

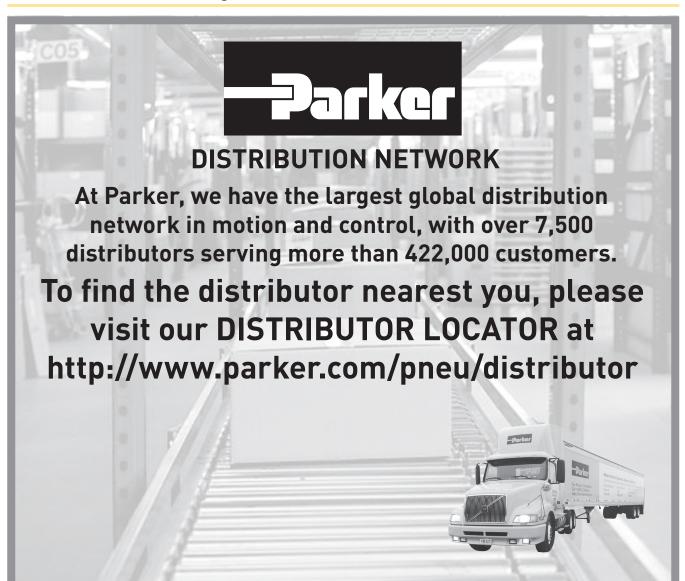


Air Preparation Products

Filters, Regulators, Lubricators, & Airline Accessories
Catalog 0700P-8 (updated pdf)







ENGINEERING YOUR SUCCESS.

↑ WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application including consequences of any failure, and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

Offer of Sale

The items described in this document are hereby offered for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated on the separate page of this document entitled "Offer of Sale".

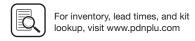
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Air Preparation Units

Global FRL's



- Port size: 1/4 through 3/4 inch
- Maximum supply pressure: 300 psig
- Operating temperature: -13°F through 150°F
- Filters, regulators, filter / regulators, lubricators and accessories
- Modular construction

P3N Series FRL's



- Port size: 3/4 through 1-1/2 inch
- Maximum supply pressure: 250 psig
- Operating temperature: 32°F through 175°F
- High flow
- Filters, regulators, filter / regulators, lubricators and accessories

P3Y FRL's



- Port size: 3/4 through 1-1/2 inch
- Maximum supply pressure: 250 psig
- Operating temperature: -40°F through 140°F
- Filters, regulators, filter / regulators, lubricators and accessories
- Modular construction

General Industrial FRL's



- Port size: 1/4 through 6 inch flange
- Maximum supply pressure: 300 psig
- Operating temperature: 32°F through 212°F
- Filters, regulators, filter / regulators, lubricators and accessories

14 Series FRL's



- Port size: 1/8 through 1/4 inch
- Operating temperature: -4°F through 175°F
- Maximum supply pressure: 300 psig
- Non-modular construction
- Ideal for OEM applications
- Filters, regulators, filter / regulators, and lubricators

Miniature / Inline FRL's



- Port size: 1/8 through 3/8 inch
- Operating temperature: -4°F through 175°F
- Non-modular construction
- Ideal for point of use applications
- Filters, regulators, filter / regulators, lubricators and accessories

Prep-Air II FRL's



- · Compact & standard
- Port size: 1/4 through 3/4 inch
- Maximum supply pressure: 300 psig
- Operating temperature: -4°F through 175°F
- Point of use applications
- Modular construction
- Filters, regulators, filter / regulators, lubricators and accessories

Regulator Products



- Port sizes: 1/8 through 2 inch
- Maximum supply pressure: 300 psig
- Operating temperature: -40°F through 200°F
- Precision
- Electronic proportional
- General Regulators
- Water Regulators

Stainless Steel FRL's



- Port sizes: 1/4 and 1/2 inch
- Stainless steel construction handles most corrosive environments
- Maximum supply pressure: 300 psig
- Operating temperature -40°F through 180°F
- Meets NACE specifications MR-01-75/ISO 15156
- Filters, regulators, filter / regulators, and lubricators

Liquid Separators



- Port sizes 1/4 through 6 inch flange
- Designed in accordance with ASME
- Maximum supply pressure: 232 psig
- Operating temperature: 35°F through 175°F
- High liquid removal efficiencies at all flow conditions
- Low maintenance
- Suitable for variable flow compressors





Air Preparation Units

Dryer Products



- Refrigeration (10-2400 scfm)
- Inline desiccant (15-60 scfm)
- Heatless desiccant dryers (40-800 scfm)

(Revised 05-05-20)

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- Part Number to Page Number Index
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Accessories

Airline Accessories



02





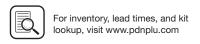
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Selection Guide

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PNEUMATIC DIVISION E-TOOLS

Pneumatic Division Part Lookup Tool

Part Lookup Tool Overview

The purpose of this application is to provide users with more in depth detail, such as replacement kits or current inventory for specific pneumatic part numbers. The tool also provides cross reference information for products that have been previously obsoleted. Searches can be made by searching a portion or all of a part number. Use the drop down options available to narrow your search.



Part Lookup Tool Contents

- Replacement KITs by part number
- Obsolete cross reference
- Inventory/stock levels
- Pricing (with distributor login only)
- Bulk part search
- Shipping location
- Lead time

How to access the Tool

U.S. Parker Pneumatic Distributors

- www.pdnpartlookup.com
- Or download the "Distributor Toolbox" app







Guest Users

www.pdnplu.com

Pneumatic Division Size & Selection Calculators

Size, Selection and Cost of Air Calculators Overview

The purpose of this application is to provide users and designers of pneumatic systems with a handy collection of compressed air cost calculators, conversion tools and air valve (Cv) and flow (SCFM) calculations for air cylinder actuation. The size and select calculators are available to anyone for use. See details below.

How to access the Tool

- www.parkerpdncalc.com
- Or download the "Pneumatics" calculator app

Pneumatics Parker



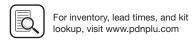


Calculator Contents

- · Cost calculator for leaks
- Cost calculator for compressors
- Cost calculator for reverse flow regulators
- · Vacuum flow through an orifice

- Air flow through an orifice
- Annual cost of air cylinder operation
- Valve/FRL sizing for cylinder actuation
- And more!





The Parker 5-Year Extended Warranty

(Revised 12-11-19)

arker Hannifin Corporation will extend its warranty on all pneumatic components to sixty (60) months providing they are correctly installed and protected by Parker pneumatic filters which are properly maintained. Components covered by this warranty include all cylinders, valves, and pneumatic automation components manufactured by Parker in any of our global facilities. This warranty covers our components anywhere in the world you may ship your equipment.

Parker's obligation under this warranty is limited to the replacement or repair of any failed components. The buyer understands that the seller will not be liable for any other costs or damages.

The buyers of quality Parker components and filters benefit by having ONE source for all pneumatic needs - Parker.

Janiferal. Parmentier



Jennifer Parmentier President Motion Systems Group



Engineering

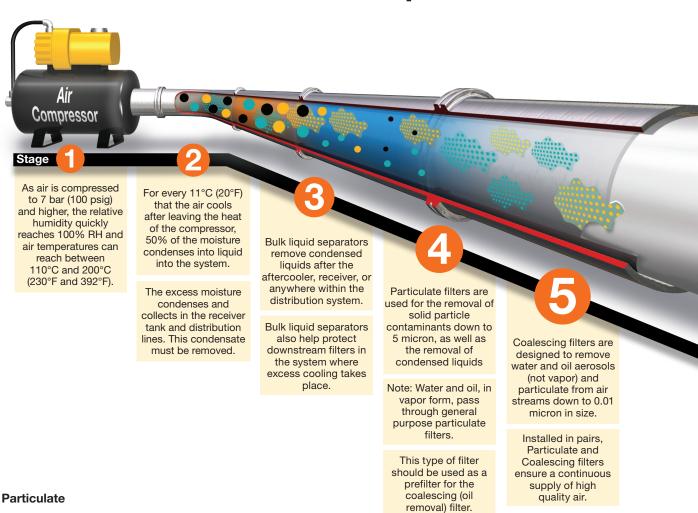




Together we can power your application with clean, dry air

Fast cycle times, high product quality, and low downtime all require a clean, dry pneumatic system to function properly. Parker has what it takes to make sure pneumatic systems perform at their best.

Clean, dry pneumatic systems with Parker Global Air Preparation



Key



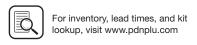




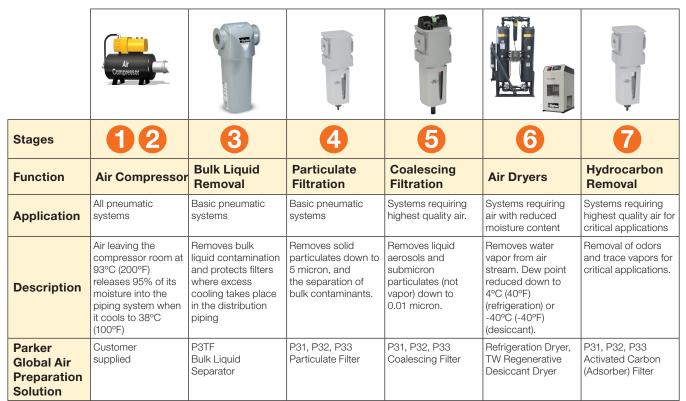








Parker Pneumatic



(Revised 03-25-20)



Refrigeration and desiccant dryers lower the air's dew point by removing water

vapor, providing

appropriately dry air

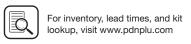
for the downstream

application.

Hydrocarbon and oil vapors are removed using filters utilizing activated carbon.

Airborne hydrocarbons are often left over from the compressor oils.







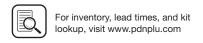


Parker Pneumatic



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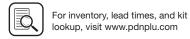
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Product Selection Guide

ingineering Data

							Port	Size (inch)							Bowls			E	lement Ty	pe	
Basic Unit	Series			2/2						_		_	4	6			Metal	Bowl Capacity				Page
		1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	flange		Poly	Metal	SG		5	40	Adsorber	
S E P A R	РЗТБ		•	•	•	•	•		•	•					Aluı	ninum B	ody	_	Bulk	Liquid Sep	parator	L2
E T R O R S	РЗТБ												•	•	Ste	eel Hous	ing	_	Bulk	Liquid Sep	parator	L5
	02F		•												Aluı	ninum B	ody	_	Std.	_	_	J2
	P31F		•												•	•	_	.4 oz.	Std.	_	_	B8
	PF504		•												Sta	inless St	eel	1.0 oz	Opt.	Std.	_	F2
	14F	•	•												•	•	_	1 oz.	Std.	Opt.	Opt.	D2
	05F		•	•											•	_	_	2 oz.	_	Std.	_	E2
	P32F		•	•	•										•	•	•	1.7 oz.	Std.	_	_	B10
F	06F		•	•	•										•	•	•	4.4 oz.	Opt.	Std.	_	E4
T E	07F				•	•									•	•	•	7.2 oz.	Opt.	Std.	_	E 6
R S	P33F				•	•									•	•	•	2.8 oz.	Std.	_	_	B12
	PF10				•										Sta	inless S	eel	4.0 oz.	Opt.	_	_	F4
	РЗҮ					•	•								•	_	_	4.4 oz.	Std.	_	_	C4
	P3NF					•	•		•						_	_	•	18 oz.	_	Std.	_	G2
	F602					•	•		•	•					_	•	•	16 oz. (W) 32 oz. (E)	Opt.	Std.	_	H2
	35F								•	•					_	•	_	13.9 oz.	Std.	_	_	Н8
	43F											•			_	•	_	17.2 oz.	Std.	_	_	Н8





Air Preparation Products **Product Selection**

Parker Pneumatic

Basic							Port	t Size (inch)							Bowls		Bowl	E	lement Ty	уре	_
Unit	Series	1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4 flange	6 flange	Poly	Metal	Metal SG	Capacity	0.01	1.0	Adsorber	Page
	02F		•												Ny	lon Hous	sing	_	Std.	Opt.		J8
	P31F		•												•	•	_	.4 oz.	Std.	Opt.	Opt.	B14
	PF501		•												Sta	inless S	teel	1.0 oz.	Std.	_	_	F6
	10F	•	•												•	•	_	1 oz.	Std.	Opt.	_	D4
	15F		•	•											•	_	_	2 oz.	Std.	_	_	E8
C O A	P32F		•	•	•										•	•	•	1.7 oz.	Std.	Opt.	_	B16
E S	11F		•	•	•										•	•	•	4.4 oz.	Std.	Opt.	_	E10
C I N	12F				•	•									•	•	•	7.2 oz.	Std.	Opt.	_	E12
G F	P33F				•	•									•	•	•	2.8 oz.	Std.	_	Opt.	B18
L T	PF11				•										Sta	inless S	teel	4.0 oz.	Std.	_	_	F8
E R S	РЗҮ					•	•								•			4.4 oz.	Std.	_	_	C6
	P3NF					•	•		•						_	_	•	18 oz.	Std.	_	_	G4
	F701					•	•								_	•	•	32 oz. (E) 100 oz. (L)	Std.	Opt.	_	H12
	35F								•	•					_	•	_	13.9 oz.	Std.	Opt.	_	H10
	43F											•			_	•	_	17.2 oz.	Std.	Opt.	_	H10
	P3TF												•	•	_	•	_		Std.	Opt.	_	H14

Parker Pneumatic

A

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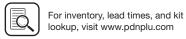
Product Selection Guide

> :ngineering Data

Basic						Port	Size												S	pring	Rang	je								
Unit	Series	1/8	1/4	3/8	1/2	3/4	1	1- 1/4	1- 1/2	2	2- 1/2	8	15	20	25	30	40	50	60	100	120	125	140	150	160	175	200	232	250	Page
	P31R		•									_	_	_	_	Opt.	_	_	Opt.	_	_	Std.	_	_	_	_	_	Opt.	_	B20- B23
	14R	•	•									_	Opt.	_	_	Opt.	_	_	Opt.	_	_	Std.	_	_	_	_	_	_	_	D6
	P3A-R	•	•									_	Opt.	_	_	Opt.	_	_	Opt.	_	Std.	_	_	_	_	_	_	_	_	J20
	R34	•	•									_	_	_	_	Opt.	_	_	Opt.	_	_	Std.	_	_	_	_	_	_	_	J22
	R25	•	•									_	_	_	Opt.	_	_	_	Opt.	_	_	Std.	_	_	_	_	_	_	_	J24 K8
	R45		•	•								_	_	_	Opt.	_	_	_	Opt.	_	_	Std.	_	_	_	_	_	_	_	J26
	15R		•	•								_	Opt.	_	_	Opt.	_	_	Opt.	_	_	Std.	_	_	_	_	_	_	_	K10
S T A			•	•								_		_		Opt.	_	_	Std.		_	Std.		_	_	_	Opt.		_	E14
N D A			•	•	•											Opt.			Opt.			Std.	_		_				Opt.	B24
R D			•	•	•											Орт.			Std.			Std.							Opt.	B27
R																0-4							_		_			_		
E G	P33R				•	•						_	_	_		Opt.		_	Opt.	_	_	Std.	_	_	_	_	_	_	Opt.	B30
U L A	P3Y					•	•					_	_			_		_	_	_	_		_	_	_	Std.	_	Opt.		C8
T O R	07R				•	•						_	_	_	_	_	_	_	Std.	_	_	Std.	_	_	_	_	_	_	Opt.	E18
S	P3NR					•	•		•			_	_	_	_	_	_	_	_	_	_	Std.	_	_	_	_	_	_	Opt.	G6 H16
	R119		•	•	•	•	•		•			_	_	_	Opt.	_	_	_	Opt.	_	_	Std.	_	_	_	_	_	_	Opt.	H19
	09R									•		_	_	_	_	_	_	_	_	_	_	Std.	_	_	_	_	_	_	_	H26
	11R		•	•	•							*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	E20
P	12R				•	•						*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	E22
L 0						•	•					*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	C10
Т	P3NR					•	•		•			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	G8
	R119		•	•	•	•	•		•	•	•	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	H20 H25
S	PN304		•									_	_	_	Opt.	_	_	_	Opt.	_	_	Std.	_	_	_	_	_	_	_	F10
A	PR364		•									_	-	_	Opt.	_	_	_	Opt.	_	_	Std.	_	_	_	_	_	_	_	F10
N L E	PR10				•							_	_	_	_	_	_	_	Opt.	_	_	Std.	_	_	_	_	_	_	Opt.	F12
S					•							_	_	_	_	_	_	_	Opt.	_	_	Std.	_	_	_	_	_	_	Opt.	F12

^{*} Will follow Pilot Regulator setting.





Product Selection

Basi						Port	Size												S	pring	Rang	je								
Unit	Sarias	1/8	1/4	3/8	1/2	3/4	1	1- 1/4	1- 1/2	2	2- 1/2	8	15	20	25	30	40	50	60	100	120	125	140	150	160	175	200	232	250	Page
			•									_	_	_	_	Opt.	_	_	_	_	_	_	_	Std.	_	_	_	_	_	B32
	EPP4		•		•							_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	K82
!	P32P				•							_	_	_	_	Opt.	_	_	_	_	_	_		Std.		_	_	_	_	B32
					•							_	_	_	_	_	_	_	_	_	_	_	_	_	_	Std.	_	Opt.	_	K74
ĺĺí	Day					•	•					_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	C12
	51R		•									_	_	_	_	_	_	_	_	_	_	_	Opt.	_	Std.	_	_	_	_	K42
ı	52R		•	•	•	•						_	_	_	_	_	Opt.	_	_	_	_	_	_	_	Std.	_	_	_	_	K44
	ESD					•	•	•				_	_	_	_	_	Opt.	_	_	_	_	_	_	_	Std.	_	_	_	_	K46
_	54R								•	•		_	_	_	_	_	Opt.	_	_	_	_	_	_	_	Std.	_	_	_	_	K48
	27R		•									_	Opt.	_	_	Opt.	_	_	Opt.	_	_	Std.	_	_	_	_	_	_	_	K14
U I	1 0010		•	•								Opt.	_	Std.	_	_	_	Opt.	_	_	_	_	_	_		_	_	_	_	K38
A T	P3RA302		•									_	_	_	_	Opt.	_	_	_	Std.	_	_	_	_		_	_	_	_	K90
0 R S	P3RA102		•									_	_	_	_	Opt.	_	_	Opt.	_	_	_	_	Std.		_	_	_	_	K92
	DODA400DD		•									_			_	Opt.	_		Opt.	_			_	Std.					_	K94
			•													Std.	_		_	_				_						K96
!	; <u> </u>		•													Ota.			Ont											K98
													_		_				Opt.						_				_	
	P3BA208		•									_	_		_		_		_		_	_	_	_	_	_	_	_	_	K100
	P3BA45		•									_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	K102
\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	20R	•	•									_	_	Opt.	_	_	_	_	Opt.	_	_	Std.	_	_	_	_	_	_	_	K104
	R24	•										_	_	Opt.	_	_	_	_	Opt.	_	_	Std.	_	_	_	_	_	_	_	K106
	R46	•		•								_	_	Opt.	_	_	_	_	Opt.	_	_	Std.	_	_	_	_	_	_	_	K108

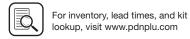
Parker Pneumatic

Product Index Engineering Data

Product Selection Guide

Ba	sic			-		Po	ort Si	ize			-		Bowls	·	Bowl	city							Spri	ng Ra	ange				
Uı		Series	1/8	1/4	3/8	1/2	3/4	1	1- 1/4	1- 1/2	2	Poly	Metal	Metal SG	Capacity	5	20	40	Adsorber	15	25	30	60	110	125	175	200	250	Page
		P31E		•								•	•	_	0.4 oz.	Std.	_	_	_	_	_	Opt.	Opt.		_	_	_	Opt.	B42
		14E	•	•								•	•	_	1 oz.	Std.	_	Opt.	Opt.	Opt.	_	Opt.	Opt.		Std.	_	_	_	D8
		B34	•	•								•	•	_	1 oz.	Std.	Opt.	_	_	_	Opt.	_	Opt.		Std.	_	_	_	J32
!		05E		•	•							•	_	_	2 oz.	_	_	Std.	_	_	_	Opt.	Std.		Std.	_	Opt.	_	E24
i	2	P32E		•	•	•						•	•	•	1.7 oz.	Std.	_	_	_	_	_	Opt.	Opt.		Std.	_	_	Opt.	B44- B47
ĺ	2	06E		•	•	•						•	•	•	4.4 oz.	Opt.	_	Std.	_	_	_	_	Std.		Std.	_	_	Opt.	E26
	j	07E				•	•					•	•	•	7.2 oz.	Opt.	_	Std.	Opt.	_	_	_	Std.		Std.	_	_	Opt.	E28
	1	P33E				•	•					•	•	•	2.8 oz.	Std.	_	_	_	_	_	Opt.	Opt.		Std.	_	_	Opt.	B48
ì	3	РЗҮ					•	•				•	•	•	4.4 oz.	Std.	_	_	_	_	_	_	_		_	Std.	_	Opt.	C14
		P3NE					•	•		•		_	_	•	18 oz.	_	_	Std.	_	_	_	_	_		Std.	_	_	Std.	G10
		12E				•	•					_	•	_	7.2 oz.	6 Std. 0.01	_	10 Opt. 1.0	_	_	_	_	Opt.		Std.	_	_	Opt.	E30
	M I C	15L		•	•							•	_	•	2 oz.	2 oz. Cannot be filled under pressure						E32							
	R O M	16L		•	•	•						•	•	•	2.6 oz.	· ·							E34						
	S T	17L			•	•	•					•	•	•	4.9 oz.				Canno	ot be t	filled (ınder	press	ure					E36
		02L		•	•							Aluı	minum	Body	0.25 oz.				Canno	ot be 1	filled (ınder	press	ure					J38
		P31L		•								•	_	•	0.6 oz.				Can	be fil	led ur	ider p	ressu	re					B50
L U B		04L	•	•								•	•	_	1 oz.				Canno	ot be t	filled (ınder	press	ure					D10
R		P32L		•	•	•						•	_	•	4.09 oz.				Can	be fil	led ur	ider p	ressu	re					B52
C A T		06L		•	•	•						•	•	•	2.9 oz.				Can	be fil	led ur	ider p	ressu	re					E38
O R S	M	07L				•	•					•	•	•	6 oz.				Can	be fil	led ur	ider p	ressu	re					E40
S	I S T	P33L				•	•					•	_	•	6.1 oz.	1 oz. Can be filled under pressure						B54							
		PL10				•						Sta	inless S	Steel	4.0 oz.	·							F18						
		РЗҮ					•	•				•	_	_	16.9 oz.								C16						
		P3NL					•	•		•		_	_	•	18 oz.				Can	be fil	led ur	ider p	ressu	re					G12
		L606					•	•		•		_	•	•	16 oz. (W) 32 oz. (E) 64 oz. (G)	z. (W) vz. (E) Can be filled under pressure									H28- H31				
		09L									•	_	_	•	1 qt. Std. 3 qt. Opt.				Can	be fil	led ur	ider p	ressu	re					H32





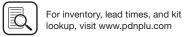
Product Selection

Product Selection Chart

			Number				Po	ort Siz	e					Bowls		E	leme	nts (N	licron)			Spri	ing Ra	inge			
	sic nit	Series	of Components	1/8	1/4	3/8	1/2	3/4	1	1- 1/4	1- 1/2	2	Poly	Metal	Metal SG	5	40	0.01	1.0	Adsorber	15	30	60	125	175	232	250	Page
		P31	Multi		•								•	•	_	Std.	_	Opt.	Opt.	Opt.	_	Opt.	Opt.	Std.	_	_	Opt.	B56
		P32	Multi		•	•	•						•	•	•	Std.	_	Opt.	Opt.	Opt.	_	Opt.	Opt.	Std.	_	_	Opt.	B57
		06H/16H	2		•	•	•						•	•	•	Opt.	Std.	_	_	_	_	_	Opt.	Std.	_	_	Opt.	E44
		06B/16B	3		•	•	•						•	•	•	Opt.	Std.	_	_	_	_	_	Opt.	Std.	_	_	Opt.	E44
	M 0	07H/17H	2				•	•					•	•	•	Opt.	Std.	_	_	_	_	_	Opt.	Std.	_	_	Opt.	E44
	D U L	07B/17B	3				•	•					•	•	•	Opt.	Std.	_	_	_	_	_	Opt.	Std.	_	_	Opt.	E44
	A R	P33	Multi				•	•					•	•	•	Std.	_	Opt.	Opt.	Opt.	_	Opt.	Opt.	Std.	_	_	Opt.	B58
C		P3YCA	2					•	•				•	•	•	Std.	_	_	_	_	_	_	_	_	Std.	Opt.	_	C18
0 M		РЗҮСВ	3					•	•				•	•	•	Std.	_	_	_	_	_	_	_	_	Std.	Opt.	_	C18
B 0		P3NCA	2					•	•		•		_	_	•	_	Std.		_	_	_	_	_	Std.	_	_	Opt.	G14
S		P3NCB	3					•	•		•		_	_	•	_	Std.		_	_	_	_	_	Std.	_	_	Opt.	G14
		14G	2	•	•								•	•	_	Std.	Opt.		_	_	Opt.	Opt.	Opt.	Std.	_	_		D12
		14A	3	•	•								•	•	_	Std.	Opt.		_	_	Opt.	Opt.	Opt.	Std.	_	_		D12
	N	06G/16G	2		•	•	•						•	•	•	Opt.	Std.		_	_	_	_	Std.	Std.	_	_	Opt.	E42
	P P L	06A/16A	3		•	•	•						•	•	•	Opt.	Std.		_	_	_	_	Std.	Std.	_	_	Opt.	E42
		07G/17G	2				•	•					•	•	•	Opt.	Std.		_	_	_	_	Std.	Std.	_	_	Opt.	E42
		07A/17A	3				•	•					•	•	•	Opt.	Std.	_	_		_	_	Std.	Std.	_	_	Opt.	E42
		C628	3					•	•		•		_	•	•	Opt.	Std.		_	_	_	_	_	Std.	_	_	Opt.	H34

Basic Units	Series	Port Sizes	Flow Rates	Pr	essure dew	points		trical ement	Dryer Application	Page
			(scfm)	37-50°F	-40°F	-40 to -100°F	Yes	No	,	
Disposable Inline Desiccant	DD10-02	1/4"	15	_	Std.	_	_	•	Point of use, intermittent use	M6
Inline Desiccant	DD	1/4" to 1"	15, 30, 60	_	Std.	_	_	•	Point of use, intermittent use	M7
Regenerative Desiccant Dryer	DAS	3/8"	3 - 20	_	Std.	_	•	_	Compact, lightweight, point of use	M9
Heatless Desiccant Dryer	PTW	1/2" to 2"	25 - 800	_	Std.	Opt.	•	_	Specific where very low pressure dewpoints are required	M13
Refrigeration Dryer	PRD	1/2" to 6" flange	10 - 2,400	Std.	_	_	•	_	General industrial use	M2

Α7



Saving Money and Space by Sizing Your Valves Properly

This catalog gives you a flow rating (Cv) for each valve in the Parker Hannifin line. You can "plug" *your* requirements into the following simple formula, and determine the Cv needed to do the job. By not oversizing, you'll save space and money, and you'll ensure the valve you select will do the job.

Converting the Job Requirements Into Cv (Capacity Co-efficient).

	Cylinder Area		Cylinder	(Compressior	1	"A"
	(Sq. In.)	X	Stroke	X	Factor	X	(Table 2)
$\mathbf{C} \vee =$	(See Table 1)		(ln.)		(Table 2)		

Stroke Time (sec.) x 28.8

Let's work through an example:

We want to extend a 3¹/4" bore cylinder which has a 12" stroke in one second, and we have a supply pressure of 80 PSI to do the work. Here's what we know:

of of to do the work. Here's what we know.
Cylinder Area for a 3-1/4" Bore, from Table 18.30 sq. in.
Cylinder Stroke
Stroke Time Required in Seconds1 sec.
Compression Factor at 80 PSI, from Table 26.4
"A" Constant for 80 PSI, from Table 2048
Substituting in the formula, we have:

$$\mathbf{C}_{V} = \frac{8.30 \times 12 \times 6.4 \times .048}{1 \times 28.8} = 1.06$$

Any valve, therefore, which has a Cv of at least 1.06, will extend our cylinder the specified distance in the required time.

Choosing the Valve "Series"

Your next step is to choose a basic valve design to do the job. For a quick guide to valve designs, see Table 3.

Having selected the basic valve design, consult the Capacity Co-efficient (Cv) tables which describe the individual valve capacities.

Selecting the Valve Model, Options and Accessories

Having determined Cv, series, port size, flow-path configuration (pre-determined by circuit design), and actuation method, you're ready to choose the *exact* valve model number.

Read the pertinent catalog pages; note the exact model numbers, options and accessories you want. Then phone or write your Parker Hannifin air valve distributor. They will give you prompt, accurate service.

Note: Need circuit design help? Contact your local Parker Hannifin distributor. They are backed up by our regional Sales Engineers and offices. Between them, you'll find answers to all of your questions.

Table 1 Effective Square-Inch Areas for Standard-Bore-Size Cylinders

Bore Size	Cylinder Area (Sq. In.)	Bore Size	Cylinder Area (Sq. In.)
3/4"	.44	4"	12.57
1"	.79	4-1/2"	15.90
1-1/8"	.99	5"	19.64
1-1/4"	1.23	6"	28.27
1-1/2"	1.77	7"	38.48
1-3/4"	2.41	8"	50.27
2"	3.14	10"	78.54
2-1/2"	4.91	12"	113.10
3-1/4"	8.30	14"	153.94
3_5/8"	10.32		

Table 2Compression Factors and "A" Constants

Inlet	Compression	"A" Constants for Various Pressure Drop*			
Pressure (psig)	Factor	2 PSI △P	5 PSI △P	10 PSI △P	
10	1.6	.152	.103		
20	2.3	.126	.084	.065	
30	3.0	.111	.073	.055	
40	3.7	.100	.065	.048	
50	4.4	.091	.059	.044	
60	5.1	.085	.055	.040	
70	5.7	.079	.051	.037	
80	6.4	.075	.048	.035	
90	7.1	.071	.046	.033	
100	7.8	.068	.044	.032	
110	8.5	.065	.042	.030	
120	9.2	.063	.040	.029	
130	9.9	.061	.039	.028	
140	10.6	.058	.037	.027	
150	11.2	.057	.036	.026	
160	11.9	.055	.035	.025	
170	12.6	.053	.034	.024	
180	13.3	.052	.033	.024	
190	14.0	.051	.032	.023	
200	14.7	.050	.032	.023	

Note: Use "A" constant at 5 PSI \triangle P for most applications. On very critical applications, use "A" at 2 PSI \triangle P. You will find in many cases, a 10 PSI \triangle P is not detrimental, and can save money and mounting space.

Table 3

Characteristics of the Major Valve Designs

A. Poppet 3-Way and 4-Way B. Spool Valves (WCS) 3-Way and 4-Way	 High flow capacities Minimum lubrication requirements Fast response Self-cleaning poppet seats Pressures of 15 to 150 psig (modifications for vacuum to 250 psig) Low friction Lower operating pressures Fast response Less wear Long Cycle Life - Under pressure, radial expansion of the seal occurs to maintain sealing contact with the valve bore Non-Lube Service - No lubrication required for continuous valve shifting Bi-Directional Spool Seals - Common
	spool used for any pressure, including vacuum
C. Packed Bore 4-Way	 Wide range of flow capacities Wide range of flow-path configurations Pilot-operated models available Pressures of vacuum to 150 psig
D. Rotary or Reciprocating Disc 4-Way, manually operated	Inexpensive Versatility in manual actuation

Cv – Capacity Co-efficients (sometimes called Flow Factors). Each flow path through the valve has its own Cv value. All Cv ratings for each valve cataloged on this page are listed on the front side of this sheet.

$$Cv = \frac{Q}{22.48} \sqrt{\frac{GT}{(P_1 - P_2) P_2}}$$

Cv = Q x "A" (Table 2)

- Q = Flow in Standard Cubic Feet per minute (14.7 PSIA at 60°F)
- P₁= Inlet Absolute Pressure (gauge pressure + 14.7)
- P₂ = Outlet Absolute Pressure (gauge pressure + 14.7) Note: P₂ must be greater than .53 x P₁
- G = Specific Gravity of flowing medium (Air, G =1)
- T = Absolute Temperature of Air (460 + °F.)





^{*} Tabulated values are the solution of $\frac{1}{22.48} \sqrt{\frac{GT}{(P_1 - P_2)P_2}}$ where T is for 68°F and G =1 for Air.

Symbol

Air Preparation Units Symbol Description



Filter / Separator with manual drain







Automatic Drain







Lubricator with automatic filling





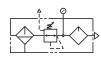
pilot controlled, relieving



Filter / Regulator (piggyback) manual drain relieving (with gauge)



Filter / Regulator (piggyback) auto drain relieving



Air Line Combo F-R-L simplified

Pneumatic Valves Symbol Description



Check





Relief Valve



2-Position, 2-Way



2-Position, 3-Way



2-Position, 4-Way



2-Position, 4-Way 5-Ported

Pneumatic Valves Symbol **Description**



3-Position, 4-Way, APB ports closed, center pos.



3-Position, 4-Way, CE 5-Ported

cylinder ports open to exhaust in center position



3-Position, 4-Way, PC 5-Ported

pressure port open to cylinder ports in center position



Quick Exhaust



Shuttle

Valve Actuators Symbol Description



general symbol



Push Button



Lever



Pedal or Treadle



Mechanical cam, toggle, etc



Spring



Detent line indicates which detent is in use



Piezo



Solenoid



Internal **Pilot Supply**



Remote **Pilot Supply**



And / Or Composite solenoid and pilot or manual override

And / Or Composite solenoid and pilot or manual override and pilot

Lines and Functions Description Symbol Solid Line - Main Line

Cylinders

Description

Standard

double acting

Single Acting

Double Rod

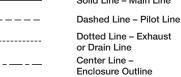
Spring Return

Ram Type

Telescope

Tandum

Duplex





Lines Crossing (90° intersection not necessary)



Lines Joining (90° intersection not necessary)



Lines Joining Flow Direction hydraulic medium



Flow Direction gaseous medium **Energy Source**



Line with Fixed Restriction



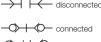
Line with Adjustable Restriction



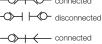
Flexible Line



Plugged Port, Test Station, Power Take-off Quick Disconnect



Without Checks



Quick Disconnect With Checks



Quick Disconnect With One Check







<u>N</u> CAUTION:

Polycarbonate bowls and sight domes, being transparent and tough, are ideal for use with Filters and Lubricators. They are suitable for use in normal industrial environments, but should not be located in areas where they could be subjected to direct sunlight, an impact blow, nor temperatures outside of the rated range. As with most plastics, some chemicals can cause damage. Polycarbonate bowls and sight domes should not be exposed to chlorinated hydro-carbons, ketones, esters and certain alcohols. They should not be used in air systems where compressors are lubricated with fire-resistant fluids such as phosphate ester and di-ester types.

Metal bowls are recommended where ambient and/or media conditions are not compatible with polycarbonate bowls. Metal bowls resist the action of most such solvents, but should not be used where strong acids or bases are present or in salt laden atmospheres. Consult the factory for specific recommendations where these conditions exist.

TO CLEAN POLYCARBONATE COMPONENTS USE MILD SOAP AND WATER ONLY! DO NOT use cleansing agents such as acetone, benzene, carbon tetrachloride, gasoline, toluene, etc., which are damaging to this plastic.

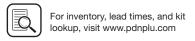
Metal bowl guards are recommended for all applications.



REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

A10





Air filters are designed to remove airborne solid contaminants, pipescale, rust, pipe dope, etc., which may plug small orifices or cause excessive wear and premature failure of pneumatic components.

Filter Selection

- 1. Determine maximum system flow requirements.
- 2. Determine maximum allowable pressure drop at rated flow in scfm.
- 3. Refer to flow chart and select filter pipe size by choosing curve that offers minimum pressure drop at desired flow in scfm. For optimum performance, a 2 to 5 psig pressure drop should be selected.

Particulate Filters:

For the removal of solid particle contaminants down to 5 microns and the separation of bulk liquids.

This type of filter is generally used in industrial applications where liquid water and oil, and harmful dirt particles must be removed from the compressed air system. This type of filter should also be used as a prefilter for the Coalescing (oil removal) filter.

First Stage Filtration:

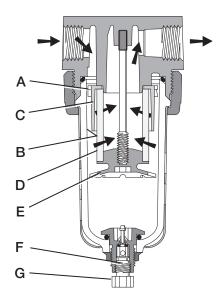
Air enters at inlet port and flows through deflector plate (A) which causes a swirling action. Liquids and coarse particles are forced to the bowl interior wall (B) by the centrifugal action of the swirling air. They then carry down the bowl wall by the force of gravity. Shroud (C) assures that the proper swirling action occurs and that the air does not pass directly through the filter element (D) until the large particles and liquids are removed. The baffle (E) separates the lower portion of the bowl into a "quiet zone" where the removed liquids and particles collect, unaffected by the swirling air, and are therefore not reentrained into the flowing air.

Second Stage Filtration:

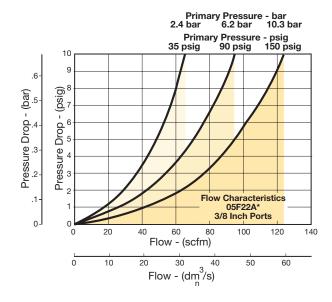
After liquids and large particles are removed in the first stage of filtration, the air flows through element (D) where smaller particles are filtered out and retained. The filtered air then passes downstream. Collected liquids and particles in the "quiet zone" should be drained before their level reaches a height where they would be reentrained in the flowing air. This can be accomplished by the twist drain (F) which is actuated by twisting knob (G) counterclockwise. On the 09 Series, unscrew the drain valve (F) slightly until the liquid begins to drain.

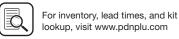
Air Preparation Products **Particulate Filter**

Once the required flow is determined for a pneumatic application, the filter can be selected by using the flow chart. To read the filter flow chart, first determine the inlet pressure that will be used. Find the appropriate pressure curve on the graph. Each graph will contain three pressure curves. If the required inlet pressure is not on the graph, interpolate a similar curve for the required pressure. Next, determine the acceptable pressure drop across the filter and locate it on the vertical axis. Find the intersection point of the acceptable pressure drop and the inlet pressure curve. At this point follow a vertical path downward to view the flow in scfm. If the flow is too low, select a larger port size or body size to give the required flow. If the flow is higher than necessary, select a smaller port size or body size to give the required flow.



Reading Flow Charts to Size Filters









Coalescing Filters

Air Preparation Products

Product Index Engineering Data

Index

Selection Guide

Coalescing Filters

Engineering Data



Coalescing filters are designed to remove 99.9% + of the liquid aerosols, both water and oil, and submicron particulate matter from your pneumatic system. These filters will provide oil free air for applications such as spray painting, air gauging, pneumatic instrumentation, printing and packaging.

Media Specifications

G r	Coalescing Efficiency	Maximum Oil Carryover ¹ PPM w/w	Micron Rating	Pressure Drop (PSID) ² @ Rated Flow	
a d e	0.3 to 0.6 Micron Particles			Media Dry	Media Wet With 10-20 wt. oil
6	99.97%	0.008	0.01	1.0	2-3
10	95%	0.85	1.0	0.5	0.5

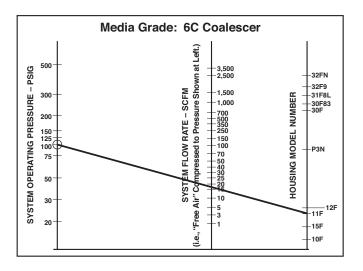
¹ Tested per BCAS 860900 at 40 ppm inlet.

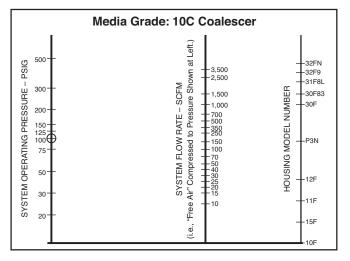
Element Selection

Element grade	Applications
6 (.01 Micron)	General air coalescing applications when total removal of liquid aerosols and suspended fines is required in all pressure ranges. Protection of air dryers, air gauging, air logic, modulating systems, critical air conveying, most breathing air systems, etc.
10 (.7 Micron)	Precoalescer or prefilter for Grade 6 to remove gross amounts of water and oil, or tenacious aerosols which are difficult to remove. Upgrading existing particulate equipment to coalescing without increase in pressure drop.

Reading Nomograms for Coalescing Filters

To size a coalescer, refer to the nomograms below. First determine the system pressure and find that pressure on the vertical axis on the left. Next, find the required flow rate on the middle vertical axis. Draw a connecting line between the two points extending to the middle vertical axis giving the recommended coalescer series. If the intersection on the model number axis is between models then choose the model above the intersection point insuring the proper flow in the unit.







² Add dry + wet for total pressure drop.

D.O.P. = Dioctylphthalate

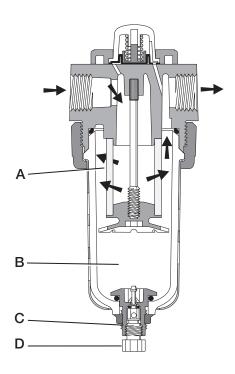
Coalescing Filters (Oil Removal)

Specifically designed for the removal of solid particles, water and oil aerosols down to 0.01 micron. Maximum remaining oil content of air leaving the filter down to 0.01 ppm at 70°F (21°C) at a pressure of 100 psig (6.9 bar) using a typical compressor lubricant. Two filter element grades are offered to better meet your air quality requirements.

Grade 10 filter elements are used for most air coalescing applications where the removal of liquid aerosols and submicronic particles for general air quality is required. Protection of components such as air valves, cylinders, as well as air conveyors, air gaging, air bearings, air control circuits and paint spraying equipment are examples of specific end-use applications. This grade of filter element should be used as a prefilter for the Grade C coalescing filter.

Grade 6 high-efficiency filter elements are used where the removal of extremely fine particulate and virtually "oil-free" or high quality air is necessary. Specific end-use applications are protection of critical air control circuits, air logic systems, flow and temperature controllers, food processing, electronics, health care and film processing.

The contaminated air enters the element interior and is forced through a thick membrane of borosilicate glass fibers coated with epoxy (A). Flow then passes through an outer structural support and, at this stage, has removed up to 99.97% + of the sub-micron particles evident in the contaminated air. These tiny droplets coalesce together and are blotted from the filter surface by the drain and release layers of non-woven glass felt and rayon cloth. The drops now begin a gravitational passage to the filter sump (B) where they can be manually or automatically drained. The clean, filtered air now passes through the outer screen plastic net and out into the pneumatic system. The Air Line Coalescing Filter removes liquid aerosols



and sub-micron particulate matter. Collected liquids and particles in the "quiet zone" should be drained before their level reaches a height where they would be reentrained in the flowing air. This can be accomplished by the manual drain **(C)** which is actuated by twisting knob **(D)** counterclockwise. On the 30 Series, unscrew the drain valve **(E)** slightly until the liquid begins to drain.

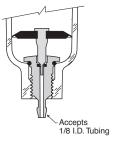
Semi Automatic Drain



(Overnight Drain)

This drain offers a semi-automatic function when there is a differential pressure in the filter which occurs when system pressure is shut off. The drain can also be used manually by gripping it with your fingertips and pushing upward.

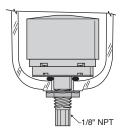
Automatic Pulse Drain



(Spitter Drain)

The diaphragm in this drain pulses when there is a pressure differential such as a valve cycling or cylinder stroking downstream. This action flexes the diaphragm and allows the filter to drain the entrapped water.

Automatic Float Drain



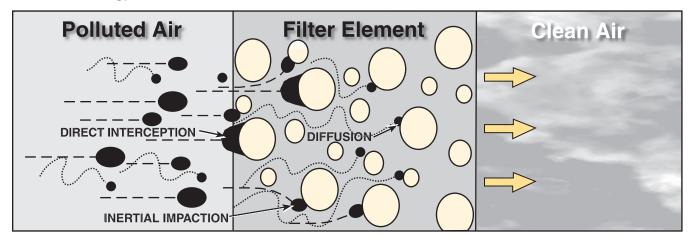
The float internal to this drain rises with increased liquid level. When the float rises, it opens a seat area allowing the trapped liquids to drain through the bottom.

A manual override can be pushed in the bottom of the drain to unseat the float if particulates create a block.





Filter Technology - Mechanisms of Filtration



Coalescing Filters

Essentially, coalescing filters Grade 10 (.7 micron) & 6 (.01 micron), rely on what is known as mechanical filtration for their effectiveness. The main mechanisms of mechanical filtration are direct interception, inertial impaction and diffusion. Electrostatic attraction can have some bearing although the efficiency of coalescing filters is not dependent on this mechanism.

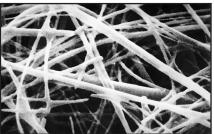


Direct Interception occurs when a particle collides with and adheres to a fiber of the filter material without deviating out of the streamline flow. This mechanism tends to take place on the surface of the filter material and affects mainly larger particles over 1 micron in size.



Inertial Impaction occurs when a particle is unable to follow the tortuous path around the filter fibers and eventually collides with and adheres to one of the fibers. Typically affecting particles in the 0.3 micron -1 micron size range.

Diffusion or Brownian Movement, as it is sometimes called, occurs with extremely small particles which tend to wander within the gas stream, increasing their chances of colliding with and adhering to a fiber. This usually affects particles below 0.3 micron in size. A degree of overlap takes place with the mechanisms, the extent varying on the conditions.

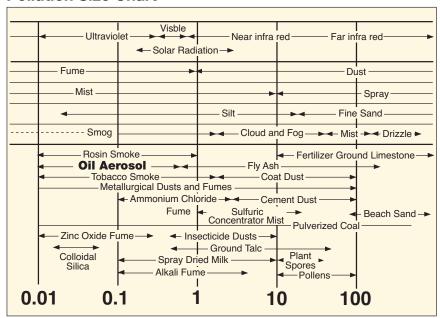


Above: Clean borosilicate microfiber seen at a magnification factor of 3900. Right: The same filter material in a contaminated state at the same degree of magnification.



When all mechanisms are combined and utilized by a deep bed of the correct type of filter material, removal of virtually all particles whether liquid or solid, is achieved.

Pollution Size Chart

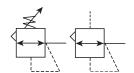


To assist in understanding the parameters of filtration, refer to this pollution size comparison chart. Look at the size of a major contaminant, oil aerosol! It is in the region of 0.01 - 0.8 micron. Tobacco smoke is also a liquid aerosol in a similar size band 0.01 -1.2 micron. Observe the smoke test yourself, appreciate the size of the problem! The smallest particle the human eye can see is in the order of 40 microns.





Regulators

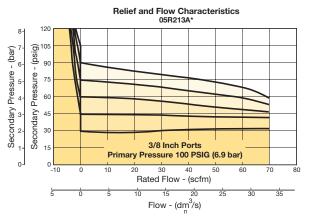


Air regulators are designed to provide quick response and accurate pressure regulation for the most demanding industrial applications.

Regulator Selection

- 1. Determine maximum system flow requirements.
- 2. Determine maximum allowable pressure drop at rated flow in scfm.
- 3. Refer to flow chart and select regulator by choosing the curve that offers minimum pressure drop at desired flow in scfm

Reading Flow Charts to Size Regulators



Once the required flow is determined for a pneumatic application the regulator or filter/regulator can be selected by using the flow chart. The chart serves two different purposes. To read the flow, use the right side of the chart. To read the relief characteristics use the left side of the chart. When reading the flow chart, first determine the secondary pressure that will be used. Find the appropriate pressure curve on the graph. Given an acceptable pressure drop for an application, follow the flow curve until it intersects the pressure drop point. This will give the flow at that particular pressure drop.

♠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

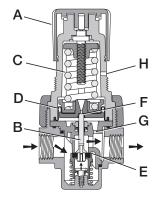
CAUTION:

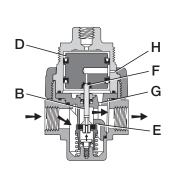
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

General Purpose Regulators

Used to provide a convenient and low cost method to reduce a supplied air pressure to a desired outlet pressure and transform a fluctuating air supply to a relatively constant reduced air pressure within the operating range of the regulator.

This type of regulator is generally used in a wide variety of applications where reduced pressure is highly desirable for energy conservation, safety requirements, air circuit control and air instrumentation.



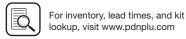


Operation

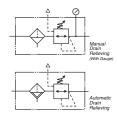
With the adjusting knob (A) turned fully counterclockwise (no spring load), and pressure supplied to the regulator inlet port, the valve poppet assembly (B) is closed. Turning the adjusting knob clockwise applies a load to control spring (C). This load causes the piston /diaphragm (D) and the valve poppet assembly (B) to move downward allowing flow across the seat area (E) created between the poppet assembly and the seat. Pressure in the downstream line is sensed below the piston / diaphragm (D) and offsets the load of spring (C). As downstream pressure rises, poppet assembly (B) and control piston (C) move upward until the area (E) is closed and the load of the spring (C) and pressure under piston / diaphragm (D) are in balance. A reduced outlet pressure has now been obtained, depending on spring load. Creating a demand downstream, such as opening a valve, results in a reduced pressure under the piston / diaphragm (D). The load of control spring (C) now causes the poppet assembly to move downward opening seat area (E) allowing air to flow to meet the downstream demand. The flow of downstream air is metered by the amount of opening (E).

During low flow requirements, the amount of opening at the seat (E) is small, while at high flows it is large. The downstream pressure signal, which regulates the amount of opening, requires an adjustment over this range, in order to attempt a constant output. This adjustment is the orifice (G), which is sized and located in such a manner as to provide a compensation to the downstream pressure signal transmitted to the piston. This effect is called aspiration and its effect is to maintain downstream pressure nearly constant over a wide range of flow demands.

Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the piston / diaphragm (D) to move upward against control spring (C), open vent hole (F), and vent the excess pressure to atmosphere through the hole in the bonnet **(H)**. (This occurs in the relieving type regulator only.)



Filter / Regulators

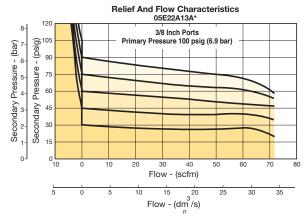


Integral Filter / Regulators are an excellent choice where accurate pressure regulation and high moisture removal efficiency are required in a space saving package.

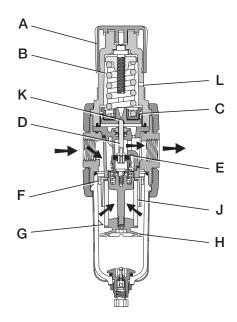
Filter / Regulator Selection

- 1. Determine maximum system flow requirements.
- 2. Determine maximum allowable pressure drop at rated flow in
- 3. Refer to flow chart and select filter/regulator by choosing the curve that offers minimum pressure drop at desired flow in scfm.

Reading Flow Charts to Size Filter / Regulators



Once the required flow is determined for a pneumatic application the regulator or filter/regulator can be selected by using the flow chart. The chart serves two different purposes. To read the flow, use the right side of the chart. To read the relief characteristics use the left side of the chart. When reading the flow chart, first determine the secondary pressure that will be used. Find the appropriate pressure curve on the graph. Given an acceptable pressure drop for an application, follow the flow curve until it intersects the pressure drop point. This will give the flow at that particular pressure drop.



Operation

Turning the knob (A) clockwise applies a load to control spring (B) which forces the piston/diaphragm (C) and valve poppet assembly (D) to move downward allowing filtered air to flow through the seat area (E) created between the poppet assembly and the seat. "First stage filtration" begins when air pressure supplied to the inlet port is directed through deflector plate (F) causing a swirling centrifugal action forcing liquids and coarse particles to the inner bowl wall (G) and down below the lower baffle (H) to the quiet zone. After liquids and large particles are removed in the first stage of filtration "second stage filtration" occurs as air flows through element (J) where smaller particles are filtered out and retained. The air flow now passes through seat area (E) to the outlet port of the unit. Pressure in the downstream line is sensed below the piston/diaphragm (C) and offsets the load of control spring (B). When downstream pressure reaches the set-point, poppet valve assembly (D) and piston/diaphragm (C) move upward closing seat area (E). Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the piston/ diaphragm (C) to move upward opening vent hole (K) venting the excess pressure to atmosphere through the hole in the bonnet (L). (This occurs in the standard relieving type regulator only.)

♠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





Air Preparation Products **Micro-Mist Lubricators**

A

Product Index Engineering Data

> Product Index

Product Selection Guide

Engineering

Micro-Mist Lubricators

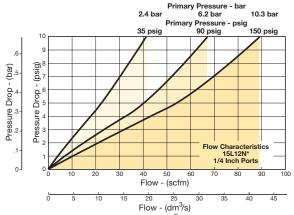


Micro-Mist Air Lubricators are designed to provide optimum and uniform lubrication with fine micro-mist particles of 2 micron or smaller, to pneumatic components even through complex piping arrangements.

Lubricator Selection

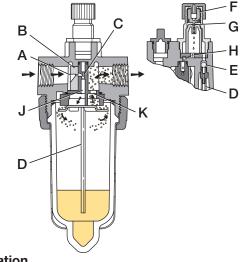
- 1. Determine maximum system flow requirements.
- 2. Determine maximum allowable pressure drop at rated flow in scfm.
- Refer to flow chart and select lubricator by choosing the curve that offers minimum pressure drop at desired flow in scfm.

Reading Flow Charts to Size Micro-Mist Lubricators



Once the required flow is determined for a pneumatic application the lubricator can be selected by using the flow chart. To read the lubricator flow chart, first determine the inlet pressure that will be used. Find the appropriate pressure curve on the graph. Each graph will contain three pressure curves. If the required inlet pressure is not on the graph, interpolate a similar curve for the required pressure. Next, determine the acceptable pressure drop across the lubricator and locate it on the vertical axis. Find the intersection point of the acceptable pressure drop and the inlet pressure curve. At this point follow a vertical path downward to view the flow in scfm.

If the flow is too low, select a larger port size or body size to give the required flow. If the flow is higher than necessary, select a smaller port size or body size to give the required flow. The Micro-Mist lubricators inject a micro-mist of oil into the flowing air stream to automatically provide the correct amount of internal lubrication for air tools and other pneumatic devices. This type of lubricator can be precisely adjusted to a very low oil flow rate because only a portion of the oil drops seen in the sight dome goes downstream. The lubricator should be used where only a very minute amount of lubricant is desirable or where it is necessary for the oil to remain in suspension in the air stream for long distances.



Operation

Air flowing through the unit goes through two paths. At low air flow rates, the majority of the air flows through venturi section (A). The rest of the air slightly deflects and flows by the flapper (B). The velocity of the air flowing through venturi section (A) creates a pressure drop at throat section (C). This lower pressure allows oil to be forced from the reservoir through the pickup tube (D) past the check ball (E), to the dome assembly where the rate of oil flow is controlled by metering screw (F). Rotation of the metering screw (F) in the counterclockwise direction increases the oil flow rate; in the clockwise direction decreases the oil flow rate.

Oil then flows through the clearance between the inner and outer sight domes (G) where drops are formed and drip into the nozzle tube (H). Here it is then broken into fine particles as it expands into the low pressure venturi. From there, the atomized oil flows through the precision orifice (J). This action causes the larger particles of oil to fall back into the reservoir where it can recirculate through the system. The remaining mist of fine particles (5 micron or smaller – about 3% of which passed through the sight dome) is then carried through opening (K) where it joins and mixes with air that bypassed the flapper (B). As air flow rate increases, the flapper (B) deflects, allowing most of the inlet air to bypass the venturi section (A).

However, a proportion of the inlet air passes through the venturi, assuring that oil delivery increases linearly with increased air flow rate. This proportioning method is advantageous at low inlet flows because the venturi design remains efficient.

The check ball **(E)** prevents reverse oil flow down the pickup tube when air flow stops. Thus, oil delivery can resume immediately when air flow restarts. **Micro-Mist Lubricators can only be filled when the air supply is shut off.**





Mist Lubricators

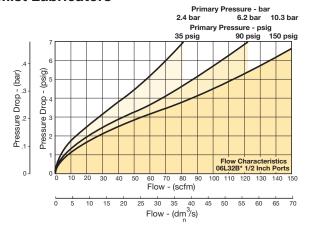


Mist Air Lubricators are designed to provide lubrication for most general applications in a pneumatic system. Units should be installed close to the application ensuring effective distribution of oil to pneumatic components.

Lubricator Selection

- 1. Determine maximum system flow requirements.
- Determine maximum allowable pressure drop at rated flow in scfm.
- Refer to flow chart and select lubricator by choosing the curve that offers minimum pressure drop at desired flow in scfm.

Reading Flow Charts to Size Mist Lubricators

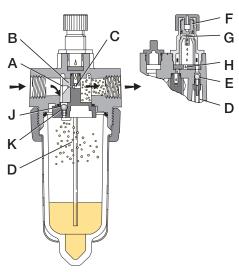


Once the required flow is determined for a pneumatic application the lubricator can be selected by using the flow chart. To read the lubricator flow chart, first determine the inlet pressure that will be used. Find the appropriate pressure curve on the graph. Each graph will contain three pressure curves. If the required inlet pressure is not on the graph, interpolate a similar curve for the required pressure. Next, determine the acceptable pressure drop across the lubricator and locate it on the vertical axis. Find the intersection point of the acceptable pressure drop and the inlet pressure curve. At this point follow a vertical path downward to view the flow in scfm.

If the flow is too low, select a larger port size or body size to give the required flow. If the flow is higher than necessary, select a smaller port size or body size to give the required flow.

Air Preparation Products Mist Lubricators

These lubricators inject an oil aerosol into the flowing air stream to automatically provide the proper amount of internal lubrication to air operated tools or other pneumatic devices.



Operation

Air flowing through the unit goes through two paths. At low air flow rates, the majority of the air flows through venturi section (A). The rest of the air slightly deflects and flows by the flapper (B), restrictor disc (M) on the 09L. The velocity of the air flowing through venturi section (A) creates a pressure drop at throat section (C). This lower pressure allows oil to be forced from the reservoir through the pickup tube (D) past the check ball (E), to the dome assembly where the rate of oil flow is controlled by metering screw (F). Rotation of the metering screw (F) in the counterclockwise direction increases the oil flow rate; in the clockwise direction decreases the oil flow rate. Oil then flows through the clearance between inner and outer sight domes (G) where drops are formed and drip into the nozzle tube (H). On the 09L, oil flows through the drip tube (F) where drops are formed and drip into the throat section (C). Here it is then broken into fine particles and mixed with the swirling air to be carried to the venturi outlet where it joins the air by passing the flapper (B), (M). As air flow rate increases, the flapper (B), (M) deflects, allowing a greater part of the additional air to bypass the venturi section (A). This assures the oil delivery rate increases linearly with increased air flow rate. The check ball (E) assures that when there is no oil flow the oil in the pickup tube does not return to the reservoir.

The bowl can be filled under pressure due to the action of the check ball (J). When the fill cap is removed, air in the bowl escapes and pressure forces the check ball (J) to nearly seal at (K). When the fill cap is replaced, the small amount of air flow past check ball (J) builds up pressure and together with the spring forces the check ball (J) off seat (K), letting full line pressure into the bowl.

F442 Oil





Quantity	Part numbers
1 Quart	F442001
1 Gallon	F442002
12 Quart Case	F442003
4 Gallon Case	F442005

Petroleum based oil of 100 to 200 SSU viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)





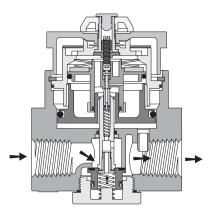
Air Preparation Products **Dial Regulators**

The Dial Regulator is a constant bleed, piston operated regulator. The pilot controlled pressure reducing valve provides exceptionally high air flow with steady pressure control and minimal secondary pressure drop. The non-rising adjustment knob provides quick selection of the desired secondary pressure in less than one full turn. The adjustment knob also can serve as the pressure indicator thereby eliminating the need for a pressure gauge.

This regulator is specifically designed for applications requiring more accurate air circuit control, high air flow capacity with flat performance curves and quick regulator adjustment. The regulator can be used as a conventional regulator for standard air circuits or as a pilot regulator to provide pressure to the control chamber of a pilot operated (slave) regulator.

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.



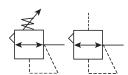
Operation

To set the regulator, turn the large dial adjustment knob to the desired secondary set pressure. This opens the pilot valve seat allowing air flow into the control chamber which forces the lower piston downward against the relief seat and opens the main valve. At the same time, the air in the control chamber forces the upper piston upward against Belleville springs which closes the pilot valve seat when the set pressure is attained. Secondary pressure in the chamber is now balanced against the control pressure through the lower piston. If demand flow increases, the constant control pressure will force the lower piston and the main valve further downward, and allow more flow downstream. A higher than desired secondary pressure will force the lower piston upward, closing the main valve seat and opening the main relief valve seat thereby allowing air to relieve to the atmosphere. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Engineering



Precision Regulators

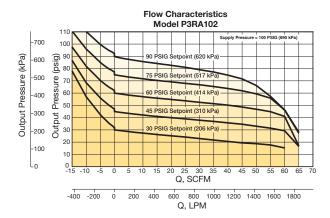


Air regulators are designed to provide quick response and accurate pressure regulation for the most demanding industrial applications.

Regulator Selection

- Determine maximum system flow requirements.
- Determine maximum allowable pressure drop at rated flow in scfm.
- Refer to flow chart and select regulator by choosing the curve that offers minimum pressure drop at desired flow in scfm.

Reading Flow Charts to Size Regulators

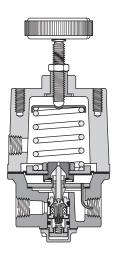


Once the required flow is determined for a pneumatic application the regulator or filter/regulator can be selected by using the flow chart. The chart serves two different purposes. To read the flow, use the right side of the chart. To read the relief characteristics use the left side of the chart. When reading the flow chart, first determine the secondary pressure that will be used. Find the appropriate pressure curve on the graph. Given an acceptable pressure drop for an application, follow the flow curve until it intersects the pressure drop point. This will give the flow at that particular pressure drop.

Air Preparation Products **Precision Regulators**

Precision Regulator

For use in applications that require reliable performance and accurate pressure control. This type of regulator is generally used for material handling systems, flow and temperature controllers, critical air control circuits, medical and scientific test equipment, and valve positioners.



Operation

Set the desired secondary pressure by turning the adjustment knob clockwise. This action increases the regulating spring force against the top of the diaphragm disc. When the spring force above exceeds the air pressure beneath the diaphragm, it is transmitted by the valve stem and opens the valve. Airflow through the regulator now occurs.

A precisely designed and positioned aspirator tube constantly transmits the secondary pressure to the under side of the diaphragm so that during flow conditions any pressure loss can be quickly compensated for. When flow is no longer required, the outlet pressure increases slightly, allowing the diaphragm to rise, the valve to close, and set pressure to be maintained.

On self-relieving models, if outlet pressure should increase above the set pressure, the diaphragm will rise therefore opening the relief seal between the diaphragm and the valve. The excess outlet pressure is then vented through the diaphragm orifice into the bonnet and subsequently to the atmosphere through an orifice in the bonnet. For best performance, regulated pressure should always be set by increasing the pressure to the desired setting.

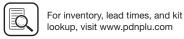
⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



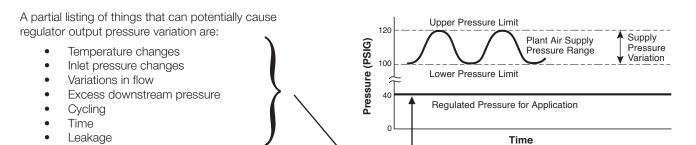


A

Product Index Engineering Data

Precision Regulators Application Guide

Pneumatic pressure regulators are designed to provide a constant pressure output from a fluctuating supply pressure – much the way an electronic voltage regulator works. Pressure regulators provide varying degrees of accuracy with regard to their reduced pressure output. General Purpose pressure regulators work for most fluid power applications. However, for more pressure-critical applications precision regulators can provide the customer with the control they need.



Who needs precision regulators?

Design level applications:

When designing a pneumatic system it is important to determine not only the air flow that the application will require but also the acceptable level of pressure variation. Some pneumatic applications cannot tolerate fluctuations in pressure. These applications can include static situations with only a steady pressure maintained, or dynamic flow situations involving any number of changing variables in play while trying to maintain a constant pressure.

Problem solving device for existing applications:

Sometimes an existing pneumatic application does not meet the customer's needs with regards to pressure control and/or stability. Any or all of the variables listed above can cause issues with pressure stability.

As applications are expanded, added on to, or modified the pressure and flow requirements can change.

How do precision regulators differ from general purpose pneumatic regulators?

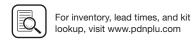
Examples →	High Precision Regulators P3RA302, P3RA102, P3RA102BP, P3RA171	Semi-Precision Regulators 27R, Dial Regulators, R216	General Purpose Regulators 05R, 06R, 07R, P3NR, R119
Sensitivity: Reduced pressure repeatability/variation under no-flow condition	.005 to .010 psig (1/8" to 1/4" of water column)	1 to 2 psig	3 to 4 psig
Regulator's ability to control back pressure accurately: *key for cylinder applications	Begins to relieve at .005 to .010 psig overpressure	Begins to relieve at .5 to 2 psig overpressure	Begins to relieve at 5 to 10 psig overpressure
Regulator's ability to maintain set pressure under varying flow, input pressure, temperature conditions:	High	Medium	Standard
Constant Bleed - does the regulator constantly bleed a small volume of air to the atmosphere to maintain stability?	Yes	Yes	No

A21

1" Water Column = .0360 PSI

1 psi = 27.7612 Inches Water Column





Product Index Engineering Data

Product Selection Guide

Application Chart

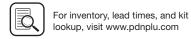
Original Equipment Manufacturers (OEMs)

Original Equipment Manufacturers (OF	EMs)			
Air Gauging Manufacturers of Air Gauging Equipment.				
Anesthesia Equipment	Manufacturers			
Calibration Stands	Similar to Test Stands			
Clamping Pressure Control	End Effect Grippers, Roll Loading			
Control Panels	Manufacturers and Users			
Coordinate Measuring Machines	Manufacturers use in Force Counterbalance Applications in Z-axis			
Dispensing Equipment	Adhesive, Paint, or any other form of Liquid or Gas			
Food Process Machinery	Manufacturers			
Gas Analyzers	Used for Reference and Calibration Air Pressures			
Ink or Paint Robotics Spraying Systems	Manufacturers use to Maintain an Even Pressure on System			
Leak Testing Equipment	Manufacturers of Equipment that Detects Leaks (i.e., Plastic Bottles)			
Medical Equipment	Manufacturers that Utilize for Blood Processing and Sampling as Examples			
Oxygen Ventilators	Manufacturers			
Pharmaceutical Process Machinery	Pill or Tablet Making Machines			
Phone Cable Pressurization Systems	Manufacturers			
Polishing Machinery	Used to Maintain Even Pressure on Polishing Head			
Semi-conductor Manufacturing Machinery	Manufacturers			
Smoke Stack Analyzers	Used for Reference and Calibration Air Pressures			
Soil or Environmental Analysis Equipment	Used for Reference and Calibration Air Pressures			
Tank Blanketing	Maintain Pressure on Top Level of a Tank or Storage Vessel			
Test Equipment	Similar to Test Stands			
Test Stands	Manufacturers of Test Stands, Laboratory Test Stands, Engineering Test Stands, Production Test Stands			
Tool Balancers High Application. Used as helps suspend the when not in use.	Manufacturers of Tool Balancers, Manipulators, and Articulating Arms use Relief Capacity Precision Regulators in a Force-balancing part of a Pneumatic Counter-balance System, the Regulator tool in the air and then makes it easy to move out of the way			
Web Tensioning	Machinery Builders for Printing Presses, Paper Converting, Packaging, Textiles, Plastics. Primarily Unwind Stands and Rewind Stands.			
System Integrators				
Automation Integrators	Anyone Involved in Designs or Projects that Automate Processes			
Francis Controls Systems				
Energy Controls Systems HVAC	Anyone who would be involved in Designs that would include Damper and Louvre Control for HVAC Applications			
End Users				
Instrumentation Supervisors				
Instrumentation Technicians				
Project Engineers				
Store Room Supervisors				
MRO				
Chemical				
Petrochemical				
Pulp & Paper				
Food & Drug				
Refineries				
Power				
Mining				

A22



Oil & Gas



Parker is protecting your most valuable assets...



Standard 190.147

- This applies to the servicing and maintenance of a machine or equipment.
- Any new, replacement, repair, or renovation to a machine must include an energy isolation device that can accept a lock out device.
- Lock out devices should not be used for any other purposes
- Verification of energy isolation is required



Standard Z244

- This applies to all machines
- Lockout / tagout is the primary method of hazardous energy control
- Machines shall be designed, manufactured, supplied, and installed with energy isolating devices





B155.1

- B11.0 applies to a broad range of machines, B11.TR6 is specific to machine tools, and B155.1 is specific to packaging and converting machines
- Energy isolating device shall:
 - Be capable of being locked in the OFF position only
 - Be easy to operate
 - Have an exhaust port equal or greater than its supply port
 - Have a pressure indicator that is visible to an operator to verify line is relieved of pressure

...By offering the best in pneumatic safety for machine maintenance:



Traditional Ball Valve

Not a dedicated energy isolation device *

Not a full exhaust port *

No verification of line exhaust *

Can be locked ON *

Not easily identifiable *



Parker Solution

- ✓ Dedicated energy isolation device
- ✓ Full exhaust port
- ✓ Verification of line exhaust
- Only lockable in OFF position
- Easily identifiable





Compressed air and its purification from generation to application

Compressed air is an essential power source that is widely used throughout industry. This safe, powerful and reliable utility can be the most important part of your production process. However, your compressed air will contain water, dirt, wear particles and even degraded lubricating oil which all mix together to form an unwanted condensate. This condensate often acidic, rapidly wears tools and pneumatic machinery, blocks valves and orifices causing high maintenance and costly air leaks. It also corrodes piping systems and can bring your production process to an extremely expensive standstill!

The quality of air required throughout a typical compressed air system can vary.

It is highly recommended that the compressed air is treated prior to entry into the distribution system as well as at each usage point or application.

This approach to system design provides the most cost effective solution to system purification as it not only removes the contamination already in the distribution system, it ensures that only the most critical areas receive air treated to the highest level.

In many instances the compressed air system will be supplying air to more than one application and although the purification equipment specified in the compressor room would remain unchanged, the point of use protection will vary depending upon the air quality requirements of each application.

In many cases this action alone is not enough, as modern production systems and processes demand an even higher level of air quality. Where required, "point of use" filtration, refrigeration or desiccant air dryers can provide the correct air quality, without the need for drying the complete compressed air installation, which can be both costly and totally unnecessary.

Sources of contamination found in a compressed air system

Contaminants in a compressed air system can generally be attributed to the following:

The quality of air being drawn into the compressor Air compressors draw in a large volume of air from the surrounding atmosphere containing large numbers of airborne contaminants.

The type and operation of the air compressor The air compressor itself can also add contamination, from wear particles to coolants and lubricants.

Compressed air storage devices and distribution systems The air receiver and system piping are designed to store and distribute the compressed air. As a consequence, they will also store the large amounts of contaminants drawn into the system. Additionally, piping and air receivers will also cool the moist compressed air forming condensate which causes damage and corrosion.

Atmospheric dirt

Atmospheric air in an industrial environment typically contains 183 million per yd³ (140 million per m³) of dirt particles. 80% of these particles are less than 2 microns in size and are too small to be captured by the compressor intake filter, therefore passing directly into the compressed air system.

Water vapor, condensed water and water aerosols

Atmospheric air contains water vapor (water in a gaseous form). The ability of compressed air to hold water vapor is dependent upon it's temperature. The higher the temperature, the more water vapor that can be held by the air. During compression, the air temperature is increased significantly, which allows it to easily retain the incoming moisture. After the compression stage, air is normally cooled to a usable temperature. This reduces the airs ability to retain water vapor. resulting in a proportion of the water vapor being condensed into liquid water which is removed by a condensate drain fitted to the compressor after-cooler. The air leaving the after-cooler is now 100% saturated with water vapor and any further cooling of the air will result in more water vapor condensing into liquid water. Condensation occurs at various stages throughout the system as the air is cooled further by the air receiver, piping and the expansion of valves, cylinders, tools and machinery. The condensed water and water aerosols cause corrosion to the storage and distribution system, damage production equipment and the end product. It also reduces production efficiency and increases maintenance costs. Water in any form must be removed to enable the system to run correctly and efficiently.

Rust and pipescale

Rust and pipescale can be found in air receivers and the piping of "wet systems" (systems without adequate purification equipment) or systems which were operated "wet" prior to purification being installed. Over time, this contamination breaks away to cause damage or blockage in production which can also contaminate final product and processes.

Micro-organisms

Bacteria and viruses will also be drawn into the compressed air system through the compressor intake and warm, moist air provides an ideal environment for the growth of microorganisms. If only a few micro-organisms were to enter a clean environment, a sterile process or production system, enormous damage could be caused that not only diminishes product quality, but may even render a product entirely unfit for use and subject to recall.

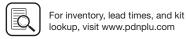
Liquid oil and oil aerosols

Most air compressors use oil in the compression stage for sealing, lubrication and cooling. During operation, lubricating oil is carried over into the compressed air system as liquid oil and aerosols. This oil mixes with water vapor in the air and is often very acidic, causing damage to the compressed air storage and distribution system, production equipment and final product.

Oil vapor

In addition to dirt and water vapor, atmospheric air also contains oil in the form of unburned hydrocarbons. The unburned hydrocarbons drawn into the compressor intake as well as vaporized oil from the compression stage of a lubricated compressor will carry over into a compressed air system where it can cool and condense, causing the same contamination issues as liquid oil.





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Compressed air quality standards – ISO 8573

ISO 8573 is the group of International standards relating to the quality of compressed air and consists of nine separate parts. Part 1 specifies the quality requirements of the compressed air and parts 2 - 9 specify the methods of testing for a range of contaminants.

ISO 8573.1: 2010 is the primary document used from the ISO 8573 series and it is this document which allows the user to specify the air quality or purity required at key points in a compressed air system.

ISO8573-1 lists the main contaminants as Solid Particulate, Water and oil. The purity levels for each contaminant are shown in separate tables, however for ease of use, this document combines all three contaminants into one easy to use table.

	Solid Particulate			Water		Oil		
IS08573-1:2010	Maximum number of particles per m ³			Concentration	Vapor	Liquid	Total oil (aerosol, liquid and vapor)	
	0.1 - 0.5 micron	0.5 - 1 micron	1 - 5 micron	mg/m³	Pressure Dewpoint	g/m³	ppm (mg/m³)	
0		As specified by the equipment user or supplier and more stringent than Class 1						
1	≤ 20,000	≤ 400	≤ 10	_	≤ -94°F (-70°C)	_	0.008 (0.01)	
2	≤ 400,000	≤ 6,000	≤ 100	_	≤ -40°F (-40°C)	_	0.08 (0.1)	
3	_	≤ 90,000	≤ 1,000	_	≤ -4°F (-20°C)	_	0.83 (1)	
4	_	_	≤ 10,000	_	≤ 37°F (3°C)	_	4.2 (5)	
5	_	_	≤ 100,000	_	≤ 45°F (7°C)	_	_	
6	_	_	_	≤ 5	≤ 50F (10°C)	_	_	
7	_	_	_	5 - 10	_	≤ 0.5	_	
8	_	_	_	_	_	0.5 - 5	_	
9	_	_	_	_	_	5 - 10	_	
Х	_	_	_	≤ 10	_	≤ 10	≤ 10	

Specifying air purity in accordance with ISO 8573-1:2010

When specifying the purity of air required, the standard must always be referenced, followed by the purity class selected for each contaminant (a different purity class can be selected for each contaminant if required). An example of how to write an air quality specification is shown below:

Example:

ISO 8573-1:2010 Class 1.2.1

ISO8573-1:2010 refers to the standard document and its revision, the three digits refer to the purity classifications selected for solid particulate, water and total oil. Selecting an air purity class of 1.2.1 would specify the following air quality when operating at the standard's reference conditions:

Class 1, Particulate

In each cubic meter of compressed air, the particulate count should not exceed 20,000 particles in the 0.1 - 0.5 micron size range, 400 particles in the 0.5 - 1 micron size range and 10 particles in the 1 - 5 micron size range.

Class 2, Water

A pressure dewpoint (PDP) of -40°F (-40°C) or better is required and no liquid water is allowed.

Class 1, Oil

In each cubic meter of compressed air, not more than 0.01mg of oil is allowed. This is a total level for liquid oil, oil aerosol and oil vapor.

Cost effective system design

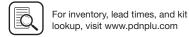
To achieve the stringent air quality levels required for today's modern production facilities, a careful approach to system design, commissioning and operation must be employed.

A25

Treatment at one point alone is not enough and it is highly recommended that the compressed air is treated in the compressor room to a level that will provide general purpose air to the site and also protect the distribution piping.

Point of use purification should also be employed, not only to remove any contamination remaining in the distribution system, but also with specific attention on the quality of air required by each application. This approach to system design ensures that air is not "over treated" and provides the most cost effective solution to high quality compressed air.





Up to 99% of the total liquid contamination found in a compressed air system is water.

Oil is perceived to cause the most problems as it is seen emanating from open drain points and exhausting valves, however, in the majority of instances, it is actually oily condensate (oil mixed with water) that is being observed.

How much water can be found in a typical compressed air system?

The amount of water in a compressed air system is staggering. A small 100 scfm (2.8m³/min) compressor and refrigeration dryer combination, operating for 4,000 hours in typical climatic conditions can produce approximately 2,200 gallons (8,328 liters) of liquid condensate per year.

If the compressor is oil lubricated with a typical 2ppm (2 mg/m³) oil carryover, then although the resulting condensate would visually resemble oil, oil would in fact account for less than 0.1% of the overall volume and it is this resemblance to oil to which a false association is made.

The example above assumes uses a small compressor to highlight the large volume of condensate produced. If a compressed air system was operated in warmer, more humid climates, or with larger compressors installed, running for longer periods, the volume of condensate would increase significantly.

Contamination and types of compressors

It is often believed that the level of compressed air purification equipment required in a system is dependent upon the type of compressor used. Contamination in a compressed air system originates from many sources and is not related solely to the compressor or it's lubricants. No matter what compressor type is selected, adequate filtration and separation products will be required to remove the large volume of dirty contaminated water as well as the dirt, rust, pipescale and microbiological contamination in the system.

Preventative maintenance provides you with the following benefits:

- Lowest operating costs
- · Superior compressed air quality
- Continued protection of downstream equipment and processes
- · Peace of mind

Compressed air and it's purification

Having identified the different types of contamination that can be found within a compressed air system, we can now examine the purification technologies available for it's removal.

Particle and coalescing filters

Coalescing filters are probably the most important items of purification equipment in any compressed air system. They are designed to remove oil and water aerosols using mechanical filtration techniques and have the additional benefit of removing solid particulate to very low levels (as small as 0.01 micron in size). Installed in pairs, most users believe one to be an oil removal filter and the other to be a particulate filter, when in fact, the pair of filters both perform the same function. The first filter, a general purpose filter is used to protect the high efficiency filter against bulk contamination. This "dual filter" installation ensures a continuous supply of high quality compressed air with low operational costs and minimal maintenance time.

Bulk liquid removal high efficiency water separators

Used to protect filters in systems where excessive cooling takes place in distribution piping. Water Separators will remove in excess of 98% of bulk liquid contamination through centrifugal separation techniques.

Refrigeration dryers

Refrigeration dryers work by cooling the air, so are limited to positive pressure dewpoint ratings to prevent freezing of the condensed liquid. Ideal for general purpose applications, they typically provide pressure dewpoints of 38°F (3°C), 45°F (7°C) or 50°F (10°C) pdp. Air is reheated before it re-enters the system to prevent piping from "sweating" in humid conditions. Refrigeration dryers are not suitable for installations where piping is installed in ambient temperatures below the dryer dewpoint i.e. systems with external piping.

Adsorption (desiccant) dryers

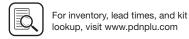
Water vapor is water in a gaseous form and is removed from compressed air using a dryer, with dryer performance being measured as pressure dewpoint. Adsorption or desiccant dryers remove moisture by passing air over a regenerative adsorbent material which strips the moisture from the air. This type of dryer is extremely efficient and typical pressure dewpoint ratings are -40°F (-40°C) or -100°F (-70°C) pdp. This means that for water vapor to condense into a liquid, the air temperature would have to drop below -40°F (-40°C) to -100°F (-70°C) respectively (the actual air temperature after an adsorption dryer is not the same as it's dewpoint).

Beneficially, a pressure dewpoint of -15°F (-26°C) or better will not only prevent corrosion, but will also inhibit the growth of microorganisms within the compressed air system.

Important note regarding compressed air dryers

As adsorption and refrigeration dryers are designed to remove only water vapor and not water in a liquid form, they require the use of particulate and coalescing filters, and possibly a bulk liquid separator to work efficiently.





A26

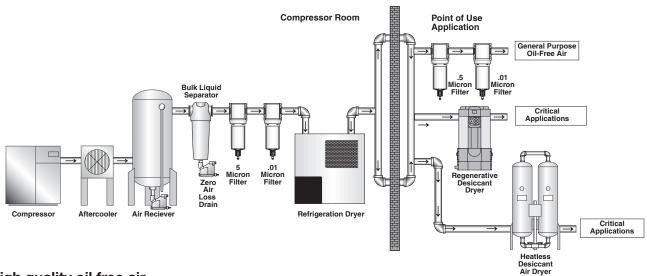
General purpose oil free air

Bulk contamination is removed to an adequate level prior to the air entering the distribution system. Point of use particulate filter(s) are used for removal of contamination within the distribution system. Point of use adsorption dryer installed where lower dewpoints are required.

Typical applications

- Plant automation
- Air logistics
- · Pneumatic tools
- · General instrumentation
- Air conveying
- Air motors
- Temperature control systems
- Blow guns

- · Gauging equipment
- · Raw material mixing
- · Sand / bead blasting



High quality oil free air

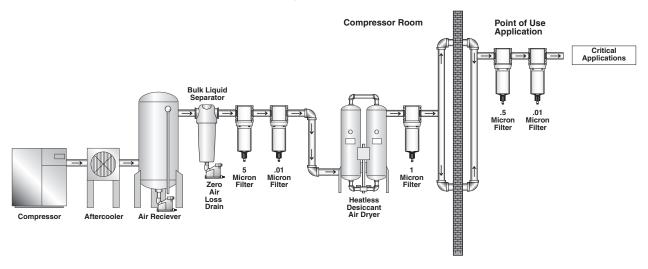
Bulk contamination is removed to an adequate level prior to the air entering the distribution system. Point of use particulate filter(s) are used for removal of contamination within the distribution system. Adsorption dryers are used for critical applications where lower dewpoints are required.

Typical applications

- Blow molding of plastics e.g. P.E.T. bottles Decompression chambers
- Film processing
- Critical instrumentation
- Advanced pneumatics
- Air blast circuit breakers

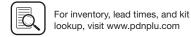
- Cosmetic production
- Medical air
- Dental air
- Lasers and optics

- Robotics
- · Spray painting
- Air bearings
- Pipeline purging
- Measuring equipment

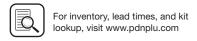


A27









Air Preparation Products Global Air Preparation Series



Introduction	B2-B7
Particulate Filters	B8-B13
Coalescing Filters	B14-B19
Regulators	B20-B31
Proportional Regulators	B32-B41
Filter / Regulators	B42-B49
Lubricators	B50-B55
Combinations	B56-B59
Dump Valves / Soft Start Valves	B60-B65
Safety Exhaust Valve	B66-B69
Redundant Safety Exhaust Valve	B70-B73
Accessories	B74-B84



Filters



DECLARATION OF COMPLIANCE (ROHS)

European Directive 2011/65/EU – RoHS (Restriction us of certain Hazardous Substances in electrical and electronic equipment), restricts the use of the 6 substances in the manufacture of specified electrical equipment.

Lead: Product containing lead and its compound (except

for applications of lead as an alloying element by weight in steel up to 0.35%, in aluminium up to 0.4% and in copper alloys up to 4% and in circuit board solder) must not exceed 0.1% by weight

Mercury: The concentration level must not exceed 0.1% by

volume

Cadmium: The concentration level must not exceed 0.01% by

volume

Hexavalent Chromiou:

This is a corrosive protective finish used on our product line. Where this finish is utilized the Chromate solution is Hexavalent (Chrome 6) free.

Polybrominated Biphenyls (PBB):

The concentration level must not exceed 0.1% by weight. This substance is not know to be in any of our products.

Polybrominated Diphenyl Esters (PBDE):

The concentration level must not exceed 0.1% by weight. This substance is not know to be in any of our products.



Global Air Preparation products supplied by Parker Hannifin have been designed and manufactured in accordance with "sound engineering practice", as defined by Article 3 of Pressure Equipment Directive 97/23/EC.



Global Air Preparation product range is in compliance with REACH to ensure continued compliance additions to the list of SVHC (Substance of Very High Concern) are reviewed periodically.

Global Air Preparation product range has been third party Shock & Vibration tested independently in accordance to EN 61373: 1999, Category 2



Following Ignition Hazard Assessments performed on the nonelectrical Global Air Preparation products they are in accordance with the requirements of EN 13463-1:2009, it was considered that the equipment does not contain its own source of ignition, and therefore is not within the scope of directive 94/9/EC.

The products can be used in a Group II Category 2 environment assuming that the ATEX Directive and the following conditions are complied with:

- Installation and maintenance of the product must be undertaken by qualified personnel.
- Do not mount the products in an area where impact may occur.
- Filters must be used to limit the introduction of particles and to capture particles generated in service.
- Supply air quality must be within ISO 8573-1:2010 Class 1.4.2.
- Maximum working temperature to be as stated on product label.
- WARNING pulsating pressure and/or a closed circuit can generate heat.
- Deposits of dust on the product must not exceed 5mm thickness.

Refer to technical file for surface areas of plastics. The unit must be earthed via the compressed air supply line.

The unit must not come into contact with liquid solvents, acids or alkalis

Refer to technical file for chemicals known to be incompatible. Product cleaning must be undertaken using a method complying with the specifications of the ATEX zone, preferably by using mild soap and water or antistatic products.

• Regulators, Filter Regulators:

Do not use Regulators or Filter Regulators within systems that can create vibration within the Regulator / Filter Regulator unit.

Solenoid Operated Valves:

Are suitable for use in an ATEX environment, (Group II Category 2) providing ATEX approved solenoids are fitted.

· Technical file available on request.



Global Air Preparation product range has been designed and tested in accordance with ISO flow testing, envelope integrity, and catalog data presented.

- Filters ISO 5782-1 & ISO 5782-2: 1997
- Regulators- ISO 6953-1 & ISO 6953-2: 2000
- Lubricators- ISO 6301-1 & ISO 6301-2: 2009





B2

Parker Global Air Preparation System



Performance you need, wherever you need it.



Full featured particulate and coalescing filters, regulators, filter/regulators, and lubricators are available with a wide range of standard options to meet air preparation needs.

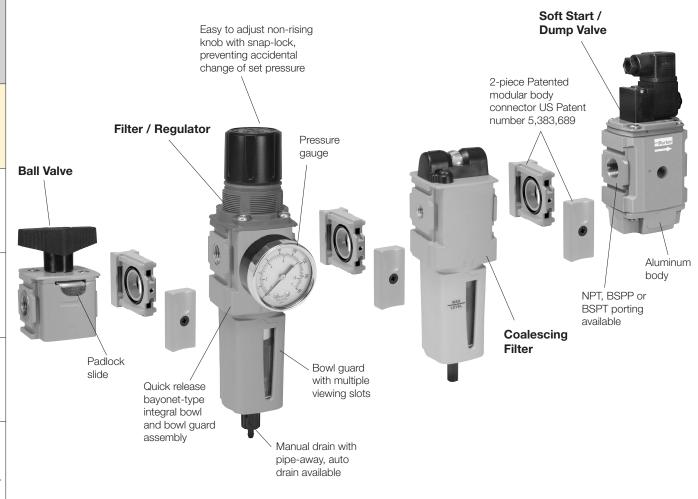
The comprehensive Global Air Preparation System is available in three body sizes with either BSPP, BSPT, or NPT to accommodate thread type requirements.

Individual units can easily be assembled into various combinations, utilizing patented modular lightweight body connectors.

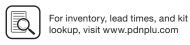
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B3

A completely modular air preparation system







Comprehensive Offering



P31 Mini Series 1/4" ports 40mm body width



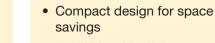
P32 Compact Series 1/4", 3/8" and 1/2' 60mm body width



P33 Standard Series 1/2" and 3/4" 73mm body width



Filter / Regulators



 Available with all the same standard options as the filters and regulators



Regulators

• 5μ particulate, 1.0μ and 0.01μ coalescing, and adsorber available as standard

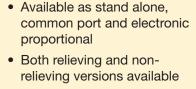
Lubricators

Proportional oil delivery over

a wide range of air flows

• Fill under pressure

 Transparent or metal bowl with manual or auto float drains standard





- savings
- · Many configurations available



- · Compact design for space
- Easily assembled



- Solenoid operated soft start, quick dump, and soft start/ quick dump valves
- Manifold blocks
- Ball style lockout / shutoff valve
- Repair kits, gauges, etc.





Air Preparation

P31 Mini Series

40mm body width

1/4" Ported

Filter 25 (12) Coalescer 7.5 (3.6) Regulator 68 (32) Filter/Regulator 22 (10) Lubricator 52 (25)	Flows up to:	scfm	(dm ³ /s, ANR
Regulator 68 (32) Filter/Regulator 22 (10)	Filter	25	(12)
Filter/Regulator 22 (10)	Coalescer	7.5	(3.6)
0	Regulator	68	(32)
Lubricator 52 (25)	Filter/Regulator	22	(10)
	Lubricator	52	(25)

Features:

Filters

Coalescers

Regulators

Filter/ Regulators

Lubricators

Combinations

- Space saving integral gauge
- Manifold style regulators available
- OSHA compliant shut-off valves
- Soft-Start & Quick Dump valves
- Electronic Proportional Regulator



P32 Compact Series

60mm body width

1/4", 3/8", & 1/2" Ported

Flows up to:	scfm	(dm ³ /s, ANR)
Filter	82	(39)
Coalescer	36	(17)
Regulator	165	(78)
Filter/Regulator	136	(64)
Lubricator	90	(42)

- Manifold style regulators available
- OSHA Compliant shut-off valves
- Soft-Start & Quick Dump valves
- Electronic Proportional Regulator



P33 Standard Series

73mm body width

1/2" & 3/4" Ported

Flows up to:	scfm	(dm³/s, ANR
Filter	85	(40)
Coalescer	72	(34)
Regulator	233	(111)
Filter/Regulator	230	(108)
Lubricator	150	(71)

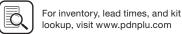
Features:

- OSHA Compliant shut-off valves
- Soft-Start & Quick Dump valves (Utilizes P32 size only)
- Electronic proportional regulator (Utilizes P32 size only)









B

Global Ai

ntroduction

Filters

Complete Pneumatic System

Common Port Manifold Regulators

- Multiple output pressures (P2, P3, P4, etc.) with common inlet (P1)
- Available in two sizes P31 and P32
- Balanced valve design for accurate pressure regulation
- Outlet pressure ports in front and rear of unit.
- Multiple spring ranges available



Electronic Proportional Regulator

- Electro-Pneumatic regulator
- Integrated systems control
- Accurate output pressure
- Micro parameter settings
- Selectable I/O parameters
- · Quick, full flow exhaust
- LED display indicates output pressure
- No air consumption in steady state
- Multiple mounting options
- Protection to IP65





P31P Mini Series

P32P Compact Series

Semi Precision Regulator and Filter/Regulator

- Available in P32 compact series
- Fine adjustment sensitivity
- Good repeatability and minimal pressure drop
- Good flow capacity
- Light gray knob for easy identification



Optional Tamperproof Kits

- One facilitates the permanent tamperproofing of the Regulator and Filter/Regulator units
- Hinged black part clamps over control knob and is locked in place after sliding yellow cover over it
- Other allows for removable lockout/tagout tamperproofing
 - Four pad lock location holes tagout
 - Hinged locking clamp secures over existing knob via yellow cover which is slid over into place



Additional Options P32 Only (Consult factory for availability)

T-Handle



Preset

• Pressure Limiter

Preset and Tamperproof



P31 Particulate Filter - Mini

- Integral 1/4" ports (NPT, BSPP & BSPT)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminum construction
- One hand operation for easy element cartridge removal
- Positive bayonet latch to ensure correct & safe fitting





Manual drain



Port	
Size	

Introduction

Filters

Coalescers

Regulators

Filter /

_ubricators

Size	Description +	Part Number
1/4"	Poly Bowl, Manual Drain	P31FB92EGMN
1/4"	Poly Bowl, Pulse Drain	P31FB92EGBN
1/4"	Metal Bowl, Manual Drain	P31FB92EMMN
1/4"	Metal Bowl, Pulse Drain	P31FB92EMBN

[‡] For polycarbonate bowl, see caution in Engineering Section A.

Operating information

Supply pressure (max):

Plastic bowl 150 psig (10 bar) Metal bowl 250 psig (17 bar)

Operating temperature:

Plastic bowl 14°F to 125°F (-10°C to 52°C) Metal bowl 14°F to 150°F (-10°C to 65.5°C)

Standard filtration: 5 micron

 Flow capacity*:
 25 scfm (12 dm³/s, ANR)

 Useful retention†:
 0.4 US oz. (12 cm³)

 Weight:
 0.24 lb (0.11 kg)

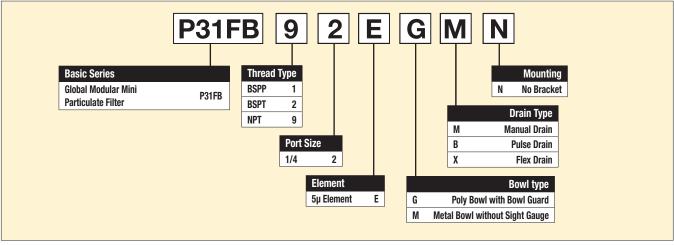
* Inlet pressure 91.3 psig (6.3 bar). Pressure drop 4.9 psig (0.34 bar).

† Useful retention refers to volume below the quiet zone baffle.

Air quality

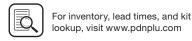
Within ISO 8573-1: 1991 Class 3 (Particulates) Within ISO 8573-1: 2001 Class 6 (Particulates)

Ordering information:



Most popular.



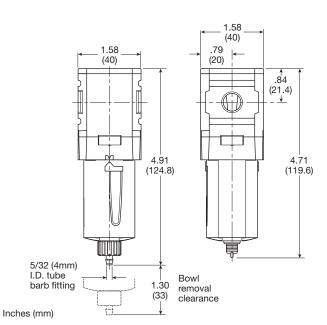


Material Specifications

Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Bowl guard	Nylon
Element retainer	Acetal
Baffle	Acetal
Filter element	Sintered polyethylene
Seals	Nitrile

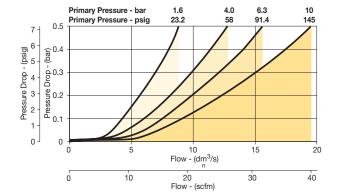
Repair and Service Kits

P31KB00BGM
P31KB00BMM
P31KB00BGB
P31KB00BMB
P31KA00ESE
P31KA00MW
P31KA00MT
P31KA00CB



Manual Drain Pulse Drain

P31FB 1/4" Filter





P32 Particulate Filter - Compact

- Integral 1/4", 3/8" or 1/2" ports (NPT, BSPP & BSPT)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- · Robust but lightweight aluminum construction
- Positive bayonet latch to ensure correct & safe fitting





Manual drain

Auto drain

Port Size	Description [‡]	Part Number
1/4"	Poly Bowl, Manual Drain	P32FB92EGMN
1/4"	Poly Bowl, Auto Drain	P32FB92EGAN
1/4"	Metal Bowl, Manual Drain	P32FB92ESMN
1/4"	Metal Bowl, Auto Drain	P32FB92ESAN
3/8"	Poly Bowl, Manual Drain	P32FB93EGMN
3/8"	Poly Bowl, Auto Drain	P32FB93EGAN
3/8"	Metal Bowl, Manual Drain	P32FB93ESMN
3/8"	Metal Bowl, Auto Drain	P32FB93ESAN
1/2"	Poly Bowl, Manual Drain	P32FB94EGMN
1/2"	Poly Bowl, Auto Drain	P32FB94EGAN
1/2"	Metal Bowl, Manual Drain	P32FB94ESMN

[‡] For polycarbonate bowl, see caution in Engineering Section A.



Operating information

Supply pressure (max):

Plastic bowl 150 psig (10 bar) Metal bowl 250 psig (17 bar)

Operating temperature:

-13°F to 125°F (-25°C to 52°C) -13°F to 150°F (-25°C to 65.5°C) Plastic bowl Metal bowl

Standard filtration: 5 micron

1/4 50 scfm (24 dm³/s, ANR) Flow capacity*: 78 scfm (37 dm³/s, ANR) 3/8

82 scfm (39 dm³/s, ANR) 1/2

1.7 US oz. (51 cm³) Useful retention[†]: Weight: 0.62 lb (0.28 kg)

* Inlet pressure 91.3 psig (6.3 bar). Pressure drop 4.9 psig (0.34 bar).

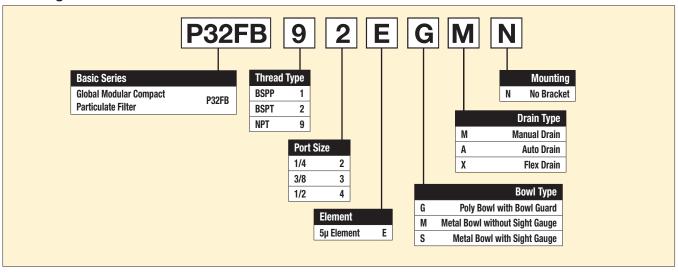
† Useful retention refers to volume below the quiet zone baffle.

P32FB94ESAN

Within ISO 8573-1: 1991 Class 3 (Particulates) Within ISO 8573-1: 2001 Class 6 (Particulates)

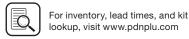
Ordering Information:

Metal Bowl, Auto Drain



Most popular.





Filters

Coalescers

Regulators

Regulators Filter/

_ubricators

Compact Particulate Filters

Material Specifications

Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Bowl guard	Nylon
Deflector	Polypropylene
Element retainer / Baffle	Acetal
Filter element	Sintered polyethylene
Seals	Nitrile
Sight gauge	Nylon

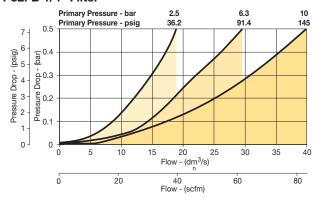
Repair and Service Kits

Plastic bowl / bowl guard, manual drain	P32KB00BGM
Metal bowl / sight gauge, manual drain	P32KB00BSM
Auto drain	P32KA00DA
5μ particle filter element	P32KA00ESE
L-bracket (fits to body)	P32KA00ML
T-bracket (fits to body connector)	P32KA00MB
T-bracket with body connector	P32KA00MT
Body connector	P32KA00CB

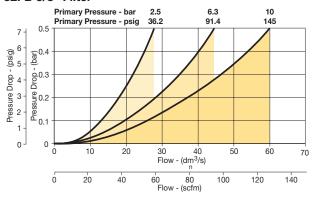
2.36 (60) 2.36 1.18_ (60) (30) 1.04 (26.3) 7.49 7.26 (190.3)(184.3) .18 (4.8mm) I.D. tube - barb fitting 2.28 Bowl removal clearance Inches (mm)

Flow Charts

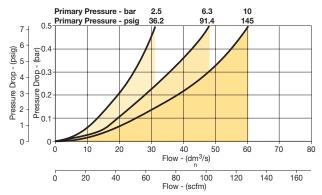
P32FB 1/4" Filter



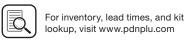
P32FB 3/8" Filter



P32FB 1/2" Filter



Automatic Drain



Standard i articulate i liters

• Integral 1/2" or 3/4" ports (NPT, BSPP & BSPT)

P33 Particulate Filter - Standard

- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminum construction
- Positive bayonet latch to ensure correct & safe fitting







Auto drain



Port Size	Description [‡]	Part Number
1/2"	Poly Bowl, Manual Drain	P33FA94EGMN
1/2"	Poly Bowl, Auto Drain	P33FA94EGAN
1/2"	Metal Bowl, Manual Drain	P33FA94ESMN
1/2"	Metal Bowl, Auto Drain	P33FA94ESAN
3/4"	Poly Bowl, Manual Drain	P33FA96EGMN
3/4"	Poly Bowl, Auto Drain	P33FA96EGAN
3/4"	Metal Bowl, Manual Drain	P33FA96ESMN
3/4"	Metal Bowl, Auto Drain	P33FA96ESAN

[‡] For polycarbonate bowl, see caution in Engineering Section A.

Operating information

Supply pressure (max):

Plastic bowl 150 psig (10 bar) Metal bowl 250 psig (17 bar)

Operating temperature:

Plastic bowl -13°F to 125°F (-25°C to 52°C)

Metal bowl -13°F to 150°F (-25°C to 65.5°C)

Standard filtration: 5 micron

Flow capacity*: 1/2 85 scfm (40 dm³/s, ANR) 3/4 102 scfm (48 dm³/s, ANR)

 Useful retention†:
 2.8 US oz. (85 cm³)

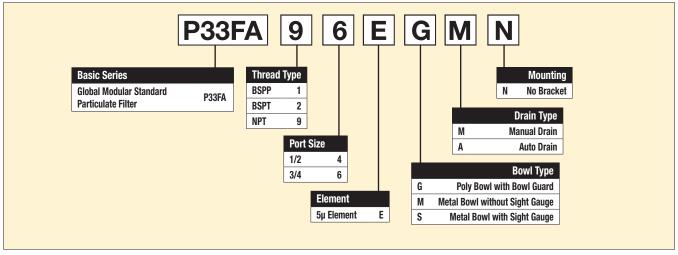
 Weight:
 1.01 lb (0.46 kg)

 * Inlet pressure 91.3 psig (6.3 bar). Pressure drop 4.9 psig (0.34 bar).

Air quality:

Within ISO 8573-1: 1991 Class 3 (Particulates) Within ISO 8573-1: 2001 Class 6 (Particulates)

Ordering Information:



Most popular.





Introduction

Filters

Coalescers

Regulators

Regulators

Filter/

_ubricators

Combinations

[†] Useful retention refers to volume below the quiet zone baffle.

Standard Particulate Filters

Material Specifications

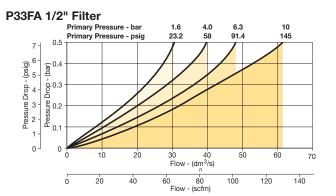
-	
Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Bowl guard	Nylon
Deflector	Polypropylene
Element retainer / Baffle	Acetal
Filter element	Sintered polyethylene
Seals	Nitrile
Sight gauge	Nylon

Repair and Service Kits

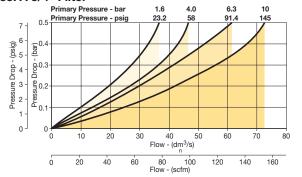
P33KA00BGM
P33KA00BSM
P32KA00DA
P33KA00ESE
P33KA00ML
P32KA00MB
P33KA00MT
P32KA00CB

2.87 (73) 1.42 (36) 2.87 (73) 1.02 (26)8.39 8.15 (207) (213).18 (4.8mm) I.D. tube Use 3/8" or (10mm) Flex barb fitting Bowl Tubing 2.00 removal (5,1) clearance Inches (mm)

Flow Charts



P33FA 3/4" Filter



Manual Drain Automatic Drain





P31 Coalescing and Adsorber Filters - Mini

- Integral 1/4" ports (NPT, BSPP & BSPT)
- Removes liquid aerosols and sub micron particles
- Oil free air for critical applications, such as air gauging, pneumatic instrumentation and control
- Differential Pressure Indicator (DPI) standard on coalescing
- Positive bayonet latch to ensure correct and safe fitting
- Adsorbing activated carbon element removes oil vapors and most hydrocarbons

To optimize the life of coalescing element, it is advisable to install a P31F pre-filter with a 5 micron element upstream of the coalescing filter.

> To optimize the life of an Adsorber it is advisable to install a P31 Coalescing Filter upstream of the Adsorber. Adsorber element should be replaced approximately every 1000 hours of service.



Port Size	Description ‡	Element	Part Number
1/4"	Poly Bowl, Manual Drain	0.01 micron	P31FB92DGMN
1/4'	Poly Bowl, Pulse Drain	0.01 micron	P31FB92DGBN
1/4"	Metal Bowl, Manual Drain	0.01 micron	P31FB92DMMN
1/4'	Metal Bowl, Pulse Drain	0.01 micron	P31FB92DMBN

[‡] For polycarbonate bowl, see caution in Engineering Section A.



Operating information

Supply pressure (max):

Poly bowl 150 psig (10 bar) Metal bowl w/ DPI 150 psig (10 bar) Metal bowl w/o DPI 250 psig (17 bar)

Operating temperature:

Plastic bowl 14°F to 125°F (-10°C to 52°C) 14°F to 150°F (-10°C to 65.5°C) Metal bowl

Standard filtration: 1.0 and 0.01 micron

Adsorber Max. oil carryover (ppm w/w)

0.003 @ 70°F (21°C)

Flow capacity*:

1.0 micron coalescing 0.01 micron coalescing Activated carbon adsorber

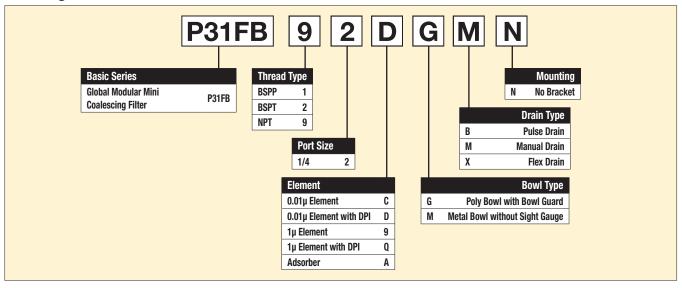
12 scfm (5.5 dm³/s, ANR) 7.5 scfm (3.6 dm³/s, ANR) 12.7 scfm (6 dm³/s, ANR)

Useful retention[†]: 0.4 US oz. (12 cm³) 0.24 lb (0.11 kg) Weight:

* Inlet pressure 91.3 psig (6.3 bar). Pressure drop 3 psig (0.2 bar), saturated element.

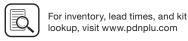
† Useful retention refers to volume below the quiet zone baffle.

Ordering Information:



Most popular.





Introduction

Filters

Coalescers

Regulators

Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Filter element	Borosilicate cloth
Adsorber element	Activated carbon
Seals	Nitrile

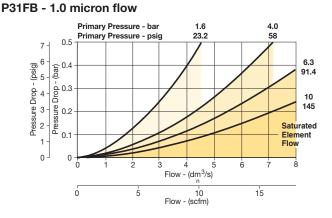
Mini Coalescing and Adsorber Filters

Repair and Service Kits

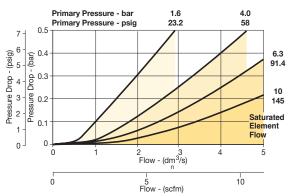
Plastic bowl / bowl guard, manual drain	P31KB00BGM
Metal bowl / w/o sight gauge ,manual drain	P31KB00BMM
Plastic bowl / bowl guard, pulse drain	P31KB00BGB
Metal bowl / w/o sight gauge, pulse drain	P31KB00BMB
1μ coalescing filter element	P31KA00ES9
0.01µ coalescing filter element	P31KA00ESC
Activated carbon adsorber filter element	P31KA00ESA
C-bracket (fits to body)	P31KA00MW
T-bracket with body connector	P31KA00MT
Body connector	P31KA00CB
Differential pressure indicator (replacement)	P31KB00RQ

1.58 (40) 0.48 0.48 1.58 (40) 0.79 (12.1)(12.1)(20)0.84 (21.4)4.91 (124.8) 4.71 (119.6) 5/32 (4mm) I.D. tube Bowl 1.30 barb fitting removal (33) clearance Inches (mm)

Flow Charts



P31FB - 0.01 micron flow





Manual Drain

Pulse Drain

P32 Coalescing and Adsorber Filters - Compact

- Integral 1/4", 3/8" or 1/2" ports (NPT, BSPP & BSPT)
- Removes liquid aerosols and sub micron particles
- Oil free air for critical applications, such as air gauging, pneumatic instrumentation and control
- Differential Pressure Indicator (DPI) standard on Coalescing Filters
- Positive bayonet latch to ensure correct & safe fitting
- Adsorbing activated carbon element removes oil vapors and most hydrocarbons

To optimize the life of coalescing element, it is advisable to install a P32F pre-filter with a 5 micron element upstream of the coalescing filter. To optimize the life of an Adsorber it is advisable to install a P32 Coalescing Filter upstream of the Adsorber. Adsorber element should be replaced approximately every 1000 hours of service.



Port		1	
Size	Description ‡	Element	Part Number
1/4"	Poly Bowl, Manual Drain	0.01 micron	P32FB92DGMN
1/4"	Poly Bowl, Auto Drain	0.01 micron	P32FB92DGAN
1/4"	Metal Bowl, Manual Drain	0.01 micron	P32FB92DSMN
1/4"	Metal Bowl, Auto Drain	0.01 micron	P32FB92DSAN
3/8"	Poly Bowl, Manual Drain	0.01 micron	P32FB93DGMN
3/8"	Poly Bowl, Auto Drain	0.01 micron	P32FB93DGAN
3/8"	Metal Bowl, Manual Drain	0.01 micron	P32FB93DSMN
3/8'	Metal Bowl, Auto Drain	0.01 micron	P32FB93DSAN
1/2"	Poly Bowl, Manual Drain	0.01 micron	P32FB94DGMN
1/2"	Poly Bowl, Auto Drain	0.01 micron	P32FB94DGAN
1/2"	Metal Bowl, Manual Drain	0.01 micron	P32FB94DSMN
1/2"	Metal Bowl, Auto Drain	0.01 micron	P32FB94DSAN

[‡] For polycarbonate bowl, see caution in Engineering Section A.



Operating information

Supply pressure (max):

Poly bowl 150 psig (10 bar) Metal bowl w/ DPI 150 psig (10 bar) Metal bowl w/o DPI 250 psig (17 bar)

Operating temperature:

-13°F to 125°F (-25°C to 52°C) Plastic bowl Metal bowl -13°F to 150°F (-25°C to 65.5°C)

Standard filtration: 1.0 and 0.01 micron

Adsorber Max. oil carryover (ppm w/w) 0.003 @ 70°F (21°C)

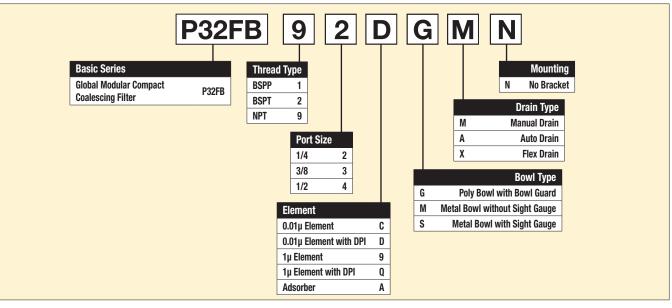
Flow capacity*:

1.0 micron coalescing 53 scfm (25 dm³/s, ANR) 36 scfm (17 dm³/s, ANR) 0.01 micron coalescing Activated carbon adsorber 85 scfm (40 dm³/s, ANR)

Useful retention[†]: 1.7 US oz. (51 cm³) Weight: 0.71 lb (0.32 kg)

- * Inlet pressure 91.3 psig (6.3 bar). Pressure drop 3 psig (0.2 bar), saturated element.
- Useful retention refers to volume below the quiet zone baffle.

Ordering Information:



Most popular.





Combinations

Introduction

Filters

Coalescers

Regulators

Regulators Filter /

Material Specifications

•	
Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Filter element	Borosilicate cloth
Adsorber	Activated carbon
Seals	Nitrile
Sight gauge	Nylon

Compact Coalescing and Adsorber Filters

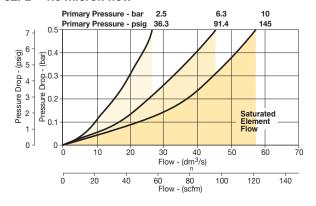
Repair and Service Kits

Plastic bowl / bowl guard, manual drain	P32KB00BGM
Metal bowl / sight gauge, manual drain	P32KB00BSM
Auto drain	P32KA00DA
1μ coalescing filter element	P32KA00ES9
0.01µ coalescing filter element	P32KA00ESC
Activated carbon adsorber filter element	P32KA00ESA
L-bracket (fits to body)	P32KA00ML
T-bracket (fits to body connector)	P32KA00MB
T-bracket with body connector	P32KA00MT
Body connector	P32KA00CB
Differential pressure indicator (replacement)	P32KA00RQ

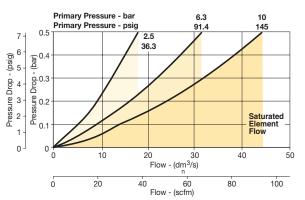
2.36 (60)1.18 2.36 (60)(30)1.90 (48.3)8.36 8.12 (212.3) (206.3) .18 (4.8mm) I.D. tube Bowl barb fitting 2.28 removal (58)clearance Inches (mm)

Flow Charts

P32FB - 1.0 micron flow

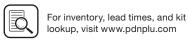


P32FB - 0.01 micron flow



Manual Drain Automatic Drain





P33 Coalescing and Adsorber Filters – Standard

- Integral 1/2" or 3/4" ports (NPT, BSPP & BSPT)
- Removes liquid aerosols and sub micron particles
- Oil free air for critical applications, such as air gauging, pneumatic instrumentation and control
- Differential Pressure Indicator (DPI) standard on Coalescing Filters
- Positive bayonet latch to ensure correct & safe fitting
- Adsorbing activated carbon element removes oil vapors and most hydrocarbons

To optimize the life of coalescing element, it is advisable to install a P33F pre-filter with a 5 micron element upstream of the coalescing filter.

> To optimize the life of an Adsorber it is advisable to install a P33 Coalescing Filter upstream of the Adsorber. Adsorber element should be replaced approximately every 1000 hours



Port Size	Description ‡	Element	Part Number
1/2"	Poly Bowl, Manual Drain	0.01 micron	P33FA94DGMN
1/2"	Poly Bowl, Auto Drain	0.01 micron	P33FA94DGAN
1/2"	Metal Bowl, Manual Drain	0.01 micron	P33FA94DSMN
1/2"	Metal Bowl, Auto Drain	0.01 micron	P33FA94DSAN
3/4"	Poly Bowl, Manual Drain	0.01 micron	P33FA96DGMN
3/4"	Poly Bowl, Auto Drain	0.01 micron	P33FA96DGAN
3/4"	Metal Bowl, Manual Drain	0.01 micron	P33FA96DSMN
3/4"	Metal Bowl, Auto Drain	0.01 micron	P33FA96DSAN

[‡] For polycarbonate bowl, see caution in Engineering Section A.



Operating information

Supply pressure (max):

150 psig (10 bar) Poly bowl Metal bowl w/ DPI 150 psig (10 bar) Metal bowl w/o DPI 250 psig (17 bar)

Operating temperature:

Plastic bowl -13°F to 125°F (-25°C to 52°C) -13°F to 150°F (-25°C to 65.6°C) Metal bowl

Standard filtration: 1.0 and 0.01 micron

Adsorber Max. oil carryover (ppm w/w)

0.003 @ 70°F (21°C)

Flow capacity*:

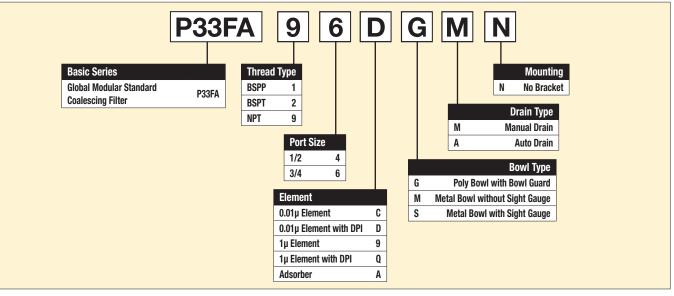
1.0 micron coalescing 0.01 micron coalescing Activated carbon adsorber Useful retention[†]:

68 scfm (32 dm³/s, ANR) 42 scfm (20 dm³/s, ANR) 72 scfm (34 dm³/s, ANR) 2.8 US oz. (85 cm³)

Weight: 1.10 lb (0.50 kg)

- * Inlet pressure 91.3 psig (6.3 bar). Pressure drop 3 psig (0.2 bar), saturated element.
- Useful retention refers to volume below the quiet zone baffle.

Ordering information:



Most popular.





Introduction

Filters

Coalescers

Regulators

Regulators

Filter /

Material Specifications

•	
Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Filter element	Borosilicate cloth
Adsorber	Activated carbon
Seals	Nitrile
Sight gauge	Nylon

Standard Coalescing and Adsorber Filters

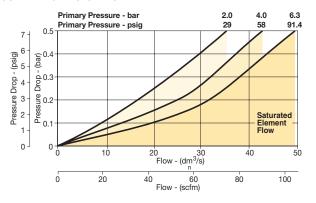
Repair and Service Kits

Plastic bowl / bowl guard, manual drain	P33KA00BGM
Metal bowl / sight gauge, manual drain	P33KA00BSM
Auto drain	P32KA00DA
1μ coalescing filter element	P33KA00ES9
0.01µ coalescing filter element	P33KA00ESC
Activated carbon adsorber filter element	P33KA00ESA
L-bracket (fits to body)	P33KA00ML
T-bracket (fits to body connector)	P32KA00MB
T-bracket with body connector	P32KA00MT
Body connector	P32KA00CB
Differential pressure indicator (replacement)	P32KA00RQ

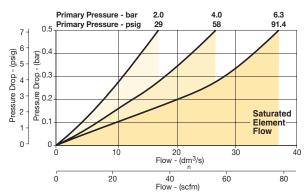
(73)(73)1.42 DPI (36) 1.02 (26) 9.25 9.02 (235)(229).18 (4.8mm) I.D. tube Use 3/8" or 10mm Flex barb fitting Bowl Tubing 2.00 removal (51)clearance Inches (mm)

Flow Charts

P33FA - 1.0 micron flow



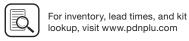
P33FA - 0.01 micron flow



Manual Drain

Automatic Drain





В

Global Air Preparation

Introduction

Filters

Coalescers

Regulators

Filter/ Regulators

Lubricators

Combinations

Accessories and Kits

Willin Hogalators

P31 Regulators - Mini

- Integral 1/4" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Secondary pressure ranges
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation.
- Relieving & non-relieving types
- Non-rising knob

Global Air Preparation

Introduction

Filters

Coalescers

Regulators

Regulators

Filter/

_ubricators

Combinations





Self relieving regulator with gauge



Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
1/4"	125 psig (8 bar)	None	P31RB92BNNP
1/4"	125 psig (8 bar)	Square	P31RB92BN5P

Operating information

Flow capacity*: 1/4 68 scfm (32 dm³/s, ANR)

Operating temperature[†]: -4°F to 150°F (-20°C to 65.5°C)

Supply pressure (max): 300 psig (20 bar)

Adjusting range pressure: 30 psig (0-2 bar)
60 psig (0-4 bar)
125 psig (0-8 bar)

232 psig (0-16 bar) 1/8 BSPP, BSPT, NPT

Weight: 0.37 lb (0.17 kg)

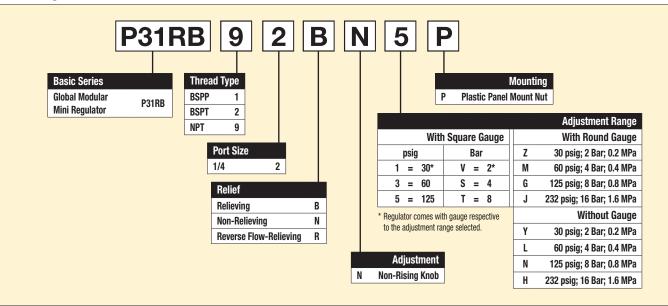
 Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

** Non-gauge option only.

Gauge port (2 each)**

Units with square gauges: 5°F to 150°F (-15°C to 65.5°C)

Ordering Information:



Most popular.





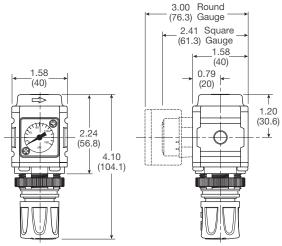
Air Preparation Products **Global Air Preparation**

Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Bonnet	PBT
Diaphragm assembly	Brass / Nitrile
Valve assembly	Brass / Nitrile
Springs	Steel
Seals	Nitrile
Panel nut	Acetal

Repair and Service Kits

Diaphragm repair kit - relieving	P31KB00RB
Diaphragm repair kit - non-relieving	P31KB00RC
Panel mount nut - aluminum	P31KA00MM
Panel mount nut - plastic	P31KA00MP
Angle bracket (attaches via panel nut)	P31KB00MR
C-bracket (fits to body)	P31KA00MW
T-bracket with body connector	P31KA00MT
Body connector	P31KA00CB

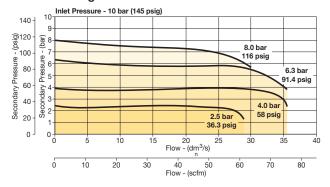


Inches (mm)

NOTE: 1.20 in. (30mm) hole required for panel nut mounting.

Flow Charts

P31RB 1/4" Regulator



⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Gauges

•		
Square flush	0-4 bar	K4511SCR04B
mount gauge	0-11 bar	K4511SCR11B
	0-60 psig	K4511SCR060
	0-160 psig	K4511SCR160
Square with	0-4 bar	P6G-PR10040
adapter kit	0-11 bar	P6G-PR10110
	0-60 psig	P6G-PR90060
	0-160 psig	P6G-PR90160
1.00" Round 1/8"	0-60 psig / 0-4 bar	K4510N18060
center back mount	0-160 psig / 0-11 bar	K4510N18160
40mm Round 1/8"	0-30 psig / 0-2 bar	K4515N18030
center back mount (Not for use with common	0-60 psig / 0-4 bar	K4515N18060
port regulators)	0-160 psig / 0-11 bar	K4515N18160

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





P31 Common P1 Regulators - Mini

- Manifold style regulator with line pressure on both sides
- Pressure output is at front or rear
- Inlet port 1/4" (NPT, BSPP & BSPT)
- Working port 1/8"
- Robust construction
- Secondary pressure ranges
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & non-relieving types
- Non-rising knob

Introduction

Filters

Coalescers

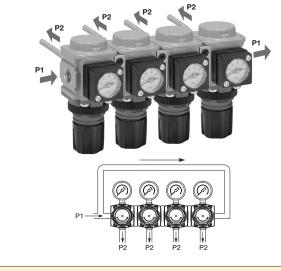
Regulators

Regulators

Filter /

_ubricators

Combinations





Self relieving regulator with gauge



Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
1/4"	125 psig (8 bar)	None	P31HB92BNNP
1/4"	125 psig (8 bar)	Square	P31HB92BN5P

Operating information

Flow capacity*:

1/4 42 scfm (20 dm³/s, ANR)

-4°F to 150°F (-20°C to 65.5°C) Operating temperature:

Supply pressure (max): 300 psig (20 bar) Adjusting range pressure: 30 psig (0-2 bar) 60 psig (0-4 bar)

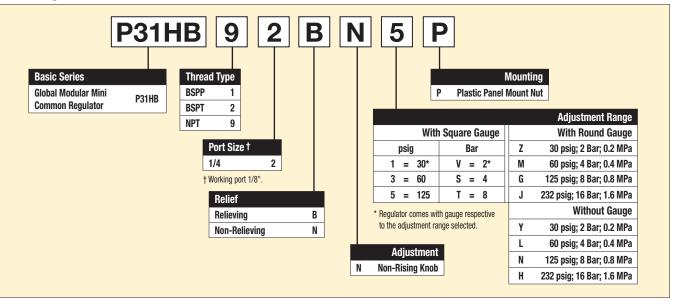
125 psig (0-8 bar) 232 psig (0-16 bar) 1/4 NPT, BSPP, BSPT

P1 port size (inlet/outlet) 1/8 NPT, BSPP, BSPT P2 regulated ports (2 ea.)

Weight: 0.66 lb (0.30 kg)

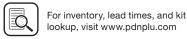
* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

Ordering Information:







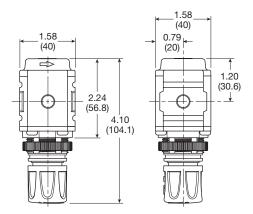


Mini Common P1 Regulators

Body	Aluminum
Adjustment knob	Acetal
Bonnet	Glass-filled PBT
Diaphragm assembly	Brass / Nitrile
Valve assembly	Brass / Nitrile

Repair and Service Kits

Diaphragm repair kit - relieving	P31KB00RB
Diaphragm repair kit - non-relieving	P31KB00RC
Panel mount nut - aluminum	P31KA00MM
Panel mount nut - plastic	P31KA00MP
Angle bracket (attaches via panel nut)	P31KB00MR
T-bracket with body connector	P31KA00MT
Body connector	P31KA00CB

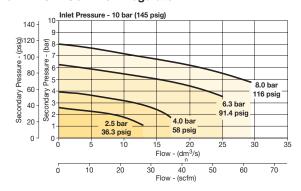


Inches (mm)

NOTE: 1.20 in. (30mm) hole required for panel nut mounting.

Flow Charts

P31HB 1/4" Common Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

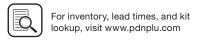
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Gauges

Square with	0-4 bar	P6G-PR10040
adapter kit	0-11 bar	P6G-PR10110
	0-60 psig	P6G-PR90060
	0-160 psig	P6G-PR90160
1.00" round 1/8"	0-60 psig / 0-4 bar	K4510N18060
center back mount	0-160 psig / 0-11 bar	K4510N18160

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





P32 Regulators - Compact

- Integral 1/4", 3/8" or 1/2" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Secondary pressure ranges
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & non-relieving types
- · Regulator will reverse flow as standard
- Non-rising knob

Introduction

Filters

Coalescers

Regulators

Filter/

_ubricators

Combinations

Available T-handle



Self relieving regulator with gauge



Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
1/4"	125 psig (8 bar)	None	P32RB92BNNP
1/4"	125 psig (8 bar)	Round	P32RB92BNGP
3/8"	125 psig (8 bar)	None	P32RB93BNNP
3/8"	125 psig (8 bar)	Round	P32RB93BNGP
1/2"	125 psig (8 bar)	None	P32RB94BNNP
1/2"	125 psig (8 bar)	Round	P32RB94BNGP

Operating information

Flow capacity*:

1/4 148 scfm (70 dm³/s, ANR) 3/8, 1/2 165 scfm (78 dm³/s, ANR)

Operating temperature: -13°F to 150°F (-25°C to 65.5°C)

Supply pressure (max): 300 psig (20 bar)

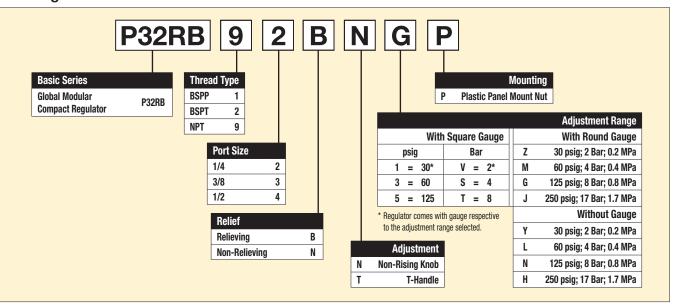
Adjusting range pressure: 30 psig (0-2 bar)
60 psig (0-4 bar)
125 psig (0-8 bar)
250 psig (0-17 bar)

Gauge port (2 each) 1/4 NPT, BSPP, BSPT

Weight: 0.90 lb (0.41 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

Ordering Information:



Most popular.





For inventory, lead times, and kit

lookup, visit www.pdnplu.com

Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Bonnet	Glass-filled nylon
Diaphragm assembly	Nitrile / Zinc
Valve assembly	Brass / Nitrile
Springs	Steel, stainless steel
Seals	Nitrile
Panel nut	Acetal

Repair and Service Kits

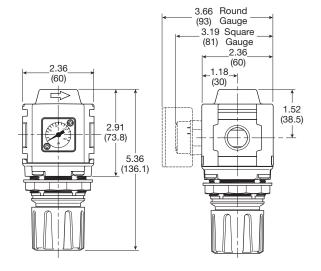
Diaphragm repair kit - relieving	P32KB00RB
Diaphragm repair kit - non-relieving	P32KB00RC
Panel mount nut - aluminum	P32KA00MM
Panel mount nut - plastic	P32KA00MP
Angle bracket (attaches via panel nut)	P32KB00MR
T-bracket with body connector	P32KA00MT
T-bracket	P32KA00MB
Body connector	P32KA00CB

⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

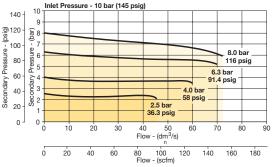


Inches (mm)

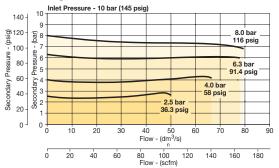
NOTE: 1.90 in. (48mm) hole required for panel nut mounting.

Flow Charts

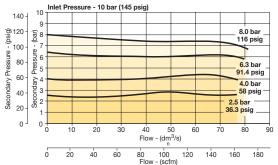




P32RB 3/8" Regulator



P32RB 1/2" Regulator



Gauges

B25

0-4 bar	K4511SCR04B
0-11 bar	K4511SCR11B
0-60 psig	K4511SCR060
0-160 psig	K4511SCR160
0-4 bar	P6G-PR10040
0-11 bar	P6G-PR10110
0-60 psig	P6G-PR90060
0-160 psig	P6G-PR90160
0-30 psig / 0-2 bar	K4520N14030
0-60 psig / 0-4 bar	K4520N14060
0-160 psig / 0-11 bar	K4520N14160
0-300 psig / 0-20 bar	K4520N14300
	0-11 bar 0-60 psig 0-160 psig 0-4 bar 0-11 bar 0-60 psig 0-160 psig 0-160 psig 0-30 psig / 0-2 bar 0-60 psig / 0-4 bar 0-160 psig / 0-11 bar

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



P32 Semi-Precision Regulator - Compact

- Integral 1/4", 3/8" or 1/2" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Secondary pressure ranges
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & non-relieving types
- Regulator will reverse flow as standard
- Non-rising knob

Introduction

Filters

Coalescers

Regulators

Regulators Filter/

_ubricators

Combinations



Self relieving regulator with gauge



Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
JIZE	(Hellevilig)	Gauge	r art Number
1/4"	125 psig (8 bar)	None	P32RB92PNNP
1/4"	125 psig (8 bar)	Round	P32RB92PNGP
3/8"	125 psig (8 bar)	None	P32RB93PNNP
3/8"	125 psig (8 bar)	Round	P32RB93PNGP
1/2"	125 psig (8 bar)	None	P32RB94PNNP
1/2"	125 psig (8 bar)	Round	P32RB94PNGP



Operating information

Flow capacity*: 1/4, 3/8, 1/2

53 scfm (25 dm³/s, ANR) 0.6 psig (0.04 bar) for Effect of supply

pressure variation 25 psig (1.7 bar) change in P1 -13°F to 150°F (-25°C to 65.5°C) Operating temperature:

Supply pressure (max): 300 psig (20 bar)

Adjusting range pressure: 0 to 30 psig (0 to 2 bar)

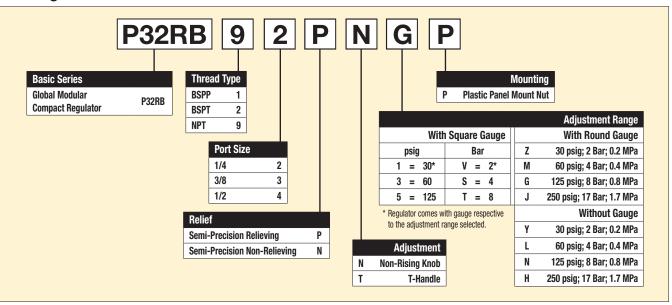
0 to 60 psig (0 to 4 bar) 0 to 125 psig (0 to 8 bar) 0 to 250 psig (0 to 17 bar)

1/4 NPT, BSPP, BSPT Gauge port (2 each):

Weight: 0.90 lb (0.41 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

Ordering Information:









For inventory, lead times, and kit

lookup, visit www.pdnplu.com

Adjustment knob

Valve assembly

Diaphragm assembly

Body

Bonnet

Springs

Panel nut

Seals

Aluminum

Nitrile / zinc

Brass / nitrile

Glass-filled nylon

Steel, stainless steel

Acetal

Nitrile

Acetal

Repair and Service Kits

Material Specifications

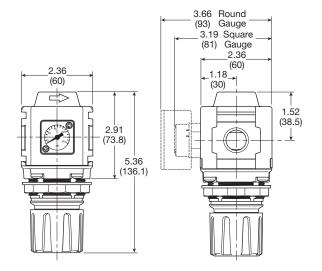
Diaphragm repair kit - relieving	P32KB00RB
Diaphragm repair kit - non-relieving	P32KB00RC
Panel mount nut - aluminum	P32KA00MM
Panel mount nut - plastic	P32KA00MP
Angle bracket (attaches via panel nut)	P32KB00MR
T-bracket with body connector	P32KA00MT
T-bracket	P32KA00MB
Body connector	P32KA00CB

MARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

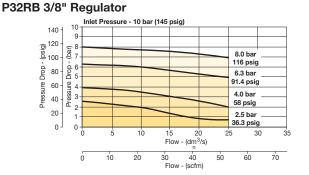
CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

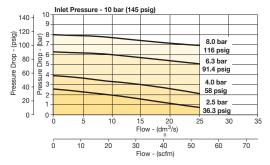


Inches (mm)

NOTE: 1.90 in. (48mm) hole required for panel nut mounting.



P32RB 1/2" Regulator



Gauges

-		
Square flush	0-4 bar	K4511SCR04B
mount gauge	0-11 bar	K4511SCR11B
	0-60 psig	K4511SCR060
	0-160 psig	K4511SCR160
Square with	0-4 bar	P6G-PR10040
adapter kit	0-11 bar	P6G-PR10110
	0-60 psig	P6G-PR90060
	0-160 psig	P6G-PR90160
50mm (2") round	0-30 psig / 0-2 bar	K4520N14030
1/4" center back mount	0-60 psig / 0-4 bar	K4520N14060
mount	0-160 psig / 0-11 bar	K4520N14160
	0-300 psig / 0-20 bar	K4520N14300

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

P32 Common - P1 Regulator - Compact

- Manifold style regulator with line pressure on both sides.
- Pressure output is at front or rear.
- Inlet ports 1/4", 3/8" or 1/2" (NPT, BSPP & BSPT)
- Working port 1/4"
- Robust construction
- Secondary pressure ranges
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & non-relieving types
- Regulator will reverse flow as standard
- Non-rising knob

Introduction

Filters

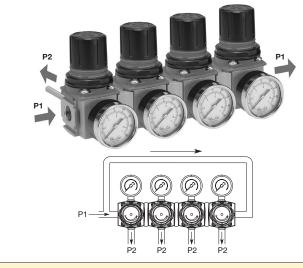
Coalescers

Regulators

Regulators Filter/

_ubricators

Combinations





Self relieving regulator with gauge



Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
1/4"	125 psig (8 bar)	None	P32HB92BNNP
3/8"	125 psig (8 bar)	None	P32HB93BNNP
1/2"	125 psig (8 bar)	None	P32HB94BNNP

Operating information

Flow capacity*:

1/4, 3/8, 1/2 64 scfm (30 dm³/s, ANR)

Operating temperature: -25°C to 65.5°C (-13°F to 150°F)

Supply pressure (max): 300 psig (20 bar)

0 to 30 psig (0 to 2 bar) Adjusting range pressure: 0 to 60 psig (0 to 4 bar)

0 to 125 psig (0 to 8 bar) 0 to 232 psig (0 to 16 bar)

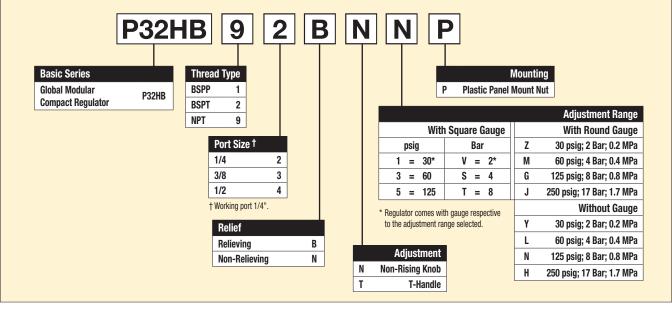
1/4 NPT, BSPP, BSPT Gauge port (2 each):

0.50 lb (0.23 kg) Weight:

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar)

and 14.5 psig (1 bar) pressure drop.

Ordering Information:









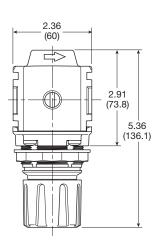
Compact Common P1 Precision Regulator

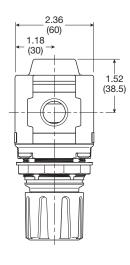
Material Specifications

Body	Aluminum	
Adjustment knob	Acetal	
Bonnet	Glass-filled nylon	
Diaphragm assembly	Nitrile / zinc	
Valve assembly	Brass / nitrile	
Springs	Steel, stainless steel	
Seals	Nitrile	
Panel nut	Acetal	

Repair and Service Kits

Diaphragm repair kit - relieving	P32KB00RB
Diaphragm repair kit - non-relieving	P32KB00RC
Panel mount nut - aluminum	P32KA00MM
Panel mount nut - plastic	P32KA00MP
Angle bracket (attaches via panel nut)	P32KB00MR
T-bracket with body connector	P32KA00MT
T-bracket	P32KA00MB
Body connector	P32KA00CB



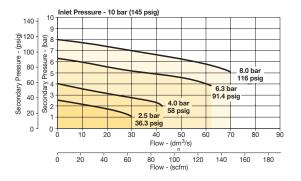


Inches (mm)

NOTE: 1.90 in. (48mm) hole required for panel nut mounting.

Flow Charts

P32HB Common Port Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Gauges

B29

-		
Square flush	0-4 bar	K4511SCR04B
mount gauge	0-11 bar	K4511SCR11B
	0-60 psig	K4511SCR060
	0-160 psig	K4511SCR160
Square with	0-4 bar	P6G-PR10040
adapter kit	0-11 bar	P6G-PR10110
	0-60 psig	P6G-PR90060
	0-160 psig	P6G-PR90160
50mm (2") round	0-30 psig / 0-2 bar	K4520N14030
1/4" center back mount	0-60 psig / 0-4 bar	K4520N14060
mount	0-160 psig / 0-11 bar	K4520N14160
	0-300 psig / 0-20 bar	K4520N14300

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

P33 Regulators - Standard

- Integral 1/2" or 3/4" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Secondary pressure ranges
- · Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & non-relieving types
- Non-rising knob

Introduction

Filters

Coalescers

Regulators

Filter /

_ubricators

Combinations



Self relieving regulator with gauge



Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
1/2"	125 psig (8 bar)	None	P33RA94BNNP
1/2"	125 psig (8 bar)	Round	P33RA94BNGP
3/4"	125 psig (8 bar)	None	P33RA96BNNP
3/4"	125 psig (8 bar)	Round	P33RA96BNGP

Operating information

Flow capacity*:

1/2, 3/4 233 scfm (110 dm³/s, ANR) Operating temperature: -13°F to 150°F (-25°C to 65.5°C)

Supply pressure (max): 300 psig (20 bar)

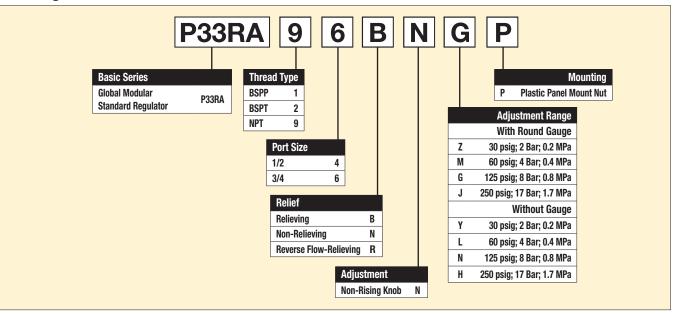
0 to 30 psig (0 to 2 bar) Adjusting range pressure: 0 to 60 psig (0 to 4 bar)

0 to 125 psig (0 to 8 bar) 0 to 250 psig (0 to 17 bar)

1/4 NPT, BSPP, BSPT Gauge port (2 each): 1.37 lb (0.62 kg) Weight:

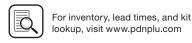
* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

Ordering Information:



Most popular.





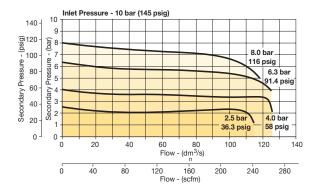
Air Preparation Products **Global Air Preparation**

Material Specifications

Body	Aluminum	
Adjustment knob	Acetal	
Body cap	ABS	
Bonnet	Glass-filled nylon	
Diaphragm assembly	Nitrile / zinc	
Valve assembly	Brass / nitrile	
Springs	Steel, stainless steel	
Seals	Nitrile	
Panel nut	Acetal	

Flow Charts

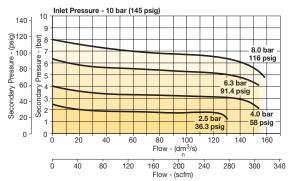
P33RA 1/2" Regulator



Repair and Service Kits

Diaphragm repair kit - relieving	P33KA00RB
Diaphragm repair kit - non-relieving	P33KA00RC
Panel mount nut - aluminum	P33KA00MM
Panel mount nut - plastic	P33KA00MP
Angle bracket (attaches via panel nut)	P33KA00MR
T-bracket with body connector	P32KA00MT
T-bracket	P32KA00MB
Body connector	P32KA00CB

P33RA 3/4" Regulator

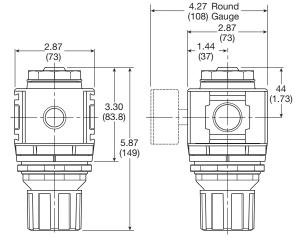


⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Gauges

50mm (2") round	0-30 psig / 0-2 bar	K4520N14030
1/4" center back mount	0-60 psig / 0-4 bar	K4520N14060
mount	0-160 psig / 0-11 bar	K4520N14160
	0-300 psig / 0-20 bar	K4520N14300

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Inches (mm)

NOTE: 2.40 in. (61mm) hole required for panel nut mounting.





Proportional Regulators

P31P & P32P Proportional Regulators

(Revised 10-27-20)

- · Very fast response times
- Accurate output pressure
- Parameter settings
- Selectable I/O parameters
- · Quick, full flow exhaust
- LED display indicates output pressure
- No air consumption in steady state
- Multiple mounting options
- Protection to IP65

Introduction

Filters

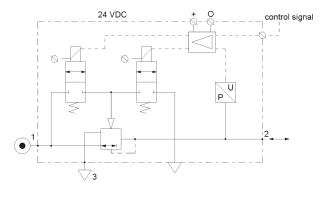
Coalescers

Regulators

Regulators Filter/

_ubricators

Combinations



Port Size	Description	Part Number
1/4"	145 psig (0-10 bar), NC 0-10V	P31PA92AD2VD1A
1/2"	145 psig (0-10 bar), NC 0-10V	P32PA94AD2VD1A



P31P Series **Bottom exhaust**



P32P Series **Bottom exhaust**

Operating information

Flow capacity*: P31P 40 scfm (19 dm³/s, ANR) P32P 120 scfm (57 dm³/s, ANR)

Temperature range: 32°F to 122°F (0°C to 50°C)

Supply pressure (max):

2 bar unit 36.3 psig (2.5 bar) 10 bar unit 152 psig (10.5 bar)

Operating pressure (min): P2 pressure + 7.3 psig (0.5 bar)

Working medium: Compressed air or inert gasses,

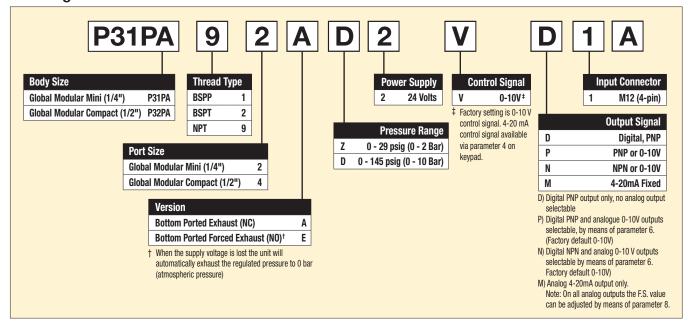
filtered to 40µ

Pressure range: 0 to 30 psig (0 to 2 bar) 0 to 145 psig (0 to 10 bar)

P31P 0.64 lb (0.291 kg) Weight: P32P 1.42 lb (0.645 kg)

* Inlet pressure 91.3 psig (6.3 bar), inlet pressure and 4.9 psig (0.34 bar) pressure drop.

Ordering Information:







Proportional Regulators

Technical Information

Accuracy

+/- 1.0% of F.S.*

* Full scale (F.S.) - For 2 bar (29 psig) versions this will be 2 bar (29 psig), for the 10 bar (145 psig) version full scale will be 10 bar (145 psig).

Air consumption

No consumption in stable regulated situation.

Display

The regulator is provided with a digital display, indicating the output pressure, either in bar or psig.

The factory setting is as indicated on the label, can be changed through to software at all times (parameter 14)

Supply voltage

24 VDC +/- 10%

Power consumption

Max. 1.1W with unloaded signal outputs

Control signals

The electronic pressure regulator can be externally controlled through an analogue control signal of either 0-10V or 4-20mA. (parameter 4).

Output signals

As soon as the output pressure is within the signal band a signal is given of 24VDC, PNP Ri = 1 kOhm Outside the signal band this connection is 0V.

Connections

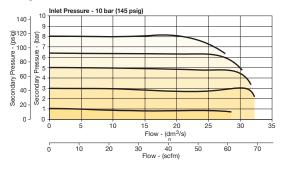
(In case of output signal (Option D)
Central M12 connector 4-pole

The electrical connections are as follows:

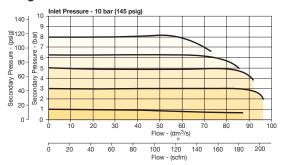
Pin N	lo.	Function	Color
1	24 V	Supply	Brown
	0 to 10 V	Control Signal Ri = 100k Ω	White
2	4 to 20mA	Control Signal Ri = 500 Ω	vvriite
3	0 V (GND)	Supply & Set Point Ground	Blue
4	24 V	Alarm Output Signal	Black

Flow Charts

P31P Regulator 1/4" Ports



P32P Regulator 1/2" Ports



Degree of protection: IP65

EU conformity

CE: standard

EMC: according to directive 89/336/EEC This pressure regulator is in accordance with:

EN 61000-6-1:2001 EN 61000-6-2:2001 EN 61000-6-3:2001 EN 61000-6-4:2001

Mounting position

B33

Preferably vertical, with the cable gland on top.

Materials: P31P & P32P

Magnet core	Steel
Solenoid valve poppet	FPM
Solenoid valve housing	Techno polymer
Regulator body (P31P & P32P versions)	Aluminum
Regulator top housing	Nylon
Valve head	Brass & NBR
Remaining seals	NBR

Filters

Regulators

How to change parameters - How to Videos available at www.parker.com/pneu/propreg

Pressing the Accept key "acc" for more than 3 seconds, will activate parameter change mode. The user can then select the parameters by pressing up or down key (display will show Pxx). When parameter number is correct, pressing accept again will enter parameter number (display will show parameter value).

Pressing the up or down key will change the parameter itself (display will flash indicating parameter editing mode). Pressing the accept key will accept the new parameter value (all digits will flash whilst being accepted).

After releasing all keys, the next parameter number will be presented on the display (you may step to the next parameter). When no key is pressed, after 3 seconds the display will show the actual output pressure.

When the unit is initially powered up allow approximately 10 seconds for the unit to "boot-up" before changing parameter settings.

Only parameter numbers 0, 4, 6, 8, 9, 14, 18, 19, 20, 12, 13 and 21 are accessible to edit. All other parameters are fixed.

Manual mode:

When keys DOWN and UP are pressed during startup, (connecting to the 24V power supply) manual mode is activated. This means that the user is able to in/decrease the output pressure of the regulator, by pressing the UP or DOWN key. During this action the display will blink, indicating that the manual mode is activated. After powering up again, the unit will revert back to normal mode.

Back to Factory Setting

After start up. (Power is on)

Entering this value in parameter 0 will store the calibrated factory data into the working parameters. (Default calibration data is used)

Parameter Number 0 – Reset Back to Factory Settings									
Step	1	2	3	4	5				
Press	acc 3-6 seconds	or	acc	or	acc				
Until Display Reads	Pxx	P00	Flashing Decimal	Flashing Decimal	Flashing	PO 1			
Description	Accesses changeable parameters.	Accesses parameter no. 0.	Displays current parameter value.	Edits parameter. 3 = standard factory settings. If other than 3, use Up or Down Arrow and accept 3	Accepts and saves new parameter setting.	Sequences to next parameter.			

Set Control Signal

The unit is factory set for 0-10 V control signal. If 4-20 mA control signal is required, change parameter 4.

Parameter Number 4 – Set Control Signal in Volts or Milliamps								
Step	1	2	3	4	5			
Press	acc 3-6 seconds	or	acc	or	acc			
Until Display Reads	Pxx	PD4	Flashing Decimal	Flashing Decimal	Flashing	P05		
Description	Accesses changeable parameters.	Accesses parameter no. 4.	Displays current parameter value. 1 = V 0 = mA	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.		

How to Videos at www.parker.com/pneu/propreg





Set Output Signal

Parameter 6 is used to set the type of output signal to your PLC. This parameter is used as follows:

Output Signal option "0" = Digital Output - PNP

• Factory set at "0" Non Adjustable

Output Signal option "P" = Digital PNP or Analog 1-10V

- Factory set at "1" for Analog Signal
- · Convert to Digital PNP by changing parameter to "0" setting

Output Signal option "N" = Digital NPN or Analog 1-10V

- Factory set at "1" Analog Signal
- Convert to Digital NPN by changing parameter to "0"

Output Signal option "M" = Analog 4-20 mA

• Factory set at "2" Non Adjustable

Parameter Number 6 – Set Output Signal								
Step	1	2	3	4	5			
Press	acc 3-6 seconds	or	acc	or	acc			
Until Display Reads	Pxx	P05	Flashing Decimal	#### Flashing Decimal (Value 0, 1 or 2)	###	P07		
Description	Accesses changeable parameters.	Accesses parameter no. 6.	Displays current parameter value. 1 = m factory default for P3H with analog options	Edits parameter. 0 = digital (NPN or PNP) 1 = analog 010V 2 = analog 420 mA	Accepts and saves new parameter setting.	Sequences to next parameter.		

Adjust Span Analog Output Signal

Set value is a % of Full Analog range. As an example for a 0-10V output signal, the original factory setting of 100% will give you an adjustment of 0-10V. If you reset Parameter 8 to 50%, the new output range would be 0-5V or 50% of the full range.

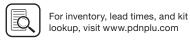
In the event that the output signal is to low, in a certain application, you can adjust it by increasing Parameter 8 to a maximum value of 130% of scale.

Note that all values are nominal and that an actual measurement may be required to ensure signal strength.

Parameter Number 8 – Adjust Span Analog Output Signal								
Step	1	2	3	4	5			
Press	acc 3-6 seconds	or	acc	or	acc			
Until Display Reads	Pxx	P08	Flashing Decimal (For 2 bar versions value = 92)	Flashing Decimal (Value between 0 and 130)	###	P[]9		
Description	Accesses changeable parameters.	Accesses parameter no. 8.	Displays current parameter value.	Edits parameter.	Accepts and saves new parameter setting and implements the new analog signal span.	Sequences to next parameter.		

How to Videos at www.parker.com/pneu/propreg





B35

sensor.

setting.

next parameter.

parameter no. 9.

Introduction

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Adjust Digital Display

If necessary, adjustments can be made to the digital display when using an external pressure sensor.

Parameter Number 9 – Adjust Digital Display Value (Pressure Calibration)								
Step	1	2	3	4	5			
Press								
	3-6 seconds	or	acc	or	acc			
Until Display Reads	Pxx	P[]9	###	###	###	P 10		
Description	Accesses changeable	Accesses	Displays current	Use up or down arrows and accept to adjust the display value if using an external pressure	Accepts and saves new parameter	Sequences to		

digital display

Set Pressure Scale

parameters.

Units with NPT port threads are supplied with a factory set psig pressure scale. Use parameter 14 to change scale to bar.

Parameter Number 14 – Set Pressure Scale in psig or bar								
Step	1	2	3	4	5			
Press	acc 3-6 seconds	or	acc	or	acc			
Until Display Reads	Pxx	P 14	Flashing Decimal	Flashing Decimal	Flashing	P 15		
Description	Accesses changeable parameters.	Accesses parameter no. 14.	Displays current parameter value. 1 = psig 0 = bar 2 = MPa	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.		





Preset Minimum Pressure

If there is a need for a pre-set Minimum pressure, use parameter 18. (Note: preset pressure is affected by % P19.)

Parameter Number 18 – Set Minimum Preset Pressure								
Step	1	2	3	4	5			
Press	acc 3-6 seconds	or	acc	or	acc			
Until Display Reads	Pxx	P 18	Flashing Decimal	Flashing Decimal (value between 0 and 200)	###	P 19		
Description	Accesses changeable parameters.	Accesses parameter no. 18.	Displays current parameter value. Incremental value is: 2 bar unit: x 2 mbar x % P19 10 bar unit: x 10 mbar x % P19	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.		

Set Pressure Correction

Pressure correction allows the user to set a Maximum pressure as a percentage of secondary pressure F.S.

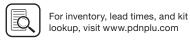
Example: If F.S. is 10 bar, set parameter 19 to 50 for Maximum preset pressure of 5 bar.

Pressure correction also affects the Minimum preset pressure in parameter 18.

Example: If F.S. is 10 bar and parameter 18 is set to a value of 100 (1 bar), and parameter 19 is set to 50%, then the actual Minimum preset pressure seen is 0.5 bar.

Parameter Number 19 – Set Maximum Preset Pressure								
Step	1	2	3	4	5			
Press	acc 3-6 seconds	or	acc	or	acc			
Until Display Reads	Pxx	P 19	Flashing Decimal	#### Flashing Decimal (value between 0 and 100)	###	P20		
Description	Accesses changeable parameters.	Accesses parameter no. 19.	Displays current parameter value. Incremental value is: % of F.S.	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.		





The regulation speed of the pressure regulator can be modified by means of one parameter. (P 20) The value in this parameter has a range from 0-5. A higher value indicates slower regulation speed, but will be more stable.

Filters

Coalescers

Behavior Control

Parameter Number 20 – Set Behavior Control								
Step	1	2	3	4	5			
Press	acc 3-6 seconds	or	acc	or	acc			
Until Display Reads	Pxx	P20	Flashing Decimal	#### Flashing Decimal (value between 0 and 5)	###	P2 ;		
Description	Accesses changeable parameters.	Accesses parameter no. 20.	Displays current parameter value.	Edits parameter 0 = custom set* 1 = fastest (narrow proportional band) 2 = fast 3 = normal 4 = slow 5 = slowest (proportional band is broad)	Accepts and saves new parameter setting.	Sequences to next parameter.		

^{*} When the value 0 is entered, you are able to create your own custom settings true parameters 12, 13 and 21.

Fine Settings Set Proportional Band

Proportional band is used for setting the reaction sensitivity of the regulator. The displayed value is X 10 mbar and has a range between 50 (0.5 bar) and 250 (2.5 bar).

Parameter Number 12 – Set Proportional Band (P20 Must be Set to 0)								
Step	1	2	3	4	5			
Press	acc 3-6 seconds	or	acc	or	acc			
Until Display Reads	Pxx	P 12	Flashing Decimal	#### Flashing Decimal (value between 50 and 250)	###	P 13		
Description	Accesses changeable parameters.	Accesses parameter no. 12.	Displays current parameter value. Incremental value is: x 10 mbar	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.		





Set Deadband

Deadband is the Minimum limit of accuracy at which the regulator is set for normal operation. The displayed value is X 10 mbar and has a range between 4 (40 mbar) and 40 (400 mbar).

Parameter Number 13 – Set Deadband (P20 Must be Set to 0)									
Step	1	2	3	4	5				
Press	acc 3-6 seconds	or	acc	or	acc				
Until Display Reads	Pxx	P 13	Flashing Decimal	#### Flashing Decimal (value between 4 and 40)	###	PIY			
Description	Accesses changeable parameters.	Accesses parameter no. 13.	Displays current parameter value. Incremental value is x 10 mbar	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.			

Proportional Effect

Parameter Number 21 – Set Proportional Effect (P20 Must be Set to 0)								
Step	1	2	3	4	5			
Press	acc 3-6 seconds	or	acc	or	acc			
Until Display Reads	Pxx	P2	Flashing Decimal	#### Flashing Decimal (value between 5 and 100)	###	P22		
Description	Accesses changeable parameters.	Accesses parameter no. 21.	Displays current parameter value.	Edits parameter. 5 = fastest regulation 100 = slowest regulation.	Accepts and saves new parameter setting.	Sequences to next parameter.		

Parameter Number 39 - Displays Current Software Version

Step	1	2	3
Press	acc 3-6 seconds	or	acc
Until Display Reads	Pxx	P39	###
Description	Accesses changeable parameters.	Accesses parameter no. 39.	Displays current parameter value. XXX = current software version





Introduction

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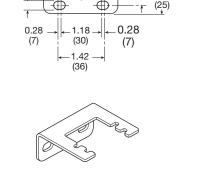
Regulators

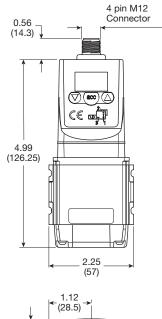
Regulators Filter/

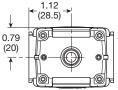
Lubricators

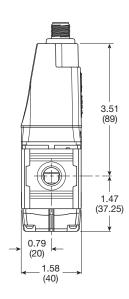
Combinations

Accessories and Kits

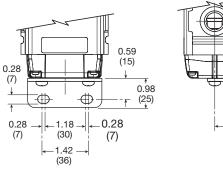


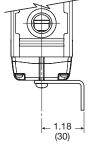




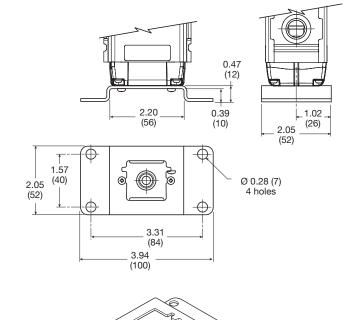


L-Bracket P3HKA00ML





Foot Bracket P3HKA00MC





2 mtr. cable with moulded straight M12x1 connector

CB-M12-4P-2M



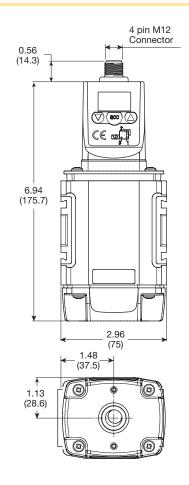


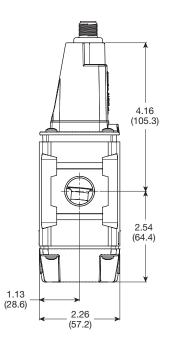


Dimensional Data

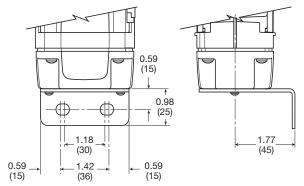
P32P

Dimensions inches (mm)



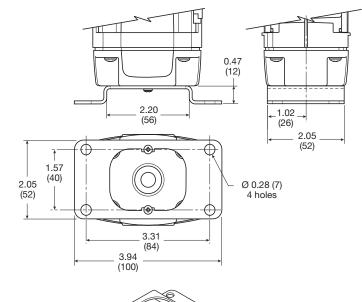


L-Bracket P3KKA00ML





Foot Bracket P3KKA00MC



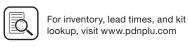
Cables

 Description
 Part Number

 2 mtr. cable with moulded straight M12x1 connector
 CB-M12-4P-2M







P31 Filter / Regulators - Mini

- Integral 1/4" ports (NPT, BSPP & BSPT)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- · Robust but lightweight aluminum construction
- Positive bayonet latch to ensure correct & safe fitting
- Secondary pressure ranges

Introduction

Filters

Coalescers

Regulators

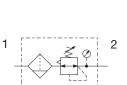
Regulators Filter /

_ubricators

Combinations

Accessories

 Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation



Port Size	Description (Relieving)	Bowl / Drain Type ‡	Part Number
1/4"	125 psig (8 bar)	Poly / Manual	P31EB92EGMBN5P
1/4"	125 psig (8 bar)	Poly / Pulse	P31EB92EGBBN5P
1/4"	125 psig (8 bar)	Metal / Manual	P31EB92EMMBN5P
1/4"	125 psig (8 bar)	Metal / Pulse	P31EB92EMBBN5P

[‡] For polycarbonate bowl, see caution in Engineering Section A.



Operating information

Flow capacity*: 73 scfm (35 dm³/s, ANR)

Operating temperature[‡]:

Plastic bowl 14°F to 125°F (-10°C to 52°C) 14°F to 150°F (-10°C to 65.5°C) Metal bowl

Supply pressure (max):

Plastic bowl 150 psig (10 bar) Metal bow 250 psig (17 bar)

Standard filtration 5 micron

Useful retention†: 0.4 US oz. (12 cm³) Adjusting range pressure: 0 to 30 psig (0 to 2 bar) 0 to 60 psig (0 to 4 bar)

0 to 125 psig (0 to 8 bar) 0 to 250 psig (0 to 17 bar) 1/8 NPT, BSPP, BSPT

Weight: 0.42 lb (0.19 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

** Non-gauge option only.

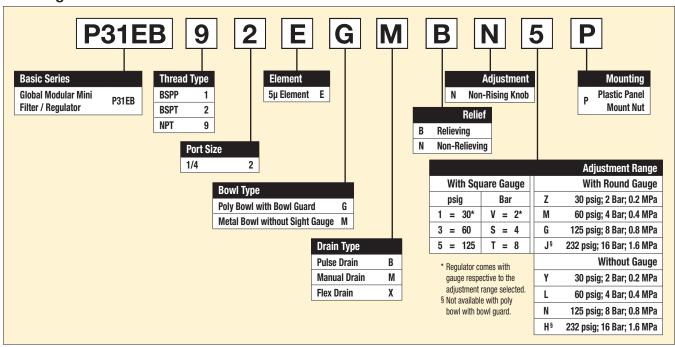
Gauge port (2 each)**:

[‡] Units with square gauges: 5°F to 150°F (-15°C to 65.5°C)

† Useful retention refers to volume below the quiet zone baffle.

Ordering Information:

Within ISO 8573-1: 1991 Class 3 (Particulates) Air quality: Within ISO 8573-1: 2001 Class 6 (Particulates)



Most popular.





Introduction

Mini Filter / Regulators

Material Specifications

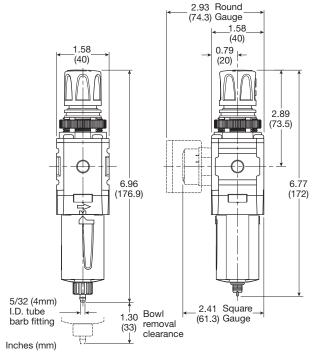
Body	Aluminum
Adjustment knob	Acetal
Body cap	ABS
Bonnet	PBT
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Bowl guard	Nylon
Filter element	Polyethylene
Seals	Nitrile
Springs	Steel
Valve assembly	Brass / Nitrile
Diaphragm assembly	Brass / Nitrile
Panel nut	Acetal

⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

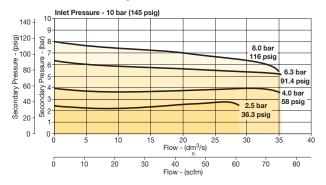
CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Flow Charts

P31EB 1/4" Filter / Regulator



Repair and Service Kits

Plastic bowl / bowl guard manual drain	P31KB00BGM
Plastic bowl / bowl guard pulse drain	P31KB00BGB
Metal bowl / w/o sight gauge pulse drain	P31KB00BMB
5μ particle filter element	P31KA00ESE
Diaphragm repair kit - relieving	P31KB00RB
Diaphragm repair kit - non-relieving	P31KB00RC
Panel mount nut - aluminum	P31KA00MM
Panel mount nut - plastic	P31KA00MP
Angle bracket (attaches via panel nut)	P31KB00MR
C-bracket (fits to body)	P31KA00MW
T-bracket with body connector	P31KA00MT
Body connector	P31KA00CB

Gauges

_		
Square flush	0-4 bar	K4511SCR04B
mount gauge	0-11 bar	K4511SCR11B
	0-60 psig	K4511SCR060
	0-160 nsig	K4511SCR160

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting

Manual Drain

Pulse Drain





P32 Filter / Regulators - Compact

- Integral 1/4", 3/8" or 1/2" ports (NPT, BSPP & BSPT)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- · Robust but lightweight aluminum construction
- Positive bayonet latch to ensure correct & safe fitting
- Secondary pressure ranges

Introduction

Filters

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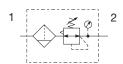
Regulators

Filter /

_ubricators

Combinations

 Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation



Port Size	Description (Relieving)	Bowl / Drain Type ‡	Part Number
1/4"	125 psig (8 bar)	Poly / Manual	P32EB92EGMBNGP
1/4"	125 psig (8 bar)	Poly / Auto	P32EB92EGABNGP
1/4"	125 psig (8 bar)	Metal / Manual	P32EB92ESMBNGP
1/4"	125 psig (8 bar)	Metal / Auto	P32EB92ESABNGP
3/8"	125 psig (8 bar)	Poly / Manual	P32EB93EGMBNGP
3/8"	125 psig (8 bar)	Poly / Auto	P32EB93EGABNGP
3/8"	125 psig (8 bar)	Metal / Manual	P32EB93ESMBNGP
3/8"	125 psig (8 bar)	Metal / Auto	P32EB93ESABNGP
1/2"	125 psig (8 bar)	Poly / Manual	P32EB94EGMBNGP
1/2"	125 psig (8 bar)	Poly / Auto	P32EB94EGABNGP
1/2"	125 psig (8 bar)	Metal / Manual	P32EB94ESMBNGP
1/2"	125 psig (8 bar)	Metal / Auto	P32EB94ESABNGP

[‡] For polycarbonate bowl, see caution in Engineering Section A.



Operating information

Flow capacity*: 148 scfm (70 dm3/s, ANR) 3/8 158 scfm (75 dm3/s, ANR) 1/2 164 scfm (77 dm3/s, ANR)

Operating temperature: Plastic bowl

-13°F to 125°F (-25°C to 52°C) -13°F to 150°F (-25°C to 65.5°C) Metal bowl

Supply pressure (max):

Plastic bowl 150 psig (10 bar) Metal bowl 250 psig (17 bar)

Standard filtration: 5 micron

Useful retention[†]: 1.7 US oz. (51 cm³) Adjusting range pressure: 0 to 30 psig (0 to 2 bar) 0 to 60 psig (0 to 4 bar)

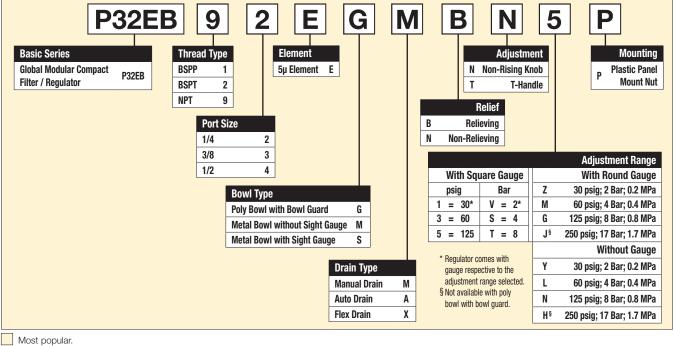
0 to 125 psig (0 to 8 bar) 0 to 250 psig (0 to 17 bar) 1/4 NPT, BSPP, BSPT

Gauge port (2 each): 1.17 lb (0.53 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

Ordering Information:

Within ISO 8573-1: 1991 Class 3 (Particulates) Within ISO 8573-1: 2001 Class 6 (Particulates)







[†] Useful retention refers to volume below the quiet zone baffle.

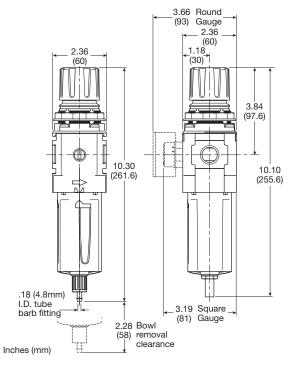
Compact Filter / Regulators

Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Element retainer / baffle	Acetal
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Bowl guard	Nylon
Filter element	Sintered polyethylene
Seals	Nitrile
Springs	Steel, stainless steel
Valve assembly	Brass / nitrile
Diaphragm assembly	Nitrile / zinc
Panel nut	Acetal
Sight gauge	Nylon

Repair and Service Kits

Plastic bowl / bowl guard manual drain	P32KB00BGM
Metal bowl / sight gauge manual drain	P32KB00BSM
Auto drain	P32KA00DA
5μ particle filter element	P32KA00ESE
Diaphragm repair kit - relieving	P32KB00RB
Diaphragm repair kit - non-relieving	P32KB00RC
Panel mount nut - aluminum	P32KA00MM
Panel mount nut - plastic	P32KA00MP
Angle bracket (fits to panel mount threads)	P32KB00MR
T-bracket (fits to body connector)	P32KA00MB
T-bracket with body connector	P32KA00MT
Body connector	P32KA00CB



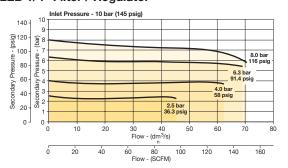
Manual Drain

Automatic Drain

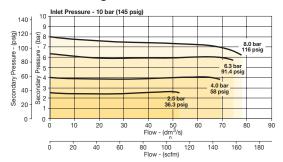
B45

Flow Charts

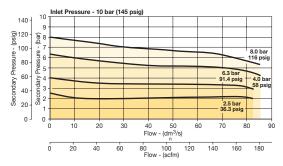
P32EB 1/4" Filter / Regulator



P32EB3/8" Filter/Regulator



P32EB 1/2" Filter/Regulator



⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Gauges

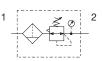
•		
50mm (2") round 1/4" center back mount	0-30 psig / 0-2 bar	K4520N14030
	0-60 psig / 0-4 bar	K4520N14060
	0-160 psig / 0-11 bar	K4520N14160
	0-300 psig / 0-20 bar	K4520N14300

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



P32 Semi-Precision Filter / Regulators - Compact

- Integral 1/4", 3/8" or 1/2" ports (NPT, BSPP & BSPT)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- · Robust but lightweight aluminum construction
- Positive bayonet latch to ensure correct & safe fitting
- Secondary pressure ranges
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation



Port Size	Description / Relieving	Bowl / Drain Type ‡	Part Number
1/4"	125 psig (8 bar)	Poly / Manual	P32EB92EGMPNGP
1/4"	125 psig (8 bar)	Poly / Auto	P32EB92EGAPNGP
1/4"	125 psig (8 bar)	Metal / Manual	P32EB92ESMPNGP
1/4"	125 psig (8 bar)	Metal / Auto	P32EB92ESAPNGP
3/8"	125 psig (8 bar)	Poly / Manual	P32EB93EGMPNGP
3/8"	125 psig (8 bar)	Poly / Auto	P32EB93EGAPNGP
3/8"	125 psig (8 bar)	Metal / Manual	P32EB93ESMPNGP
3/8"	125 psig (8 bar)	Metal / Auto	P32EB93ESAPNGP
1/2"	125 psig (8 bar)	Poly / Manual	P32EB94EGMPNGP
1/2"	125 psig (8 bar)	Poly / Auto	P32EB94EGAPNGP
1/2"	125 psig (8 bar)	Metal / Manual	P32EB94ESMPNGP
1/2"	125 psig (8 bar)	Metal / Auto	P32EB94ESAPNGP

[‡] For polycarbonate bowl, see caution in Engineering Section A.



Operating information

Flow capacity*: 1/4, 3/8, 1/2 75 scfm (35 dm³/s, ANR) Effect of supply 0.6 psig (0.04 bar) for 25 psig (1.7 bar) change in P1 pressure variation Operating temperature:

-13°F to 125°F (-25°C to 52°C) Plastic bowl Metal bowl -13°F to 150°F (-25°C to 65.5°C)

Supply pressure (max): Plastic bowl 150 psig (10 bar)

Metal bowl 250 psig (17 bar) Standard filtration: 5 micron

1.7 US oz. (51 cm³) Useful retention[†]: Adjusting range pressure: 0 to 30 psig (0 to 2 bar) 0 to 60 psig (0 to 4 bar) 0 to 125 psig (0 to 8 bar) 0 to 250 psig (0 to 17 bar)

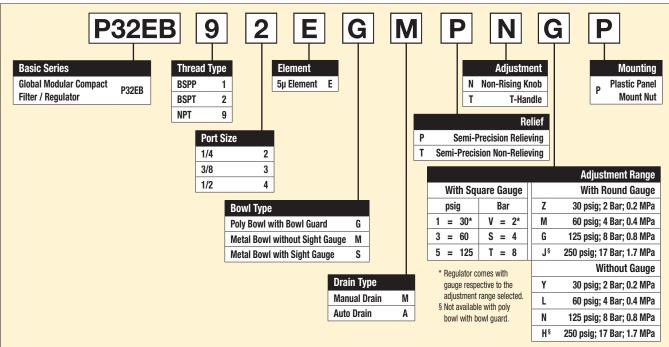
Gauge port (2 each): 1/4 NPT, BSPP, BSPT Weight: 1.17 lbs (0.53 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop. † Useful retention refers to volume below the quiet zone baffle.

Within ISO 8573-1: 2001 Class 6 (Particulates)

Within ISO 8573-1: 1991 Class 3 (Particulates)

Ordering Information:



Accessories Most popular.

Combinations

Filters

Coalescers

Regulators

Regulators Filter /



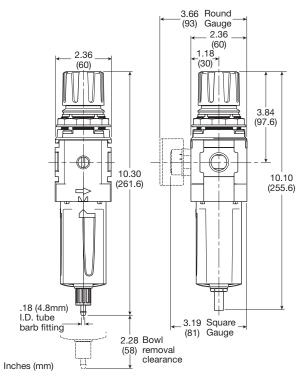


Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Element retainer / baffle	Acetal
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Bowl guard	Nylon
Filter element	Sintered polyethylene
Seals	Nitrile
Springs	Steel, stainless steel
Valve assembly	Brass / nitrile
Diaphragm assembly	Nitrile / zinc
Panel nut	Acetal
Sight gauge	Nylon

Repair and Service Kits

Plastic bowl / bowl guard manual drain	P32KB00BGM
Metal bowl / sight gauge manual drain	P32KB00BSM
Auto drain	P32KA00DA
5µ particle filter element	P32KA00ESE
Diaphragm repair kit - relieving	P32KB00RB
Diaphragm repair kit - non-relieving	P32KB00RC
Panel mount nut - aluminum	P32KA00MM
Panel mount nut - plastic	P32KA00MP
Angle bracket (fits to panel mount threads)	P32KB00MR
T-bracket (fits to body connector)	P32KA00MB
T-bracket with body connector	P32KA00MT
Body connector	P32KA00CB

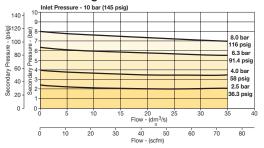


Manual Drain

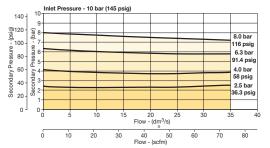
Automatic Drain

Flow Charts

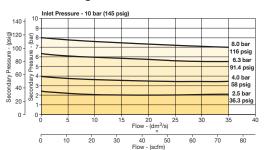
P32EB 1/4" Filter / Regulator



P32EB 3/8" Filter/Regulator



P32EB 1/2" Filter/Regulator



Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Gauges

•		
50mm (2") round	0-30 psig / 0-2 bar	K4520N14030
1/4" center back mount	0-60 psig / 0-4 bar	K4520N14060
mount	0-160 psig / 0-11 bar	K4520N14160
	0-300 psig / 0-20 bar	K4520N14300

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

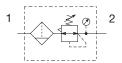




P33 Filter / Regulators - Standard

(Revised 12-11-19)

- Integral 1/2" or 3/4" ports (NPT, BSPP & BSPT)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- · Robust but lightweight aluminum construction
- Positive bayonet latch to ensure correct & safe fitting
- Secondary pressure ranges
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation



Port Size	Description / Relieving	Bowl / Drain Type ‡	Part Number
1/2"	125 psig (8 bar)	Poly / Manual	P33EA94EGMBNGP
1/2"	125 psig (8 bar)	Poly / Auto	P33EA94EGABNGP
1/2"	125 psig (8 bar)	Metal / Manual	P33EA94ESMBNGP
1/2"	125 psig (8 bar)	Metal / Auto	P33EA94ESABNGP
3/4"	125 psig (8 bar)	Poly / Manual	P33EA96EGMBNGP
3/4"	125 psig (8 bar)	Poly / Auto	P33EA96EGABNGP
3/4"	125 psig (8 bar)	Metal / Manual	P33EA96ESMBNGP
3/4"	125 psig (8 bar)	Metal / Auto	P33EA96ESABNGP

[‡] For polycarbonate bowl, see caution in Engineering Section A.



Operating information

Operating temperature:

Gauge port (2 each):

Flow capacity*: 200 scfm (94 dm³/s, ANR)

3/4 235 scfm (109 dm³/s, ANR)

-13°F to 125°F (-25°C to 52°C) Plastic bowl -13°F to 150°F (-25°C to 65.5°C) Metal bowl

Supply pressure (max): Plastic bowl 150 psig (10 bar)

250 psig (17 bar) Metal bowl

Standard filtration: 5 micron

Useful retention[†]: 2.8 US oz. (85 cm³) Adjusting range pressure: 0 to 30 psig (0 to 2 bar) 0 to 60 psig (0 to 4 bar) 0 to 125 psig (0 to 8 bar)

0 to 250 psig (0 to 17 bar) 1/4 NPT, BSPP, BSPT

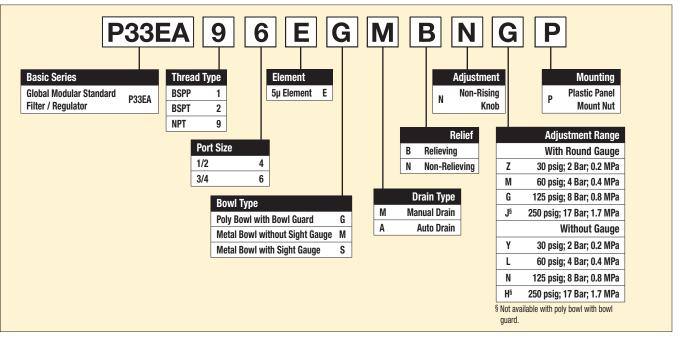
Weight: 1.87 lbs (0.85 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop

[†] Useful retention refers to volume below the quiet zone baffle.

Ordering Information:

Within ISO 8573-1: 1991 Class 3 (Particulates) Within ISO 8573-1: 2001 Class 6 (Particulates)



Most popular.





Filters

Coalescers

Regulators

Filter /

_ubricators

Combinations

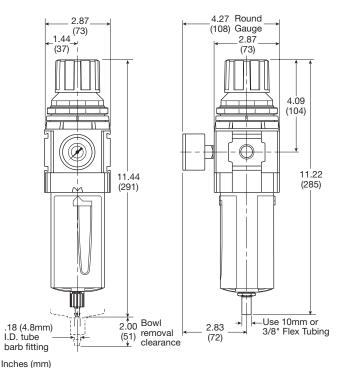
Standard Filter / Regulators

Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Body cap	ABS
Element retainer / baffle	Acetal
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Filter element	Sintered Polyethylene
Seals	Nitrile
Springs	Steel, stainless steel
Valve assembly	Brass / nitrile
Diaphragm assembly	Nitrile / zinc
Panel nut	Acetal
Sight gauge	Nylon

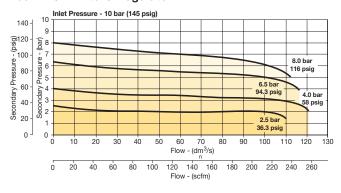
Repair and Service Kits

Plastic bowl / bowl guard, manual drain	P33KA00BGM
Metal bowl / sight gauge, manual drain	P33KA00BSM
Auto drain	P32KA00DA
5µ particle filter element	P33KA00ESE
Diaphragm repair kit - Relieving	P33KA00RB
Diaphragm repair kit - Non-relieving	P33KA00RC
Panel mount nut - Aluminum	P33KA00MM
Panel mount nut - Plastic	P33KA00MP
Angle bracket (fits to panel mount threads)	P33KA00MR
T-bracket (fits to body connector)	P32KA00MB
T-bracket with body connector	P32KA00MT
Body connector	P32KA00CB

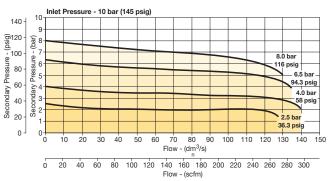


Flow Charts

P33EA 1/2" Filter / Regulator



P33EA 3/4" Filter/Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Gauges

50mm (2") round 1/4" center back mount	0-30 psig / 0-2 bar	K4520N14030
	0-60 psig / 0-4 bar	K4520N14060
	0-160 psig / 0-11 bar	K4520N14160
	0-300 psig / 0-20 bar	K4520N14300

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Manual Drain

Automatic Drain

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P31 Lubricators - Mini

- Integral 1/4" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Proportional oil delivery over a wide range of air flows
- Finger tip ratchet control for precise oil drip rate adjustment





Lubricator with drain

Port Size	Description ‡	Part Number
1/4"	Poly Bowl - No Drain	P31LB92LGNN
1/4"	Metal Bowl - No Drain	P31LB92LMNN

[‡] For polycarbonate bowl, see caution in Engineering Section A.

Operating information

Flow capacity*:

1/4

Weight:

52 scfm (25 dm³/s, ANR)

0.29 lb (0.13 kg)

Operating temperature: Plastic bowl Metal bowl

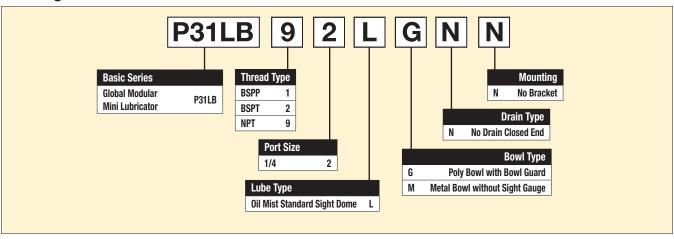
14°F to 125°F (-10°C to 52°C) 14°F to 150°F (-10°C to 65.5°C)

Supply pressure (max):

Plastic bowl 150 psig (10 bar)
Metal bowl 250 psig (17 bar)
Bowl capacity: 0.6 US oz. (18 cm³)

* Inlet pressure 91.3 psig (6.3 bar). Pressure drop 4.9 psig (0.34 bar).

Ordering Information:



Suggested Lubricant F442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C)

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

Most popular.





Filters

Coalescers

Regulators

Filter /

_ubricators

Combinations

Air Preparation Products **Global Air Preparation**

Material Specifications

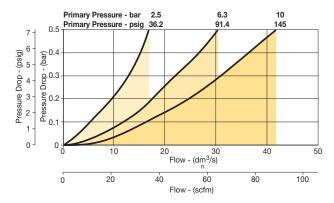
Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Seals	Nitrile
Sight dome	Polycarbonate
Suggested lubricant	ISO / ASTM VG32
Pick-up filter	Sintered bronze

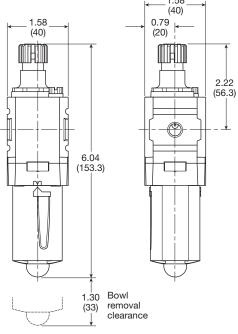
Repair and Service Kits

Plastic bowl / bowl guard no drain	P31KB00BGN
Metal bowl / w/o sight gauge no drain	P31KB00BMN
Drip control assembly	P32KA00PG
Fill plug	P31KA00PL
C-bracket (fits to body)	P31KA00MW
T-bracket with body connector	P31KA00MT
Body connector	P31KA00CB
Oil (1 quart)	F442001
Oil (1 gallon)	F442002
Oil (12 quart case)	F442003
Oil (4 gallon case)	F442005

Flow Charts

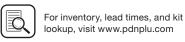
P31LB 1/4" Lubricator





Inches (mm)





P32 Lubricators – Compact

- Integral 1/4", 3/8" or 1/2" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Proportional oil delivery over a wide range of air flows
- Finger tip ratchet control for precise oil drip rate adjustment
- Fill from top under system pressure





Port		
Size	Description ‡	Part Number
1/4"	Poly Bowl - No Drain	P32LB92LGNN
1/4"	Metal Bowl - No Drain	P32LB92LSNN
3/8"	Poly Bowl - No Drain	P32LB93LGNN
3/8"	Metal Bowl - No Drain	P32LB93LSNN
1/2"	Poly Bowl - No Drain	P32LB94LGNN
1/2"	Metal Bowl - No Drain	P32LB94LSNN

[‡] For polycarbonate bowl, see caution in Engineering Section A.

Operating information

Flow capacity*:

1/4 38 scfm (17 dm³/s, ANR) 3/8 70 scfm (33 dm³/s, ANR) 1/2 90 scfm (42 dm³/s, ANR)

Operating temperature:

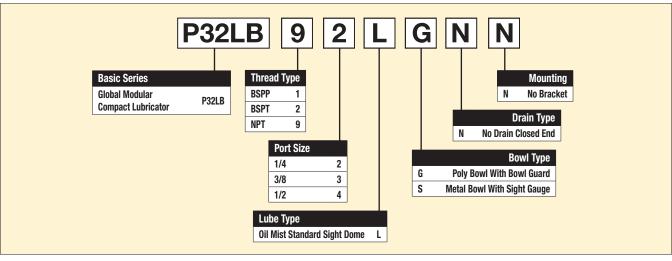
14°F to 125°F (-10°C to 52°C) Plastic bowl Metal bowl 14°F to 150°F (-10°C to 65.5°C)

Supply pressure (max):

Plastic bowl 150 psig (10 bar) Metal bowl 250 psig (17 bar) Bowl capacity: 4.09 US oz. (121 cm3) 0.68 lb (0.31 kg)

* Inlet pressure 91.3 psig (6.3 bar). Pressure drop 4.9 psig (0.34 bar).

Ordering Information:



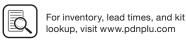
Suggested Lubricant F442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C)

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

Most popular.





Introduction

Filters

Coalescers

Regulators

Filter /

_ubricators

Combinations

Compact Lubricators

Material Specifications

Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Seals	Nitrile
Sight dome	Polycarbonate
Sight gauge	Nylon
Suggested lubricant	ISO / ASTM VG32
Pick-up filter	Sintered bronze

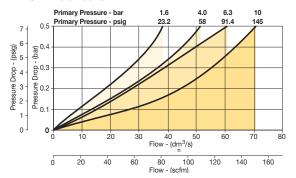
Repair and Service Kits

•	
Plastic bowl / bowl guard no drain	P32KB00BGN
Metal bowl / w/o sight gauge no drain	P32KB00BMN
Metal bowl / Sight gauge no drain	P32KB00BSN
Drip control assembly	P32KA00PG
Fill plug	P32KA00PL
L-bracket (fits to body)	P32KA00ML
T-bracket (fits to body connector)	P32KA00MB
T-bracket with body connector	P32KA00MT
Body connector	P32KA00CB
Oil (1 quart)	F442001
Oil (1 galllon)	F442002
Oil (12 quart case)	F442003
Oil (4 gallon case)	F442005

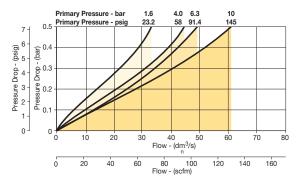
2.36 (60)1.18 2.36 (30) (60) 2.45 (62.3)8.56 (217.3) 2.28 Bowl (58) removal clearance

Flow Charts

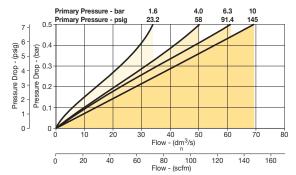
P32LB 1/4" Lubricator



P32LB 3/8" Lubricator



P32LB 1/2" Lubricator



Inches (mm)



P33 Lubricators - Standard

- Integral 1/2" or 3/4" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Proportional oil delivery over a wide range of air flows
- Finger tip ratchet control for precise oil drip rate adjustment
- Fill from top under system pressure





Port Size	Description ‡	Part Number
1/2"	Poly Bowl - No Drain	P33LA94LGNN
1/2"	Metal Bowl - No Drain	P33LA94LSNN
3/4"	Poly Bowl - No Drain	P33LA96LGNN
3/4"	Metal Bowl - No Drain	P33LA96LSNN

[‡] For polycarbonate bowl, see caution in Engineering Section A.

Operating information

Flow capacity*:

1/2 110 scfm (52 dm³/s, ANR) 3/4 150 scfm (71 dm³/s, ANR)

Operating temperature:

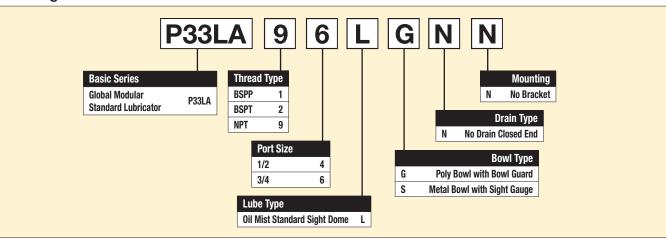
Plastic bowl 14°F to 125°F (-10°C to 52°C) 14°F to 150°F (-10°C to 65.5°C) Metal bowl

Supply pressure (max):

150 psig (10 bar) Plastic bowl Metal bowl 250 psig (17 bar) 6.1 US oz. (181 cm³) Bowl capacity: Weight: 1.04 lb (0.47 kg)

* Inlet pressure 91.3 psig (6.3 bar). Pressure drop 4.9 psig (0.34 bar).

Ordering Information:



Suggested LubricantF442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C)

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

Most popular.





Filters

Coalescers

Regulators

Filter /

_ubricators

Combinations

Standard Lubricators

Material Specifications

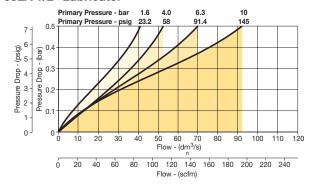
material opcomoditions	
Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Seals	Nitrile
Sight dome	Polycarbonate
Sight gauge	Nylon
Suggested lubricant	ISO / ASTM VG32
Pick-up filter	Sintered bronze

Repair and Service Kits

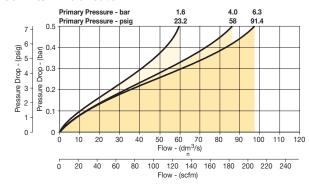
-	
Plastic bowl / bowl guard no drain	P33KA00BGN
Metal bowl / w/o sight gauge no drain	P33KA00BMN
Metal bowl / sight gauge no drain	P33KA00BSN
Drip control assembly	P32KA00PG
Fill plug	P32KA00PL
L-bracket (fits to body)	P33KA00ML
T-bracket (fits to body connector)	P32KA00MB
T-bracket with body connector	P32KA00MT
Body connector	P32KA00CB
Oil (1 quart)	F442001
Oil (1 galllon)	F442002
Oil (12 quart case)	F442003
Oil (4 gallon case)	F442005

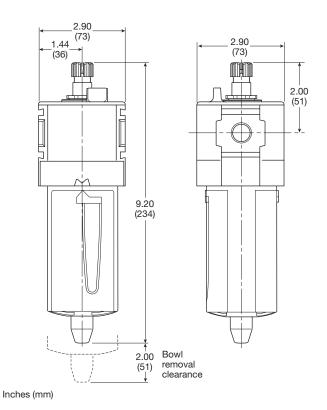
Flow Charts

P33LA 1/2" Lubricator

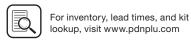


P33LA 3/4" Lubricator









Port Size

1/4"

Popular Combinations: Inlet pressure 145 psig (10 bar), secondary pressure 91.3 psig (6.3 bar), 14.5 psig (1 bar) pressure drop.

27 scfm (13 dm3/s, ANR)



Filter + Regulator + Lubricator Combinations, poly bowl 5 micron element, 116 psig (8 bar) regulator + gauge and wall mounting brackets



Pulse Drain

P31CB92GEBN5LNW

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Filter/Regulator + Lubricator Combinations, poly bowl 5 micron element, 116 psig (8 bar) regulator + gauge and wall mounting brackets

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Port Size	Flow	Manual Drain	Pulse Drain
1/4"	28 scfm (14 dm ³ /s, ANR)	P31CA92GEMN5LNW	P31CA92GEBN5LNW

Manual Drain

P31CB92GEMN5LNW



Introduction

Filters

Coalescers

Regulators

Regulators

Filter,

_ubricators

Combinations

and Kits

Ball Valve + Filter + Regulator + Lubricator Combinations, poly bowl 5 micron element, 116 psig (8 bar) regulator + gauge and wall mounting brackets



Port Size	Flow	Manual Drain	Pulse Drain
1/4"	27 scfm (13 dm³/s, ANR)	P31QB92GEMN5LNW	P31QB92GEBN5LNW

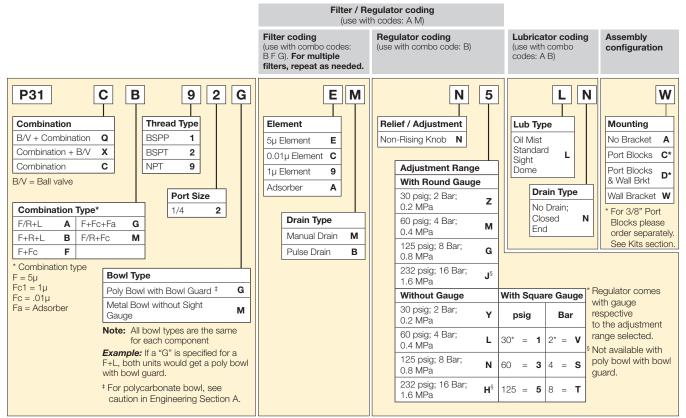


Ball Valve + Filter/Regulator + Lubricator Combinations, poly bowl 5 micron element, 116 psig (8 bar) regulator + gauge and wall mounting brackets



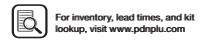
Port Size	Flow	Manual Drain	Pulse Drain
1/4"	28 scfm (14 dm ³ /s, ANR)	P31QA92GEMN5LNW	P31QA92GEBN5LNW





B56





Popular Combinations: Inlet pressure 145 psig (10 bar), secondary pressure 91.3 psig (6.3 bar), 14.5 psig (1 bar) pressure drop.



Filter + Regulator + Lubricator Combinations, poly bowl 5 micron element, 116 psig (8 bar) regulator + gauge and wall mounting brackets



Port Size	Flow	Manual Drain	Auto Drain
1/4"	42 scfm (20 dm ³ /s, ANR)	P32CB92GEMNGLNW	P32CB92GEANGLNW
3/8"	68 scfm (32 dm ³ /s, ANR)	P32CB93GEMNGLNW	P32CB93GEANGLNW
1/2"	85 scfm (40 dm ³ /s, ANR)	P32CB94GEMNGLNW	P32CB94GEANGLNW



Filter/Regulator + Lubricator Combinations, poly bowl 5 micron element, 116 psig (8 bar) regulator + gauge and wall mounting brackets

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1 A	$\mathbb{Z} \Diamond$

Port Size	Flow	Manual Drain	Auto Drain
1/4"	45 scfm (22 dm ³ /s, ANR)	P32CA92GEMNGLNW	P32CA92GEANGLNW
3/8"	70 scfm (33 dm ³ /s, ANR)	P32CA93GEMNGLNW	P32CA93GEANGLNW
1/2"	90 scfm (43 dm ³ /s, ANR)	P32CA94GEMNGLNW	P32CA94GEANGLNW



Ball Valve + Filter + Regulator + Lubricator Combinations, poly bowl 5 micron element, 116 psig (8 bar) regulator + gauge and wall mounting brackets



Introduction

Filters

Coalescers

Regulators

Regulators

Filter/

Lubricators

Port Size	Flow	Manual Drain	Auto Drain
1/4"	42 scfm (20 dm ³ /s, ANR)	P32QB92GEMNGLNW	P32QB92GEANGLNW
3/8"	68 scfm (32 dm³/s, ANR)	P32QB93GEMNGLNW	P32QB93GEANGLNW
1/2"	85 scfm (40 dm ³ /s, ANR)	P32QB94GEMNGLNW	P32QB94GEANGLNW



Ball Valve + Filter/Regulator + Lubricator Combinations, poly bowl 5 micron element, 116 psig (8 bar) regulator + gauge and wall mounting brackets

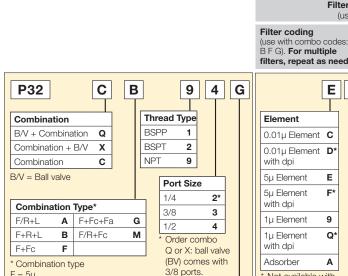


Assembly

Port Size	Flow	Manual Drain	Auto Drain
1/4"	45 scfm (22 dm ³ /s, ANR)	P32QA92GEMNGLNW	P32QA92GEANGLNW
3/8"	70 scfm (33 dm ³ /s, ANR)	P32QA93GEMNGLNW	P32QA93GEANGLNW
1/2"	90 scfm (43 dm ³ /s, ANR)	P32QA94GEMNGLNW	P32QA94GEANGLNW

Regulator coding

Filter / Regulator coding (use with codes: A M)



Fc1 = 1μ Fc = $.01\mu$ **Bowl Type** Poly Bowl with Bowl Guard ‡ Fa = Adsorber Metal Bowl without Sight Gauge For polycarbonate Metal Bowl with Sight Gauge bowl see caution in Engineering

Not available when using lubricator. Note: All bowl types are the same for each component

Example: If a "G" is specified for a F+L, both units would get a poly bowl with bowl guard.

filters, repeat as needed. E M Element 0.01µ Element C 0.01µ Element D' with dpi 5µ Element Е F 5u Flement with dpi 1μ Element 9 1u Flement O,

with dpi

Adsorber

F/R

G

Not available with

Drain Type Auto Drain Α Manual Drain м

Α

(use with combo code: B) (use with combo configuration codes: A B) Ν G L Ν Relief / Adjustment Mounting Lub Type Non-Rising Knob Oil Mist No Bracket Relieving Standard Port Blocks Sight Dome Port Blocks Adjustment Range & Wall Brkt

Lubricator coding

Drain Type

No Drain;

Closed

End

30 psig; 2 Bar; Z 0.2 MPa 60 psig; 4 Bar; М 0.4 MPa 125 psig: 8 Bar: G 0.8 MPa 250 psig; 17 Bar; 1.7 MPa

With Round Gauge

Without Gauge		With	ı Squ	are (Gauge	1^
30 psig; 2 Bar; 0.2 MPa	Υ	p	sig	E	Bar	
60 psig; 4 Bar; 0.4 MPa	L	30*	= 1	2*	= V	69
125 psig; 8 Bar; 0.8 MPa	N	60	= 3	4	= S	
250 psig; 17 Bar; 1.7 MPa	H§	125	= 5	8	= T	

Regulator comes with gauge respective to the adjustment range selected. Not available with poly bowl with bowl guard.

Section A.

For inventory, lead times, and kit lookup, visit www.pdnplu.com

Parker Hannifin Corporation Pneumatic Division Richland, Michigan

www.parker.com/pneumatics

W

Α

D

Wall Bracket W



Popular Combinations: Inlet pressure 145 psig (10 bar), secondary pressure 91.3 psig (6.3 bar), 14.5 psig (1 bar) pressure drop.



Filter + Regulator + Lubricator Combinations, poly bowl 5 micron element, 116 psig (8 bar) regulator + gauge and wall mounting brackets



Port Size	Flow	Manual Drain	Auto Drain
1/2"	90 scfm (43 dm ³ /s, ANR)	P33CB94GEMNGLNW	P33CB94GEANGLNW
3/4"	110 scfm (52 dm ³ /s, ANR)	P33CB96GEMNGLNW	P33CB96GEANGLNW



Filter/Regulator + Lubricator Combinations, poly bowl 5 micron element, 116 psig (8 bar) regulator + gauge and wall mounting brackets

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- 1	~ ~ i	
	i	

Port Size	Flow	Manual Drain	Auto Drain
1/2"	110 scfm (52 dm ³ /s, ANR)	P33CA94GEMNGLNW	P33CA94GEANGLNW
3/4"	150 scfm (71 dm ³ /s, ANR)	P33CA96GEMNGLNW	P33CA96GEANGLNW



Introduction

Filters

Coalescers

Regulators

Ball Valve + Filter + Regulator + Lubricator Combinations, poly bowl 5 micron element, 116 psig (8 bar) regulator + gauge and wall mounting brackets



Port Size	Flow	Manual Drain	Auto Drain
1/2"	90 scfm (43 dm ³ /s, ANR)	P33QB94GEMNGLNW	P33QB94GEANGLNW
3/4"	110 scfm (52 dm ³ /s, ANR)	P33QB96GEMNGLNW	P33QB96GEANGLNW



Ball Valve + Filter/Regulator + Lubricator Combinations, poly bowl 5 micron element, 116 psig (8 bar) regulator + gauge and wall mounting brackets

Ε

F'

9

Q.

Α



Assembly

Mounting

No Bracket

Port Blocks

Port Blocks

& Wall Brkt

Wall Bracket

configuration

W

Α

С

D

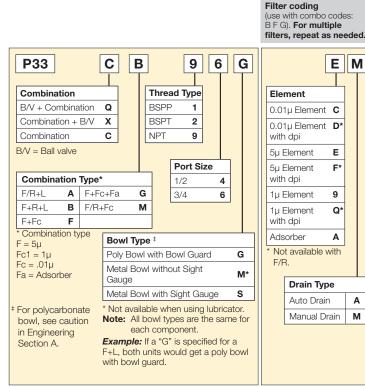
Port Size	Flow	Manual Drain	Auto Drain
1/2"	110 scfm (52 dm ³ /s, ANR)	P33QA94GEMNGLNW	P33QA94GEANGLNW
3/4"	150 scfm (71 dm ³ /s, ANR)	P33QA96GEMNGLNW	P33QA96GEANGLNW

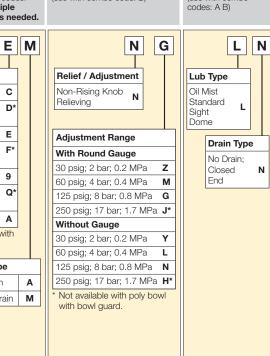


110 sctm (5	2 dm³/s, ANR)	P33QA94GEMNGLNW	P33QA94GEANGLNW	
150 scfm (7	1 dm³/s, ANR)	P33QA96GEMNGLNW	P33QA96GEANGLNW	_
		r / Regulator coding se with codes: A M)		

Regulator coding

(use with combo code: B)









Lubricator coding

(use with combo

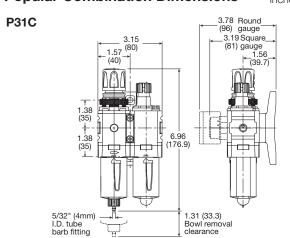
Regulators

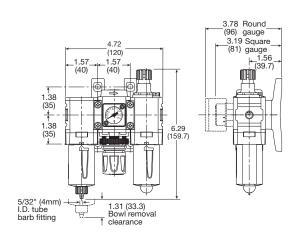
Filter /

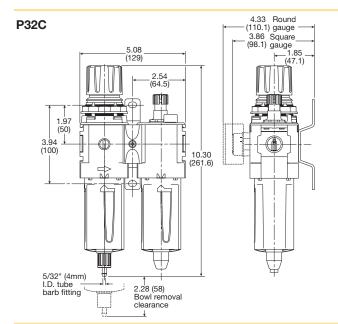
Filters

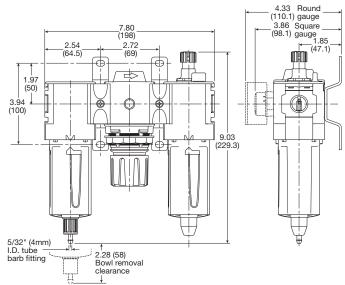
Combination Dimensional Data

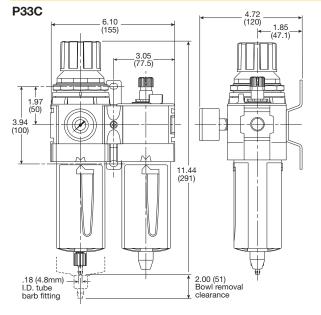
Popular Combination Dimensions inches (mm)

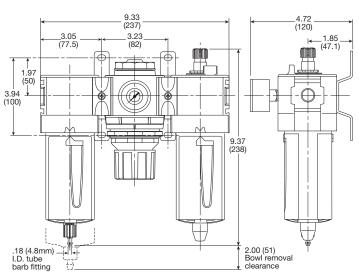




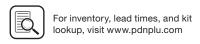












Dump Valves

P31D & P32D Dump Valves

- Modular design with 1/4" or 1/2" integral ports (NPT, BSPP & BSPT)
- The 3-way, 2-position function automatically dumps downstream pressure on the loss of pilot signal
- Solenoid or air pilot options
- High flow & exhaust capability
- Silencer included



Remotely operated dump valves automatically shut off upstream pressure and exhaust the downstream pressure when the pilot pressure is released.

To maintain these units in the open position a pilot supply to the air pilot operated version or an electrical signal to the solenoid operated version must be maintained.

The valve will automatically dump when the holding signal is

Port Size	Description	Weight lbs (kg)	Part Number
1/4"	120VAC Solenoid & cable plug	0.8 (0.37)	P31DA92SGNC1FN
1/4"	24VDC Solenoid & cable plug ‡	0.9 (0.41)	P31DA92SGNC2CN
1/4"	External air pilot operated	0.8 (0.37)	P31DA92PPN
1/2"	120VAC 30mm coil & cable plug incl. ‡	1.5 (0.69)	P32DA94SCNA3GN
1/2"	24VDC 30mm coil & cable plug incl. ‡	2.0 (0.91)	P32DA94SCNA2CN
1/2"	External air pilot operated ‡	1.9 (0.87)	P32DA94PPN

‡ Includes exhaust silencer





Operating information

36 scfm (17 dm³/s, ANR) Flow capacity*: P32D 108 scfm (51 dm³/s, ANR)

Temperature range (max)†:

Solenoid operated 14°F to 122°F (-10°C to 50°C) -4°F to 176°F (-20°C to 80°C) Air pilot operated

Pressure (max):

Solenoid operated 150 psig (10 bar) Air pilot operated 250 psig (17 bar) Operating pressure (min): 44 psig (3 bar) Fluid: Compressed air

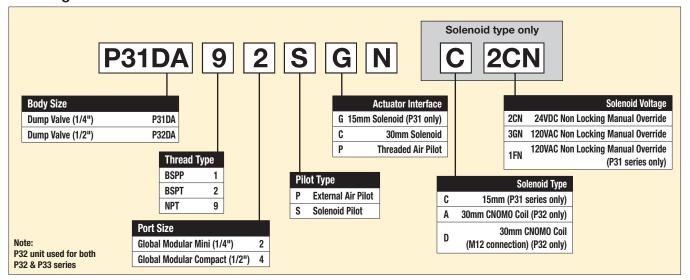
Ports: Air pilot

> Exhaust P31D - 1/4; P32D - 1/2 P31D - 1/8; P32D - 1/4 Gauge

* Inlet pressure 91.3 psig (6.3 bar), inlet pressure and 14.5 psig (1 bar) pressure drop.

† Air supply must be dry enough to avoid ice formation at temperatures below 35.6°F (2°C). Snap pressure: Full flow when downstream pressure reaches 50% of the inlet pressure.

Ordering Information:







Filters

Coalescers

Regulators

Regulators Filter /

_ubricators

Dump Valves

Air Preparation Products **Global Air Preparation**

Material Specifications

Body	Aluminum
Body cover	Polyester
Seals	Nitrile NBR

Mounting Brackets

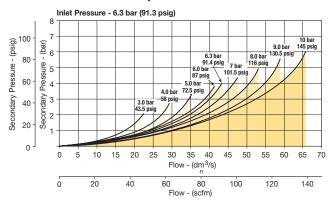
		Part Number
	Description	P31D
	L-bracket mounting kit	P3HKA00ML
P31		
	Foot bracket mounting kit	P3HKA00MC
P31		

Note:

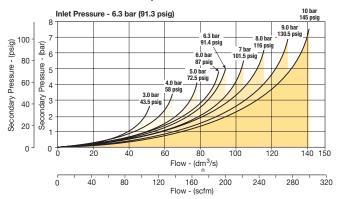
For solenoid operators and cable plugs (connectors) see pages B83 and B84.

Flow Charts

P31DA 1/4" Remote Dump Valve

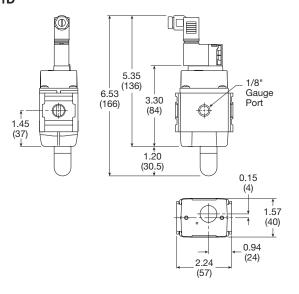


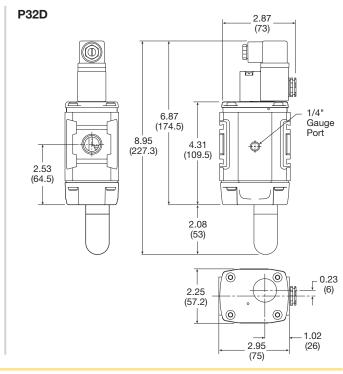
P32DA 1/2" Remote Dump Valve



Dimensions inches (mm)

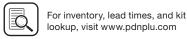
P31D





Most popular.





Parker Hannifin Corporation Pneumatic Division Richland, Michigan

P31S & P32S Soft Start Valves

- Modular design with 1/4" or 1/2" integral ports (NPT, BSPP & BSPT)
- The 2-way, 2-position function provides for the safe introduction of pressure
- Adjustable slow start
- Solenoid or air pilot options
- High flow



Parker Global Series Soft Start Valves, provide for the safe introduction of pressure to machines or systems. Soft Start Valves, allow the pressure to gradually build to the set point before fully opening to deliver full flow at line pressure.

The controlled introduction of pressure can be an important safety factor and prevent damage to tooling when air pressure is introduced at machine or system start up.

Note: Soft Start Valves must be installed downstream of a 3/2 valve with exhaust capability

Port Size	Description	Weight lbs (kg)	Part Number
1/4"	120VAC Solenoid & Cable Plug	0.8 (0.37)	P31SA92SGNC1FN
1/4"	24VDC Solenoid & Cable Plug	0.9 (0.41)	P31SA92SGNC2CN
1/4"	Internal Air Pilot Operated	0.8 (0.37)	P31SA92Y0N
1/4"	External Air Pilot (1/8" threaded)	0.8 (0.37)	P31SA92PPN
1/2"	120VAC 30mm Coil & Cable Plug Incl	. 1.5 (0.87)	P32SA94SCNA3GN
1/2"	24VDC 30mm Coil & Cable Plug	2.0 (0.90)	P32SA94SCNA2CN
1/2"	Internal Air Pilot Operated	2.0 (0.90)	P32SA94Y0N
1/2"	External Air Pilot (1/8 threaded)	1.5 (0.87)	P32SA94PPN





Operating information

Flow capacity*: P31S 36 scfm (17 dm³/s, ANR) P32S 101 scfm (48 dm³/s, ANR)

Temperature range (max)†:

Solenoid operated 14°F to 122°F (-10°C to 50°C) Air pilot operated -4°F to 176°F (-20°C to 80°C)

Pressure (max):

Solenoid operated
Air pilot operated
Operating pressure (min):

44 psig (3 bar)

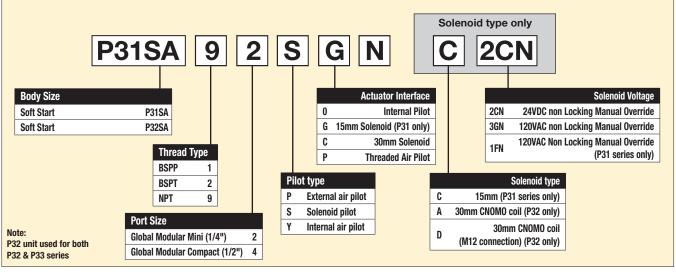
Compressed air

Ports: Air pilot 1/8

Gauge P31S - 1/8; P32S - 1/4

- * Inlet pressure 91.3 psig (6.3 bar), inlet pressure and 14.5 psig (1 bar) pressure drop.
- † Air supply must be dry enough to avoid ice formation at temperatures below 35.6°F (2°C). Snap pressure: Full flow when downstream pressure reaches 50% of the inlet pressure.

Ordering Information:









Filters

Soft Start Valves

Material Specifications

Body	Aluminum
Body cover	Polyester
Seals	Nitrile NBR

Service Kits

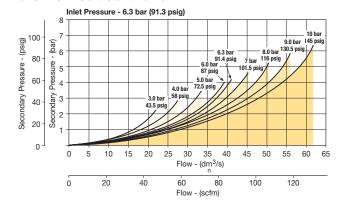
P31S	L-bracket mounting kit	P3HKA00ML
	Foot bracket mounting kit	P3HKA00MC
P32S	L-bracket mounting kit	P3KKA00ML
	Foot bracket mounting kit	P3KKA00MC

Note:

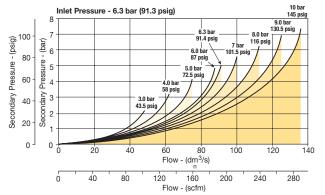
For solenoid operators and cable plugs (connectors) see pages B83 and B84.

Flow Charts

P31SA 1/4" Soft Start Valve



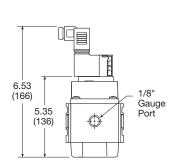
P32SA 1/2" Soft Start Valve



Dimensions inches (mm)

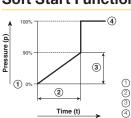
P31S

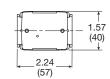




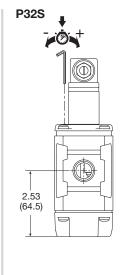
Soft Start Function:

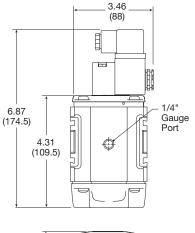
1.45

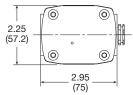




- Start signal
- Switching time delay Gradual pressure build up
- Operating pressure p2 (=p1)











P31T & P32T Combined Soft Start / Dump Valves

- Modular design with 1/4" or 1/2" integral ports (NPT, BSPP & BSPT)
- · Provides for the safe introduction of pressure
- The 3-way, 2-position function automatically dumps downstream pressure on the loss of pilot signal
- · Adjustable slow start
- Solenoid or air pilot options
- · High flow & exhaust capability
- Silencer included

Introduction

Coalescers

Regulators

Regulators

Filter/

_ubricators



Parker Global Series Combined Soft Start / Dump Valves, provide for the safe introduction of pressure to machines or systems. Soft Start / Dump Valves when set, allow the pressure to gradually build to the set point before fully opening to deliver full flow at line pressure.

The controlled introduction of pressure can be an important safety factor and prevent damage to tooling when air pressure is introduced at machine or system start up.

To maintain these units in the open position a pilot supply to the air pilot operated version or an electrical signal to the solenoid operated version must be maintained. The valve will automatically dump when the holding signal is removed.

Port Size	Description	Weight lbs (kg)	Part Number
1/4"	120VAC Solenoid & cable plug	0.8 (0.37)	P31TA92SGNC1FN
1/4"	24VDC Solenoid & cable plug	0.9 (0.41)	P31TA92SGNC2CN
1/4"	External air pilot operated	0.8 (0.37)	P31TA92PPN
1/2"	120VAC 30mm coil & cable plug incl.	1.9 (0.87)	P32TA94SCNA3GN
1/2"	24VDC 30mm coil & cable plug incl.	2.0 (0.91)	P32TA94SCNA2CN
1/2"	External air pilot operated	1.9 (0.87)	P32TA94PPN





Operating information

P31T Flow capacity*: 36 scfm (17 dm³/s, ANR) P32T 108 scfm (51 dm³/s, ANR)

Temperature range (max)†:

Solenoid operated 14°F to 122°F (-10°C to 50°C) Air pilot operated -4°F to 176°F (-20°C to 80°C)

Pressure (max):

150 psig (10 bar) Solenoid operated Air pilot operated 250 psig (7 bar) Operating pressure (min): 44 psig (3 bar) Fluid: Compressed air

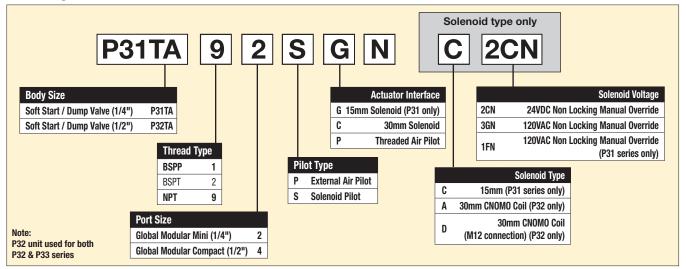
Ports: Air pilot

P31T - 1/4; P32T - 1/2 Exhaust Gauge P31T - 1/8; P32T - 1/4

Inlet pressure 91.3 psig (6.3 bar), inlet pressure and 14.5 psig (1 bar) pressure drop.

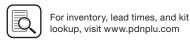
† Air supply must be dry enough to avoid ice formation at temperatures below 35.6°F (2°C). Snap pressure: Full flow when downstream pressure reaches 50% of the inlet pressure.

Ordering Information:









Combined Soft Start / Dump Valves

Material Specifications

Body	Aluminum
Body cover	Polyester
Seals	Nitrile NBR

Service Kits

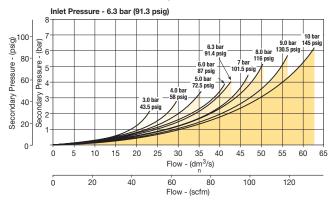
P31T	L-bracket mounting kit	P3HKA00ML
	Foot bracket mounting kit	P3HKA00MC
P32T	L-bracket mounting kit	P3KKA00ML
	Foot bracket mounting kit	P3KKA00MC

Note:

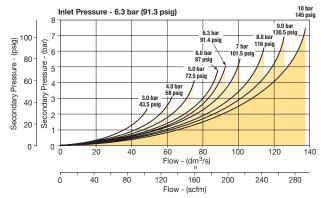
For solenoid operators and cable plugs (connectors) see pages B83 and B84.

Flow Charts

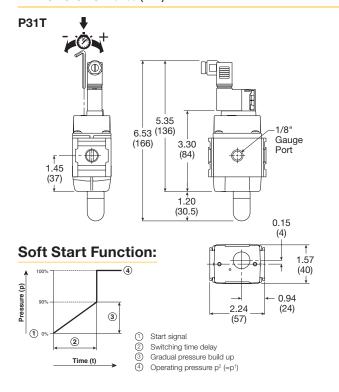
P31TA 1/4" Soft Start & Dump Valve

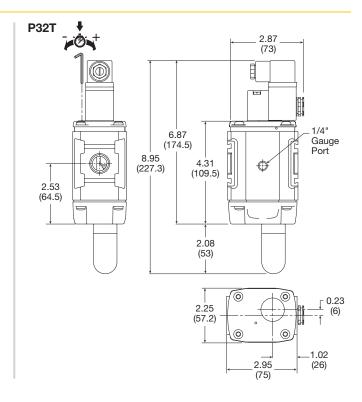


P32TA 1/2" Soft Start & Dump Valve



Dimensions inches (mm)









P33D & P33T Safety Exhaust Valves

(Revised 11-15-18)

- Easy electrical interface with M12 connectors to safety circuit
- External monitoring provides a cost and space saving advantage
- Solid state pressure sensors provide accurate, fast fault detection
- · Quick visual LED indicators on the front of the valve
- · Superior seated seal design for longer life
- Safety exhaust outlet is no-maintenance and non-clog by design
- Suitable for stand alone use or modular mounting to P32 or P33 FRL assembly
- High B10 life value

Introduction

Filters

Regulators

Regulators

Filter/

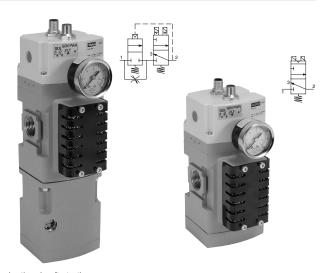
_ubricators

Combinations

Accessories

and Kits

• Fast exhaust times allow for smaller machine footprint



(optional soft start)

Operating information

Operating pressure: 30 to 150 PSIG (2 to 10 bar)

Minimum operating pressure: 30 PSIG (2 bar)

Ambient temperature: 40° to 120°F (4° to 50°C)

Recommended filtration: 40μ

Operating medium: Compressed air

Ingress protection class: **IP65**

B10 (mio): 10 million switching cycles B10 d (mio): 20 million switching cycles

Allowable discordance:

Flow media: Compresses air to ISO 8573-1

Class 7:4:4

Weight lbs (kg): 6.5 (2.9) with soft start

4.2 (1.9) without soft start

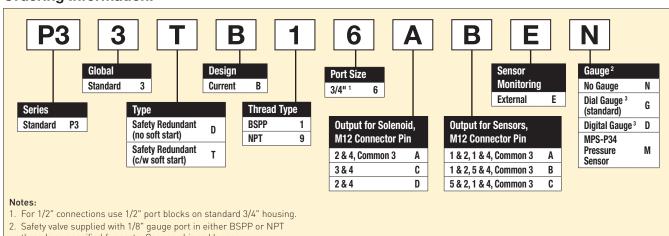
For inventory, lead times, and kit

lookup, visit www.pdnplu.com

The soft start opens to full flow at approximately 60% of input pressure.



Ordering Information:



- threads as specified for ports. Gauges shipped loose.
- 3. Dial or digital gauge not available on BSPP version.

Note: Mounting hardware and port blocks are sold separately.

Most popular.





Safety Exhaust Valves

General Technical Data

Valve type	Externally monitored, redundant, dual poppet
Soft start	Optional
Valve function	3/2 way, normally closed
Housing material	Cast aluminum
Seals	NBR
Fasteners	Stainless steel / brass
Silencer	Steel, non clog safety design

Electrical Specifications

Operating voltage 24V DC	
Electrical connection	Two M12 connectors
Switching time 1-2 (ms)	23.3
Switching time 2-3 (ms)	42.7
Duty cycle (%)	100%
Operating voltage (DC)	21.6 to 26.4
Nominal power per solenoid coil at 24V DC (W) +/- 10% per pressure sensor at 24V DC	1.2 W 1.2 W

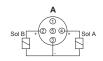
In accordance with EN ISO 13849-1 this safety valve is suitable for use up to Category 4, Ple, sil 3. Certified to cCSAus and bears the CE mark.

A product Integration Guide is available to help connect your logic controller to the Parker Safety Exhaust Valve under the Product Support tab at www.parker.com/pdn/safetyvalve

Mounting Hardware

Body Connector	P32KA00CB	
T-Bracket w / Body Connector	P32KA00MT	
T-Bracket (fits to body connected	P32KA00MB	
Port Block Kits (includes two)	1/2" NPT 1/2" BSPT 1/2" BSPP	P32KA94CP P32KA24CP P32KA14CP
	3/4" NPT 3/4" BSPT 3/4" BSPP	P32KA96CP P32KA26CP P32KA16CP

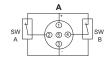
Solenoid M12 Pinouts

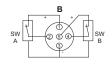


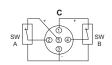




Pressure Sensor M12 Pinouts

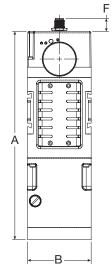


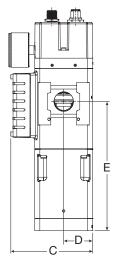




Externally Monitored (with Soft Start)

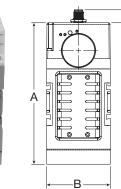


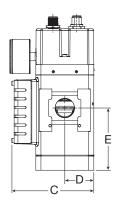




Externally Monitored (No Soft Start)







Dimensions inches (mm)

,									
		Standard nominal flow rate							
	Ports	1 → 2 L/min (SCFM)*	$2 \rightarrow 3 \text{ L/min (SCFM)}^*$	Α	В	С	D	Е	F
Externally Monitored with soft start	3/4"	4,100 (145)	7,500 (265)	10.31 (261.9)	3.15 (80)	4.30 (109.3)	1.44 (36.5)	6.39 (162.3)	0.64 (16.3)
Externally Monitored no soft start	3/4"	4,300 (152)	7,500 (265)	7.03 (178.7)	3.15 (80)	4.30 (109.3)	1.44 (36.5)	3.11 (79.0)	0.64 (16.3)

 $^{^{\}star}$ Standard nominal flow rate is based on 6 bar input pressure with ΔP = 1 bar





Safety Exhaust Valve Function

When applications demand a safe environment you can count on safety valves from Parker Hannifin. The P33 family of safety exhaust valves are 3/2 normally closed valves designed to rapidly exhaust compressed air in the event of a fault condition and to provided monitored coverage ensuring safe function. The P33 is available in two distinct styles, internally* or externally monitored. The valve is suitable for use up to Category 4, performance level e. Monitoring is achieved externally via a two channel system connected to a safety interface device. Both valves are available with an adjustable soft start and high flow exhaust to shut your equipment down faster when needed. LED's provide clear status of main solenoid operation, sensor power and fault condition for quick visual reference.

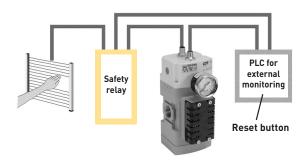
Externally Monitored Valve, Faults and Resets

The externally monitored valve has the monitoring done via a PLC or relay which offers a size and cost advantage over internally monitored valves. The integration of a safety interface into the PLC or relay will help determined the achievable category and performance level of the control system. Customers are required to provide the logic function via the safety device. The valve will lock-out to the "safe state" if asynchronous movement of the valve elements occur which will be detected by solid state pressure sensors. To achieve the proper safety rating, the safety PLC or relay must monitor the solid state pressure sensors to ensure they are not in different states for more than 150ms. If the sensors are in different states for longer than 150ms then the programming logic must shut off power to the solenoids and consider it a fault condition. If during operation the externally monitored P33 enters a fault condition the valve will shut off. A separate reset signal must be incorporated into the logic sequence to avoid automatic restart of the valve. The safety exhaust valves are not for use with clutch or brake applications and are designed for use in conjunction with a safety relay or safety PLC for safe monitoring and fault detection.

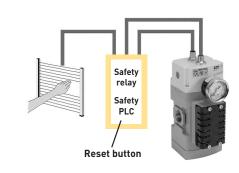


The category and performance level (PLr) needed for your machine is determined by a risk assessment of the machinery design and application based on EN ISO 13849-1. The Parker P33 safety valve is designed for those applications requiring a PL of d or e. Please note these levels require other aspects of the system to meet these requirements. As a guide: you can achieve a Cat 4 PL e system by integrating monitoring via a programmable safety rated device. Because the P33 is a mechanical failsafe device, the monitoring could also be done via a standard PLC and still attain as high as a PL d rating.

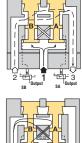
Cat 3, PL d



Cat 4, PL e



- For information on internally monitored safety valves reference Bulletin 0700-B13.
- ** An integration guide is available to provide further information on connecting the safety valve product to achieve the desired performance level. Please consult Parker and the standard EN ISO 13849-1 for more information.



Conditions at Start

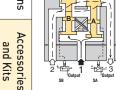
The Safety exhaust valve starts with inlet 1 closed to outlet 2 by both valve elements A and B. Outlet 2 is open to exhaust 3. Pressure signals at both sensors SA and SB are exhausted and contacts 1 and 2 of sensors SA and SB are connected. The normally closed sensors both provide voltage feedback signals to the external monitoring system.

Normal Operation

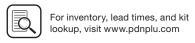
During normal operation the two solenoids are simultaneously energized which actuates both pilots and causes valve elements A and B to shift. Inlet 1 is then connected to outlet 2 via crossflow passages C and D. Exhaust 3 is closed. Sensing pressure signals go to each pressure sensor and become equal to inlet pressure. Both sensors contacts open and no voltage signals are provided to the external monitoring system. This indicates that both sides of the valve actuated as expected.

Detecting a Malfunction

A malfunction in the system or the valve itself could cause one valve element to be open and the other closed. Air then flows past the inlet poppet on valve element A, into crossflow passage D, but is substantially blocked by the spool portion of element B. The large size of the open exhaust passage past element B keeps the pressure at the outlet port below 2% of inlet pressure. Full sensing air pressure from side A goes to sensor SA, and a reduced pressure goes to sensor SB. This full pressure signal causes SA to open. Sensor SB, with a reduced pressure signal, does not open. An external monitoring system can detect the malfunction by monitoring the outputs of the SA and SB sensors. The external monitor system must then react accordingly by shutting down the power to the valve solenoids and any other components deemed necessary to stop the machine.







www.parker.com/pneumatics

Coalescers

Safety Exhaust Valves

Machinery Directive - Overview

The Machinery Directives' goal is to protect people and the environment from accidents caused from all types of machinery. Based on the standard EN 13849 [safety of machines; safety-related parts of control systems] these standards build the procedure to assess safety-related control

Required Performance Level (PLr) based on a risk assessment are now commonly used to determine the safety level required for the controls system, for the application of machinery.

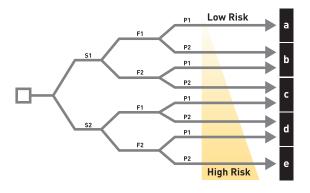
Performance Level (PL) based on the original B, 1,2,3,4 safety categories, diagnostic capabilities, Mean time to dangerous failure (MTTFd), and common cause failure (CCF), define safety levels of a given safety function. This ensures that safety is not just focused on component reliability, but instead introduces common sense safety principles such as redundancy, diversity, and fail-safe behavior of safety related control parts.

The new EN 13849 standards of the Machinery Directive dictates the machine is safe when the Performance Level of the safety control circuit is egual to or greater than the Required Performance Level of the application. When determining the required performance level, the greater the risk, the higher the requirements of the control system.

$PLr \leq PL$

Determining PLr According to EN 13849-1

The level of each hazardous situation is classified in five Performance levels from a to e. With PL a the control functions contribution to risk reduction is low, while at PL e it is high. The risk graph above can be used as a guideline to determine the required performance level PLr for safety function.



Risk Parameters

(S) Severity of injury

- S1 Slight (normally reversible injury)
- S2 Serious (normally irreversible injury, or death)

(F) Frequency and / or duration of exposure to hazard

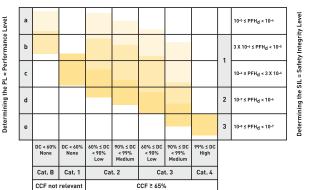
- F1 Seldom to less often and / or brief
- F2 Frequent to continuous and / or long

(P) Possibility of avoiding the hazard

- P1 Possibility of avoiding the hazard
- P2 Scarcely ever possible

Determining PL According to EN 13849-1

Determining the MTTF_d = Mean Time To Dangerous Failure



Categories Defined by EN 13849-1

Category	Summary
Category B	When a fault occurs it can lead to the loss of the safety function.
Category 1	Same that Category B, but loss of the safety function is less likely thanks to a good MTTFd of each channel.
Category 2	System behavior allow that the occurrence of a fault can lead to the loss of the safety function between the checks; the loss of the safety function is detected by the check.
Category 3	A single fault in any of safety related parts does not lead to the loss of the safety function. Whenever reasonably possible the single fault shall be detected at or before the next demand upon the safety function. [Means redundancy]
Category 4	Same as Category 3, but if detection of single fault is not possible on or before the next demand upon the safety, an accumulation of these undetected faults shall not lead to the loss of the safety function. (Means redundancy & check)





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P33T Redundant Safety Exhaust Valve

- Proven control reliable technology with integrated soft start
- Soft start application of air to the system when energized; can be adjusted for slower or faster buildup of system pressure
- Rapid exhaust of downstream air when de-energized to remove stored energy and allow safe access
- Memory, monitoring, and air flow control functions are integrated into two identical valve elements. Valves lock-out if asynchronous movement of valve elements occurs during actuation or de-actuation, resulting in a residual outlet pressure of less than 1% of supply.
- Reset can only be accomplished by the integrated electrical (solenoid) reset. Cannot be reset by removing and re-applying supply pressure.
- Basic 3/2 normally closed valve function: Dirt tolerant, wear compensating poppet design for quick response and high flow capacity.
- LED indicators of main solenoid operation, reset solenoid operation, and status indicator condition.
- Optional transducer for monitoring of downstream pressure in the system.
- Dual exhaust silencers included.
- Not for use with clutch / brake applications.
- For use in conjunction with a safety relay or safety PLC.



Port size			Cv			
Inlet	Outlet	Transducer	1 to 2	2 to 3	Part Number*	
3/4	3/4	w/o transducer	3.7	8.5	P33TA96RG4F2CN	
3/4	3/4	w/ transducer	3.7	8.5	P33TA96RG4G2CN	

^{*} NPT port threads. For BSPP threads, replace "9" in the part number with a "1".



Operating information

Pilot Solenoids: Enclosure rating: Connector socket: According to VDE 0580 According to DIN 400 50 IP65 According to DIN 43650 Form A Three solenoids, rated for

continuous duty

1.2 Watts on DC

Standard voltages: 24VDC

Power consumption (each solenoid), for

primary & reset solenoids:

Enclosure rating: IP65, IEC 60529
Electrical connection: M12, 5-pin

 $\begin{array}{ll} \mbox{Ambient temperature:} & 15^{\circ}\mbox{F to } 122^{\circ}\mbox{F (-10^{\circ}\mbox{C to } 50^{\circ}\mbox{C})} \\ \mbox{Media temperature:} & 40^{\circ}\mbox{F to } 175^{\circ}\mbox{F (4^{\circ}\mbox{C to } 80^{\circ}\mbox{C})} \\ \end{array}$

Flow media: Compressed Air,

Filtered to Minimum 40 Micron 30 to 150 psig (2 to 10 bar)

Inlet pressure: 30 to 150 psig (2 to 10 bar)

Monitoring: Dynamically, cyclically, internally during each actuating and

during each actualing and de-actuating movement.

Monitoring function has memory and requires an overt act to reset

unit after lockout.

Mounting orientation: Vertically with pilot solenoids on top

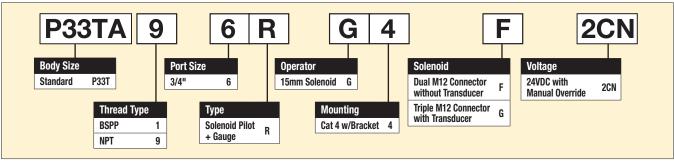
Port threads: 3/4 NPT, 3/4 BSPP Control reliable: Category 4 (Cat 4):

e: Category 4 (Cat 4); performance
Level e (PLe) in accordance with

Machine directive - EN ISO 13849-1 (Certification pending)

Weight: 16.1 lb (7.3 kg) w/o transducer 16.3 lb (7.4 kg) w/ transducer

Ordering Information:



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Most popular.





Introduction

Filters

Coalescers

Regulators

Regulators

Filter /

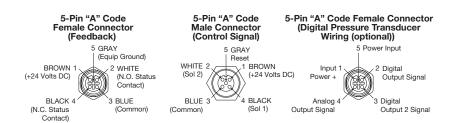
Lubricators

√□□3 MJI,D

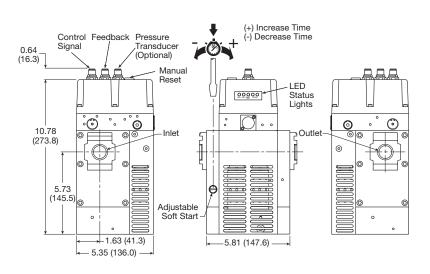
Repair and Service Kits

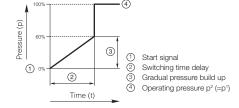
Black grill	1834C05-001
Body connector	P32KA00CB
M12, 5-pin female to flying lead cable, TPE; 6.6 ft (2 m)	RKC 4.5T-2/S1587
M12, 5-pin male to flying lead cable, TPE; 6.6 ft (2 m)	RSC 4.5T-2/S1587
1/2 NPT, port block kit	P32KA94CP
3/4 NPT, port block kit	P32KA96CP
1/2 BSPP, port block kit	P32KA14CP
3/4 BSPP, port block kit	P32KA16CP
1/2 BSPT, port block kit	P32KA24CP
3/4 BSPT, port block kit	P32KA26CP
Pressure switch	1227A30-001
Pressure transducer (optional)	1232H30-001
T-bracket w/ body connector	P32KA00MT
T-bracket (fits to body connector or port block)	P32KA00MB
Silencer(s) 3/4"	5500A5013
Solenoid (main & reset)	1527B7916-001
Square flush mounting gauge kit, 0-160 psig	K4511SCR160

Valve Wiring

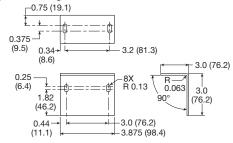


Dimensions inches (mm)





Angle Mounting Bracket



Note: Mounting bracket and installation screws included and required to install unit in the system.





Redundant Safety Exhaust Valves

Valve de-actuated (ready-to-run):

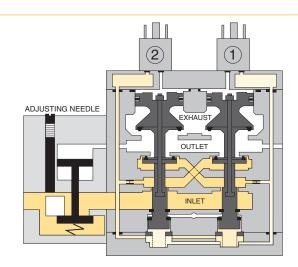
The flow of inlet air pressure to the inlet chamber of the main valve internals is restricted by a fixed orifice and an adjustable flow control as well as an air piloted 2-way normally closed poppet valve. The flow of inlet air pressure into the crossover passages is restricted by the size of the passage between the stem and the valve body opening. Flow is sufficient to quickly pressurize pilot supply / timing chambers 1 and 2. The inlet poppets prevent air flow from crossover passages into the outlet chamber. Air pressure acting on the inlet poppets and return pistons securely hold the valve elements in the closed position. (Reset adapter omitted for clarity.)

The green "Status" LED will be illuminated indicating the valve is operational.



Introduction

Filters



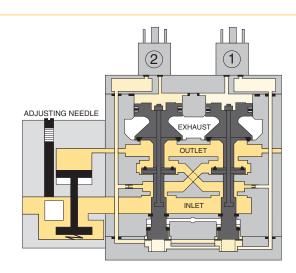
Valve actuated:

Energizing the pilot valves simultaneously applies pressure to both pistons, forcing the internal parts to move to their actuated (open) position, where inlet air flow to crossover passages is fully open, inlet poppets are fully open and exhaust poppets are fully closed. The outlet is then pressurized at a rate allowed by the fixed orifice and the adjusted flow control. Once the air pressure in the outlet chamber reaches approximately 60% of inlet pressure, the air piloted 2-way normally closed poppet valve opens fully and the pressure in the inlet, crossovers, outlet, and timing chambers are quickly equalized. The adjustable flow control will control the time it takes for the outlet air pressure to reach approximately 60% of inlet pressure.

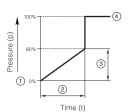
De-energizing the pilots guickly causes the valve elements to return to the ready-to-run position.

Solenoid 1, Solenoid 2 and the green "Status" LED's will be illuminated indicating the valve is operating properly.



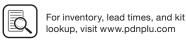


Soft start function:



- Start signal ② ③
 - Switching time delay Gradual pressure build up
- Operating pressure p2 (=p1)





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Lubricators Combinations

Regulators

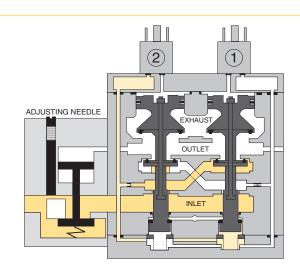
Filter/

Valve fault and lock-out:

Whenever the valve elements operate in a sufficiently asynchronous manner, either on actuation or de-actuation, the valve will move to a locked-out position. In the locked-out position, one crossover and its related timing chamber will be exhausted, and the other crossover and its related timing chamber will be fully pressurized. The valve element (side 2) that is partially actuated has pilot air available to fully actuate it, but no air pressure on the return piston to fully de-actuate the valve element.

Air pressure in the crossover acts on the differential of side 2 stem diameters creating a latching force. Side 1 is in a fully closed position, and has no pilot air available to actuate, but has full pressure on the inlet poppet and return piston to hold the element in the fully closed position. Inlet air flow on side 1 into its crossover is restricted, and flows through the open inlet poppet on side 2, through the outlet into the exhaust port, and from the exhaust port to atmosphere. Residual pressure in the outlet is less than 1% of inlet pressure. The return springs are limited in travel, and can only return the valve elements to the intermediate (locked-out) position. Sufficient air pressure acting on the return pistons is needed to return the valve elements to a fully closed position.

The red "Status" LED will be illuminated indicating the valve in fault and lock-out must be reset





Valve reset (electrical or manual):

The reset procedure is as follows:

- Remove the electrical signals to the main coils
- Ensure there is air supplied to the valve
- Energize the reset solenoid for a minimum of 200 ms
- Allow a 200 ms delay after de-energizing the reset solenoid and re-energizing the main solenoids

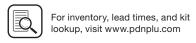
The valve will remain in the locked-out position, even if the inlet air supply is removed and re-applied.

A remote reset signal must be applied to reset the valve. A momentary, remote electrical signal must be applied to the reset solenoid to apply pressure to the reset pistons in the valve. Actuation of the reset piston physically pushes the main valve elements to their closed position. Inlet air fully pressurizes the crossovers and holds the inlet poppets on seat. Actuation of the reset piston opens the reset poppet, thereby, immediately exhausting pilot supply air, thus, preventing valve operation during reset (Reset adapter added to illustration.). De-actuation of reset pistons causes the reset poppets to close and pilot supply to fully pressurize. Reset air pressure is applied by a 3/2 normally closed solenoid, or a manual push button mounted on the reset adapter in the top valve cover.

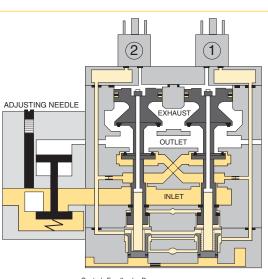
The green "Status" LED will be illuminated once the valve is reset.

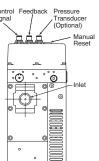






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Coalescers

Regulators

Filter/ Regulators

Lubricators

Combinations

Accessories and Kits

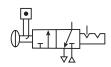
Accessories

Ball Valve / Lockout Valve

The Ball / Lockout Valve shuts off downstream line pressure in the closed position with a 90° turn of the handle. In the closed position, inlet air pressure is blocked and downstream / system air is exhausted through a threaded port. To prevent unauthorized adjustment, the padlock slide may be assembled on either side. It is recommended that this slide is installed after final system assembly.

The Safety Lockout valves conform to OSHA #29 CFR part 1910 — control of hazardous energy source (lockout / tagout).

Note: This padlock slide is a permanent assembly and may not be removed later, any unauthorized tampering will void any warranty claims. The valve can only be locked in the closed



Ordering Information

Port Size	Exhaust Port	Thread Type	Flow scfm (dm ³ /s, ANR)	Valve Flow from Left to Right
1/4"	1/4"	NPT	42.4 (20)	P31VB92LBNN
3/8"	1/4"	NPT	190.7 (90)	P32VB93LBNN
1/2"	1/4"	NPT	258.5 (122)	P32VB94LBNN
1/2"	1/2"	NPT	561.5 (265)	P33VB94LBNN
3/4"	1/2"	NPT	678 (320)	P33VB96LBNN
	3/8" 1/2" 1/2"	Size Port 1/4" 1/4" 3/8" 1/4" 1/2" 1/4" 1/2" 1/2"	Size Port Type 1/4" 1/4" NPT 3/8" 1/4" NPT 1/2" 1/4" NPT 1/2" 1/2" NPT	Size Port Type (dm³/s, ANR) 1/4" 1/4" NPT 42.4 (20) 3/8" 1/4" NPT 190.7 (90) 1/2" 1/4" NPT 258.5 (122) 1/2" 1/2" NPT 561.5 (265)

Modular Ball

* Lockout tab and muffler supplied with unit.

For thread type: BSPP 1

BSPT 2

NPT 9





Operating information

Operating temperature:	-40°C to 80°C (-40°F to 176°F)
Pressure supply (max):	250 psig (17 bar)
Port size: BSPP / BSPT / NPT	1/4, 3/8, 1/2, 3/4
Weight: P31	0.33 lbs (0.15 kg)
P32	0.79 lbs (0.36 kg)

1.21 lbs (0.55 kg)

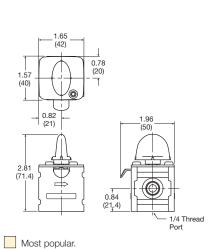
Material Specifications

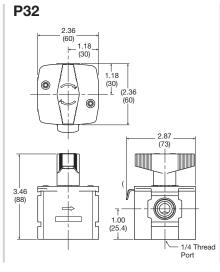
P33

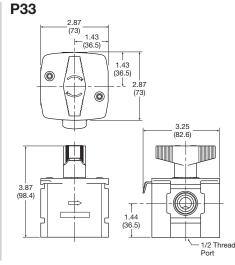
Body	Aluminum
Seals	PTFE
Ball	Stainless Steel
Lockout Tab	Zinc Plated Steel
Screw	Zinc Plated Steel

Dimensions inches (mm)

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Regulators

Introduction

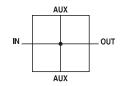
Filters

Coalescers

Regulators

Manifold Blocks

- Available in 1/4" or 3/4" threaded inlet / outlet ports
- Two additional top and bottom auxiliary ports standard
- Can be mounted anywhere in the FRL system









Ordering Information

Model Type	In / Out Port Size		Auxiliary Port Size Bottom	Thread Type	Part Number
P31	1/4"	1/4"	1/4"	NPT	P31MA92022N
P32	1/2"	1/4"	1/2"	NPT	P32MA94024N
P33	3/4"	1/4"	1/2"	NPT	P33MA96024N

For thread type: BSPP <u>1</u>
BSPT <u>2</u>

NPT 9

Operating information

 Operating temperature:
 -40°F to 150°F (-40°C to 65.5°C)

 Pressure supply (max):
 300 psig (20.7 bar)

 Weight:
 P31
 0.26 lbs (0.12 kg)

 P32
 0.45 lbs (0.20 kg)

 P33
 0.45 lbs (0.20 kg)

Material Specifications

Body Aluminum

Dimensions inches (mm)

P31 **P32 P33** Outlet Port Top Port 1/4" Outlet Port Top Port 2.88 Inlet Port 1/2 3/41 Inlet Port 1/2" 0.79 1.66 1.44 2.36 (42)(36.5)(20)(60)_1.30 1.58 Top & 0.94 (33)(40)L 1.18 Inlet Outlet Bottom (23.9) 2.60 (30)1.88 Port Port Aux. Ports (66) (47.8) 1/4" 1/4" 0.74 1/4" 0.94 (19)(23.9) 1.88 1.88 (40)(47.8)(47.8)0.94 (23.9)Bottom Port 1/2" Bottom Port 1/2"





Filters

PPS1 Pressure Switch

- Long life elastomer diaphragm
- High quality snap action switch
- Field adjustable
- Compact design
- Easily customized
- Quick delivery
- NEMA 4, 13

Definitions and Terminology

Repeatability — Accuracy is the maximum allowable set point deviation of a single pressure or temperature switch under one given set of environmental and operational conditions.

Single Pole Double Throw (SPDT) Switching element — A SPDT switching element has one normally open, one normally closed and one common terminal. Three terminals mean that the switch can be wired with the circuit either normally open (NO), or normally closed (NC), or both.

Dead Band — The dead band, sometimes referred to as "differential" or "hysteresis", is the change in pressure between actuation and deactuation set points.



Operating information

Temperature range: -40°F to 105°F (-40°C to 220°C)

Operating pressure range: 1, 2, 3 - 250 PSI (17.2 bar) 4 - 2000 PSI (137.9 bar)

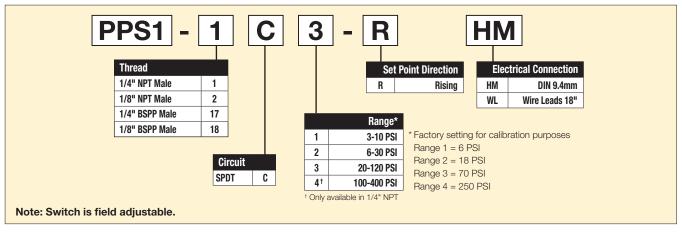
Set point tolerance ± 1 PSI or 5% (.07 bar) Deadband $\pm 10 - 20\%$ of set pressure

Current rating 3A @ 125 VAC

2A @ 30 VDC (Resistive)
Circuit form SPDT Standard

Cycle life 1 Million

Ordering Information:



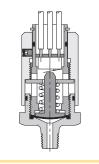
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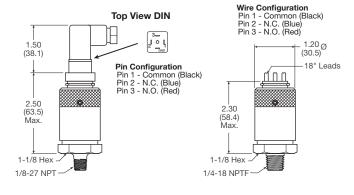
Material Specifications

-	
Adjustment knob	Anodized aluminum
Body	Brass
Diaphragm	Nitrile

Operation

The pressure switch monitors the air pressure in your pneumatic system. When the pressure in your system either drops below or exceeds the set point pressure, an electrical output is given.





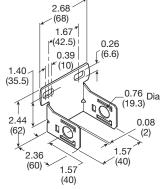




P31 Accessories

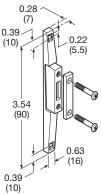
C-Bracket (Fits to filter and lubricator body)





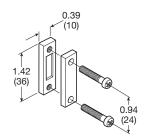
T-Bracket w/ Body Connector (O-ring not shown) P31KA00MT





Body Connector (O-ring not shown) P31KA00CB





Port Block Kit (O-ring not shown)

1/8 NPT P31KA91CF	•
1/4 NPT P31KA92CF	•
3/8 NPT P31KA93CP	•
1/8 BSPP P31KA11CF	•
1/4 BSPP P31KA12CP	•
3/8 BSPP P31KA13CP	•

P31KA21CP	1/8 BSPT
P31KA22CP	1/4 BSPT
P31KA23CP	3/8 BSPT



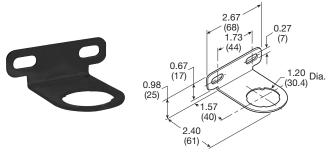
Port Block Kit w/ T-Bracket (O-ring not shown)

1/8 NPT P31KA91CI	N
1/4 NPTP31KA92CI	N
3/8 NPTP31KA93CI	N
1/8 BSPP P31KA11CI	N
1/4 BSPPP31KA12CI	V
3/8 BSPP P31KA13CI	N

1/8 BSPT P31KA21CN	
1/4 BSPT P31KA22CN	
B/8 BSPT P31KA23CN	

Angle Bracket (Fits to regulator and filter/regulator body) P31KB00MR





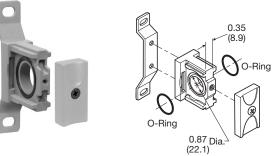




P32 Accessories

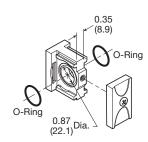
T-Bracket w/ Body Connector P32KA00MT





Body Connector P32KA00CB





Port Block Kit

Global Air Preparation

Introduction

Filters

Coalescers

Regulators

Filter/ Regulators

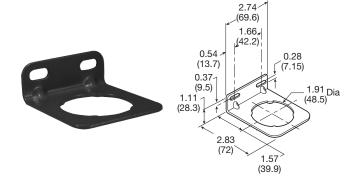
Lubricators

Combinations

1/4 NPT	P32KA92CP
3/8 NPT	P32KA93CP
1/2 NPT	P32KA94CP
3/4 NPT	P32KA96CP
1/4 BSPP	P32KA12CP
3/8 BSPP	P32KA13CP
1/2 BSPP	P32KA14CP
3/4 BSPP	P32KA16CP

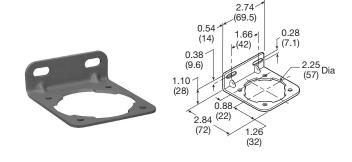
P32KA22CP	1/4 BSPT
P32KA23CP	3/8 BSPT
P32KA24CP	1/2 BSPT
P32KA26CP	3/4 BSPT

Angle Bracket (Fits to regulator and filter/regulator bonnet) P32KB00MR



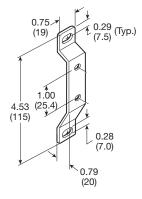
1.57 (40)

L-Bracket (Fits to filter and lubricator body) P32KA00ML



T-Bracket (fits to body connector or port block) P32KA00MB





Accessories and Kits

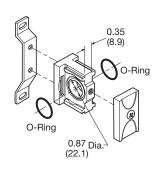




P33 Accessories

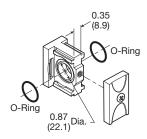
T-Bracket w/ Body Connector P32KA00MT





Body Connector P32KA00CB



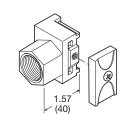


_	-	_				
Po	rt	В	O	C	k	Kit

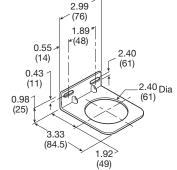
1/4	NPT	P32KA92CP
3/8	NPT	P32KA93CP
1/2	NPT	P32KA94CP
3/4	NPT	P32KA96CP
1/4	BSPP	P32KA12CP
3/8	BSPP	P32KA13CP
1/2	BSPP	P32KA14CP
3/4	BSPP	P32KA16CP

 Angle Bracket (Fits to regulator and filter/regulator bonnet)

P33KA00MR

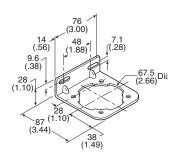






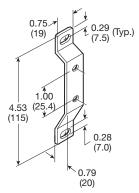
L-Bracket (Fits to filter and lubricator body) P33KA00ML



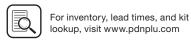


T-Bracket (fits to body connector or port block) P32KA00MB









Air Preparation Products **Global Air Preparation**

Accessories

	Series	Description	Part number
В	P31 P32 P33	Panel Mount Nut (Plastic)	P31KA00M P32KA00M P33KA00M
Global Air Preparation	P31 P32 P33	Panel Mount Nut (Aluminum)	P31KA00M P32KA00M P33KA00M
on on	P31 P32 P33	5μ Element Kit	P31KA00ES P32KA00ES P33KA00ES
Introduction	P31 P32 P33	1μ Element Kit	P31KA00ES P32KA00ES P33KA00ES
Filters	P31 P32 P33	0.01μ Element Kit	P31KA00ES P32KA00ES P33KA00ES
Coalescers	P31 P32 P33	Adsorber Element Kit	P31KA00ES P32KA00ES P33KA00ES
Regulators	P32 / P33	Auto Drain Kit	P32KA00D/
Filter/ Regulators	P31 P32 / P33	Differential Pressure Indicator Kit	P31KB00R0 P32KA00R0
Lubricators	P31 / P32 / P33	Drip Control Assembly Kit	P32KA00Pł
Combinations	P31 P32 / P33	Fill Plug Kit	P31KA00PL P32KA00PL
Accessories and Kits	P31 P32 P33	Lubricator - Plastic Bowl w/ Bowl Guard No Drain	P31KB00B0 P32KB00B0 P33KA00B0

P31 P32 P33	Panel Mount Nut (Plastic)	P31KA00MP P32KA00MP P33KA00MP	
P31 P32 P33	Panel Mount Nut (Aluminum)	P31KA00MM P32KA00MM P33KA00MM	
P31 P32 P33	5μ Element Kit	P31KA00ESE P32KA00ESE P33KA00ESE	
P31 P32 P33	1μ Element Kit	P31KA00ES9 P32KA00ES9 P33KA00ES9	
P31 P32 P33	0.01μ Element Kit	P31KA00ESC P32KA00ESC P33KA00ESC	
P31 P32 P33	Adsorber Element Kit	P31KA00ESA P32KA00ESA P33KA00ESA	
P32 / P33	Auto Drain Kit	P32KA00DA	
P31 P32 / P33	Differential Pressure Indicator Kit	P31KB00RQ P32KA00RQ	
P31 / P32 / P33	Drip Control Assembly Kit	P32KA00PH	
P31 P32 / P33	Fill Plug Kit	P31KA00PL P32KA00PL	
P31 P32 P33	Lubricator - Plastic Bowl w/ Bowl Guard No Drain	P31KB00BGN P32KB00BGN P33KA00BGN	





Air Preparation Products **Global Air Preparation**

Accessories

Series	Description	Part number	
P31 P32 P33	Lubricator - Metal Bowl w/o Sight Gauge No Drain	P31KB00BMN P32KB00BMN P33KA00BMN	
P32 P33	Lubricator - Metal Bowl w/ Sight Gauge No Drain	P32KB00BSN P33KA00BSN	
P31 P32 P33	Metal Bowl w/o Sight Gauge & Manual Drain	P31KB00BMM P32KB00BMM P33KA00BMM	
P31	Metal Bowl w/o Sight Gauge & Pulse Drain	P31KB00BMB	
P32 P33	Metal Bowl w/o Sight Gauge & Auto Drain	P32KB00BMA P33KA00BMA	
P32 P33	Metal Bowl w/ Sight Gauge & Manual Drain	P32KB00BSM P33KA00BSM	
P32 P33	Metal Bowl w/ Sight Gauge & Auto Drain	P32KB00BSA P33KA00BSA	
P31 P32 P33	Plastic Bowl w/ Bowl Guard & Manual Drain	P31KB00BGM P32KB00BGM P33KA00BGM	
P31	Plastic Bowl w/ Bowl Guard & Pulse Drain	P31KB00BGB	
P32 P33	Plastic Bowl w/ Bowl Guard & Auto Drain	P32KB00BGA P33KA00BGA	
P31 P32 P33	Regulator - Relieving Repair Kit	P31KB00RB P32KB00RB P33KA00RB	
P31 P32 P33	Regulator - Non-Relieving Repair Kit	P31KB00RC P32KB00RC P33KA00RC	

B81





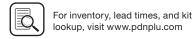
Air Preparation Products Global Air Preparation

Accessories

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Series	Description	Connection	Part number	
P31 P32 P33	Regulator - Main Adjusting S	Spring 0-30 psig (0-2 bar) Kit	P31KB00PR P32KB00PR P33KA00PR	
P31 P32 P33	Regulator - Main Adjusting S	Spring 0-60 psig (0-4.1 bar) Kit	P31KB00PS P32KB00PS P33KA00PS	
P31 P32 P33	Regulator - Main Adjusting S	Spring 0-125 psig (0-8.6 bar) Kit	P31KB00PT P32KB00PT P33KA00PT	
P31 P32 P33	Regulator - Main Adjusting S	Spring 0-250 psig (0-17 bar) Kit	P31KB00PV P32KB00PV P33KA00PV	
P31	Square Flush Mounting Gauge Kit	0-60 psig 0-160 psig 0-4 bar 0-11 bar	K4511SCR060 K4511SCR160 K4511SCR04B K4511SCR11B	0.59 (15) (15) (106 (27) (27)
P31 / P32	Square Mounting Gauge with Adapter Kit	0-60 psig 0-160 psig 0-4 bar 0-11 bar	P6G-PR90060 P6G-PR90160 P6G-PR10040 P6G-PR10110	
P31	1" Round Gauge	0-60 psig / 0-4.1 bar 1/8" 0-160 psig / 0-10 bar 1/8"	K4510N18060 K4510N18160	0.63 (16) 0.75 (19) 0.75
P31	40mm Round Gauge	0-30 psig / 0-2 bar 1/8" 0-60 psig / 0-4.1 bar 1/8" 0-160 psig / 0-10 bar 1/8"	K4515N18030 K4515N18060 K4515N18160	0.63 (16) 0.83 (25)
P32 / P33	50mm Round Gauge	0-30 psig / 0-2 bar 1/4" 0-60 psig / 0-4.1 bar 1/4" 0-160 psig / 0-10 bar 1/4" 0-300 psig / 0-20 bar 1/4"	K4520N14030 K4520N14060 K4520N14160 K4520N14300	0.71 (18) 0.94 (24)
P31 P32 / P33	Body Connector O-ring (Rep (Pack of 10)	placement kit)	P31KA00CY P32KA00CY	88
P31 P32	Tamperproof Knob Kit		P31KB00AT P32KB00AT	
P31 P32	Tamperproof Lockable Kit		P31KB00AL P32KB00AL	





Filters

Coalescers

Solenoid Operators - CNOMO

Solenoid operators, coil combinations

	NC Normal Operator with 22 x 30 standard coil	NC Normal Operator with 30 x 30 standard coil
Working pressure	0 to 10 bar	0 to 10 bar
Ambient temperature	-10°C to 60°C *	-10°C to 60°C *
Power (DC)	4.8W	2.7W
Power (AC)	8.5VA	4.9VA
Voltage tolerance	+/-10%	+/-10%
Duty cycle	100%	100%
Insulation class	F	F
Electric connection	B Industrial	DIN 43650A
Protection	IP65	IP65
Approval		UL/CSA
Working media	All neutral media such a	as compressed air
*1: :: 1: 5000:6	111 4000/ 1.1	

^{*} Limited to 50°C if use with 100% duty cycle

P31 Series only - Solenoid coils 15mm NC

	Voltage	Order code Override, blue, non-locking flush	Weight (kg)
	24VDC	PS2982B49P	0.038
410	115VAC 50Hz /	PS2982B53P	0.038
	120VAC 60Hz		

Solenoid Coils with M12 Connection

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	إر

Voltage	Part number	Weight (kg)
Direct current		
24VDC	P2FC6449	0.065

Transients

Interrupting the current through the solenoid coil produces momentary voltage peaks which, under unfavorable conditions, can amount to several hundred times the rated operating voltage. Normally, these transients do not cause problems, but to achieve the Maximum life of relays in the circuit (and particularly of transistors, thyristors and integrated circuits) it is desirable to provide protection by means of voltage-dependent resistors (varistors). All connectors/cable plugs EN175301-803 with LED's include this type of circuit protection.

Materials

Encapsulation material:

Polyamide
Brass
Corrosion resistant Cr-Ni steel
Fluorocarbon
Stainless steel

Thermoplastic as standard

Duroplast for M12 connection

Spare Base Solenoid Pilot Operator CNOMO NC

	Description	Part number non-lock manual override	Weight (kg)
	Standard Duty	P2FP23N4B	0.065
	No Override	P2FP23N4A	0.065

Note: Solenoid pilot operators are fitted to the Global range. Order the above part numbers for spares. The operators are supplied with mounting screws and interface 'O' rings. Coils and connectors must be ordered separately.

Solenoid Coils with DIN A or Industrial B Connection

Direct current 24VDC P2FCB449 0.093 P2FCA449 0.105	Voltage	22mm x 30mm Part number B industrial standard	Weight (kg)	30mm x 30mm Part number DIN 43650A standard	Weight (kg)
	Direct current				
Alternative current	24VDC	P2FCB449	0.093	P2FCA449	0.105
Alternative current	Alternative current				
110V 50Hz, 120V 60Hz P2FCB453 0.093 P2FCA453 0.105	110V 50Hz, 120V 60Hz	P2FCB453	0.093	P2FCA453	0.105







Solenoid Connectors / Cable Plugs EN175301-803

	Description	Part number 22mm Form B Industrial	Part number 30mm Form A DIN 43650A
With standard screw	Standard IP65 without flying lead	PS2429BP	PS2028BP
	With LED and protection 24VAC/DC	PS243079BP	PS203279BP
	With LED and protection 110VAC	PS243083BP	PS203283BP

With cable

Global Air Preparation

Introduction

Filters

Coalescers

Regulators

Regulators

Filter/

Lubricators

Combinations

1.89 1.85 (48) | 1.42

(36)

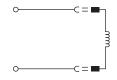


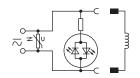
Standard with 2m cable IP65	PS2429JBP	PS2028JCP
24VAC/DC, 2m cable LED and protection IP65	PS2430J79BP	PS2032J79CP
110VAC/DC, 2m cable LED and protection IP65	PS2430J83BP	PS2032J83CP

Solenoid coil dimensions inches (mm)

15mm 22 x 30mm _ 0.93 _ (23.62) 1.18 0.86 0 0.59 (22)(30)(15)6 ____0.13 (3.4) 1.00 1.61 (41) (25.4) 1.30 1.77 1.22 (33) (31) 1.57 (40) 2.01 (22) 30 x 30mm 2.36 (51) (60) 1.18 0 (30)

Electrical schematics





PS2028BP	PS243079BP	PS203279BP
PS2028JBP	PS2430J79BP	PS2032J79CP
PS2429BP	PS243083BP	PS203283BP
PS2429JBP	PS2430J83BP	PS2032J83CP
PS2932BP	PS294679BP	PS294683BP
PS2932JBP	PS2946J79BP	PS2946J83BP

Cable plug dimensions inches (mm)

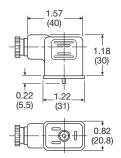
2.36 (52) (60)

_0.87

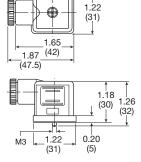
(22) 2.05_



1.22 (31)



30mm DIN 43650A **PS2028BP** Cable plugs



Most popular.





For inventory, lead times, and kit

lookup, visit www.pdnplu.com



Air Preparation Products P3Y Series	
Introduction	C3
Particulate Filters	C4-C5
Coalescing Filters	C6-C7
Regulators	C8-C11
Proportional Pressure Regulator	C12-C13
Filter / Regulators	C14-C15
Lubricators	C16-C17
Combinations	C18-C19
Soft Start / Dump Valves	C20-C22
Accessories	C23-C27

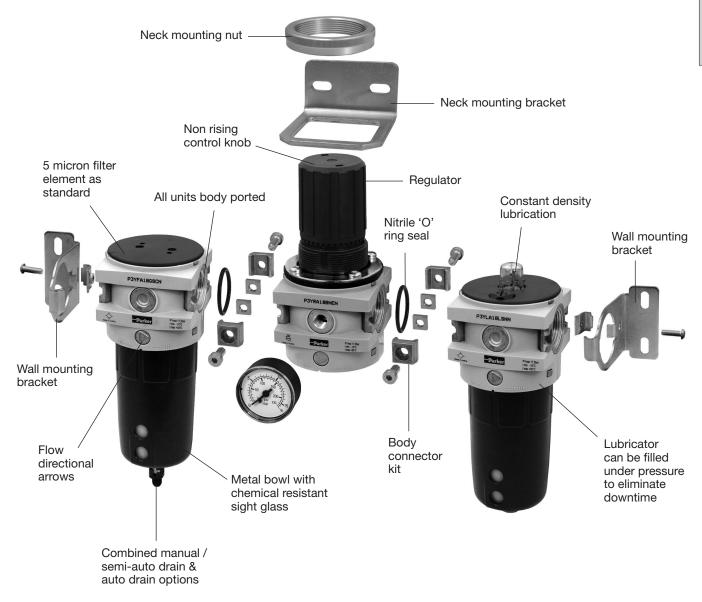
P3Y System

The P3Y system allows units to be connected together without the use of pipe connectors. This saves space, provides constant mounting centers, and maintains a modern aesthetically pleasing appearance.

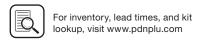
The P3Y filters are specially designed to efficiently filter out rust, dirt, moisture and other impurities from compressed air lines. Operation is fully automatic with a minimum of pressure drop. Coalescing filters and adsorber filters for high purity air are also included in the P3Y series.

The P3Y regulators are designed to provide quick response and accurate pressure regulation for the most demanding hi-flow industrial applications.

The rolling diaphragm was designed for long trouble-free operation and will not rupture or tear under high cycle or demanding applications. The P3Y mist lubricators are designed to provide lubrication for many general purpose applications.







P3Y Particulate Filter

- Integral 3/4" or 1" ports (NPT & BSPP)
- High efficiency particulate element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminium construction
- Low temperature -40°C (-40°F) with combined manual / semi-auto drain as standard





Manual drain

Auto drain

Port Size	Description	Part Number
3/4"	Combined Manual /Semi-Auto Drain	P3YFA96ESCN
3/4"	Auto Drain	P3YFA96ESAN
1"	Combined Manual /Semi Auto Drain	P3YFA98ESCN
1"	Auto Drain	P3YFA98ESAN

Operating information

Supply pressure (max)*: 254 psig (17.5 bar)

Operating temperature:

Auto drain 14°F to 140°F (-10°C to 60°C) Combined drain -40°F to 140°F (-40°C to 60°C)

Standard filtration

Manual / semi-auto drain: Closed at 11.6 psig (0.8 bar)

G1/8 thread male

Auto drain bowl pressure: Closed at 11.6 psig (0.8 bar)

Bowl capacity: 4.4 US oz. (130 cm³)

Standard filtration: 5 micron

3/4" 170 scfm (80.2 dm³/s, ANR) Flow capacity[†]: 170 scfm (80.2 dm³/s, ANR)

Fluid: Compressed air

Weight: 1.98 lb (0.9 kg) [†] Inlet pressure 91.4 psig (6.3 bar) inlet pressure and 7.3 psig (0.5 bar)

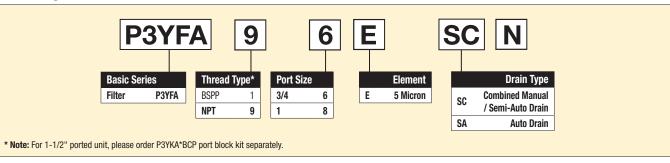
pressure drop.

* Air supply must be dry enough to avoid ice formation at temperatures below 35.6°F (2°C).

Air quality:

Within ISO 8573-1: 1991 Class 3 and 5 (Particulates) Within ISO 8573-1: 2001 Class 6 and 7 (Particulates)

Ordering Information:









Regulators

_ubricators

Combinations

Filters

Air Preparation Products

P3Y Series

Material specifications

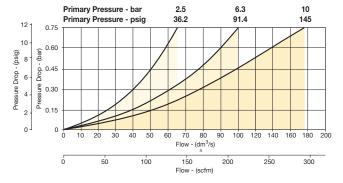
Body	Aluminium
Sight glass and bowl	Polypropylene
Body cover	ABS
Element	Sintered P.E.
Seals	Nitrile NBR
Manual / semi-auto drain	Acetal
Automatic drain	PA / Ø 10mm brass connection

Repair and Service Kits

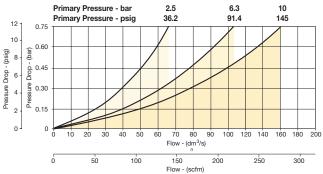
5 micron element kit	P3YKA00ESE
40 micron element kit	P3YKA00ESG
Bowl kit with combined manual / semi auto drain	P3YKA00BSC
Bowl kit with auto drain	P3YKA00BSA

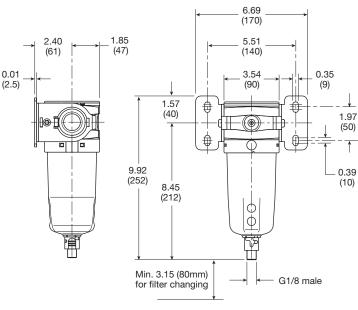
Flow characteristics

(3/4") Filter

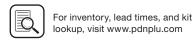


(1") Filter









(Revised 11-15-18)

P3Y Coalescing Filter

- Extended high efficiency filter element provides greater filtration surface area.
- Integral 3/4" or 1" ports (BSPP & NPT)
- Removes liquid aerosols and sub micron particles
- Oil free air for critical applications, such as air gauging, pneumatic instrumentation and control
- · Adsorber activated carbon element removes oil vapors and most hydrocarbons
- · Robust but lightweight aluminum construction

Notes: To optimize the life of the coalescing element, it is advisable to install a P3YFA pre-filter with a 5 micron element upstream of the coalescing filter.

> To optimize the life of the adsorber element, it is advisable to install a P3Y coalescing 0.01 micron filter upstream of the adsorber filter.

Port Size	Description	Part Number
3/4"	Coalescing Filter 0.01 Micron, Combined Manual / Semi-Auto Drain	P3YFA96DSCN
3/4"	Coalescing Filter 0.01 Micron, Auto Drain	P3YFA96DSAN
1"	Coalescing Filter 0.01 Micron, Combined Manual / Semi-Auto Drain	P3YFA98DSCN
1"	Coalescing Filter 0.01 Micron, Auto Drain	P3YFA98DSAN



Operating information

Supply pressure (max)*: 254 psig (17.5 bar)

Operating temperature: 14°F to 140°F (-10°C to 60°C) Manual / auto drain: Closed at 11.6 psig (0.8 bar)

G1/8 thread male

Media specifications:

Adsorber, max oil carryover

0.008 mg/m³ (PPM w/w)

Bowl capacity: 4.4 US oz. (130 cm³)

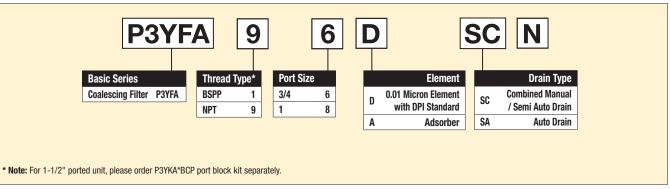
Standard filtration: 0.01 micron

275 scfm (176.9 dm³/s, ANR) Flow capacity[†]: 3/4" 307 scfm (144.8 dm³/s, ANR)

Fluid: Compressed air Weight: 3.5 lb (1.6 kg)

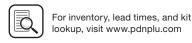
- [†] Inlet pressure 91.4 psig (6.3 bar) inlet pressure and 7.3 psig (0.5 bar)
- * Air supply must be dry enough to avoid ice formation at temperatures below 35.6°F (2°C).

Ordering Information:



C6





_ubricators

Regulators

Filters

Air Preparation Products **P3Y Series**

Material specifications

Coalescing Filter

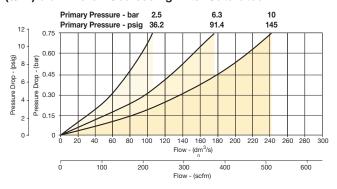
Body	Aluminium
Sight glass and bowl	Polypropylene
Filter cover	ABS
Coalescing element	Borosilicate & nano fibers
Top & bottom end cap (coalescing)	Aluminium
Adsorber element	Activated carbon
Top & bottom end cap (adsorber)	Glass filled nylon
Support cylinders	Grade 430 stainless steel
Support media	Polypropylene
Anti re-entrainment barrier	Polyester
Encapsulation	Epoxy resin / hardener
Seals	Nitrile NBR
Manual / semi-auto drain	Acetal
Auto drain	PA / Ø 10mm brass connection
Differential pressure indicator, body	Acetal
Differential pressure indicator, internal parts	Acetal
Differential pressure indicator, spring	Stainless steel
Differential pressure indicator, seals	Nitrile NBR
Differential pressure indicator, support plate	ABS
Differential pressure indicator, screws	Steel / zinc plated

Repair and Service Kits

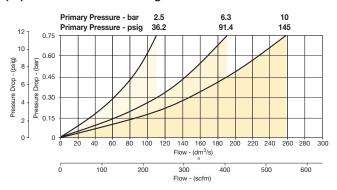
0.01 micron element kit	P3YKA00ESC
Adsorber element kit	P3YKA00ESA
Bowl kit with combined manual / semi auto drain	P3YKA00BSC
Bowl kit with auto drain	P3YKA00BSA
Differential pressure indicator kit	P3YKA00RQ

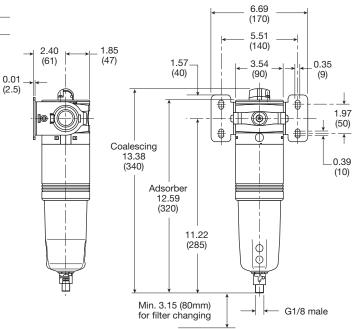
Flow characteristics

(3/4") 0.01 Micron Coalescing Filter Saturated



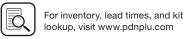
(1") 0.01 Micron Coalescing Filter Saturated





Inches (mm)





P3Y Regulators

- Integral 3/4" or 1" ports (BSPP and NPT)
- Robust but lightweight aluminium construction
- Secondary pressure ranges 12 and 16 bar
- · Rolling diaphragm for extended life
- Secondary aspiration plus rolling diaphragm provides quick response and accurate pressure regulation
- Optional tamperproof regulator padlock
- Reverse flow / relieving option
- Low temperature -40°C (-40°F)



Self relieving regulator with gauge



Reverse flow relieving regulator



Non-relieving regulator

Port Size	Description	Part Number
3/4"	174 psig Relieving	P3YRA96BNEN
3/4"	174 psig Relieving + Pressure Gauge	P3YRA96BNFN
1"	174 psig Relieving	P3YRA98BNEN
1"	174 psig Relieving + Pressure Gauge	P3YRA98BNFN



Operating information

Supply pressure (max)*: 254 psig (17.5 bar)

Operating temperature: -40°F to 140°F (-40°C to 60°C)
Flow capacity†: 3/4" 380 scfm (179.3 dm³/s, ANR)
1" 550 scfm (259.6 dm³/s, ANR)

Fluid: Compressed air

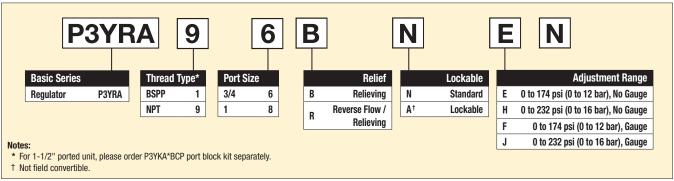
Gauge port (x2): 1/4"

Weight: 2.4 lb (1.08 kg)

 † Inlet pressure 145 psig (10 bar) inlet pressure, 91.4 psig (6.3 bar) set pressure and 7.3 psig (0.5 bar) pressure drop.

* Air supply must be dry enough to avoid ice formation at temperatures below 35.6°F (2°C).

Ordering Information









Air Preparation Products **P3Y Series**

Flow characteristics

Material specifications

Body	Aluminium
Bonnet	Glass filled polyamide
Regulator cover	ABS
Control knob	Glass filled polyamide
Valve	Brass / NBR
Seals	Nitrile NBR
Screws	Steel / zinc plated

Repair and Service Kits

Angle bracket + metal lock ring	P3YKA00MS
Panel mounting nut	P3YKA00MM
Diaphragm kit (relieving type)	P3YKA00RR
Diaphragm kit (non-relieving type)	P3YKA00RN
0 to 160 psig (0 to 10 bar), gauge 1/4" port	K4520N14160
0 to 300 psig (0 to 20 bar), gauge 1/4" port	K4520N14300

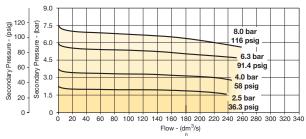
⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

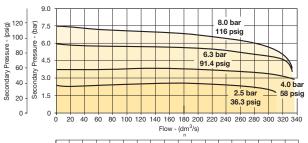
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

(3/4") Regulator

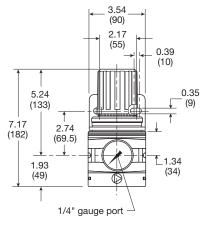


0 40 80 120 160 200 240 280 320 360 400 440 480 520 560 600 640 680 720

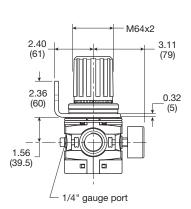
(1") Regulator



0 40 80 120 160 200 240 280 320 360 400 440 480 520 560 600 640 680 720 Flow - (scfm)



Inches (mm)



Pilot Operated Regulators

P3Y Pilot Operated Regulator

- Integral 3/4" or 1" ports (BSPP & NPT)
- Pilot controlled regulators can be mounted "out of reach" with pilot regulator installed in a convenient location
- Constant pilot bleed control for accurate pressure control
- Balanced poppet provides quick response
- High flow





Port Size	Description	Part Number
3/4"	Pilot operated regulator	P3YRA96BPPN
1"	Pilot operated regulator	P3YRA98BPPN

Operating information

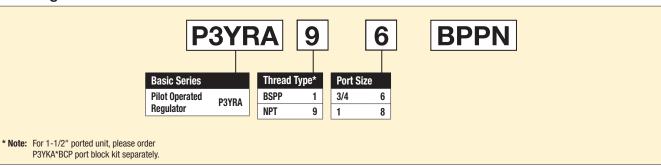
Supply pressure (max): 254 psig (17.5 bar)

-40°F to 140°F (-40°C to 60°C) Operating temperature: 550 scfm (259.6 dm³/s, ANR) Flow capacity[†]: 3/4" 550 scfm (259.6 dm³/s, ANR)

Fluid: Compressed air Weight: 2.6 lb (1.2 kg)

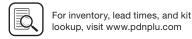
† Inlet pressure 145 psig (10 bar) inlet pressure, 91.4 psig (6.3 bar) set pressure and 7.3 psig (0.5 bar) pressure drop.

Ordering Information



Most popular.





Air Preparation Products **P3Y Series**

Material specifications

Pilot Operated Regulators

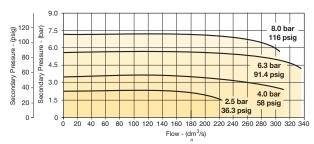
Body	Aluminium
Body cover	ABS
Valve	Brass / NBR composite
Pilot valve booster	Aluminum
Seals	Nitrile NBR
Screws	Zinc plated steel

⚠ WARNING

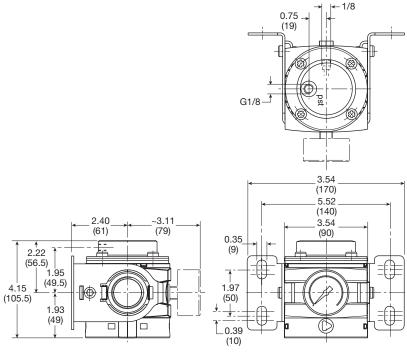
Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

Flow characteristics

3/4" and 1" Pilot Regulator



0 40 80 120 160 200 240 280 320 360 400 440 480 520 560 600 640 680 720



Inches (mm)

P3Y Proportional Pressure Regulator

- Integral 3/4" or 1" ports (BSPP & NPT)
- Very fast response times
- Robust but lightweight design



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Coalescers

Regulators

- Accurate output pressure



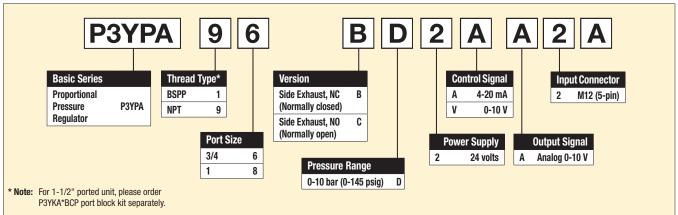
Port Size	Description	Part Number
3/4"	Normally Closed, 0 - 10 bar (0 to 145 psig)	P3YPA96BD2VA2A
1"	Normally Closed, 0 - 10 bar (0 to 145 psig)	P3YPA98BD2VA2A

10%

Operating infor	mation				
Inlet pressure 1: Operating pressure:	P ¹ min P ¹ max P ² min P ² max	14.5 psig (1 bar) 232 psig (16 bar) 2.9 psig (0.2 bar) 145 psig (10 bar)	Power consumption: Set value input:	IBmax Uw I	0.15 A V 0-10 mA 0-20 mA 4-20
Operating temperature: Flow capacity†:	:	32°F to 122°F (0°C to 50°C) 706 scfm (33.2 dm³/s, ANR) I/min 20000 m³/h 1200	Input resistance: Actual valve output: Output current: Degree of protection:	RE Ux I _{Amax}	243 K Ω 0 - 10 V 10 mA IP65 to DIN 40050. EN 60529
Repeatability: Sensitivity: Linearity:	P ² max P ² max P ² max P ² max	< 1% < 0.5% < 0.5% < 1%	Fluid: Weight: ') $p^1 > p^2 + 10\% p^2$ 2) at $p^1 - 10$ bar to $p^2 - 10\% p^2$	6.3 bar	Compressed air 1.2 lb (2.7 kg)
Nominal voltage:		$U_n \ V \ DC \ 24 \ V = \pm \ 10\%$	† Inlet pressure 91.4 psig (6.3 bar) inlet pressure and 7.3 psig (0.5 bar)		

Ordering Information

Residual ripple:









Air Preparation Products

P3Y Series

Material specifications

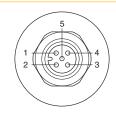
Housing	Aluminium
Pilot valve booster	Brass / NBR composite aluminium
Standard seals	NBR
Body cover screws	Steel / zinc plated

Proportional Pressure Regulators

Cables

Туре	Part number
M12, 5-pin female to flying lead cable, TPE; 2m (6.6 ft)	RKC 4.5T-2/S1587

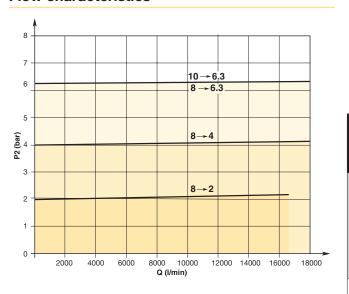
Connection diagram



Connector M12 x 1

Pin No.		Function
1	24 V	Supply
2	0 V	Reference & mass capacity
3	0 - 10 V	Set value input
4	0 V	Signal
5	0 - 10 V	Analog output

Flow characteristics



P3Y Products

Coalescers

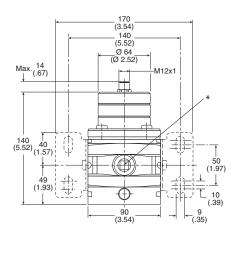
Regulators

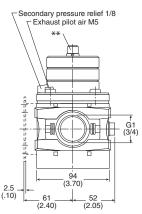
Filter / Regulators

Lubricators

Combinations

Accessories and Kits



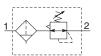


- * Two opposite gauge ports 1/4, plug screw mounted
- ** Connection for 5-pin plug M12 x 1



P3Y Filter / Regulator

- Integral 3/4" or 1" ports (BSPP or NPT)
- · High efficiency element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminium construction
- Secondary pressure ranges 12 and 16 bar
- · Rolling diaphragm for extended life
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation.
- Reverse flow / relieving option
- Low temperature -40°C (-40°F) with combined manual / semi-auto drain as standard



Filters

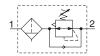
Regulators

Lubricators

Combinations

Accessories

and Kits



Port Size	Description (0 To 174 Psi)	Part Number
3/4"	Relieving, Combined Manual / Semi-Auto Drain	P3YEA96ESCBNEN
3/4"	Relieving, Auto Drain	P3YEA96ESABNEN
3/4"	Relieving, Gauge, Combined Manual / Semi-Auto Drain	P3YEA96ESCBNFN
3/4"	Relieving, Gauge, Auto Drain	P3YEA96ESABNFN
1"	Relieving, Combined Manual / Semi-Auto Drain	P3YEA98ESCBNEN
1"	Relieving, Auto Drain	P3YEA98ESABNEN
1"	Relieving, Gauge, Combined Manual / Semi-Auto Drain	P3YEA98ESCBNFN
1"	Relieving, Gauge, Auto Drain	P3YEA98ESABNFN



Operating information

Supply pressure (max)*: 254 psig (17.5 bar)

Operating temperature:

Auto drain 14°F to 140°F (-10°C to 60°C) -40°F to 140°F (-40°C to 60°C) Combined drain

Standard filtration: 5 micron

Closed at 11.6 psig (0.8 bar) Manual / semi-auto drain:

G1/8 thread male

Auto drain bowl pressure: Closed at 11.6 psig (0.8 bar)

Bowl capacity: 4.4 US oz. (130 cm³)

Standard filtration: 5 micron

Flow capacity[†]: 3/4" 335 scfm (158.1 dm³/s, ANR) 465 scfm (219.5 dm³/s, ANR)

Fluid: Compressed air

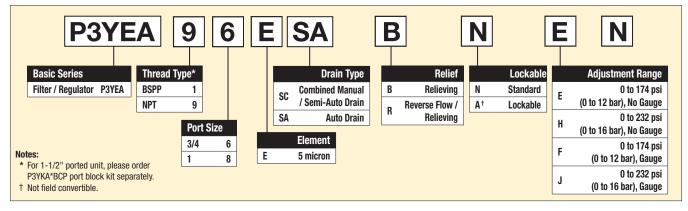
1/4" Gauge port (x2):

Weight: 3.3 lb (1.5 kg)

- [†] Inlet pressure 91.4 psig (6.3 bar) inlet pressure and 7.3 psig (0.5 bar)
- * Air supply must be dry enough to avoid ice formation at temperatures below 35.6°F (2°C).

Within ISO 8573-1: 1991 Class 3 and 5 (Particulates) Within ISO 8573-1: 2001 Class 6 and 7 (Particulates)

Ordering Information





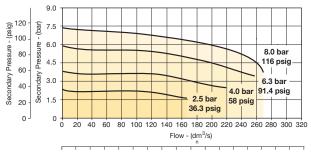




Air Preparation Products **P3Y Series**

Flow characteristics

(3/4") 5 Micron Filter / Regulator



40 80 120 160 200 240 280 320 360 400 440 480 520 560 600 640 680 Flow - (scfm)

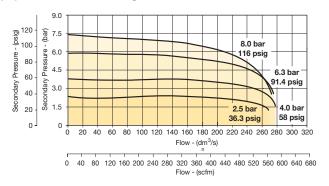
Material specifications

Body	Aluminium
Sight glass and bowl	Polypropylene
Body cover	ABS
Element	Sintered polypropylene
Seals	Nitrile NBR
Manual / semi-auto drain	Acetal
Auto drain	PA / Ø 10mm brass connection
Bonnet	Glass filled polyamide
Control Knob	Glass filled polyamide
Valve	Brass / NBR
Screws	Steel / zinc plated

Repair and Service Kits

5 micron element kit	P3YKA00ESE
Bowl kit with combined manual/semi auto drain	P3YKA00BSC
Bowl kit with auto drain	P3YKA00BSA
Key lock kit	P3XKA00AS
Diaphragm kit (relieving type)	P3YKA00RR
Diaphragm kit (non-relieving type)	P3YKA00RN
Angle bracket + metal lock ring	P3YKA00MS
Panel mount nut	P3YKA00MM

(1") 5 Micron Filter / Regulator

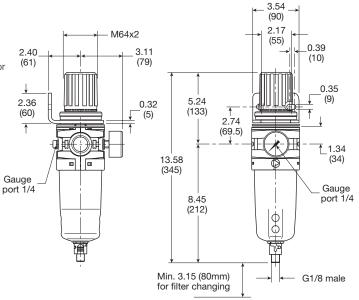


⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

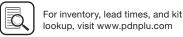
CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Inches (mm)





P3Y Lubricator

- Integral 3/4" or 1" ports (BSPP and NPT)
- Robust but lightweight aluminium construction
- Proportional oil delivery over a wide range of air flows
- Possible to fill under system pressure eliminating down time
- · Large oil reservoir





Lubricator with drain

Port Size	Description	Part Number
3/4"	Oil mist, fill under pressure	P3YLA96LSNN
1"	Oil mist fill under pressure	P3YLA98LSNN

Operating information

Supply pressure (max)*: 254 psig (17.5 bar)

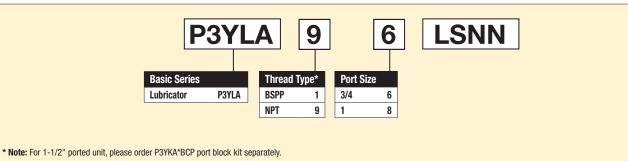
Operating temperature*: 14°F to 140°F (-10°C to 60°C) Flow capacity[†]: 3/4" 315 scfm (148.2 dm³/s, ANR) 390 scfm (184.1 dm³/s, ANR)

Fluid: Compressed air Weight: 1.8 lb (0.8 kg)

- $^{\dagger}\,$ Inlet pressure 91.4 psig (6.3 bar) inlet pressure and 7.3 psig (0.5 bar)
- * Air supply must be dry enough to avoid ice formation at temperatures below 35.6°F (2°C).

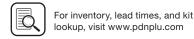
Low flow start point (lubrication pick-up): at 6.3 bar (91.4 psig) inlet pressure 0.5 dm³/s (1.1 scfm).

Ordering Information









Air Preparation Products **P3Y Series**

Material specifications

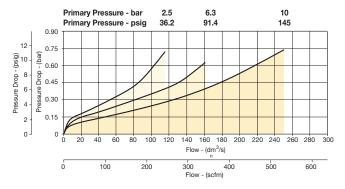
Body	Aluminium
Sight glass and bowl	Polypropylene
Sight dome	Polyamide
Lubricator cover	ABS
Top & bottom end cap	Glass filled nylon
Bayonet support	Nylon
Seals	Nitrile NBR

Repair and Service Kits

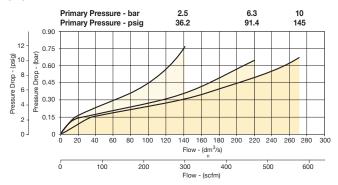
Bowl kit	P3YKA00BSN
Refill plug	P3YKA00PL
Oil (1 quart)	F442001
Oil (1 gallon)	F442002
Oil (12 quart case)	F442003
Oil (4 gallon case)	F442005

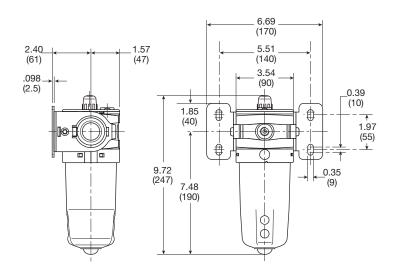
Flow characteristics

(3/4") Lubricator



(1") Lubricator





Inches (mm)

P3Y Combinations



Filter + Regulator + Lubricator Combinations 5 micron element, 12 bar (174 psig) regulator + gauge and wall mounting bracket



Port Size	Flow [‡] scfm	Weight Ib (kg)	Combined Manual / Semi-Auto Drain [†]	Auto Drain†
3/4"	170	7.3 (3.3)	P3YCB96SECNFLNF	P3YCB96SEANFLNF
1"	170	7.3 (3.3)	P3YCB98SECNFLNF	P3YCB98SEANFLNF

† Standard part numbers shown in bold. For other models refer to Options chart below.

[‡] Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.4 psig) set pressure and 1 bar (14.5 psig) pressure drop.



Filters

Coalescers

Regulators

Regulators

_ubricators

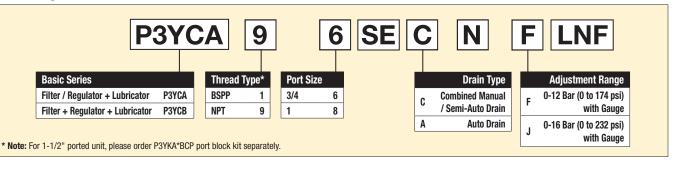
Filter / Regulator + Lubricator Combinations 5 micron element, 12 bar (174 psig) regulator + gauge and wall mounting bracket



Port Size	Flow [‡] scfm	Weight lb (kg)	Combined Manual / Semi-Auto Drain [†]	Auto Drain [†]
3/4"	315	6.2 (2.8)	P3YCA96SECNFLNF	P3YCA96SEANFLNF
1"	340	6.2 (2.8)	P3YCA98SECNFLNF	P3YCA98SEANFLNF

† Standard part numbers shown in bold. For other models refer to Options chart below.

Ordering Information:



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT -

The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

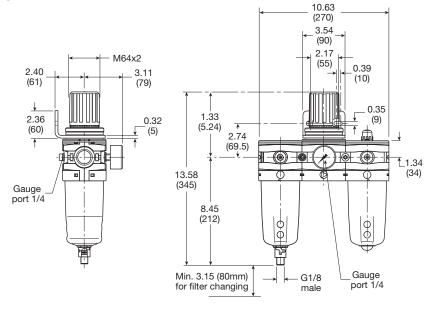
Most popular.

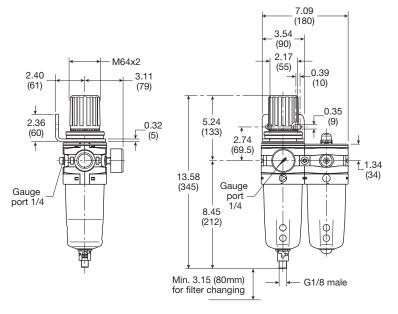


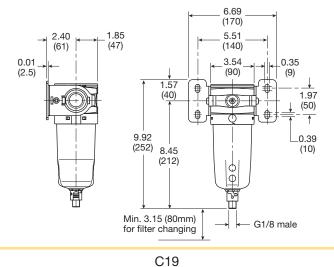


[‡] Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.4 psig) set pressure and 1 bar (14.5 psig) pressure drop.

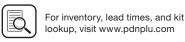
P3Y Combinations











Soft Start / Dump Valve

P3Y Combined Soft Start / Dump Valve

(Revised 05-04-20)

- Modular design with 3/4" & 1" integral ports (BSPP or NPT)
- Provides for the safe introduction of pressure
- Automatically dumps downstream pressure on the loss of pilot signal
- Adjustable slow start

Filters

Regulators Filter/

_ubricators

Combinations

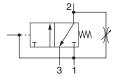
Accessories

and Kits

- · Solenoid or air pilot options
- · High flow & exhaust capability

P3Y Series Combined Soft Start / Dump Valves, provide for the safe introduction of pressure to machines or systems. Soft Start / Dump Valves when set, allow the pressure to gradually build to the set point before fully opening to deliver full flow at line pressure.

The controlled introduction of pressure can be an important safety factor and prevent damage to tooling when air pressure is introduced at machine or system start up.



Port Size	Description	Part Number
3/4"	Air Pilot Operated	P3YTA96PPN
3/4"	24VDC 30mm Coil	P3YTA96SCNA2CN
1"	Air Pilot Operated	P3YTA98PPN
1"	24VDC 30mm Coil	P3YTA98SCNA2CN





Operating information

Operating pressure (max):

30mm coil 232 psig (16 bar) 2.9 psig (0.2 bar) Operating pressure (min):

Operating temperature*:

14°F to 140°F (-10°C to 60°C) Solenoid operated 14°F to 140°F (-10°C to 60°C) Air pilot operated

Air pilot port: NPT 3/4" Exhaust port: **BSPP** 1"

1/4" Gauge port:

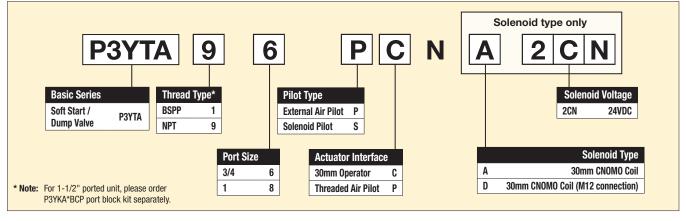
371 scfm (175.1 dm³/s, ANR) Flow capacity[†]: 3/4" 424 scfm (200.1 dm³/s, ANR)

Fluid: Compressed air Weight: Air pilot 3.1 lb (1.4 kg) 30mm coil 3.5 lb (1.6 kg)

- [†] Inlet pressure 91.4 psig (6.3 bar) inlet pressure and 7.3 psig (0.5 bar) pressure drop.
- Air supply must be dry enough to avoid ice formation at temperatures below 35.6°F (2°C).

Snap pressure: Full flow when downstream pressure reaches 50% of the inlet pressure.

Ordering Information







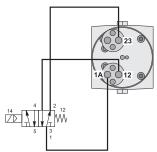


Soft Start / Dump Valve

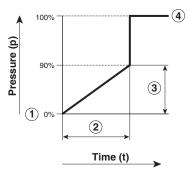
-	
Body	Aluminium
Body cover	ABS
Valve	Brass / NBR composite
Pilot valve booster	Aluminum
Seals	Nitrile NBR

Note: For solenoid coil and cable plug options see solenoid operator pages.

Combined start / stop function

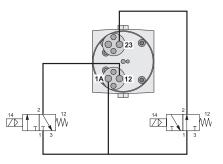


Flow characteristics



- 1) Start signal
- 2 Switching time delay
- (3) Gradual pressure build up
- (4) Operating pressure p² (= p¹)

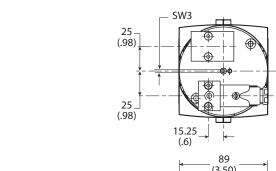
Combined start / stop function with acknowledgement

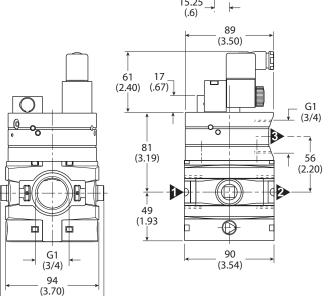


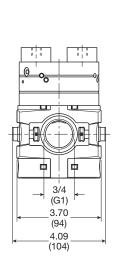
SW3

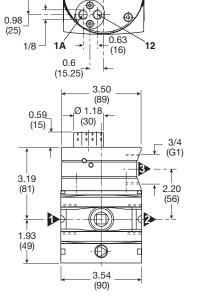
0.98

(25)









Allen key adjustment

Soft Start Valve

P3Y Soft Start Valve

- Integral 3/4" or 1" ports
- Smooth start-up of pneumatic system
- Air pilot operation
- · Adjustable slow start
- High flow

Filters

Coalescers

Regulators

Regulators

Filter/

Lubricators



Port Size	Description	Part Number
3/4"	Soft Start Valve	P3YSA96Y0N
1"	Soft Start Valve	P3YSA98Y0N

Material specifications

Body	Aluminium
Body cover	ABS
Valve	Brass / NBR composite
Pilot valve booster	Aluminum
Seals	Nitrile NBR



Operating information

Operating pressure (max): 254 psig (17.5 bar)
Operating pressure (min): 29 psig (2 bar)

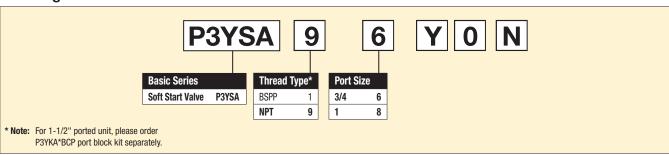
Operating temperature*:

Solenoid operated 14°F to 140°F (-10°C to 60°C)
Air pilot operated 14°F to 140°F (-10°C to 60°C)
Flow capacity†: 3/4" 324 scfm (152.9 dm³/s, ANR)
1" 324 scfm (152.9 dm³/s, ANR)

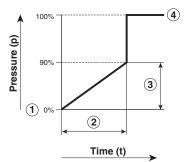
Fluid: Compressed air
Weight: 1.8 lb (0.8 kg)

- [†] Inlet pressure 91.4 psig (6.3 bar) inlet pressure and 7.3 psig (0.5 bar) pressure drop.
- * Air supply must be dry enough to avoid ice formation at temperatures below 35.6°F (2°C).
- Snap pressure: Full flow when downstream pressure reaches 50% of the inlet pressure.

Ordering Information

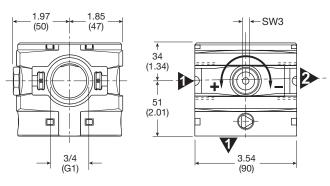


Flow characteristics



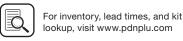
- (1) Start signal
- (2) Switching time delay
- 3 Gradual pressure build up
- 4 Operating pressure p² (= p¹)

Most popular.



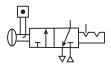
Inches (mm)





P3Y Modular Ball Valve

- Positive bubble tight shut-off
- 90° turn handle to prevent unauthorized adjustment
- Pad lockable (up to 6 times)
- When the inlet pressure is turned off the downstream vents through the exhaust port



Ball / Lockout Valve shuts off downstream line pressure in the closed position with a 90° turn of the handle. In the closed position, inlet air pressure is blocked and downstream / system air is exhausted through a threaded port. To prevent unauthorized adjustment, the padlock slide may be assembled on either side. It is recommended that this slide is installed after final system assembly.

The Safety Lockout valves conform to OSHA #29 CFR part 1910 – control of hazardous energy source (lockout / tagout).



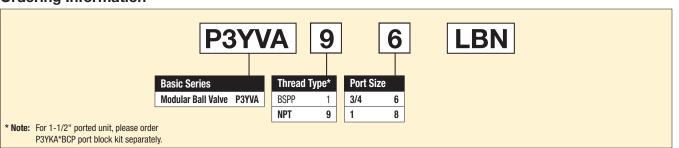
Operating information

Operating pressure (max): 254 psig (17.5 bar)
Operating pressure (min): 29 psig (2 bar)

 $\begin{array}{lll} \mbox{Operating temperature:} & 14 \mbox{°F to } 140 \mbox{°F (-10 \mbox{°C to } 60 \mbox{°C)}} \\ \mbox{Flow capacity†:} & 3/4 \mbox{"} & 705.6 \mbox{ scfm } (333 \mbox{ dm}^3/\mbox{s, ANR)} \\ & 1 \mbox{"} & 705.6 \mbox{ scfm } (333 \mbox{ dm}^3/\mbox{s, ANR)} \\ \end{array}$

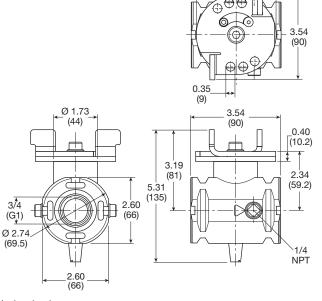
Weight: 3/4" 2.4 lb (1.1 kg) 1" 2.4 lb (1.1 kg)

Ordering Information



Material Specifications

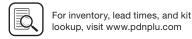
Body	Aluminium
Valve ball	Brass / nickle plated
Handle	Aluminum
Seals	Nitrile NBR
Exhaust silencer	Sintered bronze



Inches (mm)

C23





3 15

(80)

Air Preparation Products **P3Y Series**

Modular Manifold

P3Y Series Manifolds provide up to 4 extra outlet ports. They may be assembled at any position in a combination e.g. before the lubricator to provide oil free take off or at the end of a combination to provide extra outlet ports.

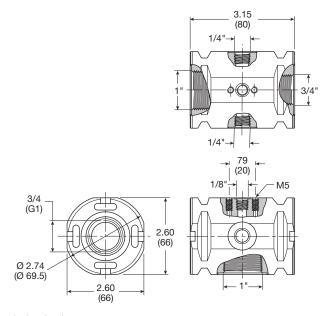
Thread Type	Part Number
BSPP	P3YMA1V0N
NPT	P3YMA9V0N

Port Sizes

Inlet Port	Тор	Bottom	Front and Back
3/4"	1/8"	1"	1/4"
1"	1/8"	1"	1/4"

Material specifications

Body	Aluminium		
Weight	0.7 kg (1.5 lb)		



Inches (mm)

Optional Port Block Kits

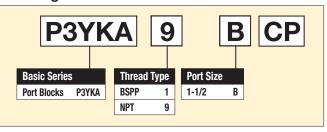


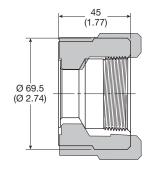
- To change port sizes Port Block Kits are available, they are attached to any unit utilizing the connecting kit.
- Allows assemblies to be removed from a hard piped system.

Material specifications

Body	Aluminium
Weight	0.65 kg (1.43 lb)

Ordering Information





Inches (mm)





Accessories

Solenoid Operators - CNOMO

Technical data -

Solenoid operators, coil combinations

	NC Normal Operator with 22 x 30 standard coil	NC Normal Operator with 30 x 30 standard coil
Working pressure	0 to 10 bar	0 to 10 bar
Ambient temperature	-10°C to 60°C *	-10°C to 60°C *
Power (DC)	4.8W	2.7W
Power (AC)	8.5VA	4.9VA
Voltage tolerance	+/-10%	+/-10%
Duty cycle	100%	100%
Insulation class	F	F
Electric connection	B Industrial	DIN 43650A
Protection	IP65	IP65
Approval		UL/CSA
Working media	All neutral media such a	s compressed air

^{*} Limited to 50°C if use with 100% duty cycle

Solenoid Coils with M12 Connection



Voltage	Part Number	Weight (Kg)
Direct current		
24VDC	P2FC6449	0.065

Transients

Interrupting the current through the solenoid coil produces momentary voltage peaks which, under unfavorable conditions, can amount to several hundred times the rated operating voltage. Normally, these transients do not cause problems, but to achieve the Maximum life of relays in the circuit (and particularly of transistors, thyristors and integrated circuits) it is desirable to provide protection by means of voltage-dependent resistors (varistors). All connectors/cable plugs EN175301-803 with LED's include this type of circuit protection.

Materials

Pilot Valve	
Body:	Polyamide
Armature tube:	Brass
Plunger & core:	Corrosion resistant Cr-Ni steel
Seals:	Fluorocarbon
Screws:	Stainless steel
Coil	
Encapsulation material:	Thermoplastic as standard Duroplast for M12 connection
	'

Spare Base Solenoid Pilot Operator CNOMO NC

	Description	Part Number	Weight (Kg)
	Non-lock Manual Override	P2FP23N4B	0.065
*	No Override	P2FP23N4A	0.065

Note: Solenoid pilot operators are fitted to the Global range. Order the above part numbers for spares. The operators are supplied with mounting screws and interface 'O' rings. Coils and connectors must be ordered separately.

Solenoid Coils with DIN A or Industrial B Connection

	Voltage	22mm x 30mm Part Number B Industrial Standard	Weight (Kg)	90mm x 30mm Part Number DIN 43650A Standard	Weight (Kg)
	Direct current				
	24VDC	P2FCB449	0.093	P2FCA449	0.105
	Alternative current				
	110V 50Hz, 120V 60Hz	P2FCB453	0.093	P2FCA453	0.105

C25







With S	Standard Scre

	Description	Part Number 22mm Form B Industrial	Part Number 30mm Form A DIN 43650A
tandard Screw	Standard IP65 without Flying Lead	PS2429BP	PS2028BP
With LED a	With LED and Protection 24VAC/DC	PS243079BP	PS203279BP
	With LED and Protection 110VAC	PS243083BP	PS203283BP

With Cable

P3Y Products

Filters

Coalescers

Regulators

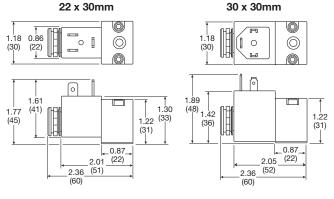
Regulators Filter/

Lubricators

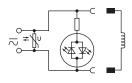


Standard with 2m cable IP65	PS2429JBP	PS2028JCP
24VAC/DC, 2m cable LED and protection IP65	PS2430J79BP	PS2032J79CP
110VAC/DC, 2m cable LED and protection IP65	PS2430J83BP	PS2032J83CP

Solenoid coil dimensions mm (inches)



Electrical schematics

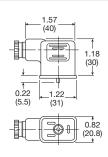


PS243079BP	PS203279BP
PS2430J79BP	PS2032J79CP
PS243083BP	PS203283BP
PS2430J83BP	PS2032J83CP
PS294679BP	PS294683BP
PS2946J79BP	PS2946J83BP

Cable plug dimensions mm (inches)

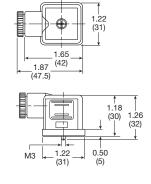
22mm Form B industrial cable plugs

PS2429BP



30mm DIN 43650A cable plugs

PS2028BP



Most popular.





Air Preparation Products **P3Y Series**

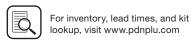
Accessories

Accessories

Description		Connection	Weight lb (kg)	Part Number	
0.01 micron element kit				P3YKA00ESC	
5 micron element kit				P3YKA00ESE	
Adsorber element kit				P3YKA00ESA	
Angle bracket + metal lock ring				P3YKA00MS	
Bowl kit with combined manual / s	emi-auto drain			P3YKA00BSC	
Bowl kit with auto drain				P3YKA00BSA	
Bowl kit				P3YKA00BSN	
Connector o-ring kit	Qty: 5			P3YKA08CY	
Differential pressure indicator kit				P3YKA00RQ	
Diaphragm kit (relieving type)				P3YKA00RR	
Diaphragm kit (non-relieving type)				P3YKA00RN	
Key lock (replacement)				P3XKA00AS	
Lubricator oil	F442001 - 1 Qt.		2.03	F442001	
	F442002 - 1 Gal		(0.92)	F442002	
Neck mounting bracket kit			8.27 (3.75)	P3YKA00MS	
P3Y connecting kit			0.11 (0.05)	P3YKA00CB	
Panel mounting nut (Aluminium)			1.54 (0.70)	РЗҮКА00ММ	
Pressure gauge	0 to 160 psig (0 to 10 bar)	1/4"	0.13 (0.06)	K4520N14160	
Pressure gauge	0 to 300 psig (0 to 20 bar)	1/4"	0.13 (0.06)	K4520N14300	201/2
Refill plug				P3YKA00PL	
Wall mounting brackets			0.44 (0.2)	P3YKA00CW	









Air Preparation Products Contents - www.parker.com/pneu/frl

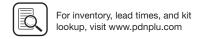
Air Preparation Products



14 Series Products	
14F Particulate Filters	D2-D3
10F Coalescing Filters	D4-D5
14R Regulators	D6-D7
14E Filter / Regulators	D8-D9
04L Lubricators	D10-D11
14A / 14G Combinations	D12-D13



4 Series



D1

14F Particulate Filters – Miniature

- Excellent water removal efficiency
- Unique deflector plate that creates swirling of the air stream ensuring maximum water and dirt separation
- Easily disassembled for servicing without the use of tools
- 5 micron element standard
- Interchangeable twist and automatic pulse drains
- 1/8" & 1/4" ports (NPT, BSPP & BSPT)





14 Series Products

Filters

Coalescers

Combinations

Twist Automatic

Port Size	Description ‡	Part Number
1/8"	Poly Bowl, Twist Drain	14F01BB
1/8"	Metal Bowl, Twist Drain	14F03BB
1/8"	Poly Bowl, Auto Pulse Drain	14F05BB
1/8"	Metal Bowl, Auto Pulse Drain	14F07BB
1/4"	Poly Bowl, Twist Drain	14F11BB
1/4"	Metal Bowl, Twist Drain	14F13BB
1/4"	Poly Bowl, Auto Pulse Drain	14F15BB
1/4"	Metal Bowl, Auto Pulse Drain	14F17BB

[‡] For polycarbonate bowl, see caution in Engineering Section A.

Operating information

Supply pressure (max):

 Plastic bowl
 0 to 150 psig (0 to 10.3 bar)

 Metal bowl
 0 to 250 psig (0 to 17.2 bar)

 Auto pulse drain
 10 to 250 psig (0.7 to 17.2 bar)

Operating temperature:

 Plastic bowl
 32°F to 125°F (0°C to 52°C)

 Metal bowl
 32°F to 175°F (0°C to 80°C)

 Auto pulse drain
 125°F (52°C) or less

Flow capacity \dagger :

High flow 1/8" 22 scfm (10.4 dm³/s, ANR) 1/4" 24 scfm (11.3 dm³/s, ANR)

Bowl capacity: 1 oz.

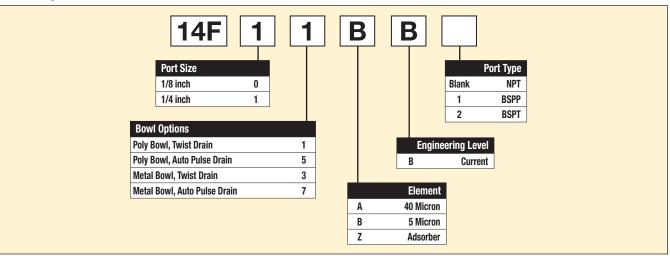
Auto pulse drain tube barb 1/8 inch

Weight: 0.41 lb (0.18 kg)

† scfm = Standard cubic feet per minute at 90 psig inlet and

5 psig pressure drop.

Ordering Information:



D2







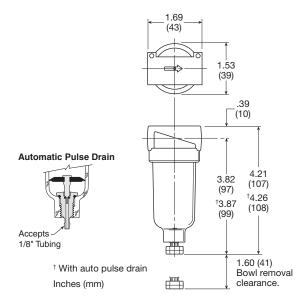
Miniature Particulate Filters

Material Specifications

Body	Zinc
Transparent bowl	Polycarbonate
Metal bowl without sight gauge	Zinc
Deflector, element holder & baffle	Plastic
Twist drain, body & stem	Plastic
Twist drain, seals	Nitrile
Auto pulse drain, piston & seals	Nitrile
Auto pulse drain, stem, seat, adaptor & washers	Aluminum
Element	Plastic
Adsorber (optional)	Activated charcoal
Seals	Nitrile

Repair and Service Kits

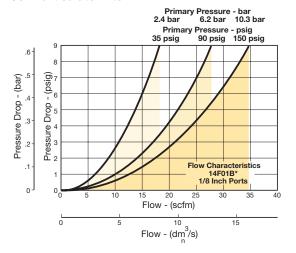
Poly bowl / auto pulse drain	PS408BP
Poly bowl / twist drain	PS404P
Metal bowl / auto pulse drain	PS451BP
Metal bowl / twist drain	PS447BP
40 Micron element	PS401P
5 Micron element	PS403P
5 Micron cartridge kit	PS407P
Adsorber element	PS452P
Mounting bracket kit	PS417BP



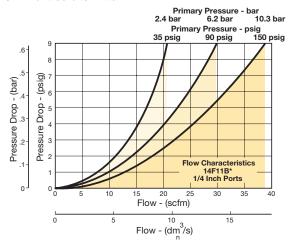
Air Preparation Products **14 Series**

Flow Charts

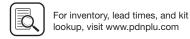
14F 1/8" Particulate Filter



14F 1/4" Particulate Filter







- Removes liquid aerosols and sub-micron particles.
- · Liquids gravitate to the bottom of the element and will not re-enter the airstream.

10F Coalescing Filters - Miniature

- Oil free air for critical applications, such as air gauging and pneumatic instrumentation and controls.
- Interchangeable twist and automatic pulse drains.
- Grade 6 element, 99.97% DOP efficiency
- 1/8", 1/4" ports (NPT, BSPP, BSPT)





Port Size	Description ‡	Part Number
1/8"	Poly Bowl, Twist Drain	10F01ED
1/8"	Metal Bowl, Twist Drain	10F03ED
1/8"	Poly Bowl, Auto Pulse Drain	10F05ED
1/8"	Metal Bowl, Auto Pulse Drain	10F07ED
1/4"	Poly Bowl, Twist Drain	10F11ED
1/4"	Metal Bowl, Twist Drain	10F13ED
1/4"	Poly Bowl, Auto Pulse Drain	10F15ED
1/4"	Metal Bowl, Auto Pulse Drain	10F17ED

Standard part numbers shown bold, with Grade 6 Elements (for Grade 10 Elements, replace "E" with "H" in the 6th position). For other models refer to ordering information below.

Operating information

Supply pressure (max):

0 to 150 psig (0 to 10.3 bar) Plastic bowl Metal bowl 0 to 250 psig (0 to 17.2 bar) Auto pulse drain 10 to 250 psig (0.7 to 17.2 bar)

Operating pressure drop:

2 psig (0.14 bar) Normal Max recommended 10 psig (0.7 bar) (Element should be replaced)

Operating temperature: Plastic bowl 32°F to 125°F (0°C to 52°C) Metal bowl 32°F to 175°F (0°C to 80°C)

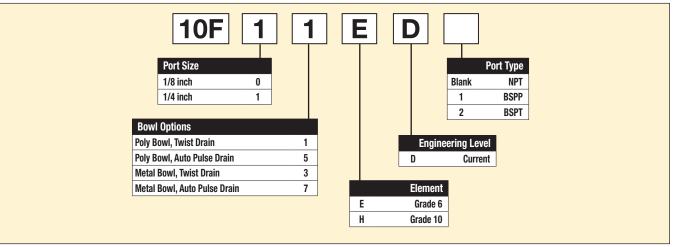
Auto pulse drain 125°F (52°C) or less Flow capacity[†]: Grade 6 1/8" 17 scfm (8 dm³/s, ANR)

(0.01 micron) 1/4" 20 scfm (9.4 dm³/s, ANR) Grade 10 1/8" 19 scfm (9 dm³/s, ANR) (1.0 micron) 1/4" 24 scfm (11.3 dm³/s, ANR)

Bowl capacity: 1 oz. 1/8 inch Auto pulse drain tube barb 0.41 lb (0.18 kg)

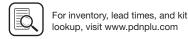
† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

Ordering Information:



Most popular.





[‡] For polycarbonate bowl, see caution in Engineering Section A.

Miniature Coalescing Filters

Material Specifications

Body	Zinc
Transparent bowl	Polycarbonate
Metal bowl without sight gauge	Zinc
Twist drain, body & stem	Plastic
Twist drain, seals	Nitrile
Auto pulse drain, piston & seals	Nitrile
Auto pulse drain, stem, seat, adaptor & washers	Aluminum
Element holder	Plastic
Element	Borosilicate & felt glass fibers
Seals	Nitrile

Repair and Service Kits

Poly bowl / auto pulse drain kit	PS408BP
Poly bowl / twist drain kit	PS404P
Metal bowl / auto pulse drain kit	PS451BP
Metal bowl / twist drain kit	PS447BP
Grade 6 element (standard)	PS446P
Grade 10 element (optional)	PS456P
Mounting bracket kit	PS417BP

1.69 (43)1.56 (39.6)(10) 4.21 (107) 3.82

1.60 (41)

Bowl removal clearance.

D5

Automatic Pulse Drain



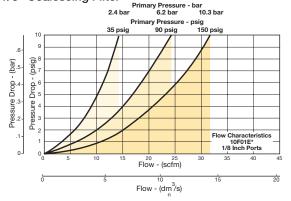
Inches (mm)

Air Preparation Products

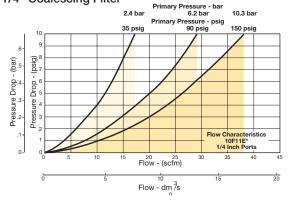
14 Series

Flow Charts Grade 6 Element

10F 1/8" Coalescing Filter



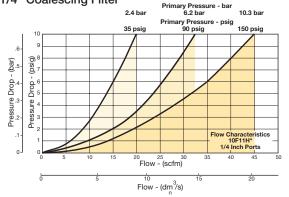
10F 1/4" Coalescing Filter



Grade 10 Element

10F 1/8" Coalescing Filter 10.3 bar Primary Pressure - psig ig 90 psig 150 psig 35 psig (bsid) Pressure Drop - (bar) Pressure Drop 20 25 Flow - (scfm)

10F 1/4" Coalescing Filter



Flow - (dm³/s)

(Revised 05-09-17)

14R Regulators - Miniature

- Unbalanced poppet standard
- · Solid control piston with lip seal for extended life
- Non-rising adjusting knob
- · Compact design
- Very easy to service
- 1/8", 1/4" ports (NPT, BSPP, BSPT)





Filters

Coalescers

Regulators Regulators Filter

Lubricators

Combinations



Port		
Size	Description	Part Number
1/8"	Without Gauge	14R013FC
1/8"	With Gauge	14R018FC
1/4"	Without Gauge	14R113FC
1/4"	With Gauge	14R118FC

NOTE: 1.218 Dia. (31 mm) hole required for panel mounting.

Operating information

Supply pressure (max): 0 to 300 psig (0 to 20.7 bar)

Secondary pressure ranges

2 to 125 psig (0 to 8.6 bar) Standard Medium 1 to 60 psig (0 to 4.1 bar) 1 to 30 psig (0 to 2.1 bar) Medium Low 1 to 15 psig (0 to 1 bar) 32°F to 125°F (0°C to 52°C) Operating temperature: Low temperature -4°F to 125°F (-20°C to 52°C)

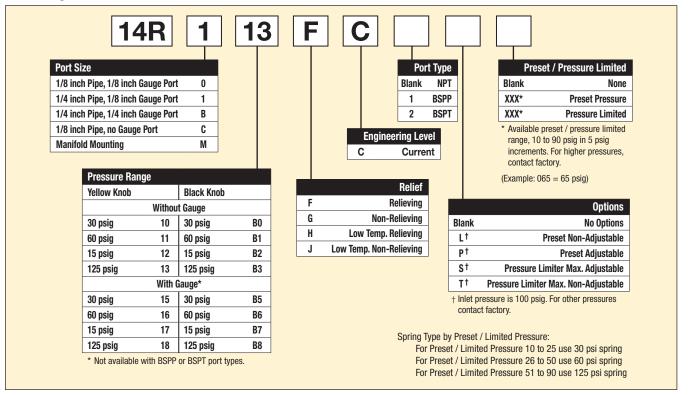
Flow capacity[†]:

1/8" 13 scfm (6.1 dm³/s, ANR) High flow 1/4" 15 scfm (7.1 dm³/s, ANR)

1/8 or 1/4 inch Gauge ports (2): 0.3 lb (0.14 kg) Weight:

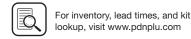
† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:









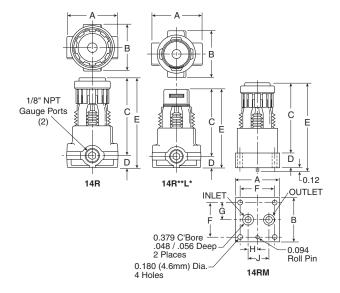
Material Specifications

Adjusting nut	Brass
Adjusting stem & spring	Steel
Body	Zinc
Bonnet, seat, piston & valve poppet	Plastic
Seals	Nitrile

Repair and Service Kits

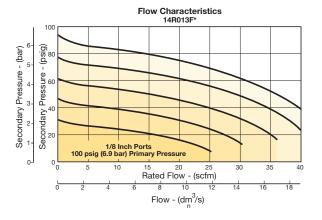
Bonnet assembly kit	L01369
Bonnet tamperproof kit	P01265
30 psig gauge, 1/8" NPT (0 to 2.1 bar)	K4515N18030
60 psig gauge, 1/8" NPT (0 to 4.1 bar)	K4515N18060
160 psig gauge, 1/8" NPT (0 to 11.0 bar)	K4515N18160
60 psig gauge, 1/4" NPT (0 to 4.1 bar)	K4520N14060
160 psig gauge, 1/4" NPT (0 to 11.0 bar)	K4520N14160
Mounting bracket kit* (includes panel mount nut)	PS417BP
Plastic panel mount nuts*	P78652
Metal panel mount nuts*	P01531
Unbalanced non-relieving, poppet / piston kit	PS428P
Unbalanced relieving, poppet / piston kit	PS426P
1-15 psig spring (yellow)	P01176
1-30 psig spring (black)	P01175
1-60 psig spring (white)	P01174
2-125 psig spring (gold)	P01173

^{*} Tighten panel mount nut 2.8 to 3.4 Nm (25 to 30 in-lbs) of torque.

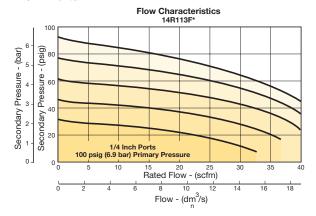


Flow Charts

14R 1/8" Ports



14R 1/4" Ports



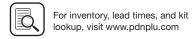
⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





14E Filter / Regulator - Miniature

- Excellent water removal efficiency
- Unbalanced poppet standard
- Solid control piston for extended life
- · Space saving package offers both filter and regulator features in one integral unit
- Non-rising adjustment knob
- Two full flow 1/8" gauge ports
- 1/8", 1/4" ports (NPT, BSPP, BSPT)



\Box

Filters

Coalescers

Regulators

Regulators

Filter

Lubricators

Combinations

Port Size	Description ‡	Part Number
1/8"	Poly Bowl, Twist Drain	14E01B13FC
1/8"	Metal Bowl, Twist Drain	14E03B13FC
1/8"	Poly Bowl, Auto Pulse Drain	14E05B13FC
1/8"	Metal Bowl, Auto Pulse Drain	14E07B13FC
1/4"	Poly Bowl, Twist Drain	14E11B13FC
1/4"	Metal Bowl, Twist Drain	14E13B13FC
1/4"	Poly Bowl, Auto Pulse Drain	14E15B13FC
1/4"	Metal Bowl, Auto Pulse Drain	14E17B13FC

[‡] For polycarbonate bowl, see caution in Engineering Section A. NOTE: 1.218 Dia. (31 mm) hole required for panel mounting.

Operating information

Supply pressure (max): 0 to 150 psig (0 to 10.3 bar) Plastic bowl Metal bowl 0 to 250 psig (0 to 17.2 bar)

Secondary pressure ranges

2 to 125 psig (0 to 8.6 bar) Standard Medium 1 to 30 psig (0 to 2.1 bar) Medium 1 to 60 psig (0 to 4.1 bar) Low 1 to 15 psig (0 to 1 bar)

Operating temperature:

32°F to 125°F (0°C to 52°C) Plastic bowl Metal bowl 32°F to 175°F (0°C to 80°C)

Flow capacity†:

16 scfm (7.6 dm³/s, ANR) High flow 1/8" 18 scfm (8.5 dm³/s, ANR)

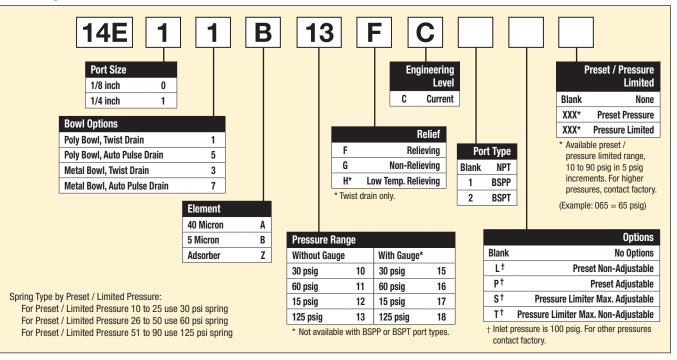
Bowl capacity: 1 oz. Auto pulse drain tube barb 1/8 inch 1/8 inch Gauge ports (2):

(can be used as additional full flow)

Weight: 0.4 lb (0.18 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet and 10 psig

Ordering Information:



D8





Miniature Filter / Regulators

Material Specifications

Adjusting nut	Brass
Adjusting stem & spring	Steel
Body	Zinc
Bonnet, knob, seat, piston, holder & deflector	Plastic
Transparent bowl	Polycarbonate
Metal bowl (without sight gauge)	Zinc
Twist drain, body & stem	Plastic
Twist drain, seals	Nitrile
Auto pulse drain, piston & seals	Nitrile
Auto pulse drain, stem, seat, adaptor & washers	Aluminum
5 Micron elements (standard)	Plastic
40 Micron elements (optional)	Plastic
Adsorber elements (optional)	Activated charcoal
Seals	Nitrile

Repair and Service Kits

Bonnet tamperproof kit	P01265
Poly bowl / auto drain	PS408BP
Poly bowl / twist drain	PS404P
Metal bowl / auto drain	PS451BP
Metal bowl / twist drain	PS447BP
40 micron element	PS401P
5 micron element	PS403P
Adsorber element	PS452P
30 psig (0 to 2.1 bar), gauge	K4515N18030
60 psig (0 to 4.1 bar), gauge	K4515N18060
160 psig (0 to 11.0 bar), gauge	K4515N18160
Mounting bracket kit* (includes panel mount nut)	PS417BP
Panel mount nut*	P78652
Unbalanced, non-relieving	PS428P
Unbalanced, relieving	PS426P
1- 15 psig spring (yellow)	P01176
1- 30 psig spring (black)	P01175
1- 60 psig spring (white)	P01174
2- 125 psig spring (gold)	P01173

^{*}Tighten panel mount nut 2.8 to 3.4 Nm (25 to 30 in-lbs) of torque.

♠ WARNING

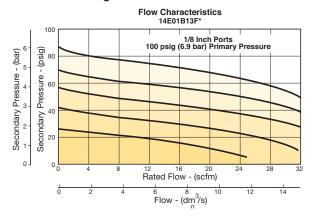
Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

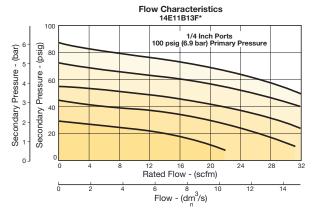
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

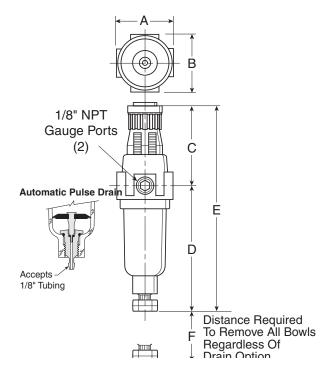
Flow Charts

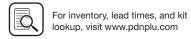
14E 1/8" Filter / Regulator



14E 1/4" Filter / Regulator







04L Mist Lubricators - Miniature

- Proportional oil delivery over a wide range of air flows
- · Precision needle valve assures repeatable oil delivery and provides simple adjustment of delivery rate
- Ideal for low and high flow applications with changing
- Transparent sight dome for 360° visibility
- Integral 1/8", 1/4" ports (NPT, BSPP, BSPT)



١
ı

Filters

Coalescers

Regulators

Regulators Filter

Lubricators

Port Size	Description ‡	Part Number
1/8"	Poly Bowl, No Drain	04L00GB
1/8"	Metal Bowl, No Sight Gauge, Twist Drain	04L03GB
1/4"	Poly Bowl, No Drain	04L10GB
1/4"	Metal Bowl, No Sight Gauge, Twist Drain	04L13GB

[‡] For polycarbonate bowl and sight dome, see caution in Engineering Section A.

Operating information

Supply pressure (max):

Plastic bowl 0 to 150 psig (0 to 10.3 bar) Metal bowl 0 to 250 psig (0 to 17.2 bar)

Operating temperature:

32°F to 125°F (0°C to 52°C) Plastic bowl Metal bowl 32°F to 175°F (0°C to 80°C)

Flow capacity[†]:

1/8" 20 scfm (9.4 dm³/s, ANR) High flow 20 scfm (9.4 dm³/s, ANR)

Minimum flow 0.5 scfm (0.24 dm³/s, ANR) at

100 psig (6.9 bar)

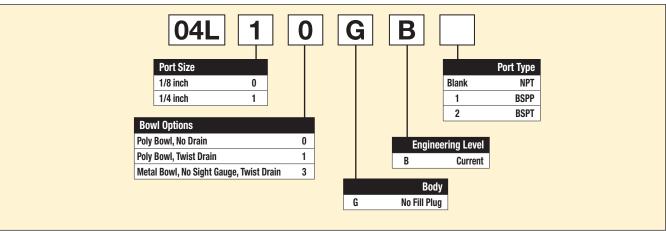
Bowl capacity: 1 oz.

0.4 lb (0.18 kg) Weight:

† scfm = Standard cubic feet per minute at 90 psig inlet and

5 psig pressure drop.

Ordering Information:



Suggested Lubricant F442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C) (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

Most popular.





Miniature Mist Lubricators

Material Specifications

Body	Zinc
Transparent bowls	Polycarbonate
Metal bowl (without sight gauge)	Zinc
Drains, twist – body & nut	Plastic
Seals	Nitrile
Sight dome	Polycarbonate

Repair and Service Kits

Poly bowl / no drain kit	PS421P
Poly bowl / twist drain kit	PS420P
Metal bowl / twist drain (no sight gauge) kit	PS447BP
Mounting bracket kit	PS419
Oil (1 quart)	F442001
Oil (1 gallon)	F442002
Oil (12 quart case)	F442003
Oil (4 gallon case)	F442005

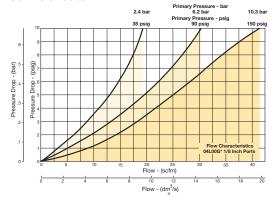
1.73 (44) 1.56 (40)2.16 (55) 5.80 (147)†5.94 (151) 3.64 (92) †3.78 (96) 1.60 (41) Bowl removal clearance.

Air Preparation Products

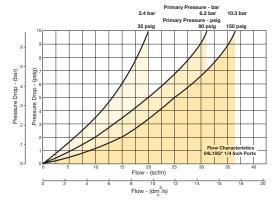
14 Series

Flow Charts

04L 1/8" Lubricator



04L 1/4" Lubricator



Inches (mm)

D11

14 Series

14A / 14G Close Nippled Combinations – Miniature

Close Nippled Combinations – 14 Miniature Series

- Regulator can be mounted with knob in up or down position
- 5 micron filter element standard, 40 micron optional
- · Manual twist drain
- · Relieving regulator





14 Series Products

14G

14A

Filters

Coalescers

Regulators

Close Nippled Combinations



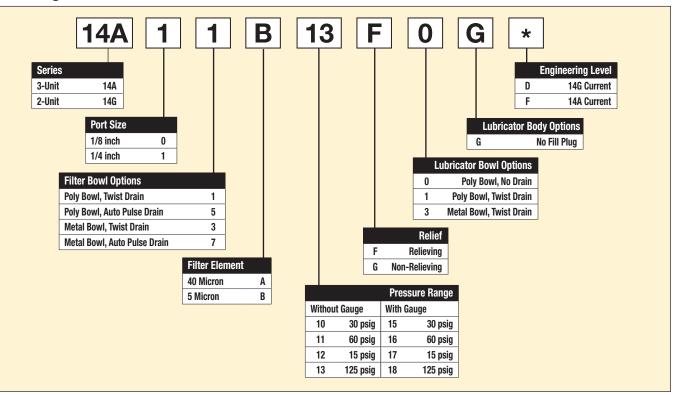
Port Size	Bowl Type ‡	Element Type	Filter Drain Type	Relief Type	Lubricator Drain Type	Part Number (NPT)
1/8"	Poly	5 micron	Twist	Relieving	None	14G01B13F0GD
1/4"	Poly	5 micron	Twist	Relieving	None	14G11B13F0GD

*	

1/8"	Poly	5 micron	Twist	Relieving	None	14A01B13F0GF
1/4"	Poly	5 micron	Twist	Relieving	None	14A11B13F0GF

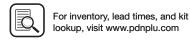
 $[\]ensuremath{^\ddagger}$ For polycarbonate bowl, see caution in Engineering Section A.

Ordering Information:

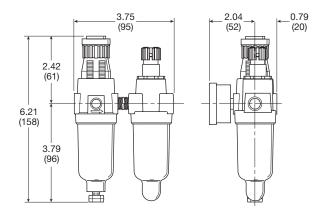


Most popular.



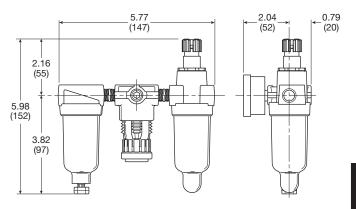


14G (Close nippled 2-unit)



Inches (mm)

14A (Close nippled 3-unit)



⚠ WARNING

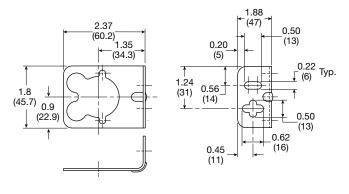
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

Service kits

Mounting bracket, 14E, 14F, 14R	PS417BP
Mounting bracket, 04L	PS419

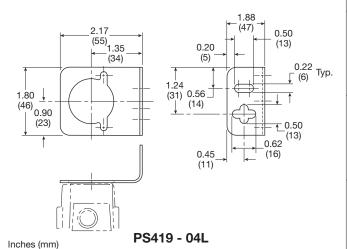
CAUTION:

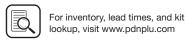
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Inches (mm)

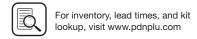
PS417BP - 10F, 14F, 14R, 14E (Includes panel mount nut)





D13





Parker Pneumatic



Air Preparation Products Prep-Air[®] II Products **Particulate Filters** 05F Economy E2-E3 06F Compact E4-E6 07F Standard E7-E8 **Coalescing Filters** 15F Economy E9-E10 E11-E12 11F Compact 12F Standard E13-E14

Regulators	
05R Economy	E15-E16
06R Compact	E17-E18
07R Standard	E19-E20

Pilot Controlled Regulators	
11R Economy	E21-E22
12R Standard	E23-E24
Filter / Regulators	

05E Economy	E25-E26
06E Compact	E27-E29
07E Standard	E30-E32
12E Coalescing	E33-E34

Lubricators		
15L Economy, Micro-Mist	E35-E36	
16L Compact, Micro-Mist	E37-E38	
17L Standard, Micro-Mist	E39-E40	
06L Compact, Mist	E41-E42	
07L Standard, Mist	E43-E44	

C	Combinations	
_	06 Compact & 07 Standard, Close Nippled	E45-E46
	06 Compact & 07 Standard, Modular	E47-E48
	Accessories	E49-E50

Accessories	
Mounting Bracket Kits	E51





E1

(Revised 12-2-20)

05F Particulate Filters – Economy

- Excellent water removal efficiency
- Unique deflector plate and shroud creates a swirling of the air stream ensuring maximum water and dirt separation
- Large filter element surface guarantees low pressure drop and increased element life
- 40 micron filter element standard
- Shown with recommended metal bowl guard
- 1/4" & 3/8" ports (NPT)





Filters

Coalescers

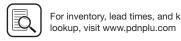
Regulators

Regulators Filter/

> Lubricators Combinations

> > Accessories

Most popular.



Operating information

Supply pressure (max):

Plastic bowl 0 to 150 psig (0 to 10.3 bar) Auto pulse drain 10 to 150 psig (0.7 to 10.3 bar) Operating temperature:

Plastic bowl

Flow capacity[†]: High flow 1/4" 54 scfm (25.5 dm³/s, ANR) 3/8" 70 scfm (33 dm³/s, ANR)

2.0 oz. Bowl capacity: 0.9 oz. Sump capacity: Weight: 1.2 lb (0.54 kg)

[†] scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

Ordering Information:

Port Size	Description ‡	Part Number
1/4"	Poly Bowl, Metal Bowl Guard, Twist Drain, 40 Micron	05F12AA
3/8"	Poly Bowl, Metal Bowl Guard, Twist Drain, 40 Micron	05F22AA

32°F to 125°F (0°C to 52°C)

E2

[‡] For polycarbonate bowl and sight dome, see caution in Engineering Section A.

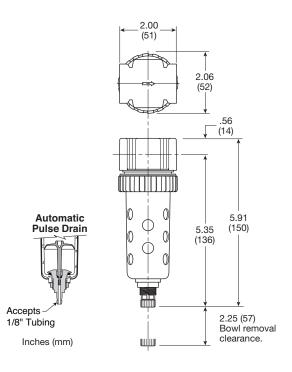
Economy Particulate Filters

Material Specifications

Body	Zinc
Transparent bowl	Polycarbonate
Bowl guards	Steel
Collar	Plastic
Deflector, shroud & baffle	Plastic
Drain	Plastic
Element	Plastic
Adsorber (optional)	Activated charcoal
Seals	Nitrile
Sight gauge	Polyamide (nylon)

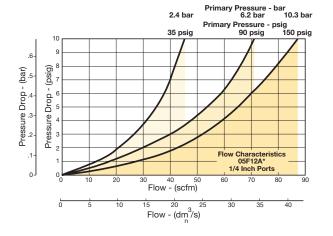
Repair and Service Kits

Bowl guard kit	PS905P
Poly bowl / auto pulse drain	PS995P
Poly bowl / twist drain	PS932P
Auto pulse drain	PS998P
Twist drain	PS512P
40 micron element	PS901P
Adsorber	PS931P
Mounting bracket kit	PS943P
Sight gauge kit	PS914P

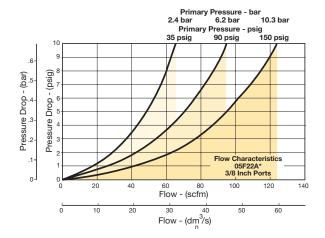


Flow Charts

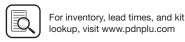
05F 1/4" Particulate Filter



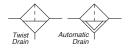
05F 3/8" Particulate Filter







- Unique deflector plate and shroud creates a swirling of the air stream ensuring maximum water and dirt separation
- Large filter element surface guarantees low pressure drop and increased element life
- · Optional automatic float drain available
- · Shown with recommended metal bowl guard
- 1/4", 3/8", 1/2" ports NPT





Operating information

Supply pressure (max):

Without DPI

Plastic bowl 0 to 150 psig (0 to 10.3 bar) Metal bowl 0 to 250 psig (0 to 17.2 bar) 0 to 150 psig (0 to 10.3 bar) With DPI Auto float drain 15 to 250 psig (1.0 to 17.2 bar)

Operating temperature:

32°F to 125°F (0°C to 52°C) Plastic bowl Metal bowl 32°F to 175°F (0°C to 80°C) With DPI 32°F to 125°F (0°C to 52°C)

Flow capacity[†]:

High flow 1/4" 53 scfm (25 dm³/s, ANR)

3/8" 80 scfm (37.8 dm³/s, ANR) 1/2" 85 scfm (40.1 dm³/s, ANR)

Bowl capacity: 4.4 oz. Sump capacity: 1.75 oz. Weight: 1.4 lb (0.6 kg)

 † scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure

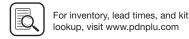
DPI = Differential pressure indicator

Ordering Information:

•	
Description ‡	Part Number
Poly Bowl, Metal Bowl Guard, Twist Drain, 40 Micron	06F12AC
Poly Bowl, Metal Bowl Guard, Twist Drain, 5 Micron	06F12BC
Metal Bowl, Twist Drain, 40 Micron	06F13AC
Metal Bowl, Sight Gauge, Twist Drain, 40 Micron	06F14AC
Poly Bowl, Metal Bowl Guard, Auto Float Drain, 40 Micron	06F16AC
Poly Bowl, Metal Bowl Guard, Auto Float Drain, 5 Micron	06F16BC
Metal Bowl, Auto Float Drain, 40 Micron	06F17AC
Metal Bowl, Auto Float Drain, 5 Micron	06F17BC
Metal Bowl, Sight Gauge, Auto Float Drain, 40 Micron	06F18AC
Metal Bowl, Sight Gauge, Auto Float Drain, 5 Micron	06F18BC
Poly Bowl, Metal Bowl Guard, Twist Drain, 40 Micron	06F22AC
Poly Bowl, Metal Bowl Guard, Twist Drain, 5 Micron	06F22BC
	Poly Bowl, Metal Bowl Guard, Twist Drain, 40 Micron Poly Bowl, Metal Bowl Guard, Twist Drain, 5 Micron Metal Bowl, Twist Drain, 40 Micron Metal Bowl, Sight Gauge, Twist Drain, 40 Micron Poly Bowl, Metal Bowl Guard, Auto Float Drain, 40 Micron Poly Bowl, Metal Bowl Guard, Auto Float Drain, 5 Micron Metal Bowl, Auto Float Drain, 40 Micron Metal Bowl, Auto Float Drain, 5 Micron Metal Bowl, Sight Gauge, Auto Float Drain, 40 Micron Metal Bowl, Sight Gauge, Auto Float Drain, 5 Micron Metal Bowl, Sight Gauge, Auto Float Drain, 5 Micron Poly Bowl, Metal Bowl Guard, Twist Drain, 40 Micron

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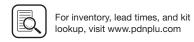
Ordering Information cont.:

Compact Particulate Filters

Port Size	Description ‡	Part Number
3/8"	Metal Bowl, Sight Gauge, Twist Drain, 5 Micron	06F24BC
3/8"	Poly Bowl, Metal Bowl Guard, Auto Float Drain, 40 Micron	06F26AC
3/8"	Poly Bowl, Metal Bowl Guard, Auto Float Drain, 5 Micron	06F26BC
3/8"	Metal Bowl, Auto Float Drain, 5 Micron	06F27BC
3/8"	Metal Bowl, Sight Gauge, Auto Float Drain, 5 Micron	06F28BC
1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain, 40 Micron	06F32AC
1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain, 5 Micron	06F32BC
1/2"	Metal Bowl, Twist Drain, 40 Micron	06F33AC
1/2"	Metal Bowl, Sight Gauge, Twist Drain, 40 Micron	06F34AC
1/2"	Metal Bowl, Sight Gauge, Twist Drain, 5 Micron	06F34BC
1/2"	Poly Bowl, Metal Bowl Guard, Auto Float Drain, 40 Micron	06F36AC
1/2"	Poly Bowl, Metal Bowl Guard, Auto Float Drain, 5 Micron	06F36BC
1/2"	Metal Bowl, Sight Gauge, Auto Float Drain, 40 Micron	06F38AC
1/2"	Metal Bowl, Sight Gauge, Auto Float Drain, 5 Micron	06F38BC
G3/8	Poly Bowl, Metal Bowl Guard, Twist Drain, 40 Micron	06F22AC1
G1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain, 5 Micron	06F32BC1
G1/2"	Metal Bowl, Sight Gauge, Twist Drain, 5 Micron	06F34BC1

 $[\]ensuremath{^{\ddagger}}$ For polycarbonate bowl and sight dome, see caution in Engineering Section A.





E5

Compact Particulate Filters

Material Specifications

Body	Zinc
Transparent bowl	Polycarbonate
Metal bowl with or without sight gauge	Zinc
Bowl Guards	Steel
Collar	Plastic
Deflector, shroud & baffle	Plastic
Twist drain - body & nut	Plastic
Auto float drain - housing, float	Plastic
Auto float drain - seals	Nitrile
Auto float drain - springs, push rod	Stainless steel
Element	Plastic
Adsorber (optional)	Activated
	charcoal
Seals	Nitrile
Sight gauge	Polyamide

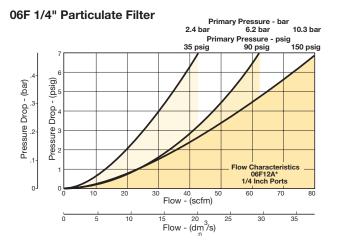
Repair and Service Kits

Bowl guard kit	PS705P
Poly bowl / auto float drain kit	PS722P
Poly bowl / twist drain kit	PS732P
Metal bowl / auto float drain kit	PS726P
Metal bowl / twist drain kit	PS734P
Metal bowl / sight gauge / auto float drain kit	PS723P
Metal bowl / sight gauge / twist drain kit	PS735P
Auto float drain kit	PS506P
Twist drain kit	PS512P
40 micron element	PS701P
5 micron element	PS702P
Adsorber element	PS731P
Mounting bracket kit	PS743P
Sight gauge kit	PS914P

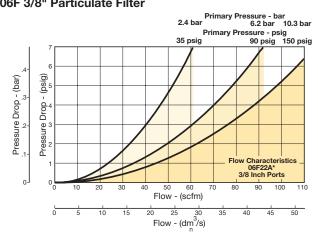
2.81 2.74 (70) .53 [(13) 6.22 (158) 5.69 (145) †6.27 †5.74 (159) (146)2.25 (57) Bowl removal clearance.

Air Preparation Products Prep-Air® II Series

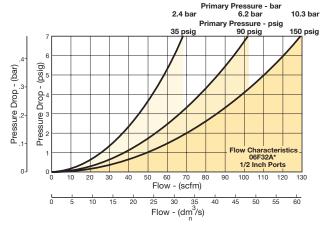
Flow Charts



06F 3/8" Particulate Filter

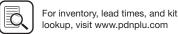


06F 1/2" Particulate Filter



† With auto float drain Inches (mm)



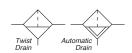


-2-20) Air Preparation Products Prep-Air® II Series

Standard Particulate Filters

07F Particulate Filters - Standard

- Excellent water removal efficiency
- Unique deflector plate and shroud creates a swirling of the air stream ensuring maximum water and dirt separation
- Large filter element surface guarantees low pressure drop and increased element life
- Optional automatic float drain available
- Shown with recommended metal bowl guard
- 1/2", 3/4" ports NPT



Operating information

Supply pressure (max):

Without DPI

 Plastic bowl Metal bowl
 0 to 150 psig (0 to 10.3 bar)

 With DPI
 0 to 150 psig (0 to 10.3 bar)

 O to 150 psig (0 to 10.3 bar)

Auto float drain 15 to 250 psig (1.0 to 17.2 bar)

Operating temperature:

 Plastic bowl
 32°F to 125°F (0°C to 52°C)

 Metal bowl
 32°F to 175°F (0°C to 80°C)

 With DPI
 32°F to 125°F (0°C to 52°C)

Flow capacity[†]:

High flow 1/2" 130 scfm (61.4 dm³/s, ANR) 3/4" 145 scfm (68.4 dm³/s, ANR)

Bowl capacity: 7.2 oz.
Sump capacity: 2.8 oz.
Weight: 2.2 lb (1.0 kg)

 $^{\dagger}\,$ scfm = Standard cubic feet per minute at 90 psig inlet and

5 psig pressure drop.

DPI = Differential pressure indicator



Ordering Information:

Port

Size	Description ‡	Part Number
1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain, 40 Micron	07F32AC
1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain, 5 Micron	07F32BC
1/2"	Metal Bowl, Twist Drain, 40 Micron	07F33AC
1/2"	Metal Bowl, Sight Gauge, Twist Drain, 40 Micron	07F34AC
1/2"	Metal Bowl, Sight Gauge, Twist Drain, 5 Micron	07F34BC
1/2"	Poly Bowl, Metal Bowl Guard, Auto Float Drain, 40 Micron	07F36AC
1/2"	Poly Bowl, Metal Bowl Guard, Auto Float Drain, 5 Micron	07F36BC
1/2"	Metal Bowl, Auto Float Drain, 40 Micron	07F37AC
1/2"	Metal Bowl, Sight Gauge, Auto Float Drain, 40 Micron	07F38AC
1/2"	Metal Bowl, Sight Gauge, Auto Float Drain, 5 Micron	07F38BC
3/4"	Poly Bowl, Metal Bowl Guard, Twist Drain, 40 Micron	07F42AC
3/4"	Poly Bowl, Metal Bowl Guard, Twist Drain, 5 Micron	07F42BC
3/4"	Metal Bowl, Sight Gauge, Twist Drain, 40 Micron	07F44AC
3/4"	Metal Bowl, Sight Gauge, Twist Drain, 5 Micron	07F44BC
3/4"	Poly Bowl, Metal Bowl Guard, Auto Float Drain, 40 Micron	07F46AC
3/4"	Poly Bowl, Metal Bowl Guard, Auto Float Drain, 5 Micron	07F46BC
3/4"	Metal Bowl, Auto Float Drain, 40 Micron	07F47AC
3/4"	Metal Bowl, Sight Gauge, Auto Float Drain, 40 Micron	07F48AC

For polycarbonate bowl and sight dome, see caution in Engineering Section A.







E7

Standard Particulate Filters

Material Specifications

Body	Zinc
Transparent bowl	Polycarbonate
Metal bowl with or without sight gauge	Zinc
Bowl guards	Steel
Collar	Plastic or metal
Deflector, shroud & baffle	Plastic
Twist drain, body & nut	Plastic
Auto float drain – housing, float	Plastic
Auto float drain – seals	Nitrile
Auto float drain – springs, push rod	Stainless steel
Element	Plastic
Adsorber element (optional)	Activated
	charcoal
Seals	Nitrile
Sight gauge	Polyamide

Repair and Service Kits

PS805P
PS822P
PS832P
PS826P
PS834P
PS823P
PS835P
PS506P
PS512P
PS801P
PS802P
PS831P
PS843P
PS914P

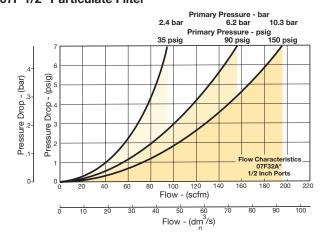
3.24 (82) 3.25 (83) .70 [(18) 7.67 (195) [†]7.70 (177)(196) †7.00 (178)2.75 (70) † With auto float drain Bowl removal

Flow Charts

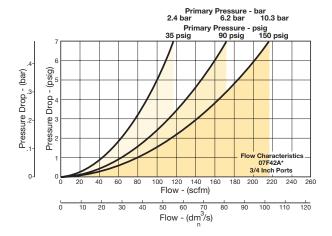
07F 1/2" Particulate Filter

Prep-Air® II Series

Air Preparation Products



07F 3/4" Particulate Filter



Inches (mm)



15F Coalescing Filters - Economy

- Removes liquid aerosols and sub-micron particles.
- Liquids gravitate to the bottom of the element and will not re-enter the airstream.
- Oil free air for critical applications, such as air gauging and pneumatic instrumentation and controls.
- Interchangeable twist and automatic pulse drains.
- Differential pressure indicator standard.
- 1/4" & 3/8" ports (NPT)





Operating information

Supply pressure (max):

Plastic bowl

Without DPI 0 to 150 psig (0 to 10.3 bar)
With DPI 0 to 150 psig (0 to 10.3 bar)
Auto pulse drain 10 to 150 psig (0.7 to 10.3 bar)

Operating temperature:

Bowl capacity:

 Plastic bowl
 32°F to 125°F (0°C to 52°C)

 With DPI
 32°F to 125°F (0°C to 52°C)

Flow capacity[†]: Grade 6 1/8" 30 scfm (14.2 dm³/s, ANR) 1/4" 30 scfm (14.2 dm³/s, ANR)

2.0 oz.

Sump capacity: 0.9 oz. Weight: 1.2 lb (0.54 kg)

[†] scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

DPI = Differential pressure indicator

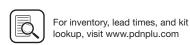
Ordering Information:

Port Size	Description ‡	Part Number
1/4"	Poly Bowl, Metal Bowl Guard, Twist Drain, Grade 6 (0.01)	15F12EA
3/8"	Poly Bowl, Metal Bowl Guard, Twist Drain, Grade 6 (0.01)	15F22EA

 $^{^{\}ddagger}\,$ For polycarbonate bowl, see caution in Engineering Section A.







Economy Coalescing Filters

Material Specifications

Body	Zinc
Transparent bowl	Polycarbonate
Bowl guards	Steel
Collar	Plastic
Drain	Plastic
Element	Borosilicate & felt glass fibers
Seals	Nitrile
Sight gauge, DPI	Polyamide (nylon)

Repair and Service Kits

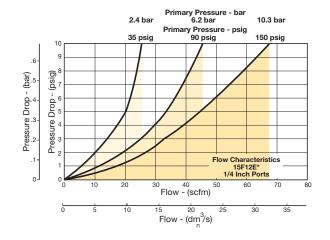
•	
Bowl Guard Kit	PS905P
Poly bowl / automatic pulse drain kit	PS995P
Poly bowl / twist drain kit	PS932P
DPI replacement kit	PS781P
Electronic DPI replacement kit	PS764
Automatic pulse drain kit	PS998P
Twist drain kit	PS512P
Electrical connector: 15mm, 3-pin DIN, 6 ft. cord	PS2932JBP
Filter element kits - Grade 6 (standard)	PS924P
Mounting bracket kit	PS943P
Sight gauge kit	PS914P

2.00 (51) 2.06 (52)4.50 1.86 (47) (114)1.50 Electronic DPI Electronic DPI (38)6.85 Automatic Pulse Drain (174)5.35 (136) ф Accepts / 1/8" Tubing 1.77 (45) Bowl removal clearance. ЩШ Inches (mm)

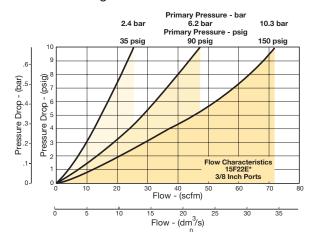
Flow Charts

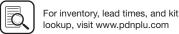
Grade 6 Element

15F 1/4" Coalescing Filter



15F 3/8" Coalescing Filter





E10

Filters

11F Coalescing Filters - Compact

- Removes liquid aerosols and sub-micron particles.
- Liquids gravitate to the bottom of the element and will not re-enter the airstream
- · Oil free air for critical applications, such as air gauging and pneumatic instrumentation and controls.
- Interchangeable twist and automatic float drains.
- Differential pressure indicator standard.
- Shown with recommended metal bowl guard.
- 1/4", 3/8", 1/2" ports (NPT)



Operating information

Supply pressure (max):

Without DPI Plastic bowl 0 to 150 psig (0 to 10.3 bar) Metal bowl 0 to 250 psig (0 to 17.2 bar) With DPI 0 to 150 psig (0 to 10.3 bar) 15 to 250 psig (1.0 to 17.2 bar) Auto float drain

Operating pressure drop:

2 psig (0.14 bar) Normal 10 psig (0.7 bar) Max recommended

(Element should be replaced)

Minimum recommended flow: 20% nominal rating of element

Operating temperature:

32°F to 125°F (0°C to 52°C) Plastic bowl Metal bowl 32°F to 175°F (0°C to 80°C) 32°F to 125°F (0°C to 52°C) With DPI

Flow capacity[†]: Grade 6 1/4" 45 scfm (21 dm³/s, ANR) (0.01 micron)

3/8" 48 scfm (23 dm³/s, ANR) 1/2" 65 scfm (31 dm³/s, ANR)

1/4" 60 scfm (28.3 dm³/s, ANR) Grade 10 (1.0 micron) 3/8" 72 scfm (34 dm³/s, ANR)

1/2" 95 scfm (45 dm³/s, ANR)

4.4 oz. Bowl capacity: Sump capacity: 1.75 oz. Weight: 1.5 lb (0.7 kg)

† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

DPI = Differential pressure indicator



Ordering Information:

Port Size	Description ‡	Part Number
1/4"	Poly Bowl, Metal Bowl Guard, Twist Drain, Grade 6 (0.01)	11F12EC
1/4"	Metal Bowl, Twist Drain, Grade 6 (0.01), W/Out Dpi	11F13ECN
1/4"	Metal Bowl, Twist Drain, Grade 10 (1.0), W/Out Dpi	11F13HCN
1/4"	Metal Bowl, Sight Gauge, Twist Drain, Grade 6 (0.01)	11F14EC
1/4"	Poly Bowl, Metal Bowl Guard, Auto Float Drain, Grade 6 (0.01)	11F16EC
1/4"	Metal Bowl, Sight Gauge, Auto Float Drain, Grade 6 (0.01)	11F18EC
3/8"	Poly Bowl, Metal Bowl Guard, Twist Drain, Grade 6 (0.01)	11F22EC
3/8"	Poly Bowl, Metal Bowl Guard, Auto Float Drain, Grade 6 (0.01)	11F26EC
3/8"	Metal Bowl, Auto Float Drain, Grade 6 (0.01)	11F27EC
3/8"	Metal Bowl, Sight Gauge, Auto Float Drain, Grade 6 (0.01)	11F28EC
1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain, Grade 6 (0.01)	11F32EC
1/2"	Metal Bowl, Sight Gauge, Twist Drain, Grade 6 (0.01)	11F34EC
1/2"	Poly Bowl, Metal Bowl Guard, Auto Float Drain, Grade 6 (0.01)	11F36EC
1/2"	Metal Bowl, Auto Float Drain, Grade 6 (0.01)	11F37EC

[‡] For polycarbonate bowl, see caution in Engineering Section A.







E11

Material Specifications

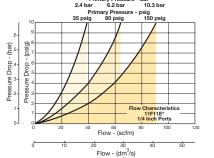
Body	Zinc
Transparent bowl	Polycarbonate
Metal bowl	Zinc
Bowl guard	Steel
Collar	Plastic
Twist drain, body & nut	Plastic
Automatic float drain, housing, float	Plastic
Automatic float drain, seals	Nitrile
Automatic float drain, springs,	
push rod	Stainless steel
Element	Borosilicate &
	felt glass fibers
Seals	Nitrile
Sight gauge	Polyamide

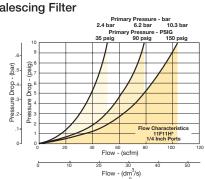
Repair and Service Kits

Bowl guard kit	PS705P
Poly bowl / automatic float drain kit	PS722P
Poly bowl / twist drain kit	PS732P
Metal bowl / automatic float drain kit	PS726P
Metal bowl / twist drain kit	PS734P
Metal bowl / sight gauge / automatic float drain kit	PS723P
Metal bowl / sight gauge / twist drain kit	PS735P
DPI replacement kit	PS781P
Automatic float drain kit	PS506P
Twist drain kit	PS512P
Electrical connector: 15mm, 3-pin DIN, 6 ft. cord	PS2932JBP
Grade 6 element (standard)	PS724P
Grade 10 element (optional)	PS730P
Mounting bracket kit	PS743P
Sight gauge kit	PS914P

Flow Charts

Grade 6 Grade 10 11F 1/4" Coalescing Filter Primary Pressure 2.4 bar 6.2 bar Primary Pressure bar 10.3 bar

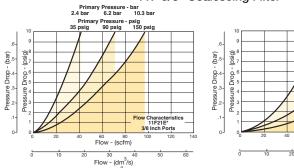




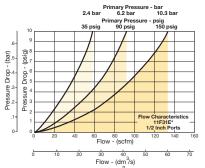
Primary Pressure - bar 2.4 bar 6.2 bar

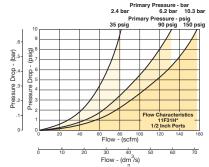
10.3 bar

11F 3/8" Coalescing Filter

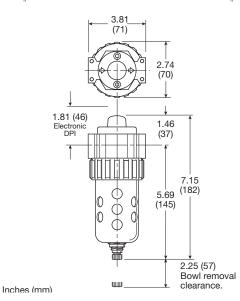


11F 1/2" Coalescing Filter

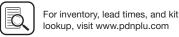




Flow - (dm³/s)









(Revised 12-2-20)

Prep-Air® II Series

12F Coalescing Filters - Standard

- Removes liquid aerosols and sub-micron particles
- · Liquids gravitate to the bottom of the element and will not re-enter the airstream
- · Oil free air for critical applications, such as air gauging and pneumatic instrumentation and controls
- Interchangeable twist and automatic float drains
- Differential pressure indicator standard
- Shown with recommended metal bowl guard
- 1/2", 3/4" ports (NPT)



Operating information

Supply pressure (max): Without DPI

Plastic bowl 0 to 150 psig (0 to 10.3 bar) Metal bowl 0 to 250 psig (0 to 17.2 bar) With DPI 0 to 150 psig (0 to 10.3 bar) Auto float drain 15 to 250 psig (1.0 to 17.2 bar)

Operating pressure drop:

2 psig (0.14 bar) Normal Max recommended 10 psig (0.7 bar)

(Element should be replaced)

Minimum recommended flow: 20% nominal rating of element

Operating temperature:

Plastic bowl 32°F to 125°F (0°C to 52°C) 32°F to 175°F (0°C to 80°C) Metal bowl With DPI 32°F to 125°F (0°C to 52°C)

1/2" 75 scfm (35.4 dm³/s, ANR) Flow capacity[†]: Grade 6

3/4" 80 scfm (37.7 dm³/s, ANR)

1/2" 125 scfm (59 dm³/s, ANR) Grade 10

3/4" 160 scfm (75.5 dm³/s, ANR)

Bowl capacity: 7.2 oz. Sump capacity: 2.8 oz. Weight: 2.4 lb (1.1 kg)

† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

DPI = Differential pressure indicator



Ordering Information:

Port Size	Description ‡	Part Number
1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain, Grade 6 (0.01)	12F32EC
1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain, Grade 6 (0.01), W/Out Dpi	12F32ECN
1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain, Grade 10 (1.0)	12F32HC
1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain, Grade 10 (1.0), W/Out Dpi	12F32HCN
1/2"	Metal Bowl, Sight Gauge, Twist Drain, Grade 6 (0.01)	12F34EC
1/2"	Metal Bowl, Sight Gauge, Twist Drain, Grade 6 (0.01), W/Out Dpi	12F34ECN
1/2"	Poly Bowl, Metal Bowl Guard, Auto Float Drain, Grade 6 (0.01)	12F36EC
1/2"	Poly Bowl, Metal Bowl Guard, Auto Float Drain, Grade 6 (0.01), W/Out Dpi	12F36ECN
1/2"	Metal Bowl, Sight Gauge, Auto Float Drain, Grade 6 (0.01)	12F38EC
1/2"	Metal Bowl, Sight Gauge, Auto Float Drain, Grade 10 (1.0)	12F38HC
3/4"	Poly Bowl, Metal Bowl Guard, Twist Drain, Grade 6 (0.01)	12F42EC
3/4"	Poly Bowl, Metal Bowl Guard, Auto Float Drain, Grade 6 (0.01)	12F46EC
3/4"	Metal Bowl, Auto Float Drain, Grade 10 (1.0)	12F47HC
3/4"	Metal Bowl, Sight Gauge, Auto Float Drain, Grade 6 (0.01)	12F48EC

[‡] For polycarbonate bowl, see caution in Engineering Section A.







E13

Material Specifications

Body	Zinc
Transparent bowl	Polycarbonate
Metal bowl with or without sight gauge	Zinc
Bowl guard	Steel
Collar	Plastic or metal
Twist drain, body & nut	Plastic
Automatic float drain, housing, float	Plastic
Automatic float drain, seals	Nitrile
Automatic float drain, springs, push rod	Stainless steel
Element	Borosilicate &
	felt glass fibers
Seals	Nitrile
Sight gauge	Polyamide

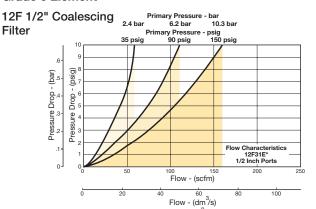
Repair and Service Kits

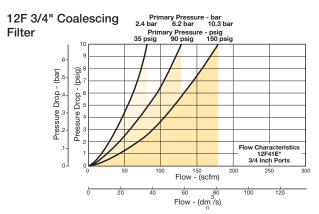
Bowl guard kit	PS805P
Poly bowl / automatic float drain kit	PS822P
Poly bowl / twist drain kit	PS832P
Metal bowl / automatic float drain kit	PS826P
Metal bowl / twist drain kit	PS834P
Metal bowl / sight gauge / automatic float drain kit	PS823P
Metal bowl / sight gauge / twist drain kit	PS835P
DPI replacement kit	PS781P
Automatic float drain kit	PS506P
Twist drain kit	PS512P
Electrical connector: 15mm, 3-pin DIN, 6 ft. cord	PS2932JBP
Grade 6 element (standard)	PS824P
Grade 10 element (optional)	PS830P
Mounting bracket kit	PS843P
Sight gauge kit	PS914P
·	

3.24 (83)1.81 (46) 1.63 Electronic DPI (41) 8.60 (2.18)000 6.97 0 (177)2.75 (70) Bowl removal Inches (mm) clearance.

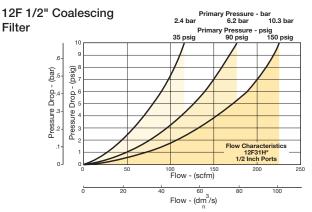
Flow Charts

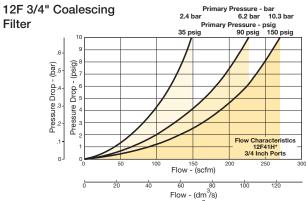
Grade 6 Element





Grade 10 Element









E14

Prep-Air® II
Products

Filters

Coalescers

Regulators

Prep-Air® II Series

(Revised 12-2-20)

05R Regulators - Economy

- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- · Rolling diaphragm for extended life
- Removable non-rising knob for panel mounting and tamper resistance
- Easily serviced
- · Reverse flow
- 1/4", 3/8" ports (NPT)





Operating information

Supply pressure (max): 0 to 300 psig (0 to 20.7 bar) For secondary pressure ranges see charts next page.

32°F to 175°F (0°C to 80°C) Operating temperature: Low temperature -4°F to 125°F (-20°C to 52°C)

Flow capacity†:

30 scfm (14.2 dm³/s, ANR) High flow 3/8" 40 scfm (18.9 dm³/s, ANR)

Gauge ports (2): Weight: 1.1 lb (0.49 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:

Port Size	Description	Part Number
1/4"	2-125 psi w/out Gauge, Relieving	05R113AD
1/4"	2-200 psi w/out Gauge, Relieving	05R114AD
3/8"	2-125 psi w/out Gauge, Relieving	05R213AD
3/8"	2-200 psi w/out Gauge, Relieving	05R214AD

NOTE: 1.53 Dia. (39 mm) hole required for panel mounting.





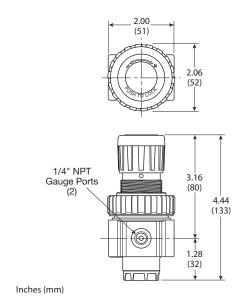
Air Preparation Products

Material Specifications

Adjusting stem	Brass
Bonnet	Plastic
Body	Zinc
Collar, Knob	Plastic
Diaphragm	Nitrile
Poppet & cap	Plastic
Seals	Nitrile
Springs – poppet & control	Steel

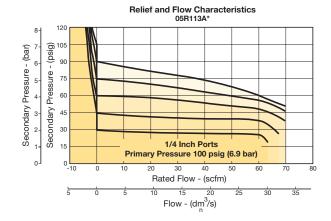
Repair and Service Kits

Bonnet assembly kit	PS915P
Control knob	P04420
1-1/2" dial face 30 psig (0 to 2.1 bar), gauge	K4515N14030
1-1/2" dial face 60 psig (0 to 4.1 bar), gauge	K4515N14060
1-1/2" dial face 160 psig (0 to 11.0 bar), gauge	K4515N14160
1-1/2" dial face 300 psig (0 to 20.7 bar), gauge	K4515N14300
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
Mounting bracket kit	PS963P
Panel mount nut – metal	PS964P
1-30 psig spring	P04427
1-60 psig spring	P04426
2-125 psig spring	P04425
2-200 psig spring	P02934
Relieving service kit	PS908P

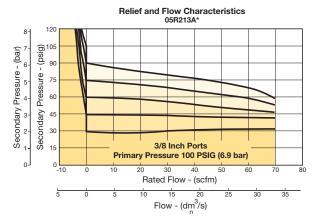


Flow Charts

05R 1/4" Regulator



05R 3/8" Regulator

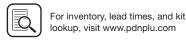


⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the design entities. the pressure up to the desired setting.



Prep-Air® II Series

(Revised 12-2-20)

06R Regulators - Compact

- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- · Rolling diaphragm for extended life
- Two high flow 1/4" gauge ports can be used as additional
- · Easily serviced
- Removable non-rising knob for panel mounting and tamper resistance
- 1/4", 3/8", 1/2" ports (NPT)



Operating information

250 psig (17.2 bar) Supply pressure (max):

Secondary pressure ranges:

Standard 2 to 125 psig (0 to 8.6 bar) 1 to 60 psig (0 to 4.1 bar) Low High 5 to 250 psig (0.4 to 17.2 bar) 32°F to 175°F (0°C to 80°C) Operating temperature: -4°F to 125°F (-20°C to 52°C)

Low temperature

Flow capacity†:

1/4" 53 scfm (25 dm³/s, ANR) High flow

3/8" 60 scfm (28.3 dm³/s, ANR) 1/2" 75 scfm (35.4 dm³/s, ANR)

Gauge ports (2):

(can be used as additional full

flow 1/4 inch outlet ports)

Weight: 1.6 lb (0.7 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

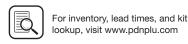
Ordering Information:

Port Size	Description	Part Number
1/4"	2-125 psi w/out Gauge, Relieving	06R113AC
1/4"	2-125 psi with Gauge, Relieving	06R118AC
3/8"	2-125 psi w/out Gauge, Relieving	06R213AC
3/8"	2-125 psi with Gauge, Relieving	06R218AC
1/2"	2-125 psi w/out Gauge, Relieving	06R313AC
1/2"	2-125 psi with Gauge, Relieving	06R318AC
1/4"	5-250 psi w/out Gauge, Relieving	06R115AC
3/8"	5-250 psi w/out Gauge, Relieving	06R215AC
1/2"	5-250 psi w/out Gauge, Relieving	06R315AC

NOTE: 2.0 Dia. (51 mm) hole required for panel mounting.









Filters

Regulators

Regulators Filter/

Combinations

Compact Regulators

Material Specifications

Adjusting stem	Steel
Body	Zinc
Bonnet, piston stem, valve poppet & cap	Plastic
Collar, knob	Plastic
Diaphragm	Nitrile
Seals	Nitrile
Spring, poppet	Stainless
Spring, control	Steel

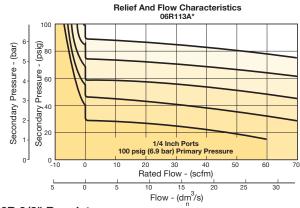
Repair and Service Kits

Bonnet assembly kit	PS715P
Control knob	P04069B
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar) gauge	K4517N14160D
Mounting bracket kit (includes panel mount nut)	PS707P
Panel mount nut, plastic	P04082
Panel mount nut, metal	P04079B
Reverse flow service conversion kit, relieving	PS708RP
Relieving (includes poppet)	PS708P
Non-relieving (includes poppet)	PS709P
1-30 psig spring	P01698
1-60 psig spring	P04062
2-125 psig spring	P04063
5-250 psig spring	P04064
Tamperproof kit	PS737P

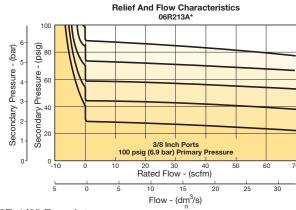
2.81 (71) 1/4" NPT Gauge Ports 4.69 (119) (2) 6.08 (154)1.39 (35)Inches (mm)

06R 1/4" Regulator

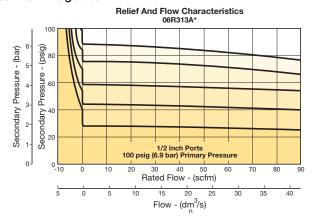
Flow Charts



06R 3/8" Regulator



06R 1/2" Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Prep-Air® II
Products

Filters

Coalescers





E18

Prep-Air® II Series

(Revised 12-2-20)

07R Regulators - Standard

- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Rolling diaphragm for extended life
- Two high flow 1/4" gauge ports can be used as additional
- Easily serviced
- Removable non-rising knob for panel mounting and tamper resistance
- 1/2", 3/4" ports (NPT)





Operating information

Supply pressure (max): 250 psig (17.2 bar)

Secondary pressure ranges:

Standard 2 to 125 psig (0 to 8.6 bar) Low 1 to 60 psig (0 to 4.1 bar) 5 to 250 psig (0.4 to 17.2 bar) High Operating temperature: 32°F to 175°F (0°C to 80°C) Low temperature -4°F to 125°F (-20°C to 52°C)

Flow capacity†:

90 scfm (42.5 dm³/s, ANR) High flow 1/2" 3/4" 90 scfm (42.5 dm³/s, ANR)

Gauge ports (2):

(can be used as additional full flow 1/4 inch outlet ports)

2.5 lb (1.1 kg) Weight:

† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

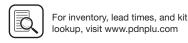
Ordering Information:

Port Size	Description	Part Number
1/2"	2-125 psi w/out Gauge, Relieving	07R313AC
1/2"	5-250 psi w/ out Gauge, Relieving	07R315AC
1/2"	2-125 psi w/ Gauge, Relieving	07R318AC
1/2"	5-250 psi with Gauge, Relieving	07R321AC
3/4"	2-125 psi w/out Gauge, Relieving	07R413AC
3/4"	5-250 psi w/out Gauge, Relieving	07R415AC
3/4"	2-125 psi w/ Gauge, Relieving	07R418AC
G1/2"	2-125 psi w/out Gauge, Relieving	07R313AC1
G3/4"	2-125 psi w/ Gauge, Relieving	07R418AC1

NOTE: 2.0 Dia. (51 mm) hole required for panel mounting.









Standard Regulators

Material Specifications

Adjusting stem	Steel
Body	Zinc
Bonnet, piston stem, valve poppet & cap	Plastic
Collar, knob	Plastic
Diaphragm	Nitrile
Seals	Nitrile
Spring, poppet	Stainless
Spring, control	Steel

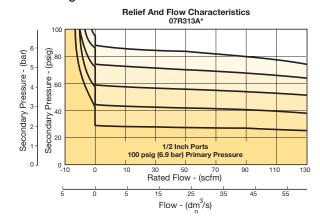
Repair and Service Kits

Bonnet assembly kit	PS715P
Control knob	P04069B
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar), gauge	K4517N14160D
Mounting bracket kit (includes panel mount nut)	PS807P
Panel mount nut, plastic	P04082
Panel Mount nut, metal	P04079B
Reverse flow service conversion kit, relieving	PS808RP
Relieving (includes poppet)	PS808P
Non-relieving (includes poppet)	PS809P
1-30 psig spring	P01698
1-60 psig spring	P04062
2-125 psig spring	P04063
5-250 psig spring	P04064
Tamperproof kit	PS737P

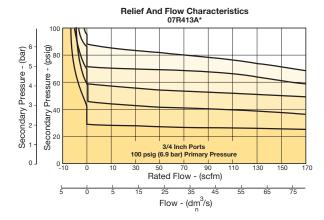
3.24 (82) 3.74 (70) 3.74 (70) 4.79 (122) 6.40 (163)

Flow Charts

07R 1/2" Regulator



07R 3/4" Regulator



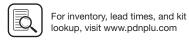
⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Inches (mm)



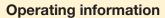
Prep-Air® II
Products

Prep-Air® II Series

11R Pilot Controlled Regulator - Compact

- Balanced poppet provides quick response and accurate pressure regulation
- Pilot controlled regulators can be mounted "out of reach" with pilot regulator installed in a convenient location
- Solid control piston for extended life
- Two full flow 1/4" gauge ports can be used as additional outlets
- Pilot port 1/4 Inch
- 1/4", 3/8", 1/2" ports (NPT)





0 to 250 psig (0 to 17.2 bar) Supply pressure (max): Operating temperature: 32°F to 175°F (0°C to 80°C)

Flow capacity[†]:

High flow 1/4" 85 scfm (40 dm³/s, ANR) 3/8" 95 scfm (44.8 dm³/s, ANR)

1/2" 95 scfm (44.8 dm³/s, ANR)

Gauge ports (2):

(can be used as additional full

flow 1/4 inch outlet ports)

Weight: 1.3 lb (0.53 kg)

Ordering Information:

Port Size	Description	Part Number
1/4"	5-250 psi w/out Gauge, Relieving, Pilot Operated	11R115PC
3/8"	5-250 psi w/out Gauge, Relieving, Pilot Operated	11R215PC
1/2"	5-250 psi w/out Gauge, Relieving, Pilot Operated	11R315PC

NOTE: 2.0 Dia. (51 mm) hole required for panel mounting.





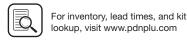
Filters

Regulators

Regulators Filter/

Combinations





 $^{^{\}dagger}$ scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

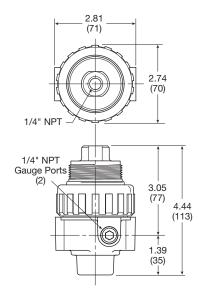
Compact Pilot Controlled Regulators

Material Specifications

Body & pilot cap	Zinc
Piston, valve poppet, & collar	Plastic
Seals	Nitrile
Springs	Steel

Repair and Service Kits

Seat Insert kit	PS713P
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face	
160 psig (0 to 11.0 bar), gauge	K4517N14160D
Mounting bracket kit (includes panel mount nut)	PS707P
Panel mount nut, plastic	P04082
Panel mount nut, metal	P04079B
Pilot conversion kit – relieving	PS745P
Non-Relieving	PS747P
Relieving	PS749P

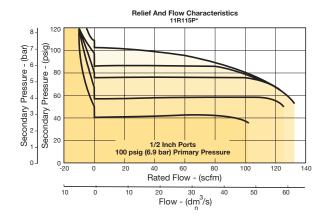


Inches (mm)

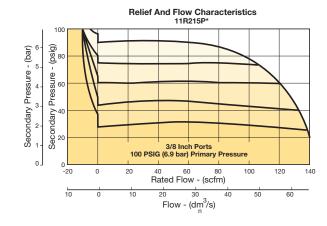
Air Preparation Products Prep-Air® II Series

11R 1/2" Regulator

Flow Charts



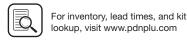
11R 3/8" Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.





Regulators

Prep-Air® II Series

12R Pilot Controlled Regulator - Standard

- Balanced poppet provides quick response and accurate pressure regulation
- Pilot controlled regulators can be mounted "out of reach" with pilot regulator installed in a convenient location
- · Solid control piston for extended life
- Two full flow 1/4" gauge ports can be used as additional outlets
- Pilot port 1/4 Inch
- 1/2", 3/4" ports (NPT)



Operating information

Supply pressure (max): 0 to 250 psig (0 to 17.2 bar)

Operating temperature: 32°F to 175°F (0°C to 80°C)

Flow capacity†:

Weight:

High flow 1/2" 140 scfm (66 dm³/s, ANR)

3/4" 140 scfm (66 dm³/s, ANR)

Gauge ports (2): 1/4 inch

(can be used as additional full flow 1/4 inch outlet ports)

2.0 lb (0.91 kg)

[†] scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:

Port Size	Description	Part Number
1/2"	5-250 psi w/out Gauge, Relieving, Pilot Operated	12R215PB
3/4"	5-250 psi w/out Gauge, Relieving, Pilot Operated	12R415PB

NOTE: 2.0 Dia. (51 mm) hole required for panel mounting.



Prep-Air ® I

E

Filters

Coalescers

Regulators

Accessories



Most popular.



Standard Pilot Controlled Regulators

Material Specifications

Body & pilot cap	Zinc
Piston, valve poppet, & collar	Plastic
Seals	Nitrile
Springs	Steel

Repair and Service Kits

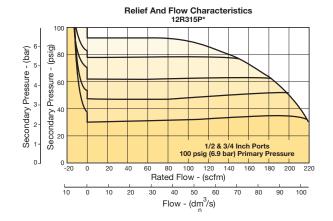
Seat insert kit	PS813P
2" dial face 60 psig (0 to 4.1 bar)	K4520N14060
2" dial face 160 psig (0 to 11.0 bar)	K4520N14160
2" dial face 300 psig (0 to 20.7 bar)	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar)	K4517N14160D
Mounting bracket kit (includes panel mount nut)	PS807P
Panel mount nut, plastic	P04082
Panel mount nut, metal	P04079B
Pilot conversion kit – relieving	PS745P
Non-relieving	PS847P
Relieving	PS849P

3.24 (82)2.74 (70)1/4" NPT Gauge Ports (2) 3.15 (80)4.76 (121) 1.61

Air Preparation Products Prep-Air® II Series

Flow Charts

12R 1/2 and 3/4" Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

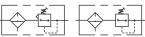
Inches (mm)



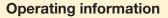
Prep-Air® II
Products

05E Filter / Regulator – Economy

- Space saving package offers both filter and regulator features for optimal performance
- Excellent water removal efficiency
- Rolling diaphragm for extended life
- Removable non-rising knob for tamper resistance
- Quick response, and accurate pressure regulation regardless of changing flow or inlet pressure
- 40 micron filter element standard
- 1/4", 3/8" ports (NPT)







Supply pressure (max):

Plastic bowl 0 to 150 psig (0 to 10.3 bar)

Operating temperature:

Plastic bowl 32°F to 125°F (0°C to 52°C)

Flow capacity†:

High flow 1/4" 30 scfm (14.2 dm³/s, ANR) 3/8" 40 scfm (18.9 dm³/s, ANR)

Bowl capacity: 2 oz.

Auto pulse drain tube barb 1/8 inch
Gauge ports (2): 1/4 inch
Sump capacity: 0.9 oz.

Weight: 1.35 lb (0.6 kg)

[†] scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:

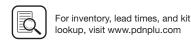
Port Size	Description ‡	Part Number
1/4"	Poly Bowl, Metal Guard, Twist Drain, 40 Micron, 2-125 psi w/out Gauge, Relieving	05E12A13AB
3/8"	Poly Bowl, Metal Guard, Twist Drain, 40 Micron, 2-125 psi w/out Gauge, Relieving	05E22A13AB

[‡] For polycarbonate bowl, see caution in Engineering Section A.

NOTE: 1.53 Dia. (39 mm) hole required for panel mounting.











Filters

Coalescer

Material Specifications

Steel
Zinc
Plastic
Polycarbonate
Steel
Plastic
Nitrile
Plastic
Plastic
Plastic
Activated charcoal
Plastic
Nitrile
Polyamide (nylon)
Steel

Repair and Service Kits

nepair and service Kits	
Bowl guard kit	PS905P
Poly bowl, automatic pulse drain	PS995P
Poly bowl, twist drain	PS932P
Auto pulse drain	PS998P
Twist drain	PS512P
40 micron element	PS901P
5 micron element	PS902P
Adsorber element	PS931P
Sight gauge kit	PS914P
1-1/2" dial face 30 psig (0 to 2.1 bar), gauge	K4515N14030
1-1/2" dial face 60 psig (0 to 4.1 bar), gauge	K4515N14060
1-1/2" dial face 160 psig (0 to 11.0 bar), gauge	K4515N14160
1-1/2" dial face 300 psig (0 to 20.7 bar), gauge	K4515N14300
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
Mounting bracket kit (includes panel mount nut)	PS963P
Panel mount nut – metal	PS964P
1-30 psig spring	P04427
1-60 psig spring	P04426
2-125 psig spring	P04425
2-200 psig spring	P02934
Relieving service kit	PS908P
Bonnet assembly kit	PS915P

⚠ WARNING

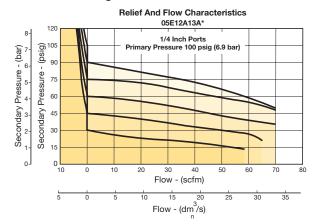
Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

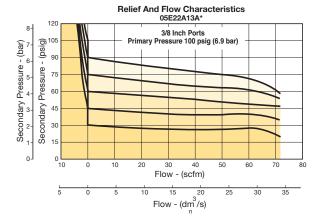
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

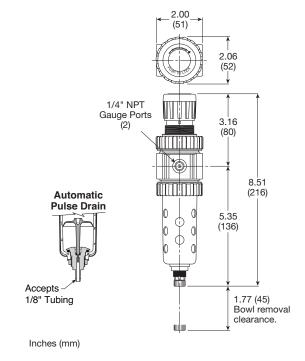
Flow Charts

05E 1/4" Filter / Regulator



05E 3/8" Filter / Regulator









Filters

Air Preparation Products

06E Filter / Regulator - Compact

- Space saving package offers both filter and regulator features for optimal performance
- Excellent water removal efficiency
- Rolling diaphragm for extended life
- · Quick response, and accurate pressure regulation regardless of changing flow or inlet pressure
- Two high flow 1/4" gauge ports can be used as additional outlets
- Shown with recommended metal bowl guard
- 1/4", 3/8", 1/2" ports (NPT)





Operating information

Supply pressure (max):

Plastic bowl 0 to 150 psig (0 to 10.3 bar) Metal bowl 0 to 250 psig (0 to 17.2 bar) Auto float drain 15 to 250 psig (1.0 to 17.2 bar)

Operating temperature:

32°F to 125°F (0°C to 52°C) Plastic bowl Metal bowl 32°F to 175°F (0°C to 80°C)

Secondary pressure range:

Standard 2 to 125 psig (0 to 8.6 bar) Low 1 to 60 psig (0 to 4.1 bar) 5 to 250 psig (0.4 to 17.2 bar) High

Flow capacity[†]:

1/4" High flow 45 scfm (21.7 dm³/s, ANR)

3/8" 55 scfm (26 dm³/s, ANR) 1/2" 61 scfm (28.8 dm³/s, ANR)

Bowl capacity:

1/4 inch (can be used as additional Gauge ports (2):

full flow 1/4" outlet ports)

Sump capacity: 1.75 oz. 1.6 lb (0.7 kg) Weight:

† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:

Port Size	Description ‡	Part Number
1/4"	Poly Bowl, Metal Guard, Twist Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	06E12A13AC
1/4"	Poly Bowl, Metal Guard, Twist Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	06E12A18AC
1/4"	Poly Bowl, Metal Guard, Twist Drain, 5 micron, 2-125 psi w/ Gauge, Relieving	06E12B18AC
1/4"	Metal Bowl, Twist Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	06E13A13AC
1/4"	Metal Bowl, Twist Drain, 40 micron, 2-125 psi w/out Gauge, T-Handle Relieving	06E13A13TC
1/4"	Metal Bowl, Twist Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	06E13A18AC
1/4"	Metal Bowl, Sight Gauge, Twist Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	06E14A13AC
1/4"	Metal Bowl, Sight Gauge, Twist Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	06E14A18AC
1/4"	Poly Bowl, Metal Guard, Auto Float Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	06E16A13AC
1/4"	Poly Bowl, Metal Guard, Auto Float Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	06E16A18AC
3/8"	Poly Bowl, Metal Guard, Twist Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	06E22A13AC
3/8"	Poly Bowl, Metal Guard, Twist Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	06E22A18AC
3/8"	Poly Bowl, Metal Guard, Twist Drain, 5 micron, 2-125 psi w/out Gauge, Relieving	06E22B13AC

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Continued on next page







Filters

Coalescers Regulators

Regulators Filter/

Ordering Information cont.:

Port Size	Description ‡	Part Number
3/8"	Metal Bowl, Twist Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	06E23A18AC
3/8"	Metal Bowl, Sight Gauge, Twist Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	06E24A13AC
3/8"	Metal Bowl, Sight Gauge, Twist Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	06E24A18AC
3/8"	Poly Bowl, Metal Guard, Auto Float Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	06E26A13AC
3/8"	Poly Bowl, Metal Guard, Auto Float Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	06E26A18AC
3/8"	Metal Bowl, Sight Gauge, Auto Float Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	06E28A13AC
1/2"	Poly Bowl, Metal Guard, Twist Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	06E32A13AC
1/2"	Poly Bowl, Metal Guard, Twist Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	06E32A18AC
1/2"	Poly Bowl, Metal Guard, Twist Drain, 5 micron, 2-125 psi w/out Gauge, Relieving	06E32B13AC
1/2"	Poly Bowl, Metal Guard, Twist Drain, 5 micron, 2-125 psi w/ Gauge, Relieving	06E32B18AC
1/2"	Metal Bowl, Sight Gauge, Twist Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	06E34A13AC
1/2"	Metal Bowl, Sight Gauge, Twist Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	06E34A18AC
1/2"	Metal Bowl, Sight Gauge, Twist Drain, 5 micron, 2-125 psi w/ Gauge, Relieving	06E34B18AC
1/2"	Poly Bowl, Metal Guard, Auto Float Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	06E36A13AC
1/2"	Poly Bowl, Metal Guard, Auto Float Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	06E36A18AC
1/2"	Poly Bowl, Metal Guard, Auto Float Drain, 5 micron, 2-125 psi w/out Gauge, Relieving	06E36B13AC
1/2"	Metal Bowl, Auto Float Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	06E37A18AC
1/2"	Metal Bowl, Sight Gauge, Auto Float Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	06E38A13AC
1/2"	Metal Bowl, Sight Gauge, Auto Float Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	06E38A18AC
G1/4"	Metal Bowl, Auto Float Drain, 5 micron, 2-125 psi w/out Gauge, Relieving	06E17B13AC1

 $^{^{\}ddagger}\,$ For polycarbonate bowl, see caution in Engineering Section A.

NOTE: 2.0 Dia. (50.8 mm) hole required for panel mounting. Max panel thickness 1/4"

Most popular.





Compact Filter / Regulators

Material Specifications

Adjusting stem	Steel
Body	Zinc
Bonnet, internal parts	Plastic
Transparent bowl	Polycarbonate
Metal bowl (with or without sight gauge)	Zinc
Bowl guard	Steel
Collar	Plastic
Diaphragm	Nitrile
Manual twist drain, standard, body & nut	Plastic
Auto float drain, housing, float	Plastic
Auto float drain, seals	Nitrile
Auto float drain, springs, push rod	Stainless steel
Knob	Plastic
40 micron element (standard)	Plastic
5 micron element (optional)	Plastic
Adsorber element (optional)	Activated charcoal
Seals	Nitrile
Sight gauge	Polyamide
Poppet, spring	Stainless
Control, spring	Steel

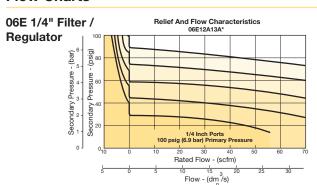
Repair and Service Kits

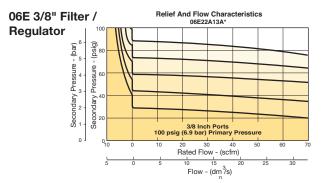
Bonnet assembly kit	PS715P
Bowl guard kit	PS705P
Poly bowl, auto float drain	PS722P
Poly bowl, twist drain	PS732P
Metal bowl, auto float drain	PS726P
Metal bowl, twist drain	PS734P
Metal bowl, sight gauge / auto drain	PS723P
Metal bowl, sight gauge / twist drain	PS735P
Control knob	P04069B
Auto float drain	PS506P
Twist drain	PS512P
40 micron element	PS701P
5 micron element	PS702P
Adsorber element	PS731P
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face	
160 psig (0 to 11.0 bar), gauge	K4517N14160D
Mounting bracket kit (includes panel mount nut)	PS707P
Panel mount nut	P04082
Non-relieving (includes poppet)	PS711P
Relieving (includes poppet)	PS710P
Seat insert kit	PS713P
1- 30 psig spring	P01698
1- 60 psig spring	P04062
2- 125 psig spring	P04063
5- 250 psig spring	P04064
Tamperproof kit (key lock)	PS737P

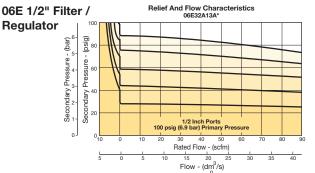
⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

Flow Charts

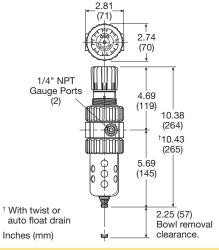






CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired

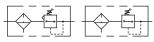






Air Preparation Products

- Excellent water removal efficiency
- · Rolling diaphragm for extended life
- Quick response, and accurate pressure regulation regardless of changing flow or inlet pressure
- Two high flow 1/4" gauge ports can be used as additional
- Shown with recommended metal bowl guard
- 1/2", 3/4" ports (NPT)





Operating information

Supply pressure (max):

Plastic bowl 0 to 150 psig (0 to 10.3 bar) Metal bowl 0 to 250 psig (0 to 17.2 bar) 15 to 250 psig (1.0 to 17.2 bar) Auto float drain

Operating temperature:

Plastic bowl 32°F to 125°F (0°C to 52°C) 32°F to 175°F (0°C to 80°C) Metal bowl

Secondary pressure range:

Standard 2 to 125 psig (0 to 8.6 bar) Low 1 to 60 psig (0 to 4.1 bar) 5 to 250 psig (0.4 to 17.2 bar) High

Flow capacity[†]:

1/2" 90 scfm (42.5 dm³/s, ANR) High flow

3/4" 90 scfm (42.5 dm³/s, ANR)

Bowl capacity:

Gauge ports (2): 1/4 inch (can be used as additional

full flow 1/4" outlet ports)

Sump capacity: 2.8 oz. Weight: 2.5 lb (1.1 kg)

[†] scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

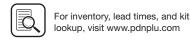
Ordering Information:

Port		
Size	Description ‡	Part Number
1/2"	Poly Bowl, Metal Guard, Twist Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	07E32A13AC
1/2"	Poly Bowl, Metal Guard, Twist Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	07E32A18AC
1/2"	Poly Bowl, Metal Guard, Twist Drain, 5 micron, 2-125 psi w/ out Gauge, Relieving	07E32B13AC
1/2"	Poly Bowl, Metal Guard, Twist Drain, 5 micron, 2-125 psi w/ Gauge, Relieving	07E32B18AC
1/2"	Metal Bowl, Sight Gauge, Twist Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	07E34A13AC
1/2"	Metal Bowl, Sight Gauge, Twist Drain, 40 micron, 5-250 psi w/out Gauge, Relieving	07E34A15AC
1/2"	Metal Bowl, Sight Gauge, Twist Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	07E34A18AC
1/2"	Metal Bowl, Sight Gauge, Twist Drain, 5 micron, 2-125 psi w/out Gauge, Relieving	07E34B13AC
1/2"	Metal Bowl, Sight Gauge, Twist Drain, 5 micron, 2-125 psi w/ Gauge, Relieving	07E34B18AC
1/2"	Poly Bowl, Metal Guard, Auto Float Drain, 40 micron, 2-125 psi w/ out Gauge, Relieving	07E36A13AC
1/2"	Poly Bowl, Metal Guard, Auto Float Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	07E36A18AC
1/2"	Poly Bowl, Metal Guard, Auto Float Drain, 5 micron, 2-125 psi w/ out Gauge, Relieving	07E36B13AC
1/2"	Poly Bowl, Metal Guard, Auto Float Drain, 5 micron, 2-125 psi w/ Gauge, Relieving	07E36B18AC
1/2"	Metal Bowl, Auto Float Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	07E37A13AC

Continued on next page







Compact Filter / Regulators

Port Size	Description ‡	Part Number
1/2"	Metal Bowl, Auto Float Drain, 5 micron, 2-125 psi w/out Gauge, Relieving	07E37B13AC
1/2"	Metal Bowl, Sight Gauge, Auto Float Drain, 40 micron, 2-125 psi w/ out Gauge, Relieving	07E38A13AC
1/2"	Metal Bowl, Sight Gauge, Auto Float Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	07E38A18AC
1/2"	Metal Bowl, Sight Gauge, Auto Float Drain, 40 micron, 5-250 psi w/ Gauge, Relieving	07E38A21AC
1/2"	Metal Bowl, Sight Gauge, Auto Float Drain, 5 micron, 2-125 psi w/ Gauge, Relieving	07E38B18AC
3/4"	Poly Bowl, Metal Guard, Twist Drain, 40 micron, 2-125 psi w/ out Gauge, Relieving	07E42A13AC
3/4"	Poly Bowl, Metal Guard, Twist Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	07E42A18AC
3/4"	Poly Bowl, Metal Guard, Twist Drain, 5 micron, 2-125 psi w/out Gauge, Relieving	07E42B13AC
3/4"	Metal Bowl, Twist Drain, 40 micron, 2-125 psi w/ out Gauge, Relieving	07E43A13AC
3/4"	Metal Bowl, Sight Gauge, Twist Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	07E44A13AC
3/4"	Metal Bowl, Sight Gauge, Twist Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	07E44A18AC
3/4"	Metal Bowl, Sight Gauge, Twist Drain, 5 micron, 5-250 psi w/ out Gauge, Relieving	07E44B15AC
3/4"	Metal Bowl, Sight Gauge, Twist Drain, 5 micron, 2-125 psi w/ Gauge, Relieving	07E44B18AC
3/4"	Metal Bowl, Sight Gauge, Twist Drain, 5 micron, 2-125 psi w/ Gauge, Relieving	07E44B21AC
3/4"	Poly Bowl, Metal Guard, Auto Float Drain, 40 micron, 2-125 psi w/ out Gauge, Relieving	07E46A13AC
3/4"	Poly Bowl, Metal Guard, Auto Float Drain, 40 micron, 2-125 psi w/ Gauge, Relieving	07E46A18AC
3/4"	Metal Bowl, Auto Float Drain, 40 micron, 2-125 psi w/out Gauge, Relieving	07E47A13AC
3/4"	Metal Bowl, Sight Gauge, Auto Float Drain, 40 micron, 2-125 psi w/ out Gauge, Relieving	07E48A13AC

E31

NOTE: 2.0 Dia. (50.8 mm) hole required for panel mounting. Max panel thickness 1/4".

Most popular.





 $[\]ensuremath{^\ddagger}$ For polycarbonate bowl, see caution in Engineering Section A.

Standard Filter / Regulators

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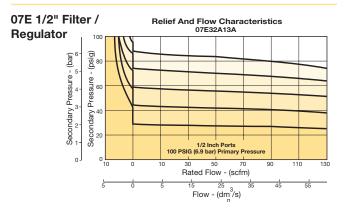
Material Specifications

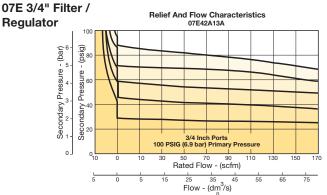
Adjusting stem	Steel
Body	Zinc
Bonnet, internal parts	Plastic
Transparent bowl	Polycarbonate
Metal bowl (with or without sight gauge)	Zinc
Bowl guard	Steel
Collar	Plastic or metal
Diaphragm	Nitrile
Manual twist drain, standard, body & nut	Plastic
Auto float drain, housing, float	Plastic
Auto float drain, seals	Nitrile
Auto float drain, springs, push rod	Stainless steel
Knob	Plastic
40 micron element (standard)	Plastic
5 micron element (optional)	Plastic
Adsorber element (optional)	Activated charcoal
Seals	Nitrile
Sight gauge	Polyamide
Poppet, spring	Stainless
Control, spring	Steel

Repair and Service Kits

Bonnet assembly kit	PS715P
Bowl guard kit	PS805P
Poly bowl, auto float drain	PS822P
Poly bowl, twist drain	PS832P
Metal bowl, automatic float drain	PS826P
Metal bowl, twist drain	PS834P
Metal bowl, sight gauge / auto drain	PS823P
Metal bowl, sight gauge / twist drain	PS835P
Control knob	P04069B
Auto float drain	PS506P
Twist drain	PS512P
40 micron element	PS801P
5 micron element	PS802P
Adsorber element	PS831P
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" Digital Round Face 160 psig (0 to 11.0 bar)	K4517N14160D
Mounting bracket kit (includes panel mount nut)	PS807P
Panel mount nut	P04082
Non-relieving (includes poppet)	PS811P
Relieving (includes poppet)	PS810P
Seat insert kit	PS813P
1- 30 psig spring	P01698
1- 60 psig spring	P04062
2- 125 psig spring	P04063
5- 250 psig spring	P04064
Tamperproof kit (key lock)	PS737P

Flow Charts





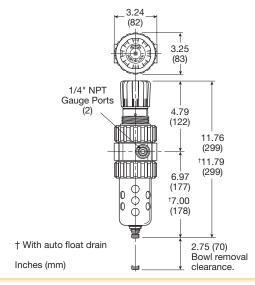
MARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

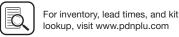
CAUTION:

E32

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



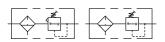


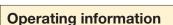




12E Filter / Regulator - Coalescing

- Space saving package offers both coalescer and regulator features for optimal performance
- Removes liquid, aerosol and sub-micron particles
- · Rolling diaphragm for extended life
- Removable non-rising knob for panel mounting and tamper
- Quick response, and accurate pressure regulation regardless of changing flow or inlet pressure
- Two high flow 1/4" gauge ports can be used as additional outlets
- 1/2", 3/4" ports (NPT)





Supply pressure (max):

Metal bowl 0 to 250 psig (0 to 17.2 bar)

Operating temperature:

Metal bowl

32°F to 175°F (0°C to 80°C)

Secondary pressure range:

2 to 125 psig (0 to 8.6 bar) Standard 1 to 60 psig (0 to 4.1 bar) 5 to 250 psig (0.4 to 17.2 bar) High

Flow capacity†:

1/2" 40 scfm (18.9 dm³/s, ANR) High flow

3/4" 45 scfm (21.2 dm³/s, ANR)

Bowl capacity:

Gauge ports (2): 1/4 inch (can be used as additional

full flow 1/4" outlet ports)

Sump capacity: 2.8 oz. Weight: 2.5 lb (1.1 kg)

[†] scfm = Standard cubic feet per minute at 150 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:

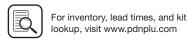
Port Size	Description ‡	Part Number
1/2"	Metal Bowl, Twist Drain, Grade 6 (0.01), 2-125 psi w/out Gauge, Relieving	12E33E13AA
1/2"	Metal Bowl, Twist Drain, Grade 6 (0.01), 2-125 psi w/ Gauge, Relieving	12E33E18AA
1/2"	Metal Bowl, Auto Float Drain, Grade 6 (0.01), 2-125 psi w/ out Gauge, Relieving	12E37E13AA
1/2"	Metal Bowl, Auto Float Drain, Grade 6 (0.01), 2-125 psi w/ Gauge, Relieving	12E37E18AA
3/4"	Metal Bowl, Twist Drain, Grade 6 (0.01), 2-125 psi w/ Gauge, Relieving	12E43E18AA

E33

NOTE: 2.0 Dia. (50.8 mm) hole required for panel mounting. Max panel thickness 1/4"







[‡] For polycarbonate bowl, see caution in Engineering Section A.

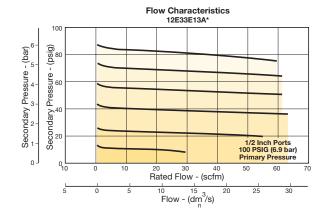
Air Preparation Products

Adjusting stem	Steel
Body	Zinc
Bonnet, internal parts	Plastic
Metal bowl (without sight gauge)	Zinc
Collar for bonnet	Metal
Control spring	Steel
Diaphragm	Nitrile
Manual twist drain, standard, body & nut	Plastic
Auto float drain, housing, float	Plastic
Auto float drain, seals	Nitrile
Auto float drain, springs, push rod	Stainless steel
Knob	Plastic
Element	Borosilicate & felt glass fibers
Seals	Nitrile
Sight gauge	Polyamide
Poppet, spring	Stainless

Repair and Service Kits

riopan ana corrido rato	
Bonnet assembly kit	PS715P
Metal bowl, auto float drain	PS826P
Metal bowl, twist drain	PS834P
Control knob	P04069B
Auto float drain	PS506P
Twist drain	PS512P
Grade 6 element (0.01 micron)	PS884P
Grade 10 element (1.0 micron)	PS885P
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face	
160 psig (0 to 11.0 bar), gauge	K4517N14160D
Mounting bracket kit (includes panel mount nut)	PS807P
Relieving (includes poppet)	PS886P
1- 30 psig spring	P01698
1- 60 psig spring	P04062
2- 125 psig spring	P04063
5- 250 psig spring	P04064
Tamperproof kit (key lock)	PS737P

12E 1/2" Filter / Regulator

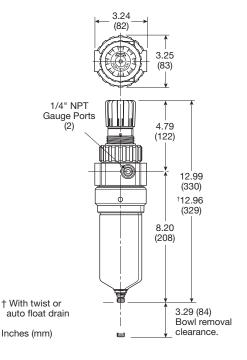


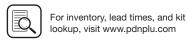
⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





E34

15L Micro-Mist Lubricators – Economy

- Proportional oil delivery over a wide range of air flows
- Generates oil particles of 5 micron or smaller downstream to lubricate systems having complex piping arrangements
- Precision needle valve assures repeatable oil delivery and provides simple adjustment of delivery rate
- Ideal for low and high flow applications with changing air flow
- Transparent sight dome for 360° visibility
- Removable drip control knob for tamper resistance
- Integral 3/8" (NPT)





Operating information

Supply pressure (max):

Plastic bowl 150 psig (10.3 bar)

Operating temperature:

Plastic bowl 32°F to 125°F (0°C to 52°C)

Flow capacity[†]:

1/4" 40 scfm (18.9 dm³/s, ANR) High flow 3/8"

40 scfm (18.9 dm³/s, ANR)

2 scfm (0.9 dm³/s, ANR) at Minimum flow

100 psig (6.9 bar)

Bowl capacity: 2.0 oz.

1.0 lb (0.45 kg) Weight

† scfm = Standard cubic feet per minute at 90 psig inlet and

5 psig pressure drop.

Ordering Information:

Port Size	Description ‡	Part Number
3/8"	Poly Bowl, Metal Bowl Guard, No Drain, No Fill Plug	15L22NA

[‡] For polycarbonate bowl and sight dome, see caution in Engineering Section A.

Suggested Lubricant F442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C)

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING

SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)







Economy Micro-Mist Lubricators

Material Specifications

Body	Zinc
Transparent bowl	Polycarbonate
Bowl guard	Steel
Collar	Plastic
Drains, twist – body & nut	Plastic
Injector meter block & base assembly	Plastic
Seals	Nitrile
Sight dome	Polycarbonate
Sight gauge	Polyamide (nylon)

Repair and Service Kits

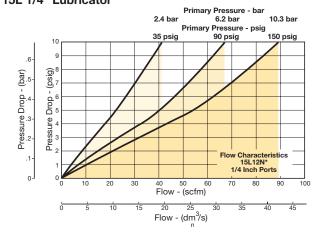
Adjustment knob	P04121
Bowl guard kit	PS905P
Poly bowl, no drain	PS946P
Twist drain	PS512P
Mounting bracket kit	PS943P
Service kit	PS948P
Sight dome kit	PS740P
Sight gauge kit	PS914P
Oil (1 quart)	F442001
Oil (1 gallon)	F442002
Oil (12 quart case)	F442003
Oil (4 gallon case)	F442005

.39 (10) Distance required 2.00 (51) to remove pressure fill adapter. 2.06 (52)3.35 (85) 2.26 (57)7.38 (187) †7.61 (193) 5.12 (130)0 †5.35 0 (136)1.77 (45) † With twist drain Bowl removal Inches (mm) clearance.

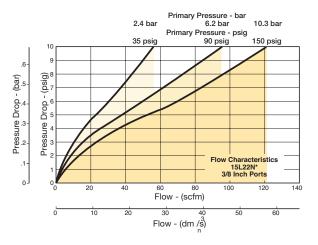
Prep-Air® II Series

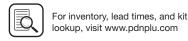
15L 1/4" Lubricator

Flow Charts



15L 3/8" Lubricator





16L Micro-Mist Lubricators - Compact

- Proportional oil delivery over a wide range of air flows
- Generates oil particles of 5 micron or smaller downstream to lubricate systems having complex piping arrangements
- Precision needle valve assures repeatable oil delivery and provides simple adjustment of delivery rate
- · Ideal for low and high flow applications with changing air flow
- Transparent sight dome for 360° visibility
- Yellow fill cap identifies micro-mist lubricator
- Integral 1/4", 3/8", 1/2" (NPT)



Operating information

Supply pressure (max):

Plastic bowl 150 psig (10.3 bar) Metal bowl 250 psig (17.2 bar)

Operating temperature:

Plastic bowl 32°F to 125°F (0°C to 52°C) 32°F to 175°F (0°C to 80°C) Metal bowl

Flow capacity[†]:

1/4" 40 scfm (18.9 dm³/s, ANR) High flow 3/8" 60 scfm (28.3 dm³/s, ANR)

90 scfm (42.5 dm³/s, ANR) 1/2"

1 scfm (0.5 dm³/s, ANR) at Minimum flow

100 psig (6.9 bar)

Bowl capacity: 2.6 oz. Weight: 1.2 lb (0.5 kg)

5 psig pressure drop.

Ordering Information:

Port Size	Description [‡]	Part Number
1/4"	Poly Bowl, Metal Bowl Guard, No Drain, With Fill Plug	16L12BE
1/4"	Metal Bowl, Sight Gauge, Twist Drain, With Fill Plug	16L14BE
3/8"	Poly Bowl, Metal Bowl Guard, No Drain, With Fill Plug	16L22BE
3/8"	Metal Bowl, Sight Gauge, Twist Drain, With Fill Plug	16L24BE
1/2"	Poly Bowl, Metal Bowl Guard, No Drain, With Fill Plug	16L32BE
1/2"	Metal Bowl, Sight Gauge, Twist Drain, With Fill Plug	16L34BE

[‡] For polycarbonate bowl and sight dome, see caution in Engineering Section A.

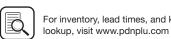
Suggested Lubricant F442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C)

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)







E37

[†] scfm = Standard cubic feet per minute at 90 psig inlet and

Material Specifications

Body	Zinc
Transparent bowls	Polycarbonate
Metal bowl (with sight gauge)	Zinc
Bowl guard	Steel
Collar	Plastic
Twist drain – body & nut	Plastic
Injector meter block & base assembly	Plastic
Seals	Nitrile
Sight dome	Polycarbonate
Sight gauge	Polyamide (nylon)

Repair and Service Kits

-	
Adjustment knob	P04121
Bowl guard kit	PS705P
Poly bowl / no drain kit	PS746P
Poly bowl / twist drain kit	PS717P
Poly bowl / pressure fill kit	PS719P
Poly bowl / remote fill kit	PS728P
Metal bowl / sight gauge / twist drain kit	PS729P
Twist drain kit	PS512P
Fill cap kit	PS742P
Lubricator service kit	PS748P
Mounting bracket kit	PS743P
Pressure fill adapter kit	PS716P
Pressure fill button	P11912
Sight dome / fill cap kit	PS739P
Sight dome kit, polycarbonate	PS740P
Sight dome kit, nylon	PS740N
Oil (1 quart)	F442001
Oil (1 gallon)	F442002
Oil (12 quart case)	F442003
Oil (4 gallon case)	F442005

2.81 (71)

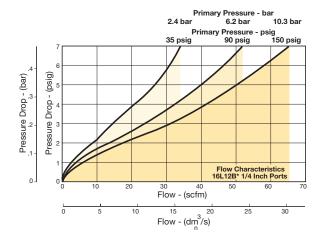
2.24 (57) 7.82 (199) 5.58 †7.93 (142) (201) †5.69 (145)

2.74 (70)

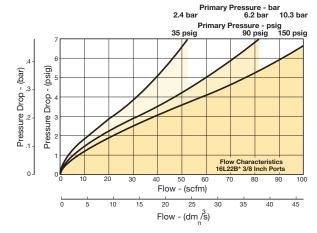
† With twist drain Inches (mm)

Flow Charts

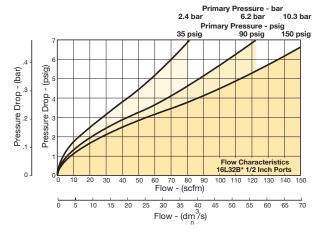
16L 1/4" Lubricator



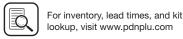
16L 3/8" Lubricator



16L 1/2" Lubricator







2.25 (57)

Bowl removal clearance.

17L Micro-Mist Lubricators - Standard

- Proportional oil delivery over a wide range of air flows
- Generates oil particles of 5 micron or smaller downstream to lubricate systems having complex piping arrangements
- Precision needle valve assures repeatable oil delivery and provides simple adjustment of delivery rate
- · Ideal for low and high flow applications with changing air flow
- Transparent sight dome for 360° visibility
- Yellow fill cap identifies Micro-Mist Lubricator.
- Integral 1/2", 3/4" ports (NPT)



Operating information

Supply pressure (max):

Plastic bowl 150 psig (10.3 bar) Metal bowl 250 psig (17.2 bar)

Operating temperature:

Plastic bowl 32°F to 125°F (0°C to 52°C) 32°F to 175°F (0°C to 80°C) Metal bowl

Flow capacity†:

1/2" 90 scfm (42.5 dm³/s, ANR) High flow

3/4" 90 scfm (42.5 dm³/s, ANR)

1 scfm (0.5 dm³/s, ANR) at Minimum flow

100 psig (6.9 bar)

Bowl capacity: 4.9 oz. Weight: 1.9 lb (0.9 kg)

† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig

pressure drop.

Ordering Information:

Port Size	Description ‡	Part Number
1/2"	Poly Bowl, Metal Bowl Guard, No Drain, With Fill Plug	17L32BE
1/2"	Metal Bowl, Sight Gauge, Twist Drain, With Fill Plug	17L34BE
1/2"	Poly Bowl, Metal Bowl Guard, Pressure Fill, With Fill Plug	17L36BE
3/4"	Poly Bowl, Metal Bowl Guard, No Drain, With Fill Plug	17L42BE
3/4"	Metal Bowl, Sight Gauge, Twist Drain, With Fill Plug	17L44BE
3/4"	Poly Bowl, Metal Bowl Guard, Pressure Fill, With Fill Plug	17L46BE

E39

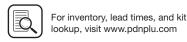
Suggested LubricantF442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C)

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)







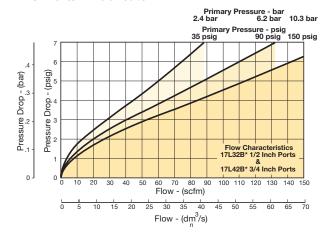
[‡] For polycarbonate bowl and sight dome, see caution in Engineering Section A.

Material opecifications	
Body	Zinc
Transparent bowl	Polycarbonate
Metal bowl (with sight gauge)	Zinc
Bowl guard	Steel
Collar	Plastic or Metal
Twist drain- body & nut	Plastic
Injector meter block & base assembly	Plastic
Seals	Nitrile
Sight dome	Polycarbonate
Sight gauge	Polyamide (nylon)

3.24 (82)

Flow Charts

17L 1/2" & 3/4" Lubricator



Coalescers

Regulators

† With twist drain

Inches (mm)

Accessories



Repair and Service Kits

Adjustment knob	P04121
Bowl guard kit	PS805P
Poly bowl / no drain kit	PS846P
Poly bowl / twist drain kit	PS817P
Poly bowl / pressure fill kit	PS819P
Metal bowl / sight gauge / twist drain kit	PS829P
Metal bowl / sight gauge / pressure fill kit	PS820P
Twist drain kit	PS512P
Fill cap kit	PS742P
Lubricator service kit	PS748P
Mounting bracket kit	PS843P
Pressure fill adapter kit	PS716P
Pressure fill button	P11912
Sight dome / fill cap kit	PS739P
Sight dome kit, polycarbonate	PS740P
Sight dome kit, nylon	PS740N
Oil (1 quart)	F442001
Oil (1 gallon)	F442002
Oil (12 quart case)	F442003
Oil (4 gallon case)	F442005

(83) 2.41 (61) 9.09 (231)6.86 †9.35 (174)(237) 000 (177)2.75 (70) Bowl removal

clearance.

3.25

Prep-Air® II Series

06L Mist Lubricators – Compact

(Revised 11-6-20)

- Proportional oil delivery over a wide range of air flows
- Precision needle valve assures repeatable oil delivery and provides simple adjustment of delivery rate
- Bowl can be filled while air line is under pressure
- Transparent sight dome for 360° visibility
- Integral 1/4", 3/8", 1/2" ports (NPT)





Operating information

Supply pressure (max):

150 psig (10.3 bar) Plastic bowl Metal bowl 250 psig (17.2 bar)

Operating temperature:

Plastic bowl 32°F to 125°F (0°C to 52°C) 32°F to 175°F (0°C to 80°C) Metal bowl

Flow capacity†:

High flow 1/4" 40 scfm (18.9 dm³/s, ANR)

60 scfm (28.3 dm³/s, ANR) 3/8" 1/2" 90 scfm 42.5 dm³/s, ANR)

Minimum flow 0.5 2 scfm (0.24 dm3/s, ANR) at

100 psig (6.9 bar)

Bowl capacity: 2.9 oz. Weight: 1.2 lb (0.5 kg)

† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig

pressure drop

Ordering Information:

Port Size	Description ‡	Part Number
1/4"	Poly Bowl, Metal Bowl Guard, No Drain, With Fill Plug	06L12BE
1/4"	Metal Bowl, Sight Gauge, Twist Drain, With Fill Plug	06L14BE
3/8"	Poly Bowl, Metal Bowl Guard, No Drain, With Fill Plug	06L22BE
3/8"	Metal Bowl, Sight Gauge, Twist Drain, With Fill Plug	06L24BE
1/2"	Poly Bowl, Metal Bowl Guard, No Drain, With Fill Plug	06L32BE
1/2"	Metal Bowl, Sight Gauge, Twist Drain, With Fill Plug	06L34BE
G1/2"	Poly Bowl, Metal Bowl Guard, No Drain, With Fill Plug	06L32BE1

[‡] For polycarbonate bowl and sight dome, see caution in Engineering Section A.

Suggested Lubricant F442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C)

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)







Material Specifications

Body	Zinc
Transparent bowl	Polycarbonate
Metal bowl (with sight gauge)	Zinc
Bowl guard	Steel
Collar	Plastic
Twist drain – body & nut	Plastic
Injector meter block & base assembly	Plastic
Seals	Nitrile
Sight dome	Polycarbonate
Sight gauge	Polyamide (nylon)

Repair and Service Kits

Adjustment knob	P04121
Bowl guard kit	PS705P
Poly bowl / no drain kit	PS746P
Poly bowl / twist drain kit	PS717P
Poly bowl / pressure fill kit	PS719P
Metal bowl / sight gauge / twist drain kit	PS729P
Metal bowl / sight gauge / pressure fill kit	PS720P
Twist drain kit	PS512P
Fill cap kit	PS741P
Lubricator service kit	PS718P
Mounting bracket kit	PS743P
Pressure fill adapter kit	PS716P
Pressure fill button	P11912
Sight dome / fill cap kit	PS738P
Sight dome kit, polycarbonate	PS740P
Sight dome kit, nylon	PS740N
Oil (1 quart)	F442001
Oil (1 gallon)	F442002
Oil (12 quart case)	F442003
Oil (4 gallon case)	F442005

2.74 (70)2 24 (57) (199)†7.93 5.58 (201)(142)

†5.69

(145)

2.25 (57) Bowl removal

clearance.

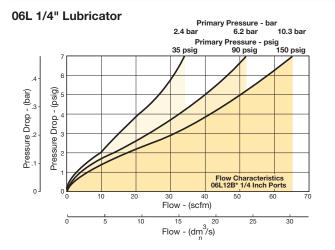
2.81 (71)

000

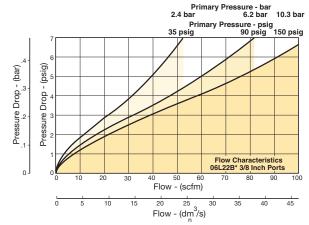
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† With twist drain Inches (mm)

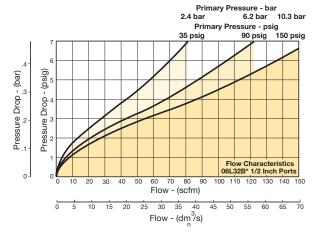
Flow Charts



06L 3/8" Lubricator



06L 1/2" Lubricator







Prep-Air® II
Products

Filters

Coalescers

Regulators

Prep-Air® II Series

07L Mist Lubricators - Standard

- Proportional oil delivery over a wide range of air flows
- Precision needle valve assures repeatable oil delivery and provides simple adjustment of delivery rate
- Bowl can be filled while air line is under pressure
- Transparent sight dome for 360° visibility
- Integral 1/2", 3/4" ports (NPT)





Operating information

Supply pressure (max):

Plastic bowl 150 psig (10.3 bar) 250 psig (17.2 bar) Metal bowl

Operating temperature:

32°F to 125°F (0°C to 52°C) Plastic bowl Metal bowl 32°F to 175°F (0°C to 80°C)

Flow capacity†:

High flow 1/2" 90 scfm (42.5 dm³/s, ANR) 3/4" 90 scfm (42.5 dm³/s, ANR)

0.5 2 scfm (0.24 dm3/s, ANR) at Minimum flow

100 psig (6.9 bar)

6.0 oz. Bowl capacity: Weight: 1.9 lb (0.9 kg)

[†] scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig

pressure drop.

Ordering Information:

Port Size	Description ‡	Part Number
1/2"	Poly Bowl, Metal Bowl Guard, No Drain, With Fill Plug	07L32BE
1/2"	Metal Bowl, Sight Gauge, Twist Drain, With Fill Plug	07L34BE
1/2"	Metal Bowl, Sight Gauge, Twist Drain, With Fill Plug	07L34FE
1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain, With Fill Plug	07L3NBE
3/4"	Poly Bowl, Metal Bowl Guard, No Drain, With Fill Plug	07L42BE
3/4"	Metal Bowl, Sight Gauge, Twist Drain, With Fill Plug	07L44BE
1/2" BSPP	Poly Bowl, Metal Bowl Guard, No Drain, With Fill Plug	07L32BE1

[‡] For polycarbonate bowl and sight dome, see caution in Engineering Section A.

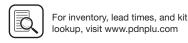
Suggested Lubricant F442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C)

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)



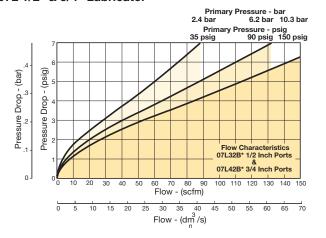




Body	Zinc
Transparent bowl	Polycarbonate
Metal bowl (with sight gauge)	Zinc
Bowl guard	Steel
Collar	Plastic or metal
Twist drain – body & nut	Plastic
Injector meter block & base assembly	Plastic
Seals	Nitrile
Sight dome	Polycarbonate
Sight gauge	Polyamide (nylon)

Flow Charts

07L 1/2" & 3/4" Lubricator



Repair and Service Kits

nepair and service Kits	
Adjustment knob	P04121
Bowl guard kit	PS805P
Poly bowl / no drain	PS846P
Poly bowl / twist drain	PS817P
Poly bowl / pressure fill	PS819P
Metal bowl / sight gauge / twist drain	PS829P
Metal bowl / sight gauge / pressure fill	PS820P
Twist drain kit	PS512P
Fill cap kit	PS741P
Lubricator service kit	PS718P
Mounting bracket kit	PS843P
Pressure fill adapter kit	PS716P
Pressure fill button	P11912
Sight dome / fill cap kit	PS738P
Sight dome kit, polycarbonate	PS740P
Sight dome kit, nylon	PS740N
Oil (1 quart)	F442001
Oil (1 gallon)	F442002
Oil (12 quart case)	F442003
Oil (4 gallon case)	F442005

3.24 (82) 3.25 (83)2.41 (61)9.09 (231)†9.35 000 (174)(237)†6.95 (177) 2.75 (70) Bowl removal clearance.

Prep-Air® II Products

Coalescers

Regulators

Regulators Filter/

Lubricators

Combinations

Accessories

† With twist drain

Inches (mm)



E44

06 Compact, 07 Standard Close Nippled Series Combinations

- Regulator can be mounted with knob in up or down position
- 40 micron filter element standard, 5 micron optional
- Manual twist drain
- Relieving regulator







06A/16G Compact Standard Close Nippled Series Combinations:

Port Size	Filter Bowl Type ‡	Element Type	Relief Type	Pressure Range	Lubricator Bowl Type	Lubricator Type	2-unit / 3-unit	Part Numbers
3/8"	Poly Bowl, Metal Bowl Guard, Twist Drain	40 micron	Relieving	2-125 psi w/out gauge	Poly Bowl, Metal Bowl Guard, No Drain	Mist, With Fill Plug	2-unit	06G22A13A2BC
3/8"	Metal Bowl, Sight Gauge, Twist Drain	40 micron	Relieving	2-125 psi w/out gauge	Metal Bowl, Sight Gauge, Twist Drain	Mist, With Fill Plug	2-unit	06G24A13A4BC
1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain	40 micron	Relieving	2-125 psi w/ gauge	Poly Bowl, Metal Bowl Guard, No Drain	Mist, With Fill Plug	2-unit	06G32A18A2BC
1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain	40 micon	Relieving	2-125 psi w/ gauge	Poly Bowl, Metal Bowl Guard, No Drain	Micro-Mist, With Fill Plug	3-unit	16G32A18A2BC

07A/17G Standard Close Nippled Series Combinations:

Port Size	Filter Bowl Type ‡	Element Type	Relief Type	Pressure Range	Lubricator Bowl Type	Lubricator Type	2-unit / 3-unit	Part Numbers
1/2"	Metal Bowl, Twist Drain	40 micron	Relieving	2-125 psi w/out gauge	Metal Bowl, Sight Gauge, Twist Drain	Micro-Mist, With Fill Plug	2-unit	17G33A13A4BD
1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain	40 micron	Relieving	2-125 psi w/out gauge	Poly Bowl, Metal Bowl Guard, No Drain	Mist, With Fill Plug	3-unit	07A32A13A2BD
1/2"	Metal Bowl, Twist Drain	40 micron	Relieving	2-125 psi w/ gauge	Metal Bowl, Sight Gauge, Twist Drain	Mist, With Fill Plug	3-unit	07A33A18A4BD
3/4"	Poly Bowl, Metal Bowl Guard, Twist Drain	40 micron	Relieving	2-125 psi w/out gauge	Poly Bowl, Metal Bowl Guard, No Drain	Mist, With Fill Plug	3-unit	07A42A13A2BD
3/4"	Poly Bowl, Metal Bowl Guard, Twist Drain	40 micron	Relieving	2-125 psi w/ gauge	Poly Bowl, Metal Bowl Guard, No Drain	Mist, With Fill Plug	3-unit	07A42A18A2BD
3/4"	Poly Bowl, Metal Bowl Guard, Auto Float Drain	5 micron	Relieving	2-125 psi w/ gauge	Poly Bowl, Metal Bowl Guard, No Drain	Mist, With Fill Plug	3-unit	07A46B18A2BD

E45

⚠ WARNING

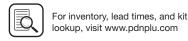
Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

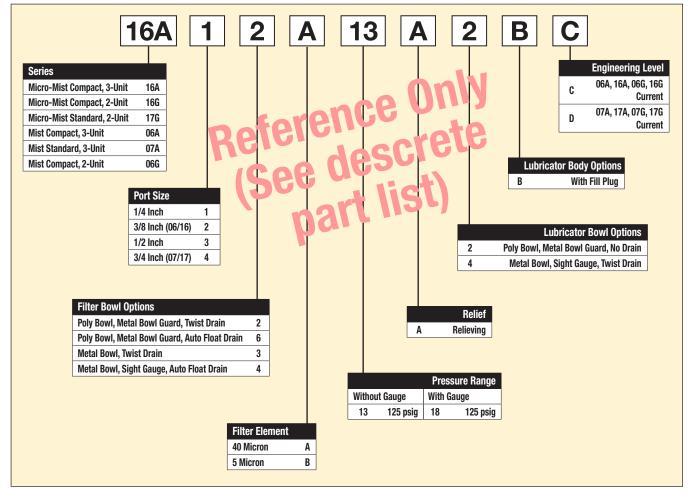
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

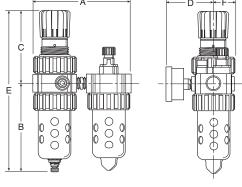
Most popular.





Ordering Information:





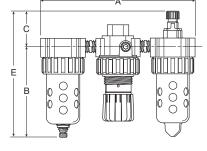
06G, 16G Series

Α	В	С	D	E	F
6.13	5.69	4.69	3.18	10.38	1.37
(156)	(145)	(119)	(81)	(264)	(35)

07G, 17	07G, 17G Series									
Α	В	С	D	Е	F					
6.99	6.97	4.79	3.44	11.76	1.63					
(178)	(177)	(122)	(87)	(299)	(41)					

Inches (mm)

All dimensions nominal.





A 9.45 (240)	B 5.69 (145)	C 2.24 (57)	D 3.18 (81)	E 7.93 (201)	F 1.37 (35)
07A, 17A	A Series				
A 10.74 (2738)	B 6.97 (177)	C 2.41 (61)	D 3.44 (87)	E 9.38 (238)	F 1.63 (41)

Inches (mm)

E46

• All dimensions nominal.





Prep-Air® II

Filters

Coalescers

Regulators

Regulators Filter/

Combinations

Accessories

Air Preparation Products

07 Standard Modular Series Combinations

- Regulator can be mounted with knob in up or down position
- 40 micron filter element standard, 5 micron optional
- Manual twist drain
- · Relieving regulator





07B/17B/17H Standard Modular Series Combinations:

Port Size	Filter Bowl Type ‡	Element Type	Relief Type	Pressure Range	Lubricator Bowl Type	Lubricator Type	2-unit / 3-unit	Modular Options	Part Numbers
3/4"	Metal Bowl, Sight Gauge, Twist Drain	5 micron	Relieving	5-250 psi w/ gauge	Metal Bowl, Sight Gauge, Twist Drain	Micro-Mist, With Fill Plug	2-unit		17H44B21A4BD
1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain	40 micron	Relieving	2-125 psi w/out gauge	Poly Bowl, Metal Bowl Guard, No Drain	Mist, With Fill Plug	3-unit		07B32A13A2BD
1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain	40 micron	Relieving	2-125 psi w/ gauge	Poly Bowl, Metal Bowl Guard, No Drain	Mist, With Fill Plug	3-unit	W/ Mounting Bracket	07B32A18A2BDW
1/2"	Metal Bowl, Twist Drain	40 micron	Relieving	5-250 psi w/ gauge	Metal Bowl, Twist Drain	Mist, With Fill Plug	3-unit		07B33A21A3BD
3/4"	Metal Bowl, Twist Drain	40 micron	Relieving	2-125 psi w/ gauge	Metal Bowl, Sight Gauge, Twist Drain	Mist, With Fill Plug	3-unit	W/ Mounting Bracket	07B43A18A4BDW
1/2"	Poly Bowl, Metal Bowl Guard, Twist Drain	40 micron	Relieving	2-125 psi w/ gauge	Poly Bowl, Metal Bowl Guard, No Drain	Micro-Mist, With Fill Plug	3-unit		17B32A18A2BD
3/4"	Poly Bowl, Metal Bowl Guard, Twist Drain	40 micron	Relieving	2-125 psi w/ gauge	Poly Bowl, Metal Bowl Guard, No Drain	Micro-Mist, With Fill Plug	3-unit		17B42A18A2BD

⚠ WARNING

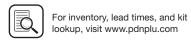
Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

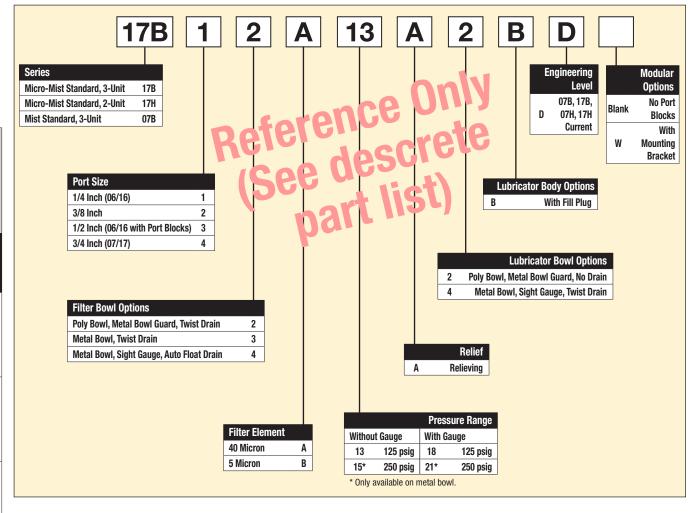
CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

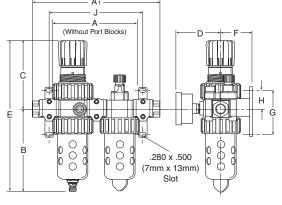
Most popular.

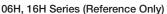






(Revised 11-6-20)





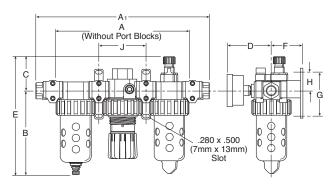
A	A ₁	В	С	D	E	F	G	Н	J
6.10	9.04	5.69	4.69	3.18	10.38	2.00	3.58	1.40	6.65
(155)	(230)	(145)	(119)	(81)	(264)	(51)	(91)	(36)	(169)

07H, 17H Series

0711,	ii, iiii Selles								
Α	A ₁	В	С	D	E	F	G	Н	J
7.00	10.28	6.97	4.79	3.44	11.76	2.09	3.58	1.40	7.51
(178)	(261)	(177)	(122)	(87)	(299)	(53)	(91)	(36)	(191)

Inches (mm)

All dimensions nominal.



06B, 16B Series (Reference Only)

Α	A ₁	В	С	D	E	F	G	Н	J
9.46	12.39	5.69	2.24	3.18	7.93	2.00	3.58	1.40	3.33
(240)	(315)	(145)	(57)	(81)	(202)	(51)	(91)	(36)	(85)

07B, 17B Series

A	A ₁	В	С	D	E	F	G	Н	J
10.75	14.03	6.97	2.41	3.44	9.38	2.18	3.58	1.40	3.76
(273)	(356)	(177)	(61)	(87)	(238)	(55)	(91)	(36)	(95)

Inches (mm)

E48

• All dimensions nominal.





Regulators

Filters

Coalescers

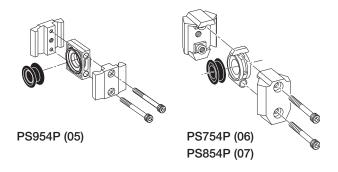
Modular Accessories

Body Connectors

Body connectors allow you to easily assemble and disassemble modular combinations.

Body connectors are required whenever you assemble two or more pieces together.

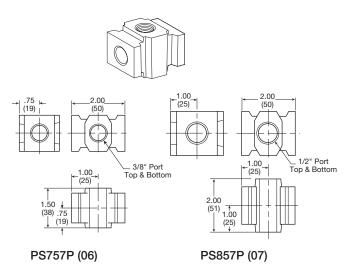
Each kit includes one set.



Modular Manifold Block

A modular manifold block can be used between any two modular units to give additional outlet ports. The manifold block provides 2 additional outlets in 3/8" and 1/2" sizes. Any standard pipe plug can be used to close off unused ports.

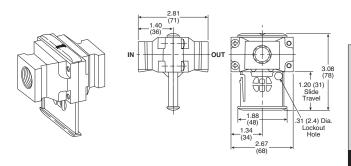
NOTE: Body connectors are not supplied with manifold blocks.



Lockout Valves

Lockout Valves provide positive shut-off and exhaust capability to isolate Modular units so they can be easily removed from the line and can be locked in a closed position. Center position can be used as a slow start. Accepts #3 padlock.

NOTE: Body connectors are not supplied with lockout valves.

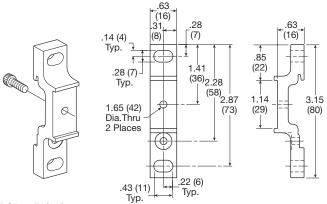


Wall Mounting Kits

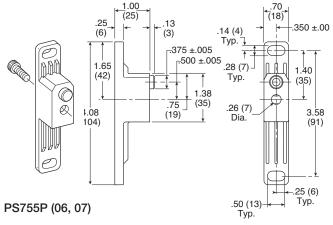
Wall mounting kits are available for mounting your modular assemblies and can be assembled and used with any standard body connector set.

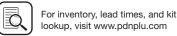
Since modular combinations are always identical in size, you can predrill for wall mounting on your equipment.

Kit includes 1 assembly.

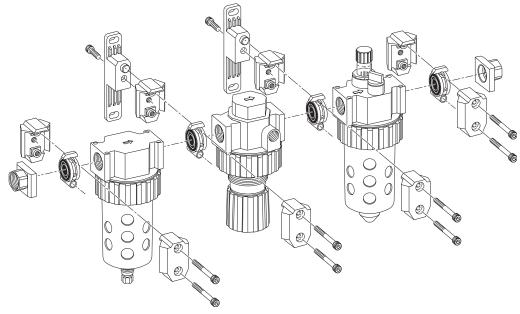


PS955P (05)









(Revised 12-2-20)

Port Block Connector Kits

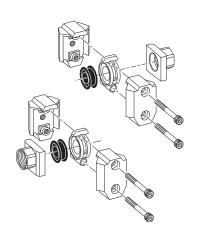
06 Series

PS750P
PS765P †
PS751P
PS766P †
PS752P*
PS767P* †

07 Series

1/4" Port block kits, NPT	PS850P
1/4" Port block kits, BSPP	PS865P
3/8" Port block kits, NPT	PS851P
3/8" Port block kits, BSPP	PS866P
1/2" Port block kits, NPT	PS852P
1/2" Port block kits, BSPP	PS867P ‡
3/4" Port block kits, NPT	PS853P
3/4" Port block kits, BSPP	PS860P

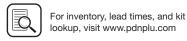
- Use 1/4 or 3/8 ported bodies.
- † 1/4, 3/8 & 1/2 inch meet ISO 1179-1 Standard.
- ‡ 1/2 inch meets ISO 1179-1 Standard.



Port block connectors allow you to make threaded port connections to modular units and are available in various port sizes to match your system requirements.

Each kit includes all the necessary pieces to make two port connections.



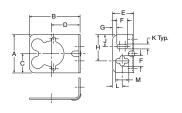


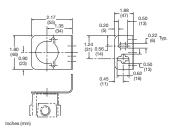
E50

Prep-Air ® II Products

Filters

Mounting Bracket Kits

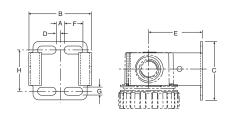




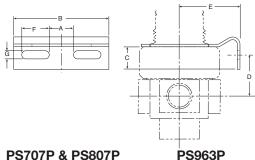
PS417BP (Includes Panel Mount Nut)

PS419 (Includes Panel Mount Nut)

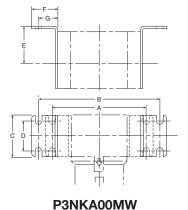
PS743P, PS843P



PS943P







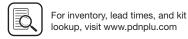
Dimensions

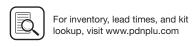
(Includes Panel Mount Nut)

Α	В	С	D	Е	F	G	Н	J	K	L	М	Kit
1.80 (46)	2.37 (60)	0.90 (23)	1.35 (34)	1.00 (25)	0.50 (13)	0.20 (5)	1.24 (31)	0.56 (14)	0.22 (6)	0.45 (11)	0.62 (16)	PS417BP (10F, 14F, P3A, 14R, 14E)
1.80 (46)	2.17 (55)	0.90 (23)	1.35 (34)	1.00 (25)	0.50 (13)	0.20 (5)	1.24 (31)	0.56 (14)	0.22 (6)	0.45 (11)	0.62 (16)	PS419 (04L)
0.84 (21)	3.25 (83)	1.50 (38)	0.42 (11)	2.00 (51)	0.94 (24)	0.28 (7)	1.44 (37)	_	_	_	_	PS743P (06F, 11F, 06L, 16L)
1.00 (25)	3.94 (100)	1.57 (40)	0.50 (13)	2.19 (56)	1.25 (32)	0.28 (7)	1.68 (43)	_	_	_	_	PS843P (07F, 12F, 07L, 17L)
0.28 (7)	2.12 (54)	2.00 (51)	0.14 (4)	1.85 (47)	0.63 (16)	0.28 (7)	1.41 (36)	_	_	_	_	PS943P (05F, 15F, 15L)
0.84 (21)	2.59 (66)	0.49 (12)	1.02 (26)	1.85 (47)	0.61 (15)	0.28 (7)	_	_	_	_	_	PS963P (05R, 10R, 05E, 27E)
0.84 (21)	3.26 (83)	0.77 (20)	1.46 (37)	2.00 (51)	0.94 (24)	0.28 (7)	_	_	_	_	_	PS707P (06R, 06E, 11R)
1.00 (25)	3.94 (100)	0.65 (17)	1.68 (43)	2.19 (56)	1.25 (32)	0.28 (7)	_	_	_	_	_	PS807P (07R, 07E, 12R)
6.22 (158)	8.19 (208)	2.75 (70)	1.97 (50)	2.36 (60)	1.77 (45)	1.30 (33)	_	_	_	_	_	P3NKA00MW (P3NF, P3NR, P3NE, P3NL)

inches (mm)







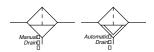


Air Preparation Products Stainless Steel Products PF504 Particulate Filters F2-F3 F4-F5 PF10 Particulate Filters PF501 Coalescing Filters F6-F7 PF11 Coalescing Filters F8-F9 PR354 & PR364 Regulators F10-F11 PR10 & PR11 Regulators F12-F13 PB548 & PB558 Filter / Regulators F14-F15 PB11 & PB12 Filter / Regulatos F16-F17 PL10 Lubricators F18-F19

PF504 Particulate Filters - Miniature

- Stainless steel construction handles most corrosive environments
- Fluorocarbon seals standard
- Meets NACE specifications MR-01-75/ISO 15156
- 1/8" female threaded drain
- 1/4" port (NPT, BSPP)





Port Size	Description	Part Number
1/4"	Twist Drain, NPT	PF504-02DHSS
1/4"	Auto Pulse Drain, NPT	PF504-02DHRSS

Operating information

Operating pressure:

Twist drain 0 to 300 psig (0 to 20.7 bar) Auto pulse drain 10 to 175 psig (0 to 12 bar)

Operating temperature:

0°F to 180°F (-18°C to 82°C) Twist drain Auto pulse drain 32°F to 150°F (0°C to 66°C) Flow capacity[†]: 23 scfm (10.9 dm³/s, ANR)

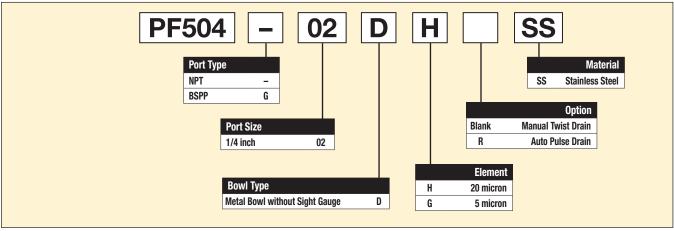
Bowl capacity: 1.0 oz. Filter rating: 20 micron Sump capacity: 0.4 oz. Weight: 0.6 lb (0.27 kg)

Note: Air must be dry enough to avoid ice formation at

temperatures below 32°F (0°C)

† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

Ordering Information:

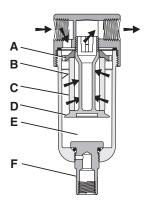


F2

Most popular.





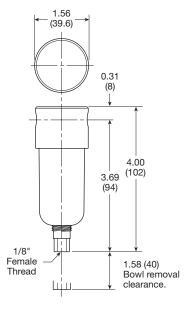


First Stage Filtration:

Air enters at inlet port and flows through deflector plate (A) which causes a swirling action. Liquids and coarse particles are forced to the bowl interior wall (B) by the centrifugal action of the swirling air. They are then carried down the bowl wall by the force of gravity. The baffle (D) separates the lower portion of the bowl into a "quiet zone" (E) where the removed liquid and particles collect, unaffected by the swirling air, and are therefore not reentrained into the flowing air.

Second Stage Filtration:

After liquids and large particles are removed in the first stages of filtration, the air flows through element (C) where smaller particles are filtered out. The filtered air then passes downstream. Collected liquids and particles in the "quiet zone" (E) should be drained before their level reaches a height where they would be reentrained in the flowing air. This can be accomplished by unscrewing the drain valve (F) slightly until the liquid begins to drain.



Material Specifications

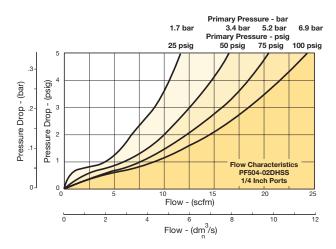
Body	316 stainless steel
Bowls	316 stainless steel
Deflector	Acetal
Drain	316 stainless steel
Element holder	Acetal
Filter element	Polyethylene
Seals	Fluorocarbon

Repair and Service Kits

Auto pulse drain	RK504SY-SS
Manual twist drain (small, old)	SA600Y7-1SS
Manual twist drain (large, new)	SAP05481
5 micron element	EK504VY
20 micron element	EK504Y
Pipe nipple, 1/4" 316 stainless steel	1/4 FF-SS

Flow Charts

PF504 1/4" Filter



Stainless Steel

Filters

Coalescers

Inches (mm)



PF10 Particulate Filters - Standard

- Stainless steel construction handles most corrosive environments
- Fluorocarbon seals standard
- Meets NACE specifications MR-01-75/ISO 15156
- 1/8" female threaded drain
- 1/2" port (NPT, BSPP)





Port Size	Description	Part Number
1/2"	Twist Drain, with Sight Gauge, NPT	PF10-04WJSS
1/2"	Auto Float Drain, with Sight Gauge, NPT	PF10-04WJRSS

Operating information

Operating pressure:

Twist drain, no sight gauge 0 to 300 psig (0 to 20.7 bar) Twist drain, sight gauge 0 to 250 psig (0 to 17.2 bar) Auto float drain 10 to 175 psig (0 to 12 bar)

Operating temperature:

0°F to 180°F (-18°C to 82°C) Twist drain, no sight gauge 0°F to 150°F (-18°C to 66°C) Twist drain, sight gauge Auto float drain 32°F to 150°F (0°C to 66°C)

Flow capacity[†]: 70 scfm (33 dm³/s, ANR)

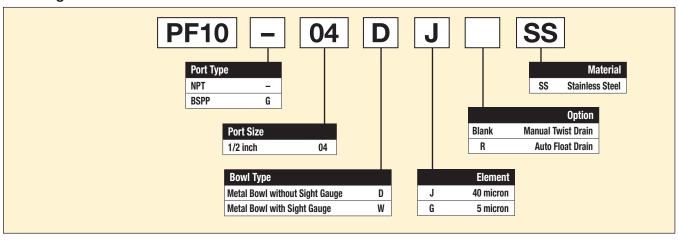
Bowl capacity: 4.0 oz. Filter rating: 40 micron Sump capacity: 1.7 oz. Weight: 1.9 lb (0.85 kg)

Note: Air must be dry enough to avoid ice formation at

temperatures below 32°F (0°C)

† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

Ordering Information:



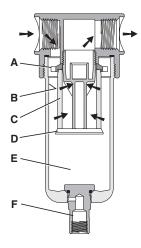
Most popular.





Air Preparation Products **Stainless Steel**

Operation

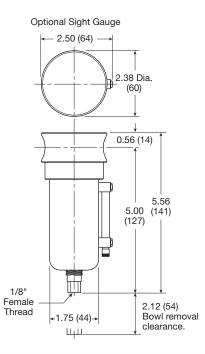


First Stage Filtration:

Air enters at inlet port and flows through deflector plate (A) which causes a swirling action. Liquids and coarse particles are forced to the bowl interior wall (B) by the centrifugal action of the swirling air. They are then carried down the bowl wall by the force of gravity. The baffle (D) separates the lower portion of the bowl into a "quiet zone" (E) where the removed liquid and particles collect, unaffected by the swirling air, and are therefore not reentrained into the flowing air.

Second Stage Filtration:

After liquids and large particles are removed in the first stages of filtration, the air flows through element (C) where smaller particles are filtered out. The filtered air then passes downstream. Collected liquids and particles in the "quiet zone" (E) should be drained before their level reaches a height where they would be reentrained in the flowing air. This can be accomplished by unscrewing the drain valve (F) slightly until the liquid begins to drain.



Material Specifications

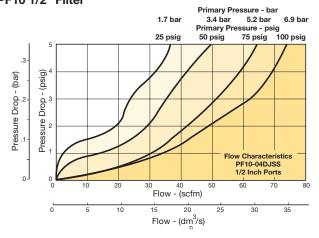
Body	316 stainless steel
Bowls	316 stainless steel
Deflector	Acetal
Drain	316 stainless steel
Element holder	Acetal
Filter element	Polyethylene
Seals	Fluorocarbon
Sight gauge	Isoplast

Repair and Service Kits

Automatic float drain	SA10MDSS
Manual twist drain (small, old)	SA600Y7-1SS
Manual twist drain (large, new)	SAP05481
40 micron element	EK55J
5 micron element	EK55G
Pipe nipple, 1/2" 316 stainless steel	616A28-SS

Flow Charts

PF10 1/2" Filter



Inches (mm)



F5

PF501 Coalescing Filters – Miniature

- Stainless steel construction handles most corrosive environments
- Meets NACE specifications MR-01-75/ISO 15156
- 1/8" female threaded drain
- 1/4" port (NPT, BSPP)





Port Size	Description	Part Number
1/4"	Twist Drain, NPT	PF501-02DHSS
1/4"	Auto Pulse Drain, NPT	PF501-02DHRSS

Operating information

Operating pressure:

Twist drain 0 to 300 psig (0 to 20.7 bar) Auto pulse drain 10 to 175 psig (0 to 12 bar)

Operating temperature:

Twist drain
Auto pulse drain

0°F to 180°F (-18°C to 82°C) 32°F to 150°F (0°C to 66°C)

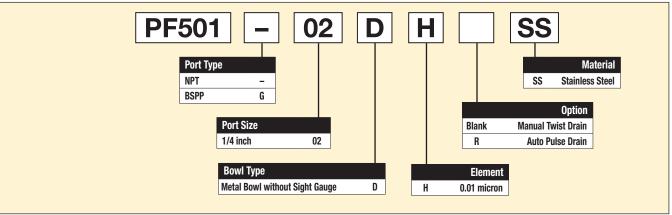
Flow capacity[†]: 16 scfm (7.6 dm³/s, ANR)

Bowl capacity: 1.0 oz.
Filter rating: 0.01 micron
Sump capacity: 0.4 oz.
Weight: 0.6 lb (0.27 kg)

Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C)

[†] scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

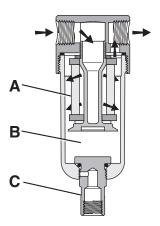
Ordering Information:







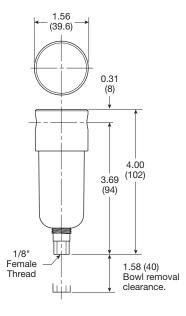




The contaminated air enters the element interior and is forced through a thick membrane (A) of "borosilicate" glass fibers coated with epoxy. Flow then passes through the element, and at this stage 99.97% of the sub micronic particles have been removed from the air stream. The tiny droplets coalesce together and are collected from the filter element by the outer drain layer.

The clean, filtered air now passes through and out into the pneumatic system. The air line coalescing filter removes liquid aerosols and sub-micron particulate matter.

Collected liquids and particles in the "quiet zone" (B) should be drained before their level reaches a height where they would be reentrained in the flowing air. This can be accomplished by unscrewing the drain valve (C) slightly until the liquid begins to drain.



Inches (mm)

Material Specifications

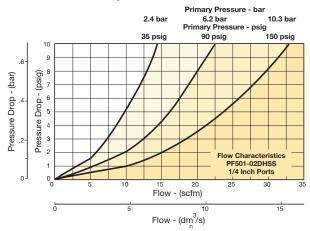
Seals	Fluorocarbon
Filter element	Borosilicate Fiber
Element holder	Acetal
Drain	316 stainless steel
Bowls	316 stainless steel
Body	316 stainless steel

Repair and Service Kits

Auto pulse drain	RK504SY-SS
Manual twist drain (small, old)	SA600Y7-1SS
Manual twist drain (large, new)	SAP05481
0.01 micron element	EKF501H
Pipe nipple, 1/4" 316 stainless steel	1/4 FF-SS

Flow Charts

PF501 1/4" Coalescing Filter







PF11 Coalescing Filters - Standard

- Stainless steel construction handles most corrosive
- Meets NACE specifications MR-01-75/ISO 15156
- 1/8" female threaded drain
- 1/2" port (NPT, BSPP)





Port Size	Description	Part Number
1/2"	Twist Drain, with Sight Gauge, NPT	PF11-04WJSS
1/2"	Auto Float Drain, with Sight Gauge, NPT	PF11-04WJRSS

Operating information

Operating pressure:

0 to 300 psig (0 to 20.7 bar) Twist drain, no sight gauge Twist drain, sight gauge 0 to 250 psig (0 to 17.2 bar) 10 to 175 psig (0 to 12 bar) Auto float drain

Operating temperature:

0°F to 180°F (-18°C to 82°C) Twist drain, no sight gauge 0°F to 150°F (-18°C to 66°C) Twist drain, sight gauge Auto float drain 32°F to 150°F (0°C to 66°C)

Flow capacity[†]: 45 scfm (21.2 dm³/s, ANR)

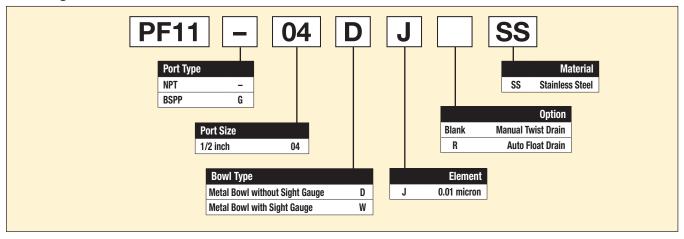
Bowl capacity: 4.0 oz. Filter rating: 0.01 micron Sump capacity: 1.7 oz. Weight: 1.9 lb (0.85 kg)

Note: Air must be dry enough to avoid ice formation at

temperatures below 32°F (0°C)

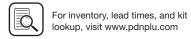
† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

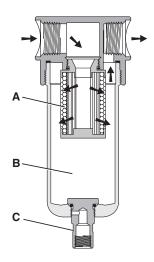
Ordering Information:







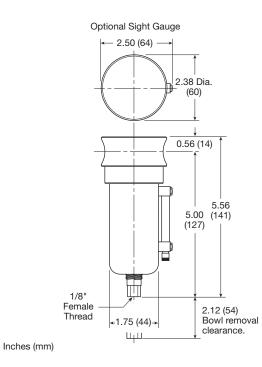




The contaminated air enters the element interior and is forced through a thick membrane (A) of "borosilicate" glass fibers coated with epoxy. Flow then passes through the element, and at this stage 99.9997% of the sub micronic particles have been removed from the air stream. The tiny droplets coalesce together and are collected from the filter element by the outer drain layer.

The clean, filtered air now passes through and out into the pneumatic system. The air line coalescing filter removes liquid aerosols and sub-micron particulate matter.

Collected liquids and particles in the "quiet zone" (B) should be drained before their level reaches a height where they would be reentrained in the flowing air. This can be accomplished by unscrewing the drain valve (C) slightly until the liquid begins to drain.



Material Specifications

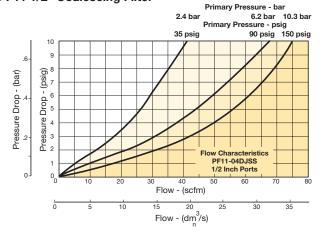
Body	316 Stainless Steel
Bowls	316 Stainless Steel
Drain	316 Stainless Steel
Element holder	Acetal
Filter element	Borosilicate Fiber
Seals	Fluorocarbon
Sight gauge	Isoplast

Repair and Service Kits

Automatic float drain	SA10MDSS
0.01 micron element	EKF71
Pipe nipple, 1/2" 316 stainless steel	616A28-SS

Flow Charts

PF11 1/2" Coalescing Filter







PR354, PR364 Regulator - Miniature

- Stainless steel construction handles most corrosive environments
- Large diaphragm to valve area ratio for precise regulation and high flow capacity
- Meets NACE specifications MR-01-75/ISO 15156
- 1/4" port (NPT, BSPP)





PR364

PR354



Port Size	Description	Part Number
1/4"	Standard Knob, NPT	PR364-02CSS
1/4"	Stainless Steel, NPT	PR354-02CSS

Operating information

Operating pressure: PR354 300 psig (20.7 bar) PR364 300 psig (20.7 bar)

Operating temperature:

PR354 0°F to 180°F (-18°C to 82°C) PR364 0°F to 150°F (-18°C to 66°C) Flow capacity†: 12 scfm (5.7 dm³/s, ANR)

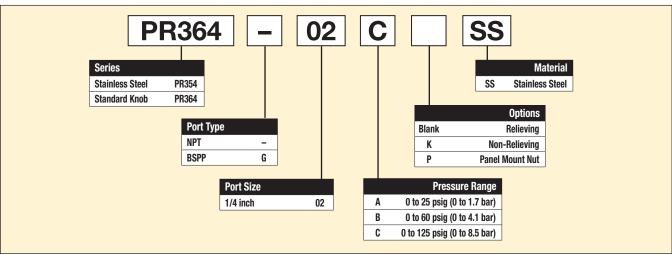
Gauge port: 1/4 inch

Operation: Fluorocarbon diaphragm Weight: 0.5 lb (0.23 kg)

Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C)

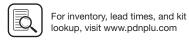
† scfm = Standard cubic feet per minute at 100 psig inlet, 75 psig no flow secondary setting and 15 psig pressure drop.

Ordering Information:



Most popular.

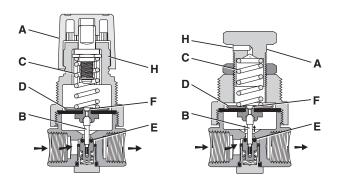




F10

Filters

Operation



With the adjusting knob (A) turned fully counter-clockwise (no spring load), and pressure supplied to the regulator inlet port, the valve poppet assembly (B) is closed. Turning the adjusting knob clockwise applies a load to control spring (C). This load causes the diaphragm (D) and the valve poppet assembly (B) to move downward allowing flow across the seat area (E) created between the poppet assembly and the seat. Pressure in the downstream line is sensed below the diaphragm (D) and offsets the load of spring (C). As downstream pressure rises, poppet assembly (B) and diaphragm (D) move upward until the area (E) is closed and the load of the spring (C) and pressure under diaphragm (D) are in balance. A reduced outlet pressure has now been obtained, depending on spring load. Creating a demand downstream, such as opening a valve, results in a reduced pressure under the diaphragm (D). The load of control spring (C) now causes the poppet assembly to move downward opening seat area (E) allowing air to flow to meet the downstream demand. The flow of downstream air is metered by the amount of opening (E).

Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the diaphragm (D) to move upward against control spring (C), open vent hole (F), and vent the excess pressure to atmosphere through the hole in the bonnet (H). (This occurs in the relieving type regulator only.)

PR354 **PR364** 1.56 (39.6)1.56 (39.6)2.00 2.00 (51) (51)2.50 2.50 (64)(64)0.50 0.50 (13)(13)Inches (mm)

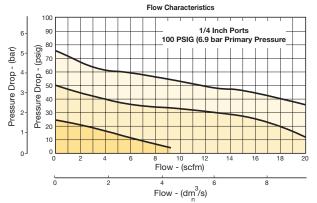
Adjustment mechanism / springs 316 stainless steel Adjusting knob (PR354) 316 Stainless Steel Adjusting knob (PR364) Polypropylene 316 stainless steel Bonnet (PR354) 316 stainless steel Bonnet (PR364) Acetal Bottom plug 316 stainless steel **Poppet** 316 stainless steel Fluorocarbon Seals

Repair and Service Kits

-	
PR354 bonnet kit	CKR354YSS
PR364 bonnet kit (knob included)	CKR364Y-1SS
1-1/2" face, 160 psig (0 to 1100 kPa), gauge (stainless)	K4515N14160SS
Panel mount bracket (Stainless)	161X57-SS
Panel mount nut, stainless	R05X51-SS
Panel mount nut, plastic	R05X51-P
Pipe nipple, 1/4" 316 stainless steel	1/4 FF-SS
Relieving	RKR364YSS
Non-relieving	RKR364KYSS
0-25 psig spring	SPR-375-2-SS
0-60 psig spring	SPR-376-1-SS
0-125 psig spring	SPR-377-1-SS

Flow Charts

PR354, PR364 1/4" Regulator

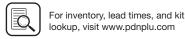


Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





PR10, PR11 Regulator - Standard

- Stainless steel construction handles most corrosive
- Large diaphragm to valve area ratio for precise regulation and high flow capacity
- Meets NACE specifications MR-01-75/ISO 15156
- Low temperature version available
- 1/2" port (NPT, BSPP)



Port Size	Description	Part Number
1/2"	Standard Knob, NPT	PR10-04CSS
1/2"	Stainless Steel T-Handle, NPT	PR11-04CSS



Operating information

Operating pressure:

PR10 300 psig (20.7 bar) PR11 300 psig (20.7 bar)

Operating temperature:

PR10 0°F to 150°F (-18°C to 66°C) 0°F to 180°F (-18°C to 82°C)

Option "L" minimum -40°F (-40°C)

Flow capacity[†]: 80 scfm (37.8 dm³/s, ANR)

Gauge port: 1/4 inch

Operation: Fluorocarbon diaphragm Weight: 1.79 lb (0.81 kg)

Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C)

† scfm = Standard cubic feet per minute at 100 psig inlet, 75 psig no flow secondary setting and 15 psig pressure drop.

Ordering Information:

Stainless Steel

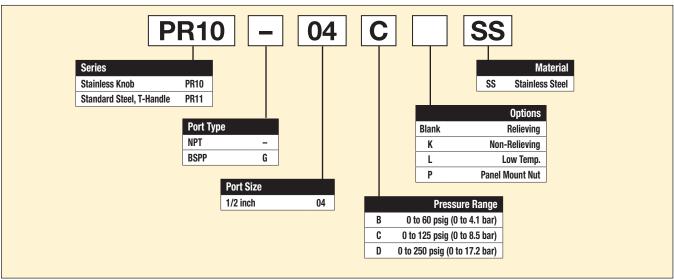
Filters

Coalescers

Regulators

Regulators Filter /

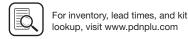
Lubricators



F12

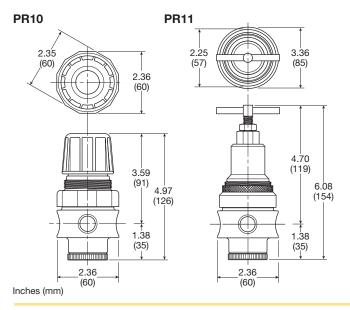
Most popular.





With the adjusting knob / T-Handle (A) turned fully counterclockwise (no spring load), and pressure supplied to the regulator inlet port, the valve poppet assembly (B) is closed. Turning the adjusting knob clockwise applies a load to control spring (C). This load causes the diaphragm (D) and the valve poppet assembly (B) to move downward allowing flow across the seat area (E) created between the poppet assembly and the seat. Pressure in the downstream line is sensed below the diaphragm (D) and offsets the load of spring (C). As downstream pressure rises, poppet assembly (B) and diaphragm (D) move upward until the area (E) is closed and the load of the spring (C) and pressure under diaphragm (D) are in balance. A reduced outlet pressure has now been obtained, depending on spring load. Creating a demand downstream, such as opening a valve, results in a reduced pressure under the diaphragm (D). The load of control spring (C) now causes the poppet assembly to move downward opening seat area (E) allowing air to flow to meet the downstream demand. The flow of downstream air is metered by the amount of opening (E).

Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the diaphragm (D) to move upward against control spring (C), open vent hole (F), and vent the excess pressure to atmosphere through the hole in the bonnet (H). (This occurs in the relieving type regulator only.)



Material Specifications

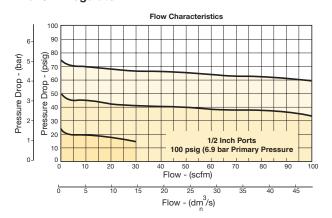
Adjustment mechanism / springs	316 stainless steel
Body	316 stainless steel
Bonnet / tee handle (PR11)	316 stainless steel
Bonnet / knob (PR10)	Acetal
Bottom plug	316 stainless steel
Poppet	316 stainless steel
Seals	Fluorocarbon

Repair and Service Kits

riopan and corrido rato	
PR10 bonnet kit (knob included)	CKR10YSS
PR11 bonnet kit	CKR11YSS
2" Face 160 psig (0 to 1100 kPa), gauge (stainless)	K4520N14160SS
Panel mount bracket (stainless)	R10Y57-SS
Panel mount nut, stainless	R10X51-SS
Panel mount nut, plastic	R10X51-P
Pipe nipple, 1/2" 316 stainless steel	616A28-SS
Relieving	RKR10YSS
Non-relieving	RKR10KYSS
0-60 psig spring	SPR-388-1-SS
0-125 psig spring	SPR-389-1-SS
0-250 psig spring	SPR-390-1-SS

Flow Charts

PR10 1/2" Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

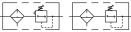




PB548, PB558 Filter / Regulator - Miniature

- Stainless steel construction handles most corrosive
- Large diaphragm to valve area ratio for precise regulation and high flow capacity
- 1/8" female threaded drain
- Meets NACE specifications MR-01-75/ISO 15156
- 1/4" port (NPT, BSPP)





Port Size	Description	Part Number
1/4"	Standard Knob, NPT	PB548-02DHCSS
1/4"	Stainless Steel, NPT	PB558-02DHCSS

Operating information

Operating pressure:

PB548 300 psig (20.7 bar) PB558 300 psig (20.7 bar) Auto pulse drain 10 to 175 psig (0 to 12 bar)

Operating temperature:

0°F to 150°F (-18°C to 66°C) 0°F to 180°F (-18°C to 82°C) PR548 PB558 Auto pulse drain 32°F to 150°F (0°C to 66°C) Flow capacity[†]: 12 scfm (5.7 dm³/s, ANR)

Bowl capacity: 1.0 oz.

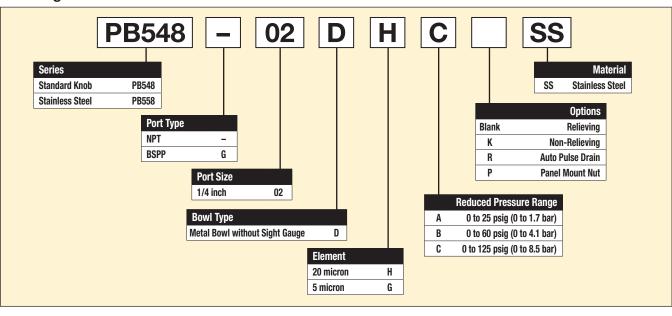
Filter rating: 20 micron Sump capacity: 0.4 oz. Gauge port: 1/4 inch

Operation: Fluorocarbon diaphragm Weight: 0.6 lb (0.27 kg)

Note: Air must be dry enough to avoid ice formation at

temperatures below 32°F (0°C) † scfm = Standard cubic feet per minute at 100 psig inlet, 75 psig no flow secondary setting and 15 psig pressure drop.

Ordering Information:



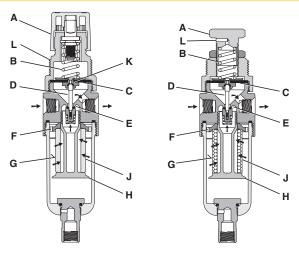
F14





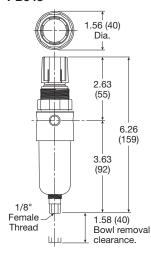


Filters

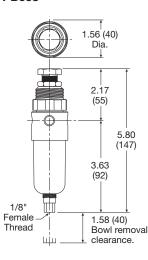


Turning the adjusting knob (A) clockwise applies a load to control spring (B) which forces diaphragm (C) and valve poppet assembly (D) to move downward allowing filtered air to flow through the seat area (E) created between the poppet assembly and the seat. "First stage filtration". Air pressure supplied to the inlet port is directed through deflector plate (F) causing a swirling centrifugal action forcing liquids and coarse particles to the inner bowl wall (G) and down below the lower baffle (H) to the quiet zone. After liquids and large particles are removed in the first stage of filtration "second stage filtration" occurs as air flows through element (J) where smaller particles are filtered out and retained. The air flow now passes through seat area (E) to the outlet port of the unit. Pressure in the downstream line is sensed below the diaphragm (C) and offsets the load of spring (B). When downstream pressure reaches the set-point, poppet valve assembly (D) and diaphragm (C) move upward closing seat area (E). Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the diaphragm (C) to move upward opening vent hole (K) venting the excess pressure to atmosphere through the hole in the bonnet (L). (This occurs in the standard relieving type filter/regulators only.)

PB548



PB558



Inches (mm)

Material Specifications

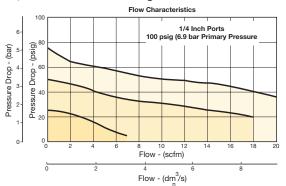
Adjustment mechanism / springs	316 stainless steel
Body	316 Stainless steel
Bonnet (PB548)	Acetal
Bonnet (PB558)	316 stainless steel
Bottom plug	316 stainless steel
Knob (PB548)	Polypropylene
Knob (PB558)	316 stainless steel
Poppet	316 stainless steel
Seals	Fluorocarbon

Repair and Service Kits

PB558 bonnet kit (knob included)	CKR354YSS
PB548 bonnet kit (knob included)	CKR364Y-1SS
Automatic pulse drain	RK504SY-SS
Manual twist drain (small, old)	SA600Y7-1SS
Manual twist drain (large, new)	SAP05481
5 micron element	EK504VY
20 micron element	EK504Y
1-1/2" face 160 psig (0 to 1100 kPa),	
gauge (stainless)	K4515N14160SS
Panel mount bracket (stainless)	161X57-SS
Panel mount nut, stainless	R05X51-SS
Panel mount nut, plastic	R05X51-P
Pipe nipple, 1/4" 316 stainless steel	1/4 FF-SS
Relieving	RK549YSS
Non-relieving	RK548YSS
0-25 psig spring	SPR-375-2-SS
0-60 psig spring	SPR-376-1-SS
0-125 psig spring	SPR-377-1-SS

Flow Charts

PB548, PB558 1/4" Filter / Regulator



↑ WARNING

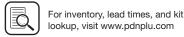
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

F15

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





PB11, PB12 Filter / Regulator - Standard

- Stainless steel construction handles most corrosive
- Large diaphragm to valve area ratio for precise regulation and high flow capacity
- 1/8" female threaded drain
- Meets NACE specifications MR-01-75/ISO-15156
- Low temperature version available
- 1/2" port (NPT, BSPP)



PB12

Stainless Steel Products

Filters

Coalescers

Regulators

Lubricators

Port Size	Description	Part Number
With S	Sight Gauge, NPT	
1/2"	Standard Knob, Twist Drain	PB11-04WJCSS
1/2"	Standard Knob, Auto Float Drain	PB11-04WJCRSS
1/2"	Stainless Steel T-Handle, Twist Drain	PB12-04WJCSS
1/2"	Stainless Steel T-Handle, Auto Float Drain	PB12-04WJCRSS

Operating information

Operating pressure: 300 psig (20.7 bar) PB11, PB12 Auto float drain 15 to 175 psig (1 to 12 bar)

Operating temperature:

0°F to 150°F (-18°C to 66°C) PB12, no sight gauge 0°F to 180°F (-18°C to 82°C) 0°F to 150°F (-18°C to 66°C) PB12, sight gauge 32°F to 150°F (0°C to 66°C) Auto float drain 72 scfm (34 dm³/s, ANR)

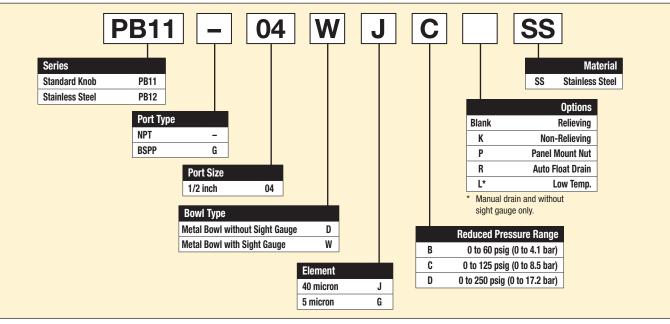
Flow capacity[†]:

4.0 oz. Bowl capacity: Filter rating: 40 micron Sump capacity: 1.7 oz. Gauge port: 1/4 inch Operation: Fluorocarbon diaphragm

Weight: 2.42 lb (1.09 kg) Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C)

† scfm = Standard cubic feet per minute at 100 psig inlet, 75 psig no flow secondary setting and 15 psig pressure drop.

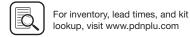
Ordering Information:



F16



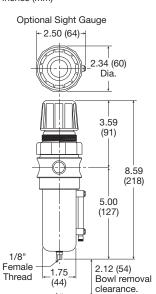




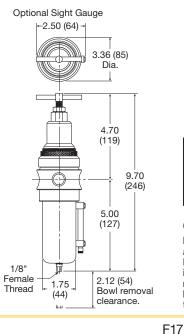
Turning the adjusting knob / T-Handle (A) clockwise applies a load to control spring (B) which forces diaphragm (C) and valve poppet assembly (D) to move downward allowing filtered air to flow through the seat area (E) created between the poppet assembly and the seat. "First stage filtration". Air pressure supplied to the inlet port is directed through deflector plate (F) causing a swirling centrifugal action forcing liquids and coarse particles to the inner bowl wall (G) and down below the lower baffle (H) to the quiet zone. After liquids and large particles are removed in the first stage of filtration "second stage filtration" occurs as air flows through element (J) where smaller particles are filtered out and retained. The air flow now passes through seat area (E) to the outlet port of the unit. Pressure in the downstream line is sensed below the diaphragm (C) and offsets the load of spring (B). When downstream pressure reaches the set-point, poppet valve assembly (D) and diaphragm (C) move upward closing seat area (E). Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the diaphragm (C) to move upward opening vent hole (K) venting the excess pressure to atmosphere through the hole in the bonnet (L). (This occurs in the standard relieving type filter/regulators only.)

PB11

Inches (mm)



PB12



Material Specifications

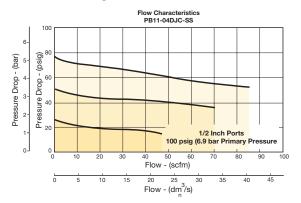
Adjustment mechanism / springs	316 stainless steel
Body	316 stainless steel
Bonnet / knob (PB11)	Acetal
Bonnet / tee handle (PB12)	316 stainless steel
Bottom plug	316 stainless steel
Poppet	316 stainless steel
Seals	Fluorocarbon
Sight gauge	Isoplast

Repair and Service Kits

PB11 bonnet kit (knob included)	CKR10YSS
PB12 bonnet kit	CKR11YSS
Auto float drain	SA10MDSS
Manual twist drain (small, old)	SA600Y7-1SS
Manual twist drain (large, new)	SAP05481
40 micron element	EKF10Y
5 micron element	EKF10VY
2" face 160 psig (0 to 1100 kPa),	
gauge (stainless)	K4520N14160SS
Panel mount bracket (stainless)	R10Y57-SS
Panel mount nut, stainless	R10X51-SS
Panel mount nut, plastic	R10X51-P
Pipe nipple, 1/2" 316 stainless steel	616A28-SS
Relieving	RKR10YSS
Non-relieving	RKR10KYSS
0-60 psig spring	SPR-388-1-SS
0-125 psig spring	SPR-389-1-SS
0-250 psig spring	SPR-390-1-SS

Flow Charts

PB11 1/2" Filter / Regulator



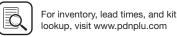
↑ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





Standard Lubricator

PL10 Lubricators - Standard

- Stainless steel construction handles most corrosive environments
- 1/8" female threaded drain
- Fillable under pressure
- Meets NACE specifications MR-01-75/ISO 15156
- 1/2" port (NPT, BSPP)





Port Size	Description	Part Number
1/2"	Twist Drain, with Sight Gauge, NPT	PL10-04WSS
1/2"	Twist Drain, without Sight Gauge, NPT	PL10-04DSS

Operating information

Operating pressure:

Metal bowl, no sight gauge 0 to 300 psig (0 to 20.7 bar)
Metal bowl, sight gauge 0 to 250 psig (0 to 17.2 bar)

Operating temperature:

Metal bowl, no sight gauge
Metal bowl, sight gauge

Metal bowl, sight gauge

O°F to 150°F (-18°C to 66°C)

O°F to 150°F (-18°C to 66°C)

100 scfm (47.2 dm³/s, ANR)

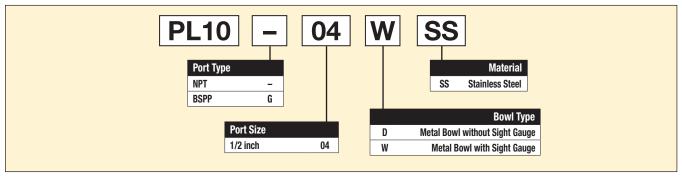
Bowl capacity: 4.0 oz.

Weight: 1.9 lb (0.85 kg)

Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C)

[†] scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

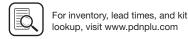
Ordering Information:





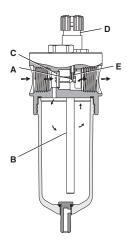


Most popular.



Air Preparation Products **Stainless Steel**

Operation



Air flowing through the unit goes through two paths. At low flow rates the majority of the air flows through the Venturi section (A). The rest of the air opens the check valve (C). The velocity of the air flowing through the Venturi section (A) creates a pressure drop. This lower pressure allows the oil to be forced from the reservoir through the pickup tube (B) and travels up to the metering screw (D). The rate of oil delivery is then controlled by adjusting the metering screw (D). Oil flows past the metering screw (D) and forms a drop in the nozzle tube (E). As the oil drops through the dome (F) and back into the Venturi section (A), it is broken up into fine particles. It is then mixed with the air flowing past the check valve (C) and is carried downstream. As the air flow increases the check valve (C) will open more fully. This additional flow will assure that the oil delivery rate will increase linearly with the increase of air flow.

Optional Sight Gauge -2.52 (64) 2.36 Dia. (60) 7.62 5.46 (194) (139) 1.73 1.73 3.50 (89) Bowl removal clearance.

Inches (mm)

Material Specifications

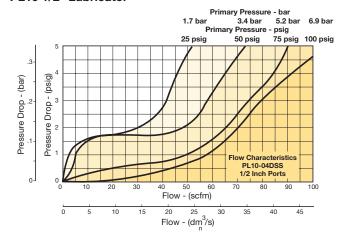
Body	316 stainless steel
Bowl	316 stainless steel
Dip tube	316 stainless steel
Drain	316 stainless steel
Fill plug	316 stainless steel
Seals	Fluorocarbon
Sight dome	Nylon
Sight gauge	Isoplast

Repair and Service Kits

Manual twist drain (small, old)	SA600Y7-1SS
Manual twist drain (large, new)	SAP05481
Pipe nipple, 1/2" 316 stainless steel	616A28-SS
Sight dome kit, (old)	RKL10SS
Sight dome kit, (new)	PS740N

Flow Charts

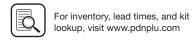
PL10 1/2" Lubricator







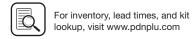






Air Preparation Products P3N Series P3NF Particulate Filters G2-G3 G4-G5 P3NF Coalescing Filters G6-G7 P3NR Regulators P3NR Pilot Controlled Regulators G8-G9 P3NE Filter / Regulators G10-G11 P3NL Lubricators G12-G13 P3NC Modular Combinations G14-G15



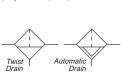


Hi-Flow Particulate Filters

P3NF Particulate Filters – Hi-Flow

- Port blocks (PB) available to provide 1-1/2" port extension to 1" ported bodies
- Excellent water removal efficiency
- · Metal bowl with sight gauge
- Large filter element surface guarantees low pressure drop and increased element life
- Twist drain as standard, optional auto float drain
- 3/4", 1", 1-1/2" port, NPT & BSPP





Port Size	Description	Part Number
3/4"	Metal Bowl, Sight Gauge, Twist Drain	P3NFA96GSM
3/4"	Metal Bowl, Sight Gauge, Auto Float Drain	P3NFA96GSA
1"	Metal Bowl, Sight Gauge, Twist Drain	P3NFA98GSM
1"	Metal Bowl, Sight Gauge, Auto Float Drain	P3NFA98GSA
1-1/2"#	Metal Bowl, Sight Gauge, Twist Drain	P3NFA9PGSM
1-1/2" #	Metal Bowl, Sight Gauge, Auto Float Drain	P3NFA9PGSA

^{# 1&}quot; port body with 1-1/2" port block.



Operating information

0 to 250 psig (0 to 17.2 bar) Supply pressure (max): 32°F to 175°F (0°C to 80°C) Operating temperature:

Flow capacity[†]:

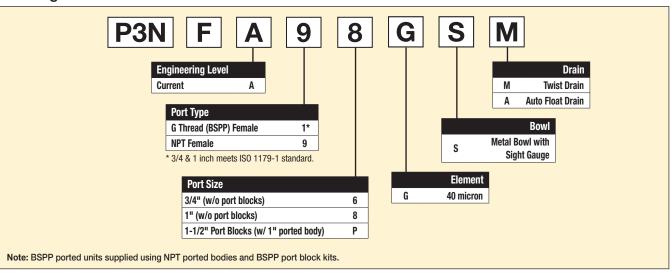
270 scfm (127.4 dm³/s, ANR) 3/4" High flow 300 scfm (141.6 dm³/s, ANR)

1-1/2" 300 scfm (141.6 dm³/s, ANR)

Bowl capacity: 18.0 oz. Sump capacity: 6.8 oz. Weight: 3/4", 1" 3.5 lb (1.6 kg) 1-1/2" # 4.6 lb (2.1 kg)

† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop, with 40 micron element.

Ordering Information:



G2







Filters

Coalescers

^{# 1&}quot; port body with 1-1/2 port block

Hi-Flow Particulate Filters

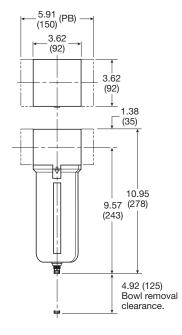
Material Specifications

•	
Body, bowl	Aluminum
Deflector	Plastic
Drain	Plastic
Element	Plastic
Adsorber (optional)	Activated charcoal
Seals	Nitrile
Sight gauge	Polyamide (nylon)

Repair and Service Kits

-	
Metal bowl / sight gauge / auto float drain	P3NKA00BSA
Metal bowl / sight gauge / twist drain	P3NKA00BSM
Bowl latch kit	C11A33
DPI replacement kit	PS781P
Automatic float drain	PS506P
Twist drain	PS512P
40 micron element	P3NKA00ESG
5 micron element	P3NKA00ESE
Adsorber element	P3NKA00ESA
Mounting bracket kit*	P3NKA00MW
Sight gauge kit	P3NKA00PE

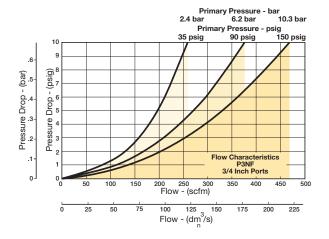
^{*} If 1-1/2 BSPP E02 fittings are required, use P3NKA0BMW.



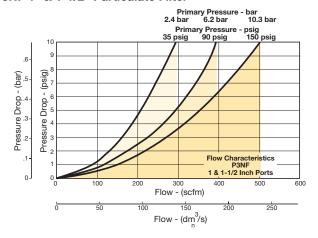
Air Preparation Products **P3N Products**

Flow Charts

P3NF 3/4" Particulate Filter



P3NF 1" & 1-1/2" Particulate Filter



Inches (mm)

P3NF Coalescing Filters - Hi-Flow

- Port blocks (PB) available to provide 1-1/2" port extension to 1" ported bodies
- Metal bowl with sight gauge
- Large filter element surface guarantees low pressure drop and increased element life
- Twist Drain as standard, optional automatic float drain
- 3/4", 1", 1-1/2" # ports (NPT, BSPP)





Port		
Size	Description	Part Number
3/4"	Metal Bowl, Sight Gauge, Twist Drain	P3NFA96DSM
3/4"	Metal Bowl, Sight Gauge, Auto Float Drain	P3NFA96DSA
1"	Metal Bowl, Sight Gauge, Twist Drain	P3NFA98DSM
1"	Metal Bowl, Sight Gauge, Auto Float Drain	P3NFA98DSA
1-1/2" #	Metal Bowl, Sight Gauge, Twist Drain	P3NFA9PDSM
1-1/2"#	Metal Bowl, Sight Gauge, Auto Float Drain	P3NFA9PDSA

Standard part numbers shown bold, with Grade 6 Elements. For other models refer to ordering information below.

Operating information

Supply pressure (max): 0 to 250 psig (0 to 17.2 bar) Auto float drain 15 to 250 psig (1.0 to 17.2 bar) Operating temperature: 32°F to 175°F (0°C to 80°C)

Flow capacity†:

High flow

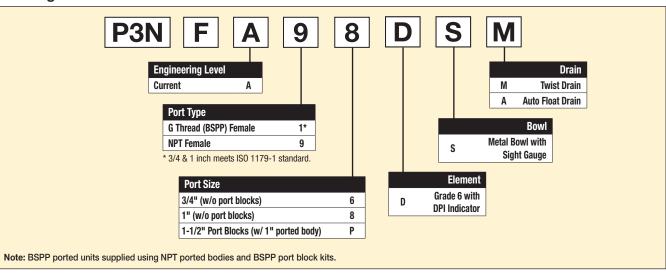
130 scfm (61 dm³/s, ANR) 140 scfm (66 dm³/s, ANR) 140 scfm (66 dm³/s, ANR)

18.0 oz. Bowl capacity: 6.8 oz. Sump capacity: 3/4", 1" 3.5 lb (1.6 kg) Weight: 1-1/2" # 4.6 lb (2.1 kg)

† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop

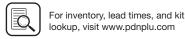
1" port body with 1-1/2 port block

Ordering Information:









Filters

^{# 1&}quot; port body with 1-1/2" port block.

Hi-Flow Coalescing Filters

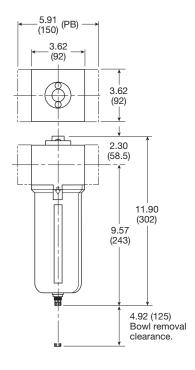
Material Specifications

Body, bowl	Aluminum
Deflector	Plastic
Drain	Plastic
Element	Borosilicate & felt glass fibers
Largest aerosol particle passed (Grade 6)	0.01 micron
Largest solid particle passed (Grade 6)	0.30 micron
Seals	Nitrile
Sight gauge	Polyamide (nylon)

Repair and Service Kits

Metal bowl / sight gauge / automatic float drain	P3NKA00BSA
Metal bowl / sight gauge / twist drain	P3NKA00BSM
Bowl latch kit	C11A33
DPI replacement kit	PS781P
Automatic float drain kit	PS506P
Twist drain kit	PS512P
Grade 6 element (standard)	P3NKA00ESCB
Sight gauge kit	P3NKA00PE
Mounting bracket kit*	P3NKA00MW
* If 1 1/0 DCDD E00 filtings are required DONI	(A ODA 4)4/

^{*} If 1-1/2 BSPP E02 fittings are required, use P3NKA0BMW.

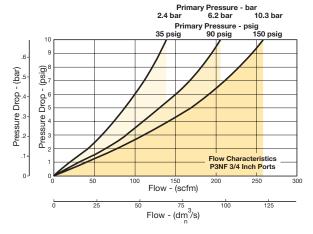


Air Preparation Products **P3N Products**

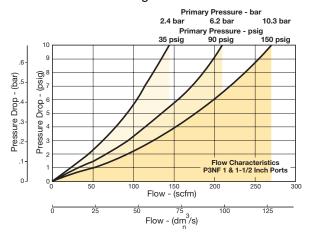
Flow Charts

Grade 6 Element

P3NF 3/4" Coalescing Filter



P3NF 1" & 1-1/2" Coalescing Filter



Inches (mm)

P3NR Regulators - Hi-Flow

- Port blocks (PB) available to provide 1-1/2" port extension to 1" ported bodies
- Self relieving feature plus balanced poppet provides quick response and accurate pressure regulation
- Solid control piston for extended life
- 3/4", 1", 1-1/2" ports (NPT, BSPP)





Port Size	Description	Part Number
3/4"	Without Gauge	P3NRA96BNN
3/4"	With 160 psi Gauge	P3NRA96BNG
1"	Without Gauge	P3NRA98BNN
1"	With 160 psi Gauge	P3NRA98BNG
1-1/2"#	Without Gauge	P3NRA9PBNN
1-1/2"#	With 160 psi Gauge	P3NRA9PBNG

^{# 1&}quot; port body with 1-1/2" port block.

NOTE: 2.0 Dia. (51 mm) hole required for panel mounting.



Operating information

Supply pressure (max): 250 psig (17.2 bar) 32°F to 175°F (0°C to 80°C) Operating temperature:

Flow capacity[†]:

High flow 3/4" 200 scfm (94.4 dm³/s, ANR) 300 scfm (141.6 dm³/s, ANR) 1-1/2" 300 scfm (141.6 dm³/s, ANR)

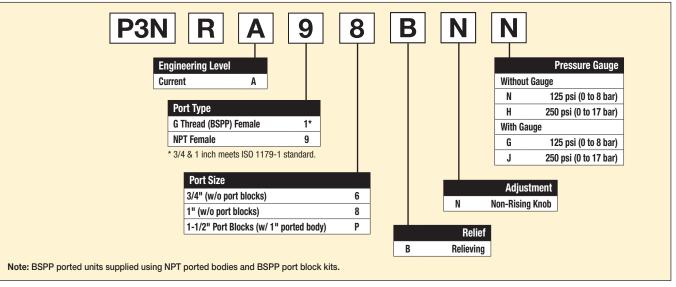
Gauge ports (2): 1/4 inch Weight: 3/4", 1" 4.2 lb (1.9 kg) 1-1/2" #

† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

5.3 lb (2.4 kg)

1" port body with 1-1/2 port block

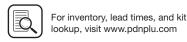
Ordering Information:



G6

Most popular.





Hi-Flow Regulators

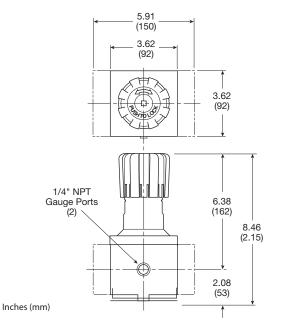
Material Specifications

Adjusting stem	Steel
Body	Aluminum
Bonnet	Aluminum
Knob	Plastic
Piston	Plastic
Poppet assembly	Brass
Seals	Nitrile
Springs, poppet & control	Steel

Repair and Service Kits

P3NKA00PN
K4520N14060
K4520N14160
K4520N14300
K4517N14160D
P3NKA00MW
P3NKA00RR
P3NKA00RN
C10A1304
C10A1308
C10A1317

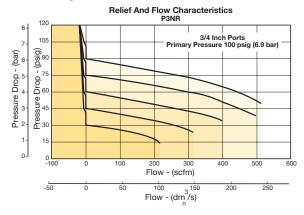
^{*} If 1-1/2 BSPP E02 fittings are required, use P3NKA0BMW.



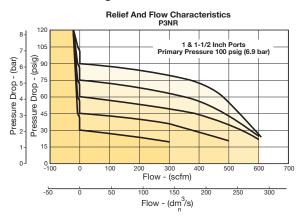
Air Preparation Products **P3N Products**

Flow Charts

P3NR 3/4" Regulator



P3NR 1" & 1-1/2" Regulator



⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



P3NR Pilot Controlled Regulator - Hi-Flow

- Port blocks (PB) available to provide 1-1/2" port extension to 1" ported bodies
- Self relieving feature plus balanced poppet provides quick response and accurate pressure regulation
- Solid control piston for extended life
- 3/4", 1" 1-1/2" ports (NPT, BSPP)





Port Size	Description	Part Number
3/4"	Without Gauge	P3NRA96BPP
1"	Without Gauge	P3NRA98BPP
1-1/2"#	Without Gauge	P3NRA9PBPP

^{# 1&}quot; port body with 1-1/2" port block.

Operating information

Supply pressure (max): 250 psig (17.2 bar) 32°F to 175°F (0°C to 80°C) Operating temperature:

Flow capacity[†]:

High flow 3/4" 300 scfm (141.6 dm³/s, ANR)

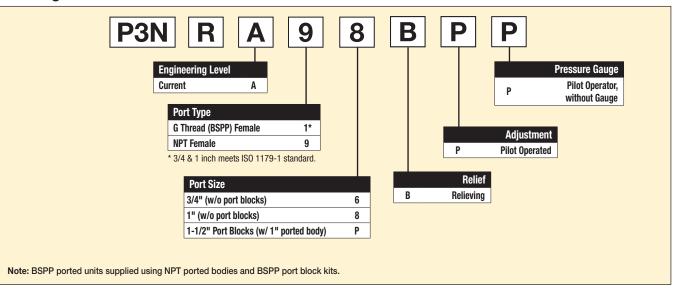
300 scfm (141.6 dm³/s, ANR) 1-1/2" 350 scfm (165.2 dm³/s, ANR)

Gauge ports (2): 1/4 inch Weight: 3/4", 1" 3.3 lb (1.5 kg)

1-1/2" # 4.4 lb (2.0 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:



G8

Most popular.





Filters

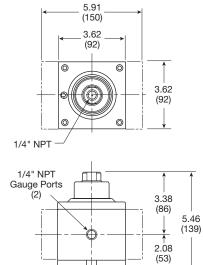
^{# 1&}quot; port body with 1-1/2 port block

Steel
Aluminum
Aluminum
Plastic
Brass
Nitrile
Steel

Repair and Service Kits

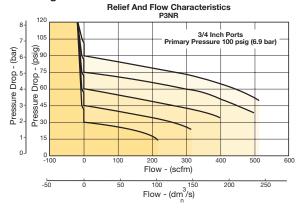
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 70 11.0 bar), gauge	K4517N14160D
Mounting bracket kit*	P3NKA00MW
Relieving	P3NKA00PD

^{*} If 1-1/2 BSPP E02 fittings are required, use P3NKA0BMW.

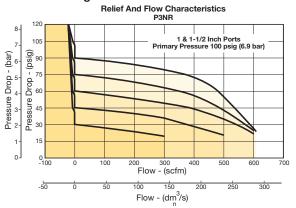


Flow Charts

P3NR 3/4" Regulator



P3NR 1" & 1-1/2" Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

Inches (mm)

P3NE Filter / Regulator - Hi-Flow

- Port blocks (PB) available to provide 1-1/2" port extension to 1" ported bodies
- Excellent water removal efficiency
- · Metal bowl with sight gauge
- Large filter element surface guarantees low pressure drop and increased element life
- Twist drain as standard, optional auto drain
- Self relieving feature plus balanced poppet provides quick response and accurate pressure regulation
- Solid control piston for extended life
- 3/4", 1", 1-1/2" # ports (NPT, BSPP)







Port Size	Description	Part Number
3/4"	Metal Bowl, Sight Gauge, Twist Drain	P3NEA96GSMBNN
3/4"	Metal Bowl, Sight Gauge, Auto Float Drain	P3NEA96GSABNN
1"	Metal Bowl, Sight Gauge, Twist Drain	P3NEA98GSMBNN
1"	Metal Bowl, Sight Gauge, Auto Float Drain	P3NEA98GSABNN
1-1/2"#	Metal Bowl, Sight Gauge, Twist Drain	P3NEA9PGSMBNN
1-1/2"#	Metal Bowl, Sight Gauge, Auto Float Drain	P3NEA9PGSABNN

^{# 1&}quot; port body with 1-1/2" port block.

Operating information

Supply pressure (max): 0 to 250 psig (0 to 17.2 bar) Operating temperature: 32°F to 175°F (0°C to 80°C)

Flow capacity†:

3/4" 250 scfm (118 dm³/s, ANR) High flow

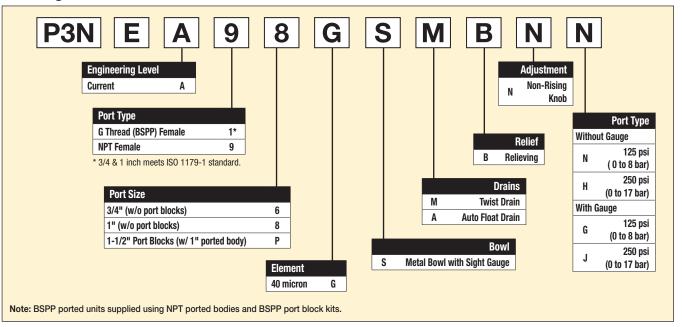
250 scfm (118 dm³/s, ANR) 1-1/2' 250 scfm (118 dm³/s, ANR)

Bowl capacity: 18.0 oz. Sump capacity: 6.8 oz. Weight: 3/4 5.3 lb (2.4 kg) 1" 5.3 lb (2.4 kg)

1-1/2" 6.43 lb (2.9 kg)

† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop with 40 micron element

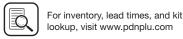
Ordering Information:



G10

Most popular.





Filters

^{# 1&}quot; port body with 1-1/2 port block

Hi-Flow Filter / Regulators

Material Specifications

Adjusting stem	Steel
Body, bonnet, bowl	Aluminum
Drain	Plastic
40 micron element (standard)	Plastic
5 micron element (optional)	Plastic
Adsorber element (optional)	Activated charcoal
Knob	Plastic
Piston	Plastic
Seals	Nitrile
Sight gauge	Polyamide (nylon)
Poppet & control, spring	Steel

Repair and Service Kits

Metal bowl, sight gauge / auto float drain	P3NKA00BSA
Metal bowl, sight gauge / twist drain	P3NKA00BSM
Bowl latch kit	C11A33
Control knob	P3NKA00PN
Auto float drain	PS506P
Twist drain	PS512P
40 micron element	P3NKA00ESG
5 micron element	P3NKA00ESE
Adsorber element	P3NKA00ESA
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face	1/454 5 1144400 D
160 psig (0 70 11.0 bar), gauge	K4517N14160D
Mounting bracket kit*	P3NKA00MW
Relieving	P3NKA00RR
Non-relieving	P3NKA00RN
Sight gauge kit	P3NKA00PE
1-60 psig spring	C10A1304
2-125 psig spring	C10A1308
5-250 psig spring	C10A1317
·	

^{*} If 1-1/2 BSPP E02 fittings are required, use P3NKA0BMW.

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

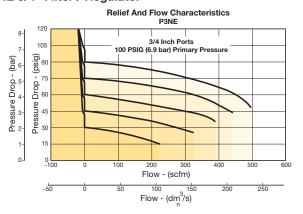
CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

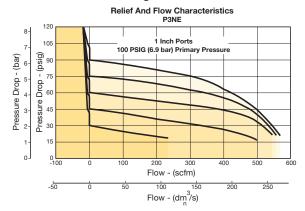
Air Preparation Products **P3N Products**

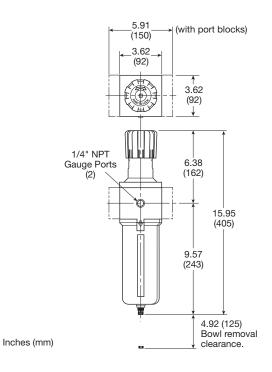
Flow Charts

P3NE 3/4" Filter / Regulator



P3NE 1" & 1-1/2" Filter / Regulator





P3NL Mist Lubricators - Hi-Flow

- Port blocks (PB) available to provide 1-1/2" port extension to 1" ported bodies
- Proportional oil delivery over a wide range of air flows
- Bowl can be filled while air line is under pressure
- Transparent sight dome for 360° visibility
- Integral 3/4", 1" ports (NPT, BSPP)



Port Size	Description	Part Number
3/4"	Metal Bowl, Sight Gauge, No Drain	P3NLA96LSN
1"	Metal Bowl, Sight Gauge, No Drain	P3NLA98LSN
1-1/2" #	Metal Bowl, Sight Gauge, No Drain	P3NLA9PLSN

^{# 1&}quot; Port Body with 1-1/2" Port Block.



Supply pressure (max):	250 psig (17.2 bar)
Operating temper	ature:	32°F to 175°F (0°C to 80°C
Flow capacity†:		
High flow	3/4"	240 scfm (113.3 dm ³ /s, AN
	1"	250 scfm (118 dm ³ /s, ANR

1" 250 scfm (118 dm³/s, ANR) 1-1/2" 260 scfm (122.7 dm³/s, ANR)

C)

NR)

Minimum flow 6.6 scfm (3.1 dm³/s, ANR) at 100 psig (6.9 bar)

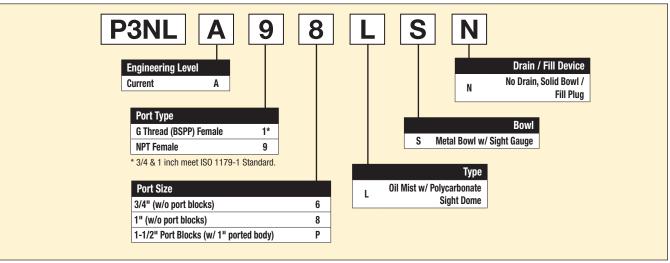
Bowl capacity: 18.0 oz.

Weight: 3/4", 1" 3.5 lb (1.6 kg)
1-1/2" 4.6 lb (2.1 kg)

[†] scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

Operating information

Ordering Information:



Note: All configured BSPP ported units are supplied using NPT ported bodies and BSPP port block kits.

Suggested Lubricant F442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C)

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

Most popular.





^{# 1&}quot; port body with 1-1/2 port block

Hi-Flow Mist Lubricators

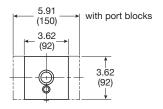
Material Specifications

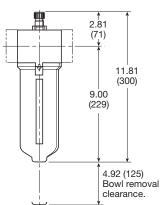
Body, bowl	Aluminum
Injector meter block & base assembly	Plastic
Seals	Nitrile
Sight dome	Polycarbonate
Sight gauge	Polyamide (nylon)

Repair and Service Kits

•	
Adjustment knob	P04121
Metal bowl / sight gauge / twist drain	P3NKA00BSM
Metal bowl / sight gauge / no drain	P3NKA00BSN
Bowl latch kit	C11A33
Twist drain kit	PS512P
Fill cap kit	P3NKA00PL
Sight dome kit, polycarbonate	PS740P
Sight dome kit, nylon	PS740N
Sight gauge kit	P3NKA00PE
Pressure fill adapter kit	P3NKA00PK
Service kit	P3NKA00RL
Mounting bracket kit*	P3NKA00MW
Oil (1 quart)	F442001
Oil (1 gallon)	F442002
Oil (12 quart case)	F442003
Oil (4 gallon case)	F442005
* If 4 4/0 DODD FOO (this DOA	II/AODAMA/

^{*} If 1-1/2 BSPP E02 fittings are required, use P3NKA0BMW.

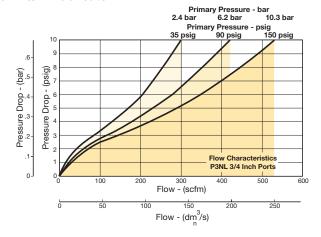




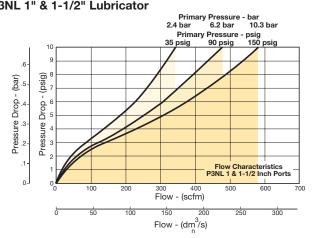
Air Preparation Products **P3N Products**

Flow Charts

P3NL 3/4" Lubricator



P3NL 1" & 1-1/2" Lubricator



Inches (mm)

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P3N Products

G

Filters

Coalescers

Regulators



40 micron element, 125 psig (8.6 bar) regulator without gauge			gauge
Port Size	Bowl Type	Relief Type	Manual Twist Drain
3/4"	Metal, Twist Drain	Relieving	P3NCA96SGMNNLNA
1"	Metal, Twist Drain	Relieving	P3NCA98SGMNNLNA



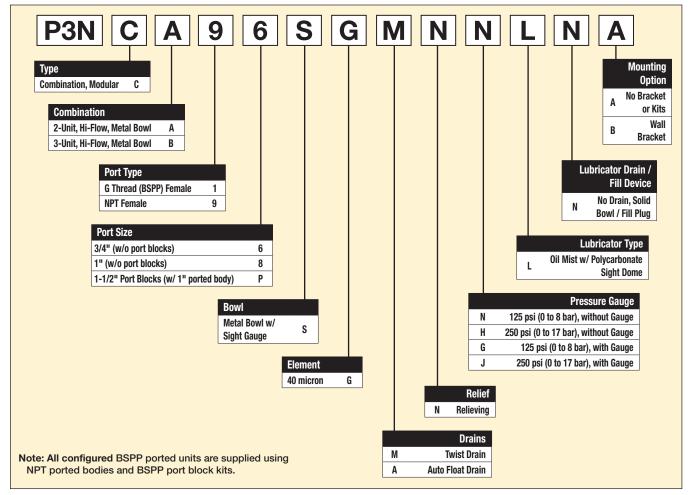


Filter + Regulator + Lubricator Combinations, metal bowl, manual twist drain 40 micron element, 125 psig (8.6 bar) regulator without gauge

Port Size	Bowl Type	Relief Type	Manual Twist Drain
3/4"	Metal, Twist Drain	Relieving	P3NCB96SGMNNLNA
1"	Metal, Twist Drain	Relieving	P3NCB98SGMNNLNA
1-1/2" #	Metal, Twist Drain	Relieving	P3NCB9PSGMNNLNA

Notes: All combo part numbers are with regulator knob in up position. BSPP ported units supplied using NPT ported bodies and BSPP port block kits.

Ordering Information:









^{# 1&}quot; Port body with 1-1/2" port block

Repair and Service Kits

Modular Combinations

•	
Mounting bracket kit	P3NKA00MW
Replacement body cover	P3NKA00PM
Individual NPT 3/4" Port block kits	P3NKB96CP
Individual NPT 1" Port block kits	P3NKB98CP
Individual NPT 1-1/2" Port block kits	P3NKB9BCP
Individual BSPP 3/4" Port block kits	P3NKB16CP
Individual BSPP 1" Port block kits	P3NKB18CP
Individual BSPP 1-1/2" Port block kits	P3NKB1BCP
Combination NPT 3/4" Port block kits	P3NKB96CL
Combination NPT 1" Port block kits	P3NKB98CL
Combination NPT 1-1/2" Port block kits	P3NKB9BCL
Combination BSPP 3/4" Port block kits	P3NKB16CL
Combination BSPP 1" Port block kits	P3NKB18CL
Combination BSPP 1-1/2" Port block kits	P3NKB1BCL

Note: 2-piece filter and regulator (F+R) assemblies require a (P3NKXXCCP) port block kit.

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

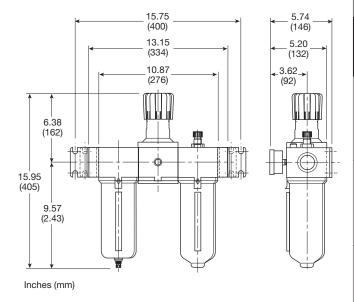
CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

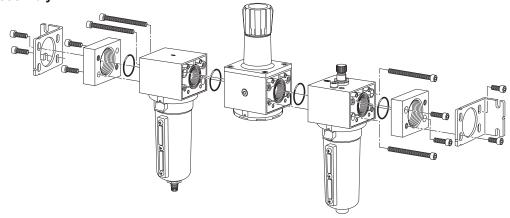
12.13 5.74 (308)(146)9.53 5.20 (242)(132)7.24 _3.62 _ (184)(92)6.38 (162)15.95 (405) (2.43)

P3NCB (Modular 3-unit)

Inches (mm)



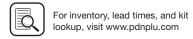
Modular Assembly











09L Lubricators

C628 Combinations

H32-H33

H34



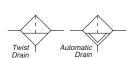
Air Preparation Products General Industrial F602 Particulate Filters H2-H7 H8-H9 35F / 43F Particulate Filters H10-H11 35F / 43F Coalescing Filters F701 Coalescing Filters H12-H13 P3TF Flanged Coalescing Filters H14-H15 R119 Regulators H16-H25 09R Regulators H26-H27 L606 Lubricators H28-H31





F602 Particulate Filters – Hi-Flow

- Excellent water removal efficiency
- For heavy duty applications with minimum pressure drop
- Unique deflector plate that creates swirling of the air stream ensuring maximum water and dirt separation
- Large filter element surface guarantees low pressure drop and increased element life
- 40 micron filter element standard, 5 micron available
- Metal bowl with sight gauge standard
- Twist drain as standard, optional auto drain
- 3/4" & 1" port, NPT & BSPP



Port Size	Description	Part Number
3/4"	16 oz. Metal Bowl / Manual Drain	F602-06WJ
3/4"	16 oz. Metal Bowl / Auto Drain	F602-06WJR
3/4"	32 oz. Metal Bowl / Manual Drain	F602-06EJ
3/4"	32 oz. Metal Bowl / Auto Drain	F602-06EJR
1"	16 oz. Metal Bowl / Manual Drain	F602-08WJ
1"	16 oz. Metal Bowl / Auto Drain	F602-08WJR
1"	32 oz. Metal Bowl / Manual Drain	F602-08EJ
1"	32 oz. Metal Bowl / Auto Drain	F602-08EJR



Operating information

Supply pressure (max):

Aluminum (E) 0 to 300 psig (0 to 20.7 bar) Zinc with gauge (W) 0 to 250 psig (0 to 17.2 bar) With internal auto drain [R] 20 to 175 psig (1.14 to 11.9 bar) With external auto drain [Q] 0 to 250 psig (0 to 17.2 bar)

Operating temperature:

Aluminum (E) 40°F to 150°F (4.4°C to 65.6°C) 40°F to 150°F (4.4°C to 65.6°C) Zinc with gauge (W) 40°F to 125°F (4.4°C to 52°C) With internal auto drain [R] With external auto drain [Q] 40°F to 150°F (4.4°C to 65.6°C)

Flow capacity[†]:

High flow 270 scfm (127.4 dm³/s, ANR) 300 scfm (141.5 dm³/s, ANR)

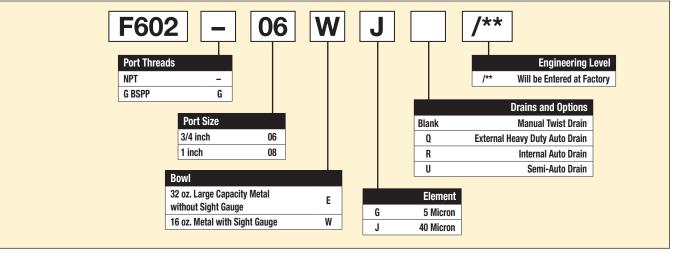
Bowl capacity:

Zinc with gauge (W) 16 oz. Aluminum (E) 32 oz. 6.3 lb (2.86) Weight: 16 oz. 32 oz. 7.0 lb (3.18 kg)

† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

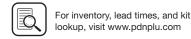
() Bowl type, [] drain type.

Ordering Information:









Filters

Hi-Flow Particulate Filters

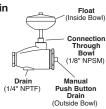
•	
Body	Zinc
Bowl (E) 32 oz. without sight gauge	Aluminum
Bowl (W) 16 oz. with sight gauge	Zinc
Manual twist drain & overnight	Brass
Drain housing "R"	Acetal
Drain housing "Q"	Bronze
Element	Polypropylene
Seals	Nitrile
Sight gauge	Nylon

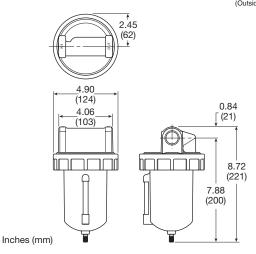
Repair and Service Kits

Aluminum bowl (E) 32 oz.	BK603B
Zinc bowl with sight gauge (W) 16 oz.	BK605WB
External auto drain (E) 32 oz.	SA603D
External auto drain (W) 16 oz.	SA602D
Internal auto drain (All)	SA602MD
Manual drain (All)	SA600Y7-1
Semi-auto "overnight" drain (drains automatically under zero pressure)	SA602A7
40 micron element (All)	EK602B
5 micron element (All)	EK602VB
Mounting bracket, 3/4" Unit (pair or 2 kits pipe mounted brackets needed)	SA200AW57
Mounting bracket, 1" Unit (pair or 2 kits pipe mounted brackets needed)	SA200CW57
Deflector, baffle assembly, & retaining rod (E,W)	RK602B
External auto drain (All)	RK602D
Internal auto drain (All)	RK602MD
Sight glass repair kit (W)	RKB605WB

"Q" Option External Heavy Duty Auto Drain SA602D / SA603D

For heavy duty applications where the filter is being used to remove large volumes of liquid and/or particulate matter from the airstream, the external automatic drain ("Q" option) should be used.

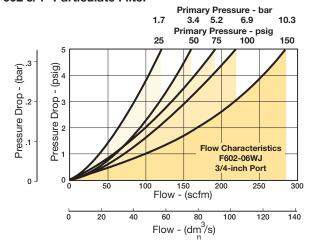




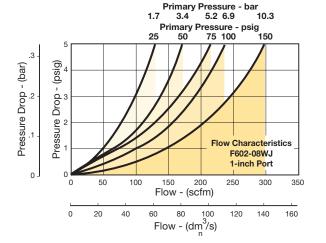
F602-06W, F602-08W (Hi-Flow)

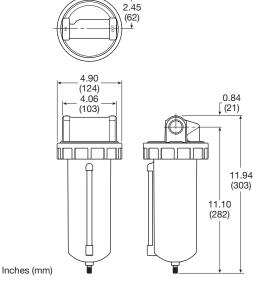
Flow Charts

F602 3/4" Particulate Filter



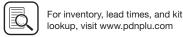
F602 1" Particulate Filter





F602-06E, F602-08E (Hi-Flow)





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F602 Particulate Filters – Hi-Flow

- Excellent water removal efficiency
- For heavy duty applications with minimum pressure drop requirement
- Unique deflector plate that creates swirling of the air stream ensuring maximum water and dirt separation
- Large filter element surface guarantees low pressure drop and increased element life
- 40 micron filter element standard, 5 micron available
- Metal bowl with sight gauge standard
- Twist drain as standard, optional auto drain
- · Large bowl capacity
- Optional high capacity bowl(s) available
- 1-1/2" port, NPT & BSPP



\wedge	
Twist \(\frac{}{Drain}\)	Automatic Y
Drain '	Drain '

Size	Description	Part Number
1-1/2"	16 oz. Metal Bowl / Manual Drain	F602-12WJ
1-1/2"	16 oz. Metal Bowl / Auto Drain	F602-12WJR
1-1/2"	32 oz. Metal Bowl / Manual Drain	F602-12EJ
1-1/2"	32 oz. Metal Bowl / Auto Drain	F602-12EJR

Operating information

Supply pressure (max):

Aluminum (E)

Zinc with gauge (W)

With internal auto drain [R]

O to 300 psig (0 to 20.7 bar)

0 to 250 psig (0 to 17.2 bar)

20 to 175 psig (1.14 to 11.9 bar)

With external auto drain [Q] 0 to 250 psig (0 to 17.2 bar)

Operating temperature:

Aluminum (E) 40°F to 150°F (4.4°C to 65.6°C)

Zinc with gauge (W) 40°F to 150°F (4.4°C to 65.6°C)

With internal auto drain [R] 40°F to 125°F (4.4°C to 52°C)

With external auto drain [Q] 40°F to 150°F (4.4°C to 65.6°C)

Flow capacity[†]:

High flow 1-1/2" 450 scfm (212.4 dm³/s, ANR)

Bowl capacity:

Zinc with gauge (W) 16 oz. Aluminum (E) 32 oz.

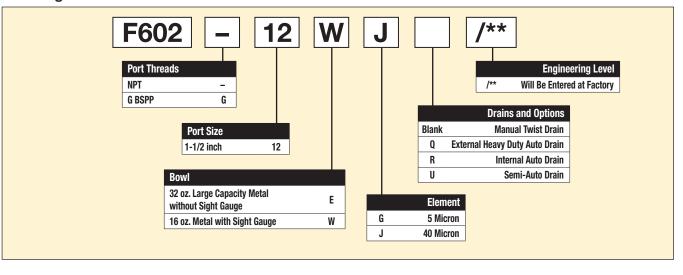
Weight: 16 oz. 7.0 lb (3.18 kg)

32 oz. 7.7 lb (3.49 kg)

† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

() Bowl type, [] drain type.

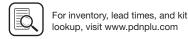
Ordering Information:



H4







Hi-Flow Particulate Filters

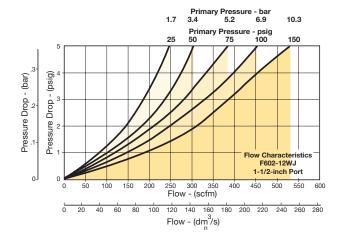
•	
Body	Zinc
Bowl (E) 32 oz. without sight gauge	Aluminum
Bowl (W) 16 oz. with sight gauge	Zinc
Manual twist drain & overnight	Brass
Drain housing "R"	Acetal
Drain housing "Q"	Bronze
Element	Polypropylene
Seals	Nitrile
Sight gauge	Nylon

Repair and Service Kits

riopan and corrido rate	
Aluminum bowl (E) 32 oz.	BK603B
Zinc bowl with sight gauge (W) 16 oz.	BK605WB
External auto drain (E) 32 oz.	SA603D
External auto drain (W) 16 oz.	SA602D
Internal auto drain (All)	SA602MD
Manual drain (All)	SA600Y7-1
Semi-automatic "overnight" drain (drains automatically under zero pressure)	SA602A7
40 micron element (All)	EK602B
5 micron element (All)	EK602VB
Deflector, baffle assembly, & retaining rod (All)	RK602C
External auto drain (All)	RK602D
Internal auto drain (All)	RK602MD
Sight glass repair kit (W)	RKB605WB

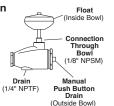
Flow Charts

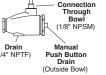
F602 1-1/2" Particulate Filter

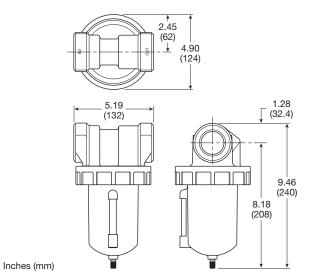


"Q" Option External Heavy Duty Auto Drain SA602D / SA603D

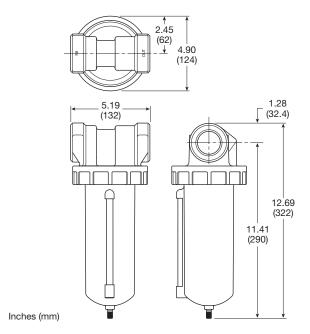
For heavy duty applications where the filter is being used to remove large volumes of liquid and/or particulate matter from the airstream, the external automatic drain ("Q" option) should be used.







F602-12W (Hi-Flow)



F602-12E (Hi-Flow)



General Industria

F602 Particulate Filters - Hi-Flow

- · Excellent water removal efficiency
- For heavy duty applications with minimum pressure drop requirement.
- Unique deflector plate that creates swirling of the air stream ensuring maximum water and dirt separation.
- Large filter element surface guarantees low pressure drop and increased element life.
- 40 micron filter element standard.
- Metal bowl with sight gauge standard.
- Twist drain as standard, optional auto drain.
- · Large bowl capacity.
- Optional high capacity bowl(s) available
- 2" port, NPT & BSPP



Port Size	Description	Part Number
2"	16 oz. Metal Bowl / Manual Drain	F602-16WJ
2"	16 oz. Metal Bowl / Auto Drain	F602-16WJR
2"	32 oz. Metal Bowl / Manual Drain	F602-16EJ
2"	32 oz. Metal Bowl / Auto Drain	F602-16EJR



Operating information

Zinc with gauge (W)

With internal auto drain [R]

With external auto drain [Q]

0 to 250 psig (0 to 17.2 bar)

20 to 175 psig (1.14 to 11.9 bar)

0 to 250 psig (0 to 17.2 bar)

Operating temperature:

Aluminum (E) 40°F to 150°F (4.4°C to 65.6°C)

Zinc with gauge (W) 40°F to 150°F (4.4°C to 65.6°C)

With internal auto drain [R] 40°F to 125°F (4.4°C to 52°C)

With external auto drain [Q] 40°F to 150°F (4.4°C to 65.6°C)

Flow capacity[†]:

High flow 2" 1200 scfm (566.3 dm³/s, ANR)

Bowl capacity:

Zinc with gauge (W) 16 oz. Aluminum (E) 32 oz.

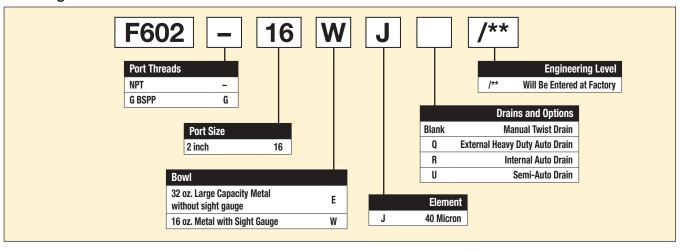
Weight: 16 oz. 9.8 lb (4.45 kg)

32 oz. 10.3 lb (4.67 kg)

† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

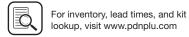
() Bowl type, [] drain type.

Ordering Information:









Hi-Flow Particulate Filters

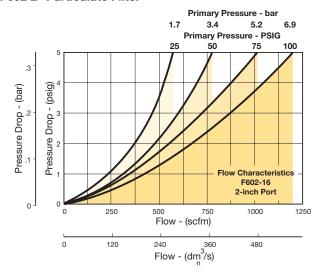
-	
Body	Aluminum
Bowl (E) 32 oz. without sight gauge	Aluminum
Bowl(W) 16 oz. with sight gauge	Zinc
Manual twist drain & overnight	Brass
Drain housing "R"	Acetal
Drain housing "Q"	Bronze
Element	Polypropylene
Seals	Buna N
Sight Gauge	Nylon

Repair and Service Kits

Aluminum bowl (E) 32 oz.	BK603B
Zinc bowl with sight gauge (W) 16 oz.	BK605WB
External auto drain (E) 32 oz.	SA603D
External auto drain (W) 16 oz.	SA602D
Internal auto drain (All)	SA602MD
Manual drain (All)	SA600Y7-1
Semi-auto "overnight" drain (drains automatically under zero pressure)	SA602A7
40 micron element (All)	EK602G
Deflector, baffle assembly, & retaining rod (All)	RK602C
External auto drain (All)	RK602D
Internal auto drain (All)	RK602MD
Sight glass repair kit (W)	RKB605WB

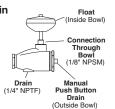
Flow Charts

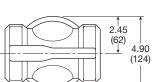
F602 2" Particulate Filter

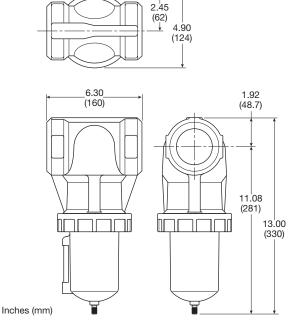


"Q" Option External Heavy Duty Auto Drain SA602D / SA603D

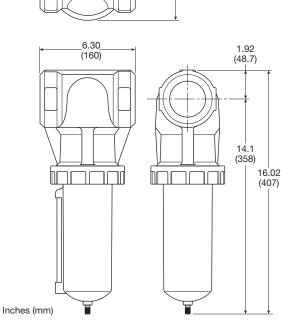
For heavy duty applications where the filter is being used to remove large volumes of liquid and/or particulate matter from the airstream, the external automatic drain ("Q" option) should be used.







F602-16W (Hi-Flow)



F602-16E (Hi-Flow)





Filters Coalescers Regulators

General Industrial

35F / 43F Particulate Filters - Hi-Flow

- Heavy-duty cast aluminum housings to withstand operating pressures up to 250 psig*
- Differential pressure indicator to eliminate the guesswork of element replacement
- Differential pressure gauge available, order separately, kit DP3-01-000
- Unique drain mounting plate design offers a trouble-free method for interchanging and installing external drains
- 1-1/2" & 2" (35F), 3" (43F) ports, NPT & BSPP



\(\frac{1}{1}\)
Auto Drain

Port Size	Description	Part Number
1-1/2"	Metal Bowl / Auto Drain	35F77BAP
2"	Metal Bowl / Auto Drain	35F87BAP
3"	Metal Bowl / Auto Drain	43FN7BAP

Operating information

Supply pressure (max): With pressure gauge

without DPI* 250 psig (17.2 bar) with DPI 150 psig (10.3 bar)

Operating temperature: 32°F to 150°F (0°C to 65.6°C)

Flow capacity†:

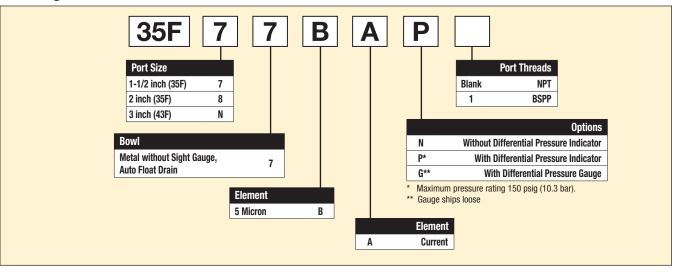
High flow 1-1/2" 1280 scfm (604.1 dm³/s, ANR) 2" 1400 scfm (660.7 dm³/s, ANR) 3" 2900 scfm (1368.6 dm³/s, ANR)

35F 13.9 oz. Bowl capacity: 17.2 oz. Standard Filtration: 5 micron 19.3 lb (8.7 kg) Weight: 43F 32.8 lb (14.9 kg)

† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

* Without differential pressure indicator, max supply pressure is 250 psig (17.2 bar).

Ordering Information:



Most popular.



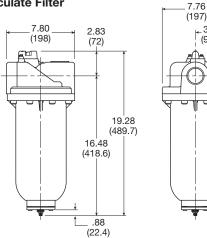


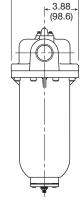
•	
Baffle	Plated steel
Body	Aluminum
Bowls	Aluminum
Deflector	Plated steel
Element retainer	Plated steel
Filter element	Polyethylene
Seals	Fluorocarbon
Stud	Plated steel

Repair and Service Kits

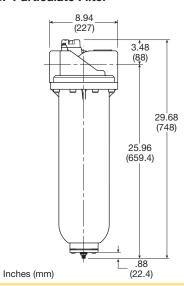
Differential pressure indicator cap	
For pressures over 150 psig	GRP-95-022
Differential pressure gauge	DP3-01-000
Differential pressure indicator	DP2-02-001
Auto drain, 1/8 NPT	GRP-95-981
Drain plate kit, 1/2 NPT tapped drain port	GRP-95-393
Element, 5 micron (35F)	FRP-95-505
Element, 5 micron (43F)	FRP-95-508
Manual drain kit with 1/2" drain plate	GRP-95-392

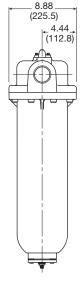
35F Particulate Filter





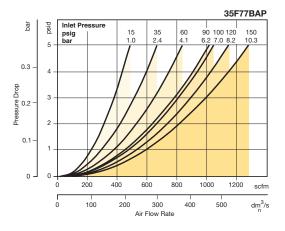
43F Particulate Filter



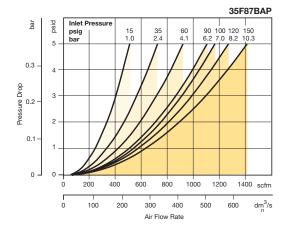


Flow Charts

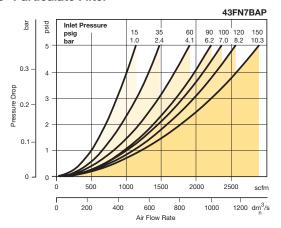
35F, 1-1/2" Particulate Filter

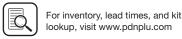


35F, 2" Particulate Filter



43F, 3" Particulate Filter





35F / 43F Coalescing Filters - Hi-Flow

- Heavy-duty cast aluminum housings to withstand operating pressures up to 250 psig*
- Differential pressure indicator to eliminate the guesswork of element replacement
- Differential pressure gauge available, order separately, kit DP3-01-000
- Unique drain mounting plate design offers a trouble-free method for interchanging and installing external drains
- High-flow filter elements: coalescing, 1 micron and 0.01
- 1-1/2", 2", 3" ports (NPT, BSPP, BSPT)

Without Differential Pressure Indicator - Max. supply pressure is 250 psig (20.1 bar).



Auto Drain

Port Size	Description	Part Number
1-1/2"	0.01 micron / Auto Float	35F77EAP
1-1/2"	1.0 micron / Auto Float	35F77HAP
2"	0.01 micron / Auto Float	35F87EAP
2"	1.0 micron / Auto Float	35F87HAP
3"	0.01 micron / Auto Float	43FN7EAP
3"	1.0 micron / Auto Float	43FN7HAP



Operating information

Supply pressure (max):

With pressure gauge

without DPI* 250 psig (17.2 bar) with DPI 150 psig (10.3 bar)

32°F to 150°F (0°C to 65.6°C) Operating temperature:

Flow capacity[†]:

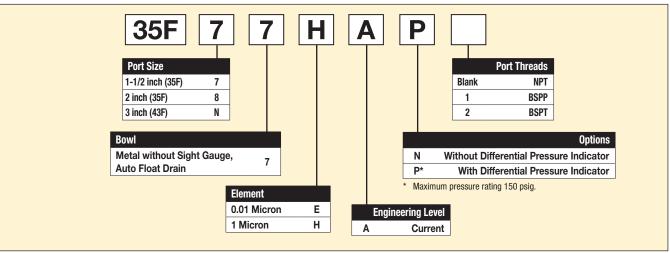
High flow (35F) 1-1/2" 710 scfm (335 dm³/s, ANR) (35F) 2" 710 scfm (335 dm³/s, ANR)

(43F) 3" 1770 scfm (835 dm³/s, ANR) Bowl capacity: 35F

43F 17.2 oz. Standard Filtration: 0.01 & 1 micron Weight: 19.3 lb (8.7 kg) 43F 32.8 lb (14.9 kg)

[†] scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

Ordering Information:



H₁₀







^{*} Filtration temperature of 70°F (21°C) @ 100 psig (6.9 bar) with typical compressor lubricating oil and protected by 0.01 micron filter.

Hi-Flow Coalescing Filters

General Industrial

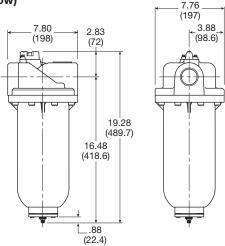
Material Specifications

Body	Aluminum
Bowls	Aluminum
Filter element	Borosilicate cloth
Seals	Fluorocarbon
Stud	Plated steel

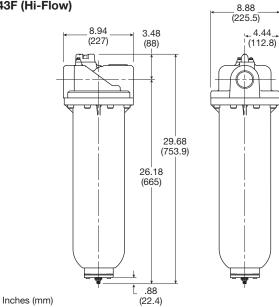
Repair and Service Kits

Differential pressure indicator cap – for pressures over 150 psig	GRP-95-022
Differential pressure indicator	DP2-02-001
Drain, automatic, internal, fluorocarbon, 1/8 NPT	GRP-95-981
Drain plate kit, 1/2 NPT tapped drain port	GRP-95-393
35F: 0.01 Micron element	MTP-95-502
35F: 1.0 Micron element	MSP-95-502
43F: 0.01 Micron element	MTP-95-562
43F: 1.0 Micron element	MSP-95-876
Manual drain kit with 1/2" drain plate	GRP-95-392

35F (Hi-Flow)



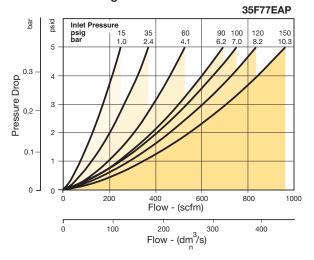
43F (Hi-Flow)



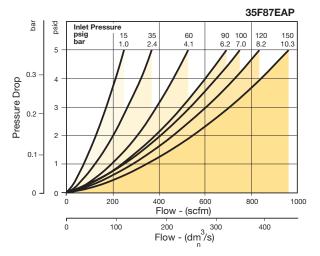
Flow Charts

35F 1-1/2" Coalescing Filters

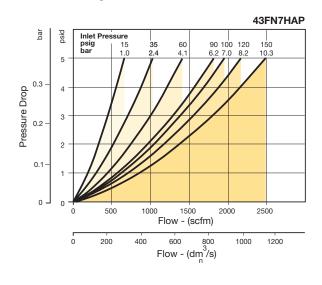
Air Preparation Products

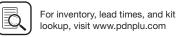


35F 2" Coalescing Filters



43F 3" Coalescing Filters





H11

Filters

General Industrial

Hi-Flow Coalescing Filters

F701 Coalescing Filters – Hi-Flow

- Removes liquid aerosols and sub-micron particles.
- Protects pneumatic systems from contamination that standard particulate filters will not catch.
- Two different grade elements available.
- Differential pressure indicator (pop-up) standard.
- Differential pressure gauge optional.
- · High flow design
- 3/4", 1" ports (NPT, BSPP)

Note: All coalescing filters should be protected by a particulate filter (i.e., F602, or other) installed upstream.



Port Size	Description	Part Number
3/4"	32 oz. Metal Bowl, Grade 6 Element	F701-06E3P
3/4"	100 oz. Metal Bowl, Grade 6 Element	F701-06L3P
3/4"	32 oz. Metal Bowl, Grade 10 Element	F701-06E7P
3/4"	100 oz. Metal Bowl, Grade 10 Element	F701-06L7P
1"	32 oz. Metal Bowl, Grade 6 Element	F701-08E3P
1"	100 oz. Metal Bowl, Grade 6 Element	F701-08L3P
1"	32 oz. Metal Bowl, Grade 10 Element	F701-08E7P
1"	100 oz. Metal Bowl, Grade 10 Element	F701-08L7P



Operating information

Supply pressure (max):
Manual drains

0 to 300 psig (0 to 20.7 bar)

Auto drains

"R" low pressure internal "T" High pressure internal "Q" external "250 psig (12.0 bar) 250 psig (17.2 bar) 250 psig (17.2 bar)

Operating pressure drop:

 Normal
 Dry
 2 psig (0.14 bar)

 Wet
 5 psig (0.34 bar)

 Max recommended
 10 psig (0.7 bar)

(Element should be replaced)

Minimum recommended flow: 20% nominal rating of element Operating temperature (max): 32°F to 150°F (0°C to 65°C)

"R", "T", "Q" drains 125°F (52°C)

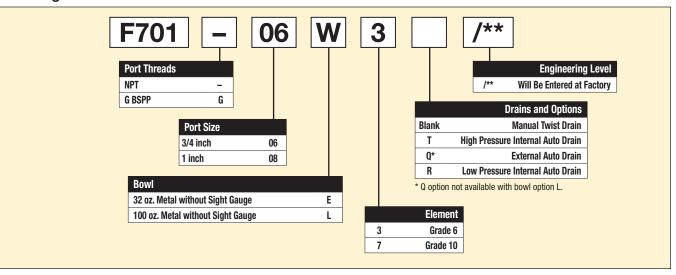
Flow capacity[†]:

Grade 6 32 oz* 95 scfm (44.8 dm³/s, ANR) (0.01 micron) 100 oz* 170 scfm (80 dm³/s, ANR) Grade 10 32 oz* 158 scfm (75 dm³/s, ANR) (1.0 micron) 100 oz* 285 scfm (135 dm³/s, ANR)

Weight: 32 oz 5.0 lb (2.3 kg) 100 oz 8.0 lb (3.6 kg)

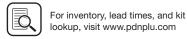
- † scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.
- * Dry media flow, for wet media flow information see table on next page.

Ordering Information:









Body & flange ring

Metal bowl (E) (L)

Seals & float

Element (media)

Element end caps

Springs

Seals

Auto float drain, housing "R", "T" (internal)

Auto float drain, housing "Q" (external)

Auto float drain, manual twist drain

Material Specifications

Air Preparation Products **General Industrial**

Flow Charts

Zinc

Acetal

Bronze

Brass

Buna N

Stainless steel

Borosilicate fibers & felt

Urethane

Buna N

Aluminum

F701 3/4" & 1" Coalescing Filter

100)6E3)8E3				701 701			
90														
<u>gi</u> 80														
<u>6</u> 70			H.,					_						
<u>.</u> 60	\rightarrow													
Primary Pressure - (psig)														
D. G.		/												
¥ 40														
<u>≅</u> 30				/										
<u>د</u> 20				1										
10														
0														
o	10 20	30 40 5		70 8			0011	0 12	20 13	30 14	10 15	016	60 17	'0
				Flow	/ - (s	cfm	1)							1
Ċ) 10	20	30		40	2	50		6	0	7	0	8	30
				Flow	- (d	ار اس	s)							

Repair and Service Kits

Bracket - 1 (pair of pipe mounted brackets) 32 oz bowl kit - 3/4, 1 inch (E)	SA200CW57 BK603B
32 oz bowl kit - 3/4, 1 inch (E)	
	D1/2222
32 oz bowl kit - 3/4, 1 inch (L) 100 oz.	BK603C
Differential pressure pop up Indicator repair kit (only works with originally equipped units)	RK701P
Differential pressure gauge (only works on units without pop-up indicator)	DP276-P
Internal automatic drain kit, high pressure (T)	SA702MD
Manual twist drain kit	SA600Y7-1
Grade 6 element - 3/4, 1 Inch (E) 32 oz.	F701-C3-0773
Grade 6 element - 3/4, 1 Inch (L) 100 oz.	F701-C3-0774
Grade 10 element - 3/4, 1 Inch (E) 32 oz.	F701-C7-0773
Grade 10 element - 3/4, 1 Inch (L) 100 oz.	F701-C7-0774

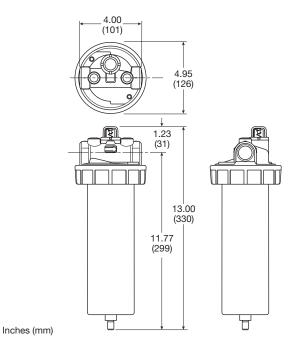
^{() =} Bowl Type

Media Specifications

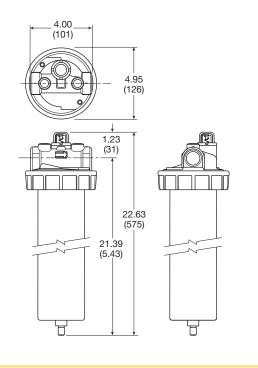
G r	D.O.P. Coalescing efficiency	Maximum oil	Pressure drop (PSID) ² @ rated flow				
a d e	0.3 to 0.6 micron particles	carryover ¹ PPM w/w	Media dry	Media Wet with 10-20 wt. oil			
6	99.97%	0.008	1.0	2-3			
10	95%	0.85	0.5	0.5			

¹ Tested per BCAS 860900 at 40 ppm inlet.

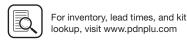
F701 - 32 oz. bowl (Hi-Flow)



F701 - 100 oz. bowl (Hi-Flow)







H13

Parker Hannifin Corporation Pneumatic Division Richland, Michigan www.parker.com/pneumatics

² Add dry + wet for total pressure drop. D.O.P. = Dioctylphthalate

P3TF Series Flanged Coalescing Filters

- No tie rod element design
- Pleated element technology
- New high efficiency drainage layer
- Designed in accordance with ASME and CRN
- Connection sizes: 4" & 6" flange
- Acrylic polyurethane coating for corrosion protection
- Float drain is standard, shipped loose
- DP gauge is standard, installed



Port Size	Element Type	Number Of Elements	Part Number
4"	0.01 micron	4	P3TFAFFD2AN
4"	1.0 micron	4	P3TFAFFQ2AN
6"	0.01 micron	6	P3TFAFGD3AN
6"	1.0 micron	6	P3TFAFGQ3AN

Operating information				
Supply pressure (n	nax):	232 psig (16 bar)		
Operating tempera	ature:	35°F to 212°F (1.5°C to 100°C)		
Flow capacity†:	4" 6"	2119 scfm (1000 dm ³ /s, ANR) 4132 scfm (1950 dm ³ /s, ANR)		
Standard Filtration	:	0.01 & 1 micron		
† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.				

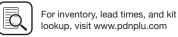
Material Specifications

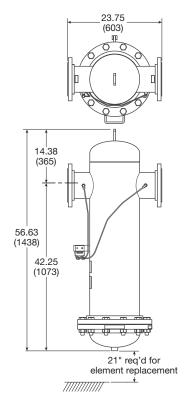
Steel
Plated steel
Plated steel
Borosilicate cloth
Fluorocarbon
Plated steel

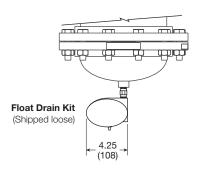
Repair and Service Kits

DP gauge replacement kit	DPG-Kit
Float drain kit - 1/2" NPT	HDF-120-NPT-A
0.01 Micron element (4 or 6 required)	060AA
1.0 Micron element (4 or 6 required)	060AO







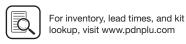


P3TFAFFD2AN & P3TFAFFQ2AN

P3TFAFGD3AN & P3TFAFGQ3AN

General Industrial Products





R119 Regulators - Standard

- High flow performance featuring rugged design for the most demanding applications
- Ideal for those installations calling for constant pressure with wide variation in flow
- Diaphragm operated design with balanced poppet design for quick and accurate regulation
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Heavy duty tee handle adjustment
- Reverse flow version available
- Panel mount version available
- 1/4", 3/8", 1/2" ports (NPT, BSPP)





Port Size	Description (0-125 psig reduced pressure)	Part Number
1/4"	Without Gauge, Relieving, NPT	R119-02C
1/4"	With Gauge, Relieving, NPT	R119-02CG
3/8"	Without Gauge, Relieving, NPT	R119-03C
3/8"	With Gauge, Relieving, NPT	R119-03CG
1/2"	Without Gauge, Relieving, NPT	R119-04C
1/2"	With Gauge, Relieving, NPT	R119-04CG

Operating information 300 psig (0 to 20.7 bar) Supply pressure (max): Reduced pressure range: 2 to 125 psig (0.15 to 8.5 bar) Operating temperature: 40°F to 125°F (4.4°C to 52°C) Flow capacity†: 1/4" 100 scfm (47.2 dm³/s, ANR) High flow 3/8" 110 scfm (51.9 dm³/s, ANR) 150 scfm (70.8 dm³/s, ANR) Gauge ports (2): 1/4" Weight: 1.8 lb (0.82 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet, 75 psig no flow secondary setting and 20 psig pressure drop.

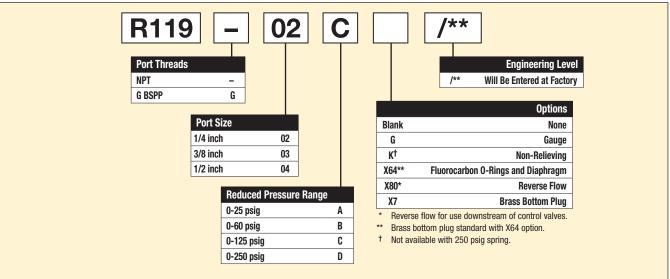
1.8 lb (0.82 kg)

3.2 lb (1.45 kg)

3/8"

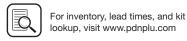
1/2"

Ordering Information:









Adjusting screw, springs	Steel
Body, spring cage	Zinc
Bottom plug	Nylon
Innervalve	Brass
Seals	Buna N

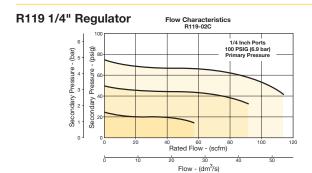
Repair and Service Kits

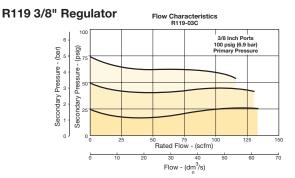
riopan and corrido rato	
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar), gauge	K4517N14160D
Mounting bracket, 1/4", 3/8"	SA15Y57
Mounting bracket, 1/2"	18A57
Panel mount conversion kit, 1/4", 3/8"	4202
Panel mount conversion kit, 1/2"	4204
Non-relieving diaphragm, valve assembly (1/4", 3/8"; all psig)	RK118Y
Relieving diaphragm, valve assembly (1/4", 3/8"; all psig)	RK119Y
Non-Relieving diaphragm, valve assembly (1/2"; 25, 60, 125 psig)	RK118A
Relieving diaphragm, valve assembly (1/2"; 25, 60, 125 psig)	RK119A
Relieving diaphragm, valve assembly (1/2"; 250 psig)	RK119A250
Spring cage & T-handle kit (1/4 & 3/8)	RKC119Y
Spring cage & insert only kit (1/2)	SAC18A3/BK
For fluorocarbon repair kits, add X64 to kit number suffix	

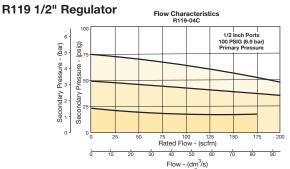
For fluorocarbon repair kits, add X64 to kit number suffix.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

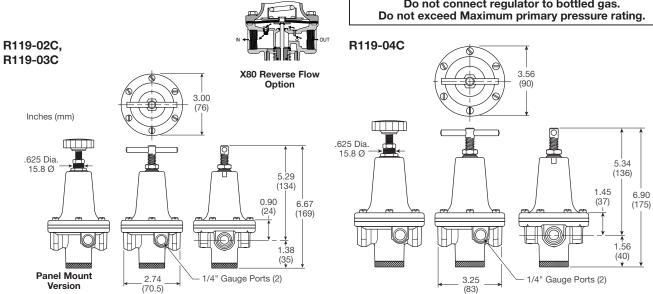


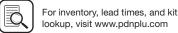




⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas.







R119 Regulators - Hi-Flow

- High flow performance featuring rugged design for the most demanding applications
- Ideal for those installations calling for constant pressure with wide variation in flow
- Diaphragm operated design with balanced poppet design for quick and accurate regulation
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Heavy duty tee handle adjustment
- Reverse flow version available
- 3/4", 1", 1-1/2" ports (NPT, BSPP)



Port Size	Description (0-125 psig reduced pressure)	Part Number
3/4"	Without Gauge, Relieving, NPT	R119-06C
3/4"	With Gauge, Relieving, NPT	R119-06CG
1"	Without Gauge, Relieving, NPT	R119-08C
1"	With Gauge, Relieving, NPT	R119-08CG
1-1/2"	Without Gauge, Relieving, NPT	R119-12C
1-1/2"	With Gauge, Relieving, NPT	R119-12CG



Operating information

Supply pressure (max): 300 psig (0 to 20.7 bar)

Reduced pressure range: 2 to 125 psig (0.15 to 8.5 bar)

Operating temperature: 40°F to 125°F (4.4°C to 52°C)

Flow capacity[†]:

High flow 3/4" 300 scfm (141.6 dm³/s, ANR) 1" 400 scfm (188.8 dm³/s, ANR)

1-1/2" 500 scfm (236 dm³/s, ANR)

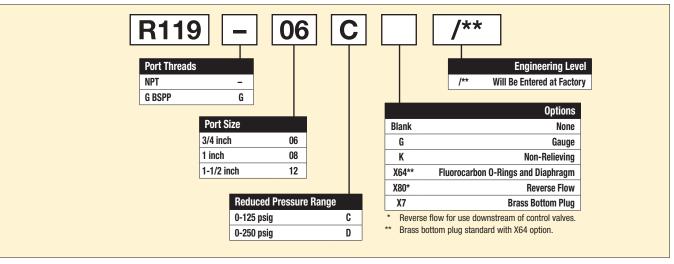
Gauge ports (2): 1/4 inch

Weight: 3/4" 6.2 lb (2.81 kg)

1" 6.2 lb (2.81 kg) 1-1/2" 7.2 lb (3.27 kg)

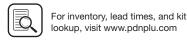
[†] scfm = Standard cubic feet per minute at 100 psig inlet, 75 psig no flow secondary setting and 20 psig pressure drop.

Ordering Information:









Filters

Air Preparation Products

General Industrial

Material Specifications

Hi-Flow Regulators

Adjusting screw, springs	Steel
Body, spring cage	Zinc
Bottom plug	Nylon
Innervalve	Brass
Seals	Buna N

Repair and Service Kits

2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar), gauge	K4517N14160D
Mounting bracket kit	18B57
Non-relieving diaphragm, valve assembly (3/4", 1")	RK118B
Non-relieving diaphragm, valve assembly (1-1/2")	RK118D
Relieving diaphragm, valve assembly (3/4", 1")	RK119B
Relieving diaphragm, valve assembly (1-1/2")	RK119D

For Fluorocarbon Repair Kits, add X64 to kit number suffix.

↑ WARNING

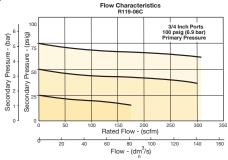
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

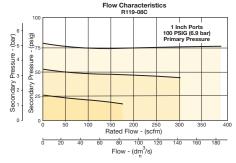
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Flow Charts

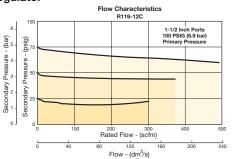
3/4" Regulator



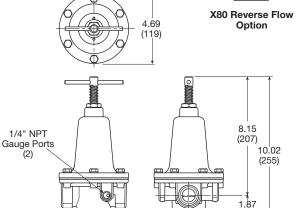
1" Regulator



1-1/2" Regulator

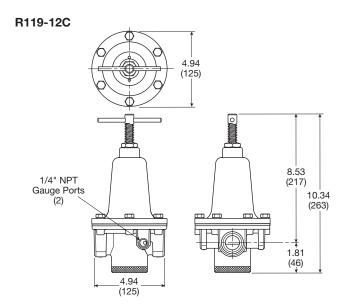


R119-06C, R119-08C



4.38

(111)



Inches (mm)



General Industrial Products

R119 - Pilot Operated Regulators

- Adapted for control by a remote or distant small pilot regulator. Ideal for maximum capacity requirements in applications where units are not readily accessible
- High flow performance featuring rugged design for the most demanding applications
- Ideal for those installations calling for constant pressure with wide variation in flow
- Diaphragm operated design with balanced poppet and constant bleed pilot for quick and accurate regulation.
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Reverse flow available
- 1/4", 3/8", 1/2" ports (NPT, BSPP)



Port Size	Description (0-125 psig reduced pressure)	Part Number
1/4"	Without Gauge, Relieving, NPT	R119-02J
3/8"	Without Gauge, Relieving, NPT	R119-03J
1/2"	Without Gauge, Relieving, NPT	R119-04J



Operating information

Supply pressure (max): 300 psig (0 to 20.7 bar)

Air consumption: Constant bleed from air pilot chamber: approx. 0.17 scfm

(10 scfh)

Operating temperature: 40°F to 125°F (4.4°C to 52°C)
Pilot pressure: 1/4", 3/8" thread - 1/8"

1/2" thread - 1/4"

Reduced pressure range: Adjustable to within 5 to 7 psig

(0.34 to 0.48 bar) of supply

pressure

Flow capacity†:

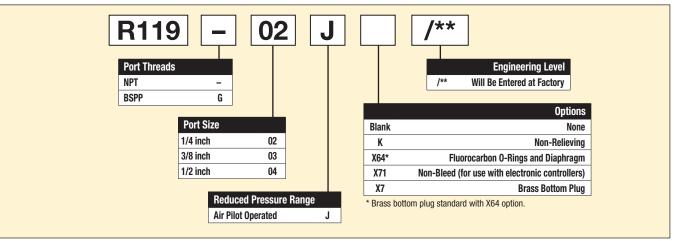
High flow 1/4" 100 scfm (47.2 dm³/s, ANR) 3/8" 110 scfm (51.9 dm³/s, ANR) 1/2" 150 scfm (70.8 dm³/s, ANR)

Gauge ports (2): 1/4 inch

Weight: 1/4" 1.6 lb (0.73 kg) 3/8" 1.6 lb (0.73 kg) 1/2" 2.6 lb (1.18 kg)

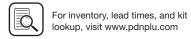
 † scfm = Standard cubic feet per minute at 100 psig inlet, 75 psig no flow secondary setting and 20 psig pressure drop.

Ordering Information:









R119 Regulators

Material Specifications

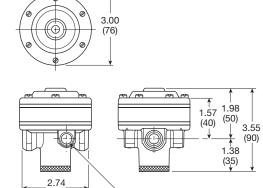
Body, ring, top plate	Zinc
Bottom plug	Nylon
Innervalve	Brass
Seals	Buna N

Repair and Service Kits

•	
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar), gauge	K4517N14160D
Non-relieving diaphragm, valve assembly (1/2")	RK118X20A
Non-relieving diaphragm, valve assembly (1/4", 3/8")	RK118X20Y
Relieving diaphragm, valve assembly (1/2")	RK119X20A
Relieving diaphragm,	RK119X20Y

For fluorocarbon repair kits, add X64 to kit number suffix. For non-bleed pilot repair kits, add X71 to kit number suffix.

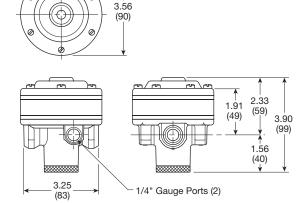
R119-02J, R119-03J



1/4" Gauge Ports (2)

R119-04J

(70)

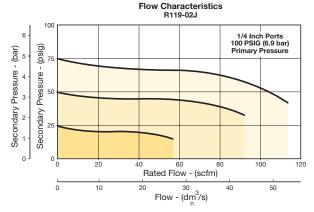


Inches (mm)

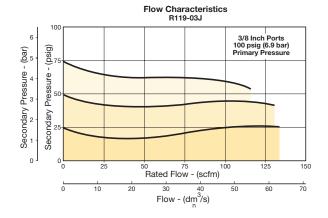
Air Preparation Products **General Industrial**

Flow Charts

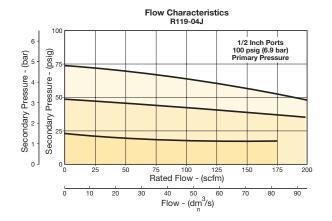
R119 1/4" Regulator



R119 3/8" Regulator



R119 1/2" Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

R119 Pilot Operated Regulators - Hi-Flow

- Adapted for control by a remote or distant small pilot regulator. Ideal for maximum capacity requirements in applications where units are not readily accessible
- High flow performance featuring rugged design for the most demanding applications
- Ideal for those installations calling for constant pressure with wide variation in flow
- Diaphragm operated design with balanced poppet and constant bleed pilot for quick and accurate regulation
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Reverse flow version available
- 3/4", 1", 1-1/2" ports (NPT, BSPP)



Port Size	Description (0-125 psig reduced pressure)	Part Number
3/4"	Without gauge, relieving, NPT	R119-06J
1"	Without gauge, relieving, NPT	R119-08J
1-1/2"	Without gauge, relieving, NPT	R119-12J



Operating information

Supply pressure (max): 300 psig (0 to 20.7 bar) Constant bleed from air pilot Air consumption:

chamber: approx. 0.17 scfm

(10 scfh)

Operating temperature: 40°F to 125°F (4.4°C to 52°C) Reduced pressure range: Adjustable to within 5 to 7 psig

(0.34 to 0.48 bar) of supply

pressure

Flow capacity[†]:

High flow 3/4" 300 scfm (141.6 dm³/s, ANR)

300 scfm (141.6 dm³/s, ANR) 1-1/2" 500 scfm (236 dm³/s, ANR)

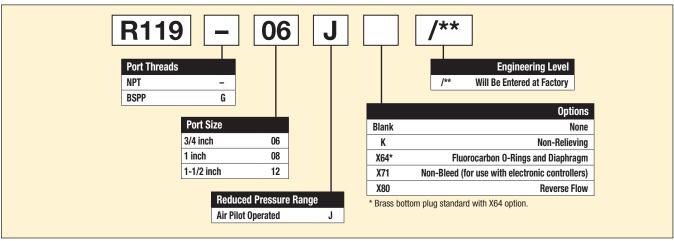
Gauge ports (2):

Weight: 3/4" 5.2 lb (2.36 kg) 1"

5.2 lb (2.36 kg) 1-1/2" 5.6 lb (2.54 kg)

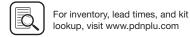
† scfm = Standard cubic feet per minute at 100 psig inlet, 75 psig no flow secondary setting and 20 psig pressure drop.

Ordering Information:









Hi-Flow Regulators

Material Specifications

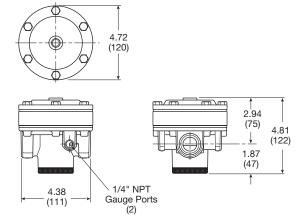
Body, ring, top plate	Zinc
Bottom plug, innervalve	Brass
Seals	Buna N

Repair and Service Kits

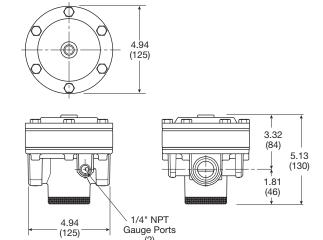
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar), gauge	K4517N14160D
Non-relieving diaphragm, valve assembly (3/4", 1")	RK118X20B
Non-relieving diaphragm, valve assembly (1-1/4", 1-1/2")	RK118X20D
Relieving diaphragm, valve assembly (3/4", 1")	RK119X20B
Relieving diaphragm, valve assembly (1-1/4", 1-1/2")	RK119X20D

For Fluorocarbon Repair Kits, add X64 to Kit Number suffix.

R119-06J, R119-08J



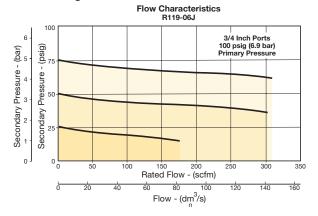
R119-12J



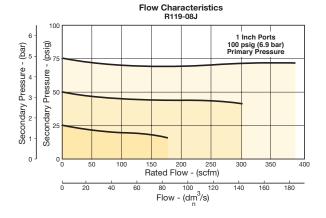
Air Preparation Products **General Industrial**

Flow Charts

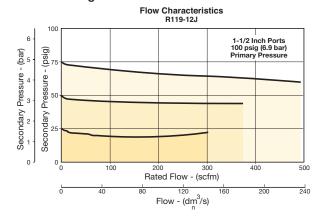
R119 3/4" Regulator



R119 1" Regulator



R119 1-1/2" Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

Inches (mm)

General Industrial Filters Products Filters

R119 Pilot Operated Regulators - Hi-Flow

- Adapted for control by a remote or distant small pilot regulator. Ideal for maximum capacity requirements in applications where units are not readily accessible
- High flow performance featuring rugged design for the most demanding applications
- Ideal for those installations calling for constant pressure with wide variation in flow
- Piston operated design with balanced poppet and dual constant bleed for quick and accurate regulation
- 2", 2-1/2" ports (NPT, BSPP)





Port Size	Description (0-125 psig reduced pressure)	Part Number
2"	Without Gauge, Relieving, NPT	R119-16J
2-1/2"	Without Gauge, Relieving, NPT	R119-20J

Operating information

Supply pressure (max): 300 psig (0 to 20.7 bar)

Air consumption:

Constant bleed from Air pilot chamber: approx.

0.17 scfm (10 scfh)

Reduced pressure: approx.

0.17 scfm (10 scfh)

Operating temperature: 40°F to 120°F (4.4°C to 48.9°C)

Reduced pressure range: Adjustable to within 5 to 7 psig

(0.34 to 0.48 bar) of supply pressure

Flow capacity†:

High flow 2" 1800 scfm (850 dm³/s, ANR) 2-1/2" 1800 scfm (850 dm³/s, ANR)

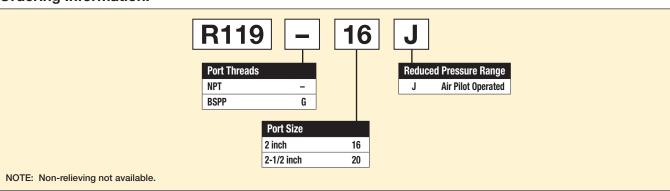
Gauge ports (2):

Can be used for full flow
High pressure outlet for pilot
Weight:

1/4 inch
1/4 inch
1/4 inch
1/5 lb (6.8 kg)

 † scfm = Standard cubic feet per minute at 100 psig inlet, 75 psig no flow secondary setting and 20 psig pressure drop.

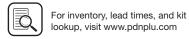
Ordering Information:



H24







Material Specifications

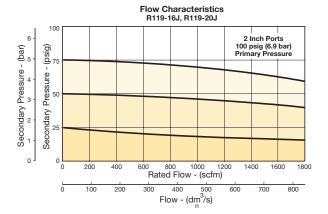
Body, piston	Aluminum
Seals	Buna N
Innervalve	Brass & stainless

Repair and Service Kits

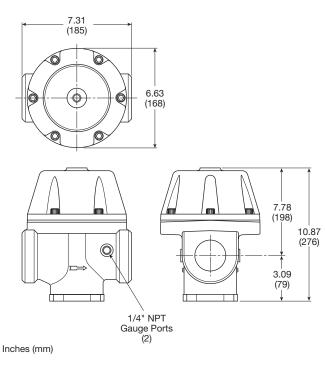
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar), gauge	K4517N14160D
Piston type regulation (2", 2-1/2")	RK119G

Flow Charts

R119 2" Regulator



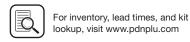
R119-16J, R119-20J



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.





09R Regulators - Hi-Flow

- Piston design for reduced downtime
- High flow
- Balanced poppet for quick and accurate regulation.
- Two full flow 1/4" gauge ports which can be used as additional outlets
- · Self relieving piston standard

Description

Without Gauge, Relieving

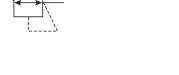
• 2" ports (NPT)

Port

Size

2"





Part Number

09R813BA



Operating information

Supply pressure (max): 300 psig (0 to 20.7 bar) 10 to 125 psig (0.7 to 8.6 bar) Secondary pressure range: 10 to 180 psig (0.7 to 12.4 bar) 32°F to 150°F (0°C to 65.6°C) Operating temperature:

Flow capacity†:

High flow 1000 scfm (472 dm³/s, ANR)

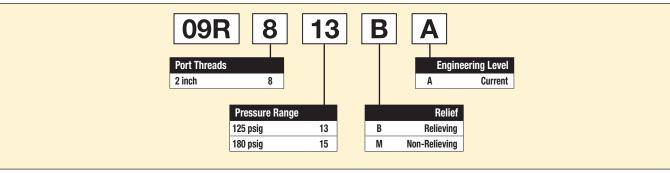
1/4 inch Gauge ports (2):

(can be used as additional full flow 1/4 inch outlet ports)

10.82 lb (53 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:



Most popular.





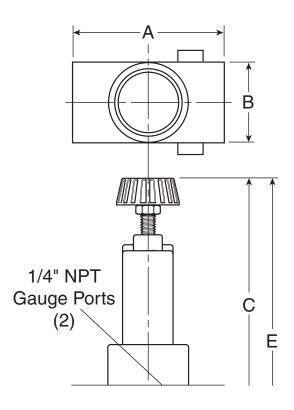
Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

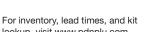
CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Repair and Service Kits

-	
Body service kit	PS603P
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar), gauge	K4517N14160D
Mounting bracket kit	PS605P
Non-relieving	PS604P
Relieving	PS626P
0 to 125 psig spring	PS602P
0 to 180 psig spring	PS627





H27

General Industrial Filters

L606 Lubricators - Standard

- Metal bowl with sight gauge standard
- Polycarbonate sight dome
- Bowl can be filled while air line is under pressure
- Proportional oil delivery over a wide range of air flows
- Large capacity bowl
- Optional high capacity bowl(s) available
- Precision needle valve assures repeatable oil delivery and provides simple adjustment of delivery rate
- 3/4", 1" ports, (NPT, BSPP)





Port Size	Description	Part Number
3/4"	16 oz. Bowl with Sight Gauge, Drain	L606-06W
1"	16 oz. Bowl with Sight Gauge, Drain	L606-08W
3/4"	32 oz. Bowl without Sight Gauge, with Drain	L606-06E
1"	32 oz. Bowl without Sight Gauge, with Drain	L606-08E
3/4"	64 oz. Bowl with Sight Gauge, No Drain	L606-06G
1"	64 oz. Bowl with Sight Gauge, No Drain	L606-08G

Operating information

Supply pressure (max):
Aluminum (E)
Aluminum with gauge (G)
Zinc with gauge (W)
300 psig (20.7 bar)
150 psig (10.2 bar)
250 psig (17.2 bar)

Operating temperature:

Aluminum (É) 40°F to 150°F (4.4°C to 65.6°C) Aluminum with gauge (G) 40°F to 125°F (4.4°C to 52°C) Zinc with gauge (W) 40°F to 150°F (4.4°C to 65.6°C)

Flow capacity[†]:

High flow 3/4" 325 scfm (153.4 dm³/s, ANR) 1" 350 scfm (165.2 dm³/s, ANR)

Bowl capacity:

Aluminum (E) 32 oz.
Aluminum with gauge (G) 64 oz.
Zinc with gauge (W) 16 oz.

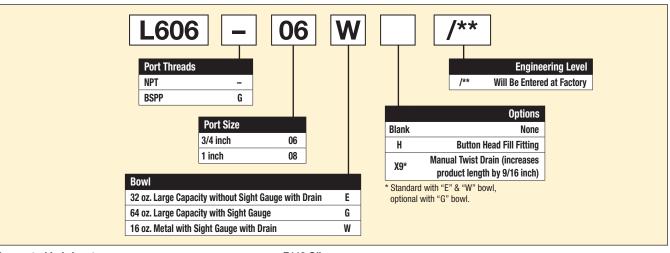
Weight: 16 oz (W) 4.2 lb (1.91 kg)

32 oz (E) 5.5 lb (2.49 kg) 64 oz (G) 7.2 lb (3.27 kg)

[†] scfm = Standard cubic feet per minute at 100 psig inlet and 5 psig pressure drop.

() Bowl type.

Ordering Information:



H28

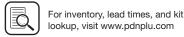
Suggested LubricantF442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C)

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

Most popular.





Air Preparation Products

General Industrial

Material Specifications

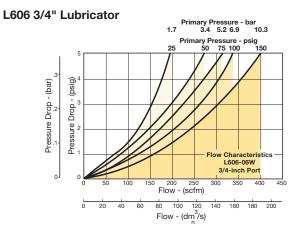
Standard Lubricators

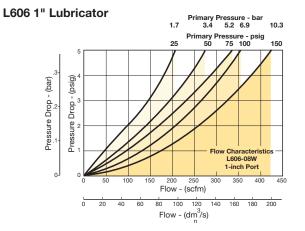
Body	Zinc
Bowl, 32 oz. (E)	Aluminum
Bowl, 64 oz. (G)	Aluminum with polycarbonate sight gauge
Bowl, 16 oz. (W)	Zinc with nylon sight gauge
Seals	Buna N

Repair and Service Kits

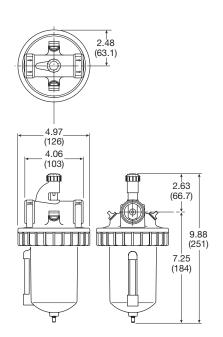
•	
Adjusting knob	606Y72
Aluminum 32 oz bowl (E)	BK603B
Aluminum 64 oz bowl with sight gauge (G)	BK606X30B
Zinc 16 oz bowl with sight gauge (W)	BK609WB
Button head fill fitting (M14 male thread)	L606C14
Dip tube kit	DTK606
Drip spout kit	RK606SY
Mounting bracket, 3/4 Inch (2 required per unit)	SA200AW57
Mounting bracket, 1 Inch units (2 required per unit)	SA200CW57
Needle valve assembly (All)	RK606Y
Sight glass repair kit (W)	RKB605WB
Sight glass repair kit (G)	RKB606X30B
Oil (1 quart)	F442001
Oil (1 gallon)	F442002
Oil (12 quart case)	F442003
Oil (4 gallon case)	F442005

Flow Charts

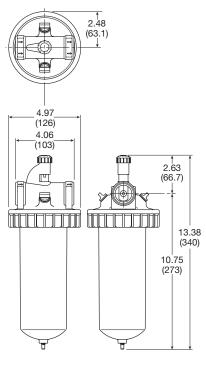




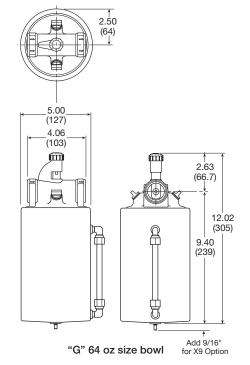
L606 - 3/4" and 1"



"W" 16 oz size bowl



"E" 32 oz size bowl



Inches (mm)



L606 Lubricators - Standard

- Metal bowl with sight gauge standard
- Polycarbonate sight dome
- Bowl can be filled while air line is under pressure
- Proportional oil delivery over a wide range of air flows
- Large capacity bowl
- Optional high capacity bowl(s) available
- Precision needle valve assures repeatable oil delivery and provides simple adjustment of delivery rate
- 1-1/2" ports (NPT, BSPP)



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Port Size	Description	Part Number
1-1/2"	16 oz. Bowl with Sight Gauge, Drain	L606-12W
1-1/2"	32 oz. Bowl without Sight Gauge, with Drain	L606-12E
1-1/2"	64 oz. Bowl with Sight Gauge, No Drain	L606-12G

Operating information

Supply pressure (max): Aluminum (E) 300 psig (20.7 bar) Aluminum with gauge (G) 150 psig (10.2 bar) Zinc with gauge (W) 250 psig (17.2 bar)

Operating temperature:

Aluminum (E) 40°F to 150°F (4.4°C to 65.6°C) Aluminum with gauge (G) 40°F to 125°F (4.4°C to 52°C) Zinc with gauge (W) 40°F to 150°F (4.4°C to 65.6°C)

Flow capacity[†]:

High flow 1-1/2" 400 scfm (188.8 dm³/s, ANR)

Bowl capacity:

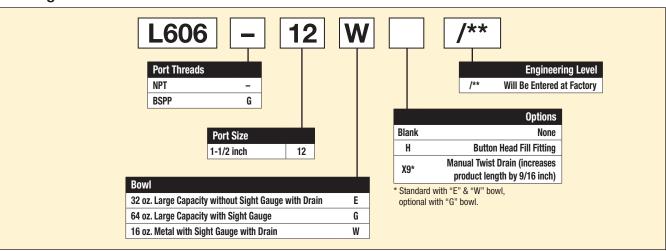
() Bowl type.

32 oz. Aluminum (E) Aluminum with gauge (G) 64 oz. Zinc with gauge (W) 16 oz.

16 oz 7.5 lb (3.40 kg) Weight: 32 oz 8.3 lb (3.76 kg) 64 oz

10.0 lb (4.54 kg) † scfm = Standard cubic feet per minute at 100 psig inlet and 5 psig pressure drop.

Ordering Information:



Suggested LubricantF442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C)

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

Most popular.





Material Specifications

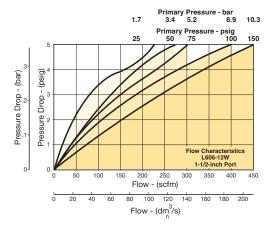
Body	Zinc
32 oz. bowl (E)	Aluminum
64 oz. bowl (G)	Aluminum with polycarbonate sight gauge
16 oz. bowl (W)	Zinc with nylon sight gauge
Seals	Buna N

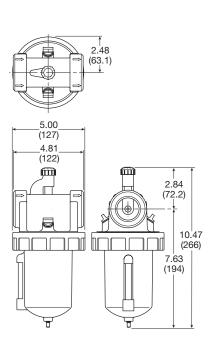
Repair and Service Kits

Adjusting knob	606Y72
Aluminum 32 oz. bowl (E)	BK603B
Aluminum 64 oz. bowl with sight gauge (G)	BK606X30B
Zinc 16 oz. bowl with sight gauge (W)	BK609WB
Button head fill fitting (M14 male thread)	L606C14
Dip tube kit	DTK606
Drip spout kit	RK606SY
Needle valve assembly (All)	RK606Y
Sight glass repair kit (W)	RKB605WB
Sight glass repair kit (G)	RKB606X30B
Oil (1 quart)	F442001
Oil (1 gallon)	F442002
Oil (12 quart case)	F442003
Oil (4 gallon case)	F442005

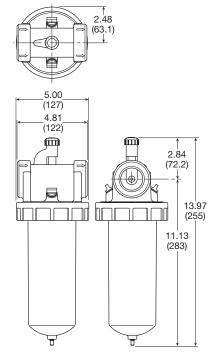
Flow Charts

L606 1-1/2" Lubricator

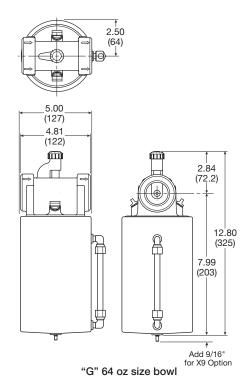




"W" 16 oz size bowl



"E" 32 oz size bowl



Inches (mm)



09L Mist Lubricators - Hi-Flow

- Metal bowl with sight gauge and manual drain standard
- Transparent sight dome for 360° visibility
- Bowl can be filled while air line is under pressure
- Proportional oil delivery over a wide range of air flows
- 2" ports (NPT)



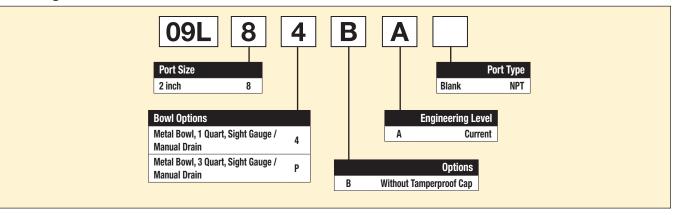


Port Size	Description	Part Number
2"	Metal Bowl, Sight Gauge, 1 Quart	09L84BA
2"	Metal Bowl, Sight Gauge, 3 Quart	09L8PBA

ag informa	tion

Operating information Supply pressure (max): 150 psig (10.3 bar) Operating temperature: 32°F to 150°F (0°C to 66°C) Flow capacity[†]: 1000 scfm (472 dm³/s, ANR) High flow Minimum flow 6.6 scfm at 100 psig Bowl capacity: 1 qt. (standard) Weight: 10.2 lb (4.6 kg) 1 at 3 qt 13.7 lb (6.2 kg) † scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

Ordering Information:



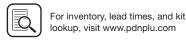
Suggested LubricantF442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C)

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

Most popular.





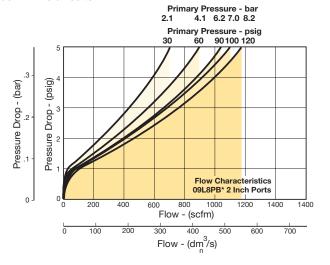
Body	Zinc alloy, die cast
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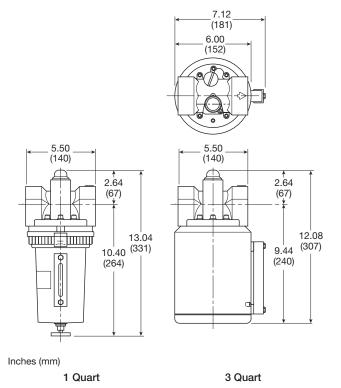
Repair and Service Kits

Fill cap kit	PS610P
Lubricator service kit	PS607P
Metal bowl, 1 quart, sight gauge / twist drain	PS612P
Sight dome kit	PS613P
Oil (1 quart)	F442001
Oil (1 gallon)	F442002
Oil (12 quart case)	F442003
Oil (4 gallon case)	F442005

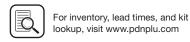
Flow Charts

09L 2" Lubricator









C628 General Industrial Combinations - Standard

- 40 micron filter element
- Gauges included on combinations
- · Manual twist drain
- Relieving regulator

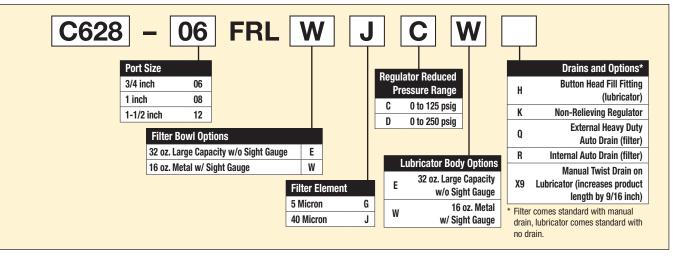
C628 Standard Combinations

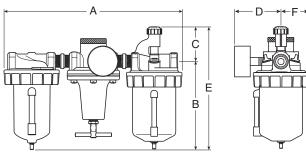




Port Size	Bowl Type	Bowl Capacity	Element Type	Part Number
3/4"	Metal / Sight Gauge	16 oz	40 micron	C628-06FRLWJCW
3/4"	Metal / Without Sight Gauge	32 oz	40 micron	C628-06FRLEJCE
1"	Metal / Sight Gauge	16 oz	40 micron	C628-08FRLWJCW
1"	Metal / Without Sight Gauge	32 oz	40 micron	C628-08FRLEJCE
1-1/2"	Metal / Sight Gauge	16 oz	40 micron	C628-12FRLWJCW
1-1/2"	Metal / Without Sight Gauge	32 oz	40 micron	C628-12FRLEJCE

Ordering Information:





Α	В	С	D	E	F
C628-06	FRL, C628-	-08FRL			
15.75 (400)	7.75 (197)	2.63 (67)	3.52 (89)	13.00 (330)	2.48 (63)
C628-12	PRL PRL				
16.50 (419)	8.13 (206)	2.84 (72)	3.86 (98)	14.13 (359)	2.64 (67)

Inches (mm), All dimensions nominal.

⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed maximum primary pressure rating.

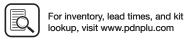
Most popular.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT -

The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.







Air Preparation Products Miniature / Inline

15F

Filters		
02F	J2-J3	
P31FB	J4-J5	
14F	J6-J7	

Coalescing Filters		
02F	J8-J9	
P31F	J10-J11	
10F	J12-J13	

Regulators	
P31R	J16-J17
14R	J18-J19
P3A-R	J20-J21
R34	J22-J23
R25	J24-J25
R45	J26-J27
15R	J28-J29

Filter / Regulators	
P31EB	J30-J31
B34	J32-J33
14E	J34-J35
05E	J36-J37

Lubricators	
02L	J38-J39
P31LB	J40-J41
0.41	140, 140

J14-J15



J1

02F Particulate Filters – Miniature

Application

This small, aluminum in-line filter is designed to provide protection for portable pneumatic hand tools. It weighs only 2 ounces with a throw-away filter element rated at 5 micron. Either port may be used as the inlet port. Flow is 17 scfm at 90 psig inlet pressure with 5 psig pressure drop.





Port Size	Description	Part Number
1/4"	Inline Filter	02F1BA

Operating information

Supply pressure (max): 200 psig (13.8 bar)

Operating temperature: 32°F to 150°F (0°C to 65.6°C)
Flow capacity†: 17 scfm (8 dm³/s, ANR)

Standard Filtration*: 5 micron

Weight: 0.13 lb (0.06 kg)

- $^{\dagger}\,$ Inlet pressure 90 psig (6.2 bar). Pressure drop 5 psid (0.3 bar).
- * "F" Series Filters, Type "A" 5 micron elements: All Parker 5 micron elements meet or exceed ISO Class 3 for maximum particle size and concentration of solid contaminants.





Coalescers

Regulators

Filter / Regulators

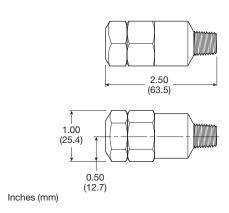
Air Preparation Products Miniature / Inline

Material Specifications

Body	Aluminum	
Baffle	Aluminum	
Filter element	Sintered polyethylene	
Seals	Nitrile	

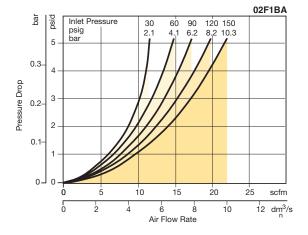
Repair and Service Kits

5 Micron	PS436



Flow Charts

1/4" Filter



J3

Mini Particulate Filters

P31 Particulate Filter - Mini

- Integral 1/4" ports (NPT, BSPP & BSPT)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminum construction
- One hand operation for easy element cartridge removal
- Positive bayonet latch to ensure correct & safe fitting





Manual drain



Port Size	Description	Part Number
/4"	Poly Bowl, Manual Drain	P31FB92EGN

	<u> </u>	
1/4"	Poly Bowl, Manual Drain	P31FB92EGMN
1/4"	Poly Bowl, Pulse Drain	P31FB92EGBN
1/4"	Metal Bowl, Manual Drain	P31FB92EMMN
1/4"	Metal Bowl, Pulse Drain	P31FB92EMBN

Operating information

Supply pressure (max):

Plastic bowl 150 psig (10 bar) Metal bowl 250 psig (17 bar)

Operating temperature:

14°F to 125°F (-10°C to 52°C) Plastic bowl 14°F to 150°F (-10°C to 65.5°C) Metal bowl

Standard filtration: 5 micron

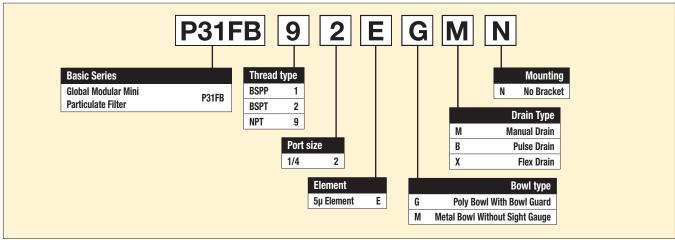
Flow capacity*: 25 scfm (12 dm³/s, ANR) Useful retention[†]: 0.4 US oz. (12 cm³) Weight: 0.24 lb (0.11 kg)

* Inlet pressure 91.3 psig (6.3 bar). Pressure drop 4.9 psig (0.34 bar).

† Useful retention refers to volume below the quiet zone baffle.

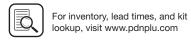
Within ISO 8573-1: 1991 Class 3 (Particulates) Within ISO 8573-1: 2001 Class 6 (Particulates)

Ordering Information:









Lubricators

Filters

Coalescers

Regulators

Regulators Filter/

Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Bowl guard	Nylon
Element retainer	Acetal
Baffle	Acetal
Filter element	Sintered polyethylene
Seals	Nitrile

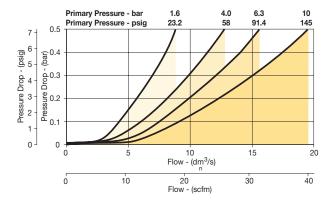
Repair and Service Kits

Plastic bowl / bowl guard, manual drain	P31KB00BGM
Metal bowl / w/o sight gauge, manual drain	P31KB00BMM
Plastic bowl / bowl guard, pulse drain	P31KB00BGB
Metal bowl / w/o sight gauge, pulse drain	P31KB00BMB
5μ particle filter element	P31KA00ESE
C-bracket (fits to body)	P31KA00MW
T-bracket with body connector	P31KA00MT
Body connector	P31KA00CB

1.58 (40) .79 (20) 1.58 (40).84 (21.4) 4.71 (119.6) 4.91 (124.8) 5/32 (4mm) I.D. tube Bowl barb fitting 1.30 removal clearance (33)Inches (mm)

Flow Charts

P31 1/4 Particulate Filter



Lubricators

Filters

Coalescers

Regulators

Filter/ Regulators

Manual Drain



J5

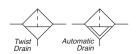
Pulse Drain

Filters

Filter/

14F Particulate Filters - Miniature

- Excellent water removal efficiency
- Unique deflector plate that creates swirling of the air stream ensuring maximum water and dirt separation
- Easily disassembled for servicing without the use of tools
- 5 micron element standard
- Interchangeable twist and automatic pulse drains
- 1/8" & 1/4" ports (NPT, BSPP & BSPT)



Port Size	Description ‡	Part Number
1/8"	Poly Bowl, Twist Drain	14F01BB
1/8"	Metal Bowl, Twist Drain	14F03BB
1/8"	Poly Bowl, Auto Pulse Drain	14F05BB
1/8"	Metal Bowl, Auto Pulse Drain	14F07BB
1/4"	Poly Bowl, Twist Drain	14F11BB
1/4"	Metal Bowl, Twist Drain	14F13BB
1/4"	Poly Bowl, Auto Pulse Drain	14F15BB
1/4"	Metal Bowl, Auto Pulse Drain	14F17BB

[‡] For polycarbonate bowl, see caution in Engineering Section A.



Operating information

Supply pressure (max):

Plastic bowl 0 to 150 psig (0 to 10.3 bar) Metal bowl 0 to 250 psig (0 to 17.2 bar) Auto pulse drain 10 to 250 psig (0.7 to 17.2 bar)

Operating temperature:

32°F to 125°F (0°C to 52°C) Plastic bowl Metal bowl 32°F to 175°F (0°C to 80°C) Auto pulse drain 125°F (52°C) or less

Flow capacity†:

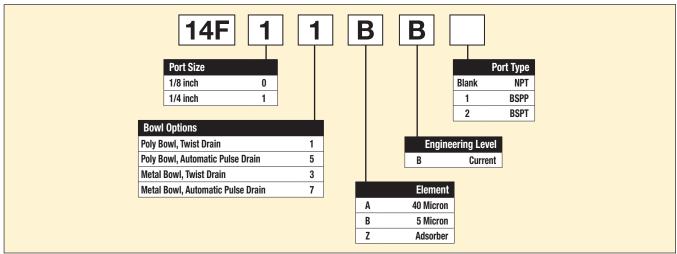
1/8" 22 scfm (10.4 dm³/s, ANR) High flow 1/4" 24 scfm (11.3 dm³/s, ANR)

Bowl capacity: 1 oz. 1/8 inch Auto pulse drain tube barb Weight: 0.41 lb (0.18 kg)

† scfm = Standard cubic feet per minute at 90 psig inlet and

5 psig pressure drop.

Ordering Information:







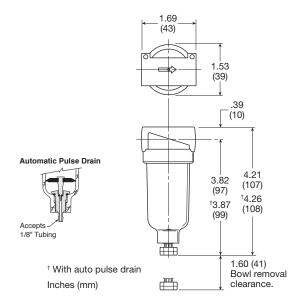
Miniature Particulate Filters

Material Specifications

Zinc
Polycarbonate
Zinc
Plastic
Plastic
Nitrile
Nitrile
Aluminum
Plastic
Activated charcoal
Nitrile

Repair and Service Kits

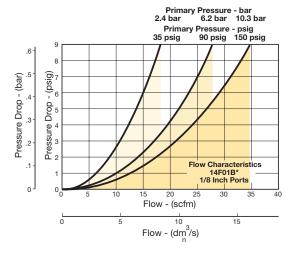
•	
Poly bowl / auto pulse drain	PS408BP
Poly bowl / twist drain	PS404P
Metal bowl / auto pulse drain	PS451BP
Metal bowl / twist drain	PS447BP
40 Micron element	PS401P
5 Micron element	PS403P
5 Micron cartridge kit	PS407P
Adsorber element	PS452P
Mounting bracket kit	PS417BP



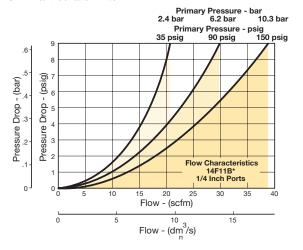
Air Preparation Products **Miniature / Inline**

Flow Charts

14F 1/8" Particulate Filter



14F 1/4" Particulate Filter







Miniature Coalescing Filters

02F Coalescing Filters - Miniature

- Clear nylon housing.
- Full length support tube.
- Positive tube seals.
- Optional filter grades available.
- Disposable.

Filters

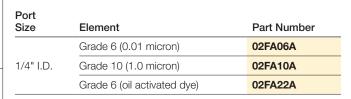
Coalescers

Regulators

Filter / Regulators

Application

The 02F Miniature Inline Filter is designed to remove 99.9%+ of the aerosols and sub-micron particles from your air system.





Operating information

Pressure & temperature: 100 psig at 125°F

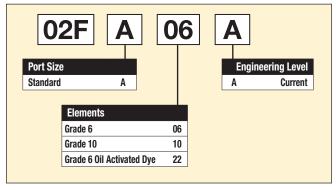
(0.69 bar at 52°C) or less

High flow[†]: Grade 6 3.5 scfm (1.65 dm³/s, ANR) Grade 10 5.3 scfm (2.50 dm³/s, ANR)

Port size: 1/4 I.D. hose slip on tang standard

† scfm @ 1 psid operating pressure 100 psig.

Ordering Information:





J8

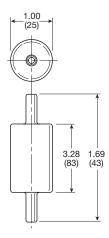
Lubricators

Regulators

Miniature Coalescing Filters

Material Specifications

Element	Borosilicate & Felt Glass Fibers	Glass Fibers	
Housing	Nylon		

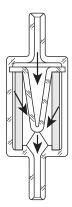


Inches (mm)

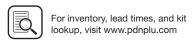
Air Preparation Products Miniature / Inline

Operation

The contaminated air enters the filters interior and is forced through the elements membrane of Borosilicate glass fibers. Contaminants and aerosols are collected and distributed evenly along the entire tubes length. This is accomplished by the use of the "center post" which not only provides this "drop out pocket", but also provides a stable support.







P31 Coalescing and Adsorber Filters - Mini

- Integral 1/4" ports (NPT, BSPP & BSPT)
- · Removes liquid aerosols and sub micron particles
- Oil free air for critical applications, such as air gauging, pneumatic instrumentation and control
- Differential Pressure Indicator (DPI) standard on coalescing
- Positive bayonet latch to ensure correct and safe fitting
- Adsorbing activated carbon element removes oil vapors and most hydrocarbons

To optimize the life of coalescing element, it is advisable to install a P31F pre-filter with a 5 micron element upstream of the coalescing filter.

> To optimize the life of an Adsorber it is advisable to install a P31 Coalescing Filter upstream of the Adsorber. Adsorber element should be replaced approximately every 1000 hours of service.



Port Size	Description	Element	Part Number
1/4"	Poly Bowl, Manual Drain	0.01 micron	P31FB92DGMN
1/4'	Poly Bowl, Pulse Drain	0.01 micron	P31FB92DGBN
1/4"	Metal Bowl, Manual Drain	0.01 micron	P31FB92DMMN
1/4'	Metal Bowl, Pulse Drain	0.01 micron	P31FB92DMBN



Operating information

Supply pressure (max):

Poly bowl 150 psig (10 bar) Metal bowl w/ DPI 150 psig (10 bar) Metal bowl w/o DPI 250 psig (17 bar)

Operating temperature:

Plastic bowl 14°F to 125°F (-10°C to 52°C) Metal bowl 14°F to 150°F (-10°C to 65.5°C)

Standard filtration: 1.0 and 0.01 micron

Adsorber Max. oil carryover (ppm w/w)

0.003 @ 70°F (21°C)

Flow capacity*:

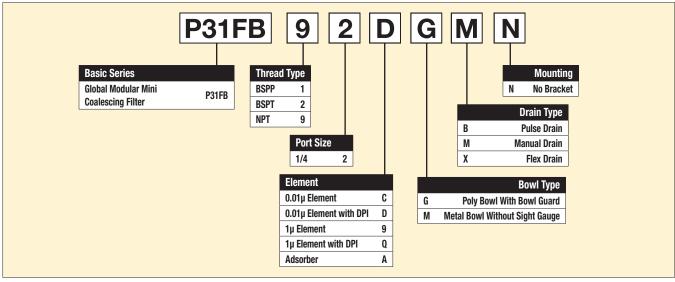
12 scfm (5.5 dm³/s, ANR) 1.0 micron coalescing 7.5 scfm (3.6 dm³/s, ANR) 0.01 micron coalescing Activated carbon adsorber 12.7 scfm (6 dm³/s, ANR)

Useful retention[†]: 0.4 US oz. (12 cm³) Weight: 0.24 lb (0.11 kg)

* Inlet pressure 91.3 psig (6.3 bar). Pressure drop 3 psig (0.2 bar), saturated element.

[†] Useful retention refers to volume below the quiet zone baffle.

Ordering Information:









Lubricators

Filters

Coalescers

Regulators

Regulators Filter/

Air Preparation Products Miniature / Inline

Mini Coalescing and Adsorber Filters

Material Specifications

Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Filter element	Borosilicate cloth
Adsorber element	Activated carbon
Seals	Nitrile

Repair and Service Kits

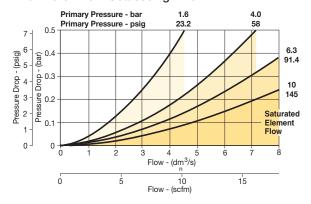
Plastic bowl / bowl guard, manual drain	P31KB00BGM
Metal bowl / w/o sight gauge ,manual drain	P31KB00BMM
Plastic bowl / bowl guard, pulse drain	P31KB00BGB
Metal bowl / w/o sight gauge, pulse drain	P31KB00BMB
1μ coalescing filter element	P31KA00ES9
0.01µ coalescing filter element	P31KA00ESC
Activated carbon adsorber filter element	P31KA00ESA
C-bracket (fits to body)	P31KA00MW
T-bracket with body connector	P31KA00MT
Body connector	P31KA00CB
Differential pressure indicator (replacement)	P31KB00RQ

1.58 (40) 0.48 0.48 1.58 (40) 0.79 (12.1)(12.1)(20)0.84 (21.4)4.91 (124.8) 4.71 (119.6) 5/32 (4mm) I.D. tube Bowl 1.30 barb fitting removal (33) clearance Inches (mm)

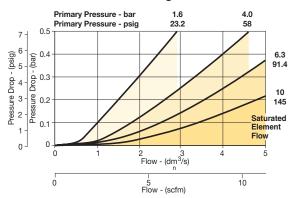
Manual Drain Pulse Drain

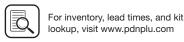
Flow Charts

P31 - 1.0 micron flow Coalescing Filter



P31 - 0.01 micron flow Coalescing Filter





Filters

Coalescers

Regulators

Filter/

10F Coalescing Filters - Miniature

- Removes liquid aerosols and sub-micron particles.
- · Liquids gravitate to the bottom of the element and will not re-enter the airstream.
- Oil free air for critical applications, such as air gauging and pneumatic instrumentation and controls.
- Interchangeable twist and automatic pulse drains.
- Grade 6 element, 99.97% DOP efficiency
- 1/8", 1/4" ports (NPT, BSPP, BSPT)

To optimize the life of coalescing element, it is advisable to install a pre-filter with a 5 micron element upstream of the coalescing filter.

> To optimize the life of an adsorber it is advisable to install a coalescing filter upstream of the adsorber. Adsorber element should be replaced approximately every 1000 hours of service.



Port Size	Description ‡	Part Number
1/8"	Poly Bowl, Twist Drain	10F01ED
1/8"	Metal Bowl, Twist Drain	10F03ED
1/8"	Poly Bowl, Auto Pulse Drain	10F05ED
1/8"	Metal Bowl, Auto Pulse Drain	10F07ED
1/4"	Poly Bowl, Twist Drain	10F11ED
1/4"	Metal Bowl, Twist Drain	10F15ED
1/4"	Poly Bowl, Auto Pulse Drain	10F13ED
1/4"	Metal Bowl, Auto Pulse Drain	10F17ED

Standard part numbers shown bold, with Grade 6 Elements (for Grade 10 Elements, replace "E" with "H" in the 6th position). For other models refer to ordering information below.



Operating information

Supply pressure (max):

Plastic bowl 0 to 150 psig (0 to 10.3 bar) Metal bowl 0 to 250 psig (0 to 17.2 bar) Auto pulse drain 10 to 250 psig (0.7 to 17.2 bar)

Operating pressure drop:

2 psig (0.14 bar) 10 psig (0.7 bar) Max recommended (Element should be replaced)

Operating temperature:

Plastic bowl 32°F to 125°F (0°C to 52°C) 32°F to 175°F (0°C to 80°C) Metal bowl Auto pulse drain 125°F (52°C) or less

Flow capacity[†]: Grade 6 1/8" 17 scfm (8 dm³/s, ANR)

1/4" 20 scfm (9.4 dm³/s, ANR)

Grade 10 1/8" 19 scfm (9 dm³/s, ANR)

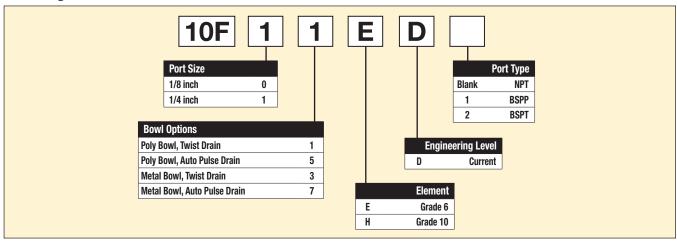
24 scfm (11.3 dm³/s, ANR)

1 oz. Bowl capacity: Auto pulse drain tube barb 1/8 inch 0.41 lb (0.18 kg)

† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig

pressure drop.

Ordering information:



Most popular.





[‡] For polycarbonate bowl, see caution in Engineering Section A.

Body	Zinc
Transparent bowl	Polycarbonate
Metal bowl without sight gauge	Zinc
Twist drain, body & stem	Plastic
Twist drain, seals	Nitrile
Auto pulse drain, piston & seals	Nitrile
Auto pulse drain, stem, seat, adaptor & washers	Aluminum
Element holder	Plastic
Element	Borosilicate & felt glass fibers
Seals	Nitrile

Repair and Service Kits

PS408BP
PS404P
PS451BP
PS447BP
PS446P
PS456P
PS417BP

1.69

(43)

1.56

(39.6)

(10)

4.21 (107)

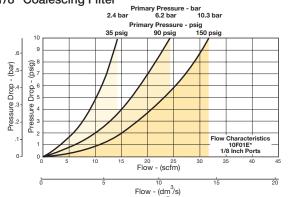
1.60 (41)

Bowl removal clearance.

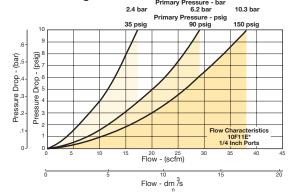
3.82

Flow Charts Grade 6 Element

10F 1/8" Coalescing Filter

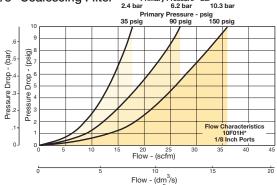


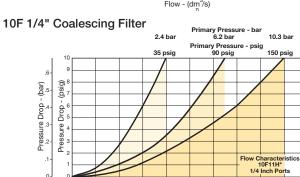
10F 1/4" Coalescing Filter



Grade 10 Element

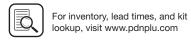
10F 1/8" Coalescing Filter





Automatic Pulse Drain Accepts 1/8" Tubing





Flow - (scfm) Flow - (dm³/s)

Economy Coalescing Filters

15F Coalescing Filters - Economy

- Removes liquid aerosols and sub-micron particles.
- Liquids gravitate to the bottom of the element and will not re-enter the airstream.
- Oil free air for critical applications, such as air gauging and pneumatic instrumentation and controls.
- Interchangeable twist and automatic pulse drains.
- Differential pressure indicator standard.
- 1/4" & 3/8" ports NPT

Note: To optimize the life of coalescing element, it is advisable to install a pre-filter with a 5 micron element upstream of the coalescing filter.

To optimize the life of an adsorber it is advisable to install a coalescing filter upstream of the adsorber. Adsorber element should be replaced approximately every 1000 hours of service.



Port		
Size	Description ‡	Part Number
1/4"	Poly Bowl, Metal Guard, Twist Drain	15F12EA
1/4"	Poly Bowl, Metal Guard, Auto Pulse Drain	15F1PEA
3/8"	Poly Bowl, Metal Guard, Twist Drain	15F22EA
3/8"	Poly Bowl, Metal Guard, Auto Pulse Drain	15F2PEA

[‡] For polycarbonate bowl, see caution in Engineering Section A.



Operating information

Supply pressure (max): Without DPI

 Plastic bowl Metal bowl
 0 to 150 psig (0 to 10.3 bar)

 With DPI Auto pulse drain
 0 to 150 psig (0 to 10.3 bar)

 10 to 150 psig (0.7 to 10.3 bar)

 10 to 150 psig (0.7 to 10.3 bar)

Operating temperature:

Plastic bowl 32°F to 125°F (0°C to 52°C)

Metal bowl 32°F to 175°F (0°C to 80°C)

With DPl 32°F to 125°F (0°C to 52°C)

Flow capacity†: Grade 6 1/8" 30 scfm (14.2 dm³/s, A

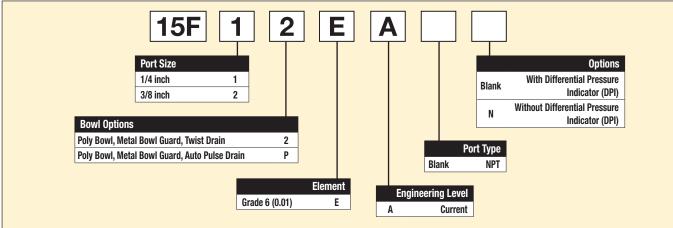
acity[†]: Grade 6 1/8" 30 scfm (14.2 dm³/s, ANR) 1/4" 30 scfm (14.2 dm³/s, ANR)

Bowl capacity: 2.0 oz.
Sump capacity: 0.9 oz.

Weight: 1.2 lb (0.54 kg)

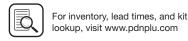
[†] scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop. DPI = Differential pressure indicator

Ordering Information:









Filters

Coalescers

Regulators

Filter/

Lubricators

Air Preparation Products **Miniature / Inline**

Material Specifications

Body	Zinc
Transparent bowl	Polycarbonate
Metal bowl without sight gauge	Zinc
Bowl guards	Steel
Collar	Plastic
Drain	Plastic
Element	Borosilicate & felt glass fibers
Seals	Nitrile
Sight gauge, DPI	Polyamide (nylon)

Repair and Service Kits

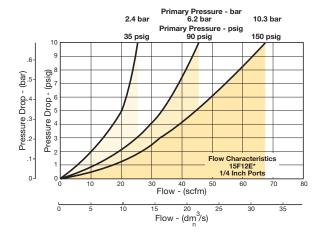
•	
Bowl Guard Kit	PS905P
Poly bowl / automatic pulse drain kit	PS995P
Poly bowl / twist drain kit	PS932P
DPI replacement kit	PS781P
Electronic DPI replacement kit	PS764
Automatic pulse drain kit	PS998P
Twist drain kit	PS512P
Electrical connector: 15mm, 3-pin DIN, 6 ft. cord	PS2932JBP
Filter element kits - Grade 6 (standard)	PS924P
Mounting bracket kit	PS943P
Sight gauge kit	PS914P

2.00 (51) 2.06 (52)4.50 1.86 (47) (114)1.50 Electronic DPI Electronic DPI (38)Automatic Pulse Drain 6.85 (174)5.35 (136) ф Accepts 1.77 (45) 1/8" Tubing Bowl removal clearance. ЩШ

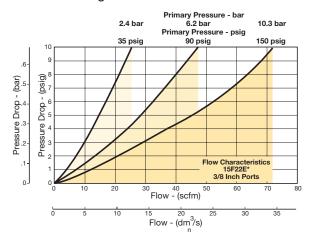
Flow Charts

Grade 6 Element

15F 1/4" Coalescing Filter

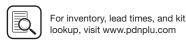


15F 3/8" Coalescing Filter





Inches (mm)



Mini Regulators

P31 Regulators - Mini

- Integral 1/4" ports (NPT, BSPP & BSPT)
- · Robust but lightweight aluminum construction
- Secondary pressure ranges
- · Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation.
- Relieving & non-relieving types
- Non-rising knob





Self relieving regulator with gauge



Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
1/4"	125 psig (8 bar)	None	P31RB92BNNP
1/4"	125 psig (8 bar)	Square	P31RB92BN5P

Operating information

Flow capacity*: 1/4 68 scfm (32 dm³/s, ANR) Operating temperature†: -4°F to 150°F (-20°C to 65.5°C)

Supply pressure (max): 300 psig (20 bar) Adjusting range pressure: 30 psig (0-2 bar) 60 psig (0-4 bar)

125 psig (0-8 bar) 232 psig (0-16 bar) 1/8 BSPP, BSPT, NPT

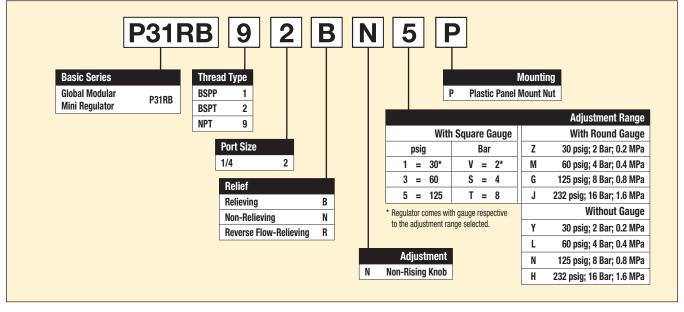
Gauge port (2 each)** Weight: 0.37 lb (0.17 kg)

Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

** Non-gauge option only.

† Units with square gauges: 5°F to 150°F (-15°C to 65.5°C)

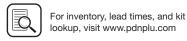
Ordering Information:



J16







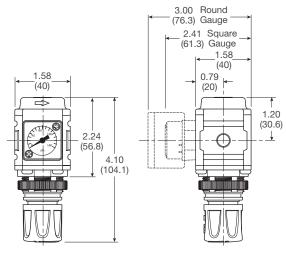
Air Preparation Products Miniature / Inline

Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Bonnet	PBT
Diaphragm assembly	Brass / Nitrile
Valve assembly	Brass / Nitrile
Springs	Steel
Seals	Nitrile
Panel nut	Acetal

Repair and Service Kits

Diaphragm repair kit - relieving	P31KB00RB
Diaphragm repair kit - non-relieving	P31KB00RC
Panel mount nut - aluminum	P31KA00MM
Panel mount nut - plastic	P31KA00MP
Angle bracket (attaches via panel nut)	P31KB00MR
C-bracket (fits to body)	P31KA00MW
T-bracket with body connector	P31KA00MT
Body connector	P31KA00CB

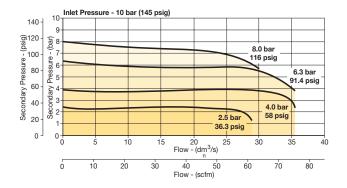


Inches (mm)

NOTE: 1.20 in. (30mm) hole required for panel nut mounting.

Flow Charts

P31 1/4 Regulator



MARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Gauges

Square flush	0-4 bar	K4511SCR04B
mount gauge	0-11 bar	K4511SCR11B
	0-60 psig	K4511SCR060
	0-160 psig	K4511SCR160
Square with adapter kit	0-4 bar	P6G-PR10040
	0-11 bar	P6G-PR10110
	0-60 psig	P6G-PR90060
	0-160 psig	P6G-PR90160
1.00" Round 1/8" center back mount	0-60 psig / 0-4 bar	K4510N18060
	0-160 psig / 0-11 bar	K4510N18160
40mm Round 1/8" center back mount (Not for use with common	0-30 psig / 0-2 bar	K4515N18030
	0-60 psig / 0-4 bar	K4515N18060
port regulators)	0-160 psig / 0-11 bar	K4515N18160

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

(Revised 05-09-17)

14R Regulators - Miniature

- Unbalanced poppet standard
- · Solid control piston with lip seal for extended life
- Non-rising adjusting knob
- Compact design
- Very easy to service
- 1/8", 1/4" ports (NPT, BSPP, BSPT)





Port		
Size	Description	Part Number
1/8"	Without Gauge	14R013FC
1/8"	With Gauge	14R018FC
1/4"	Without Gauge	14R113FC
1/4"	With Gauge	14R118FC

NOTE: 1.218 Dia. (31 mm) hole required for panel mounting.

Operating information

Supply pressure (max): 0 to 300 psig (0 to 20.7 bar)

Secondary pressure ranges

Standard 2 to 125 psig (0 to 8.6 bar) Medium 1 to 60 psig (0 to 4.1 bar) Medium 1 to 30 psig (0 to 2.1 bar) Low 1 to 15 psig (0 to 1 bar) 32°F to 125°F (0°C to 52°C) Operating temperature:

-4°F to 125°F (-20°C to 52°C)

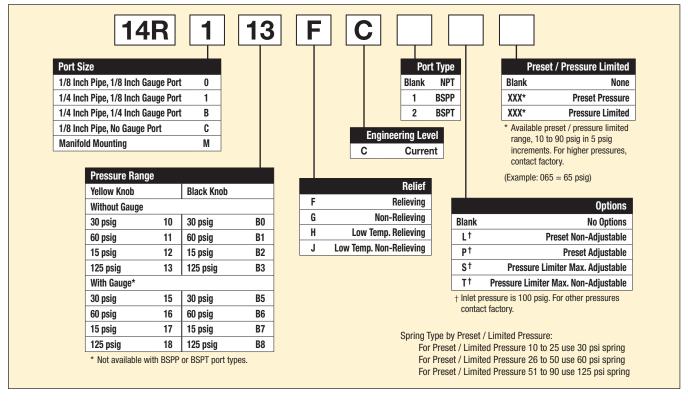
Low temperature Flow capacity[†]:

1/8" 13 scfm (6.1 dm³/s, ANR) High flow 1/4" 15 scfm (7.1 dm³/s, ANR)

1/8 or 1/4 inch Gauge ports (2): 0.3 lb (0.14 kg) Weight:

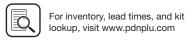
† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:









Regulators

Miniature Regulators

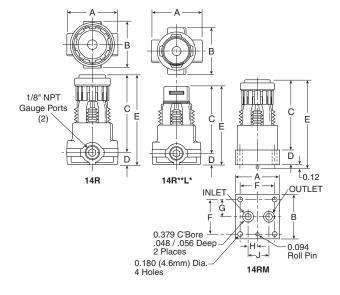
Material Specifications

Adjusting nut	Brass
Adjusting stem & spring	Steel
Body	Zinc
Bonnet, seat, piston & valve poppet	Plastic
Seals	Nitrile

Repair and Service Kits

Bonnet assembly kit	L01369
Bonnet tamperproof kit	P01265
30 psig gauge, 1/8" NPT (0 to 2.1 bar)	K4515N18030
60 psig gauge, 1/8" NPT (0 to 4.1 bar)	K4515N18060
160 psig gauge, 1/8" NPT (0 to 11.0 bar)	K4515N18160
60 psig gauge, 1/4" NPT (0 to 4.1 bar)	K4520N14060
160 psig gauge, 1/4" NPT (0 to 11.0 bar)	K4520N14160
Mounting bracket kit* (includes panel mount nut)	PS417BP
Plastic panel mount nuts*	P78652
Metal panel mount nuts*	P01531
Unbalanced non-relieving, poppet / piston kit	PS428P
Unbalanced relieving, poppet / piston kit	PS426P
1-15 psig spring (yellow)	P01176
1-30 psig spring (black)	P01175
1-60 psig spring (white)	P01174
2-125 psig spring (gold)	P01173

^{*} Tighten panel mount nut 2.8 to 3.4 Nm (25 to 30 in-lbs) of torque.

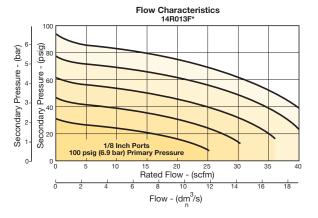


Flow Charts

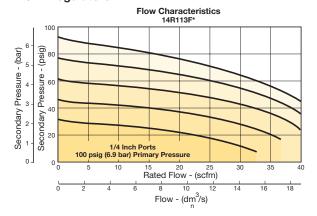
14R 1/8" Regulators

Miniature / Inline

Air Preparation Products



14R 1/4" Regulators



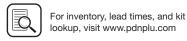
⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





P3A-R Regulators - Miniature

(Revised 05-14-20)

- · Lightweight plastic body
- Non-rising adjusting knob
- Solid control piston with lip seal for extended life
- Unbalanced poppet standard
- Two full flow 1/8" gauge ports
- Reverse flow capability
- 1/8", 1/4" ports (NPT)



Port Size	Description	Part Number
1/4"	Without Gauge	P3A-RN92YNNN

NOTE: 1.218 Dia. (31 mm) hole required for panel mounting.



Operating information

120 psig (8.3 bar) Supply pressure (max):

Secondary pressure:

15 psig spring 1 to 15 psig (0.07 to 1.0 bar) 30 psig spring 6 to 30 psig (0.4 to 2.1 bar) 6 to 60 psig (0.4 to 4.1 bar) 60 psig spring 110 psig spring 6 to 110 psig (0.4 to 7.6 bar) 32°F to 125°F (0°C to 52°C) Operating temperature:

Flow capacity†:

Gauge ports (2):

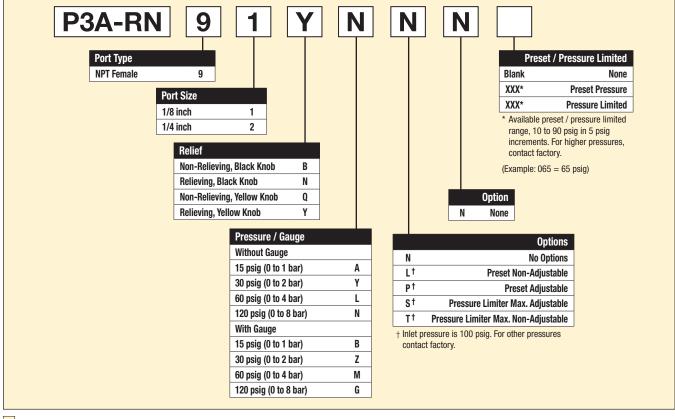
1/8" 13 scfm (6.1 dm³/s, ANR) High flow 1/4" 15 scfm (7.1 dm³/s, ANR)

1/8 inch

Weight: 0.3 lb (0.14 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:







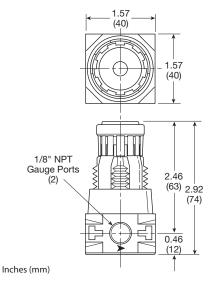


Adjusting nut	Brass
Adjusting stem & spring	Steel
Poppet return spring	Stainless Steel
Body	Plastic
Bonnet, seat & piston	Plastic
Seals	Nitrile
Valve poppet	Plastic & nitrile

Repair and Service Kits

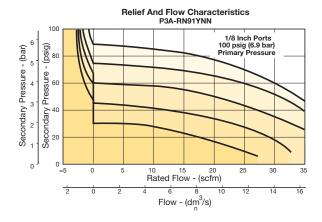
30 psig gauge, 1/8" NPT (0 to 2.1 bar)	K4515N18030
60 psig gauge, 1/8" NPT (0 to 4.1 bar)	K4515N18060
160 psig gauge, 1/8" NPT (0 to 11.0 bar)	K4515N18160
Mounting bracket kit* (includes panel mount nut)	PS417BP
Panel mount nut*	P78652
Unbalanced non-relieving, poppet / piston kit	PS428P
Unbalanced relieving, poppet / piston kit	PS426P
1-15 psig Spring (yellow)	P01176
1-30 psig spring (black)	P01175
1-60 psig spring (white)	P01174
5-110 psig spring (gold)	P01173

^{*} Tighten panel mount nut 2.8 to 3.4 Nm (25 to 30 in-lbs) of torque.

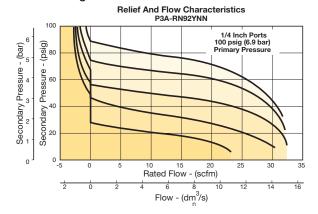


Flow Charts

P3A-R 1/8" Regulator



P3A-R 1/4" Regulator

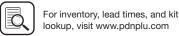


⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Miniature Regulators

R34 Regulators - Miniature

- Diaphragm operated for fast response
- Large diaphragm to valve area ratio for precise regulation and high flow capacity
- Balanced valve design for precise regulation
- Available in 2 or 4 port design
- Available with a manifold mount to minimize plumbing
- Suitable for low temperature applications
- Non-rising adjusting knob
- 1/8", 1/4" ports (NPT, BSPP)





Relieving

Non-Relieving

Port		Part Number	
Size	Description	Without Gauge	With Gauge
1/8"	Relieving, 0 to 30 psig	R344-01A	R344-01AG
1/8"	Relieving, 0 to 60 psig	R344-01B	R344-01BG
1/8"	Relieving, 0 to 125 psig	R344-01C	R344-01CG
1/4"	Relieving, 0 to 30 psig	R344-02A	R344-02AG
1/4"	Relieving, 0 to 60 psig	R344-02B	R344-02BG
1/4"	Relieving, 0 to 125 psig	R344-02C	R344-02CG
Manifold	Relieving, 0 to 30 psig	R342-0MA	-
Manifold	Relieving, 0 to 60 psig	R342-0MB	-
Manifold	Relieving, 0 to 125 psig	R342-0MC	-
Manifold	Relieving, 0 to 125 psig	R342-0MC	-





R344-02C

R342-0MC

Operating information

Supply pressure (max): 300 psig (0 to 20.7 bar)

Operating temperature: -40°F to 150°F (-40°C to 65.5°C)

Flow capacity†:

High flow 1/8" 17 scfm (8.0 dm³/s, ANR) 1/4" 19 scfm (8.9 dm³/s, ANR)

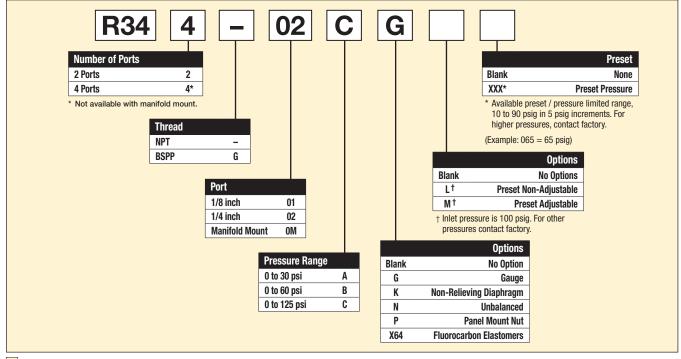
Gauge ports (2): 1/8 inch

(no gauge port version available)

Weight: 0.25 lb (0.11 kg)

 † scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

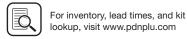
Ordering Information:



J22







Lubricators

Filters

Coalescers

Regulators

Regulators

Filter/

Material Specifications

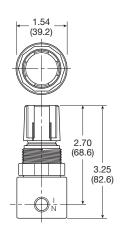
Miniature Regulators

Body	Aluminum
Bonnet	Acetal
Diaphragm & seals	Nitrile
Valve assembly	Brass
Springs	Steel
Panel Nut	Acetal

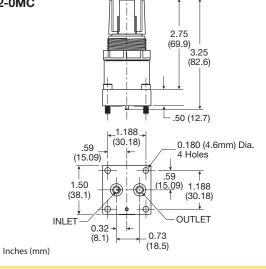
Repair and Service Kits

•	
Diaphragm assembly, non-relieving	GRP-96-726
Diaphragm assembly, relieving	GRP-96-725
0 to 30 psig (0 to 2.1 bar), spring, regulating	GRP-95-111
0 to 60 psig (0 to 4.1 bar) spring, regulating	GRP-96-718
0 to 125 psig (0 to 8.6 bar) spring, regulating	GRP-96-717
Panel mount nut, aluminum	R05X51-A
Panel mount nut, plastic	R05X51-P
Mounting bracket kit (includes panel mount nut)	SA161X57
1-1/2" Dial Face, 1/8 NPT, CBM, 0 to 60 psig (0 to 4.1 bar), gauge	K4515N18060
1-1/2" Dial Face, 1/8 NPT, CBM,	
0 to 160 psig (0 to 11.0 bar), gauge	K4515N18160
Tamperproof knob kit	P31KB00AT

R342 / R344

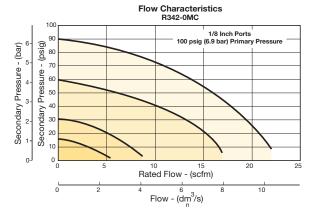


R342-0MC

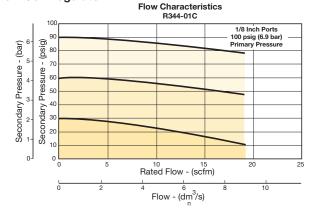


Flow Charts

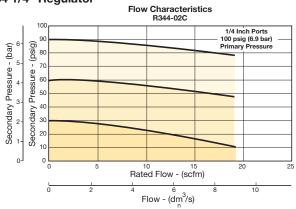
R34 1/8" Manifold Mount



R34 1/8" Regulator



R34 1/4" Regulator



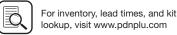
⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.







Miniature Regulators

R25 Regulators - Miniature

- · Lightweight plastic body
- Unbalanced poppet standard
- Non-rising, push-to-lock adjusting knob
- Compact, 3.10 Inch (79 mm) high by 1.60 Inch (41 mm)
- Lightweight
- Diaphragm operated
- 1/8", 1/4" ports (NPT)





Port Size	Description	Part Number
1/8"	Relieving, 0-125 Reduced Pressure, without Gauge	R25-01C
1/4"	Relieving, 0-125 Reduced Pressure, without Gauge	R25-02C

NOTE: 1.250 Dia. (31.8 mm) hole required for panel mounting.

Operating information

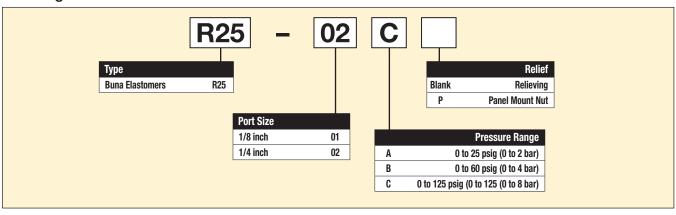
Supply pressure (max): Inlet 150 psig (10.0 bar) 40°F to 125°F (4°C to 52°C) Operating temperature:

Gauge ports (2): 1/8 inch

(can be used for full flow)

Weight: 0.25 lb (0.11 kg)

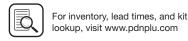
Ordering Information:



J24

Most popular.



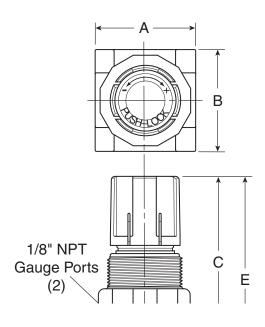


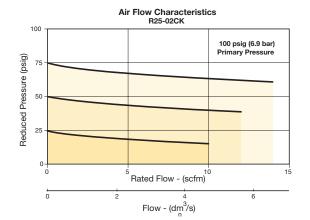
R25 1/4" Regulator

Adjusting screw	Steel
Body	Acetal
Bonnet and seat	Acetal
Diaphragm	Buna N
Seals	Buna N
Springs	Stainless steel
Valve poppet	Buna N

Repair and Service Kits

R05X51-P
R05X51-A
SA161X57
RKR25Y
RKR25KY
SPR-375-1
SPR-376
SPR-377





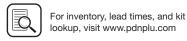
⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the design entitled. the pressure up to the desired setting.





Miniature Regulators

R45 Regulators - Miniature

- · Lightweight plastic body
- Unbalanced poppet standard
- Non-rising, push-to-lock adjusting knob
- Compact, 3.43 inch (87.1 mm) high by 2.06 inch (52.3 mm) wide
- Lightweight

Filters

Coalescers

Regulators

Regulators

Filter/

Lubricators

- Diaphragm operated
- 1/4", 3/8" ports (NPT)



Port Size	Description	Part Number
1/4"	Relieving, 0-125 Reduced Pressure, without Gauge	R45-02C
3/8"	Relieving, 0-125 Reduced Pressure, without Gauge	R45-03C

NOTE: 1.250 Dia. (31.8 mm) hole required for panel mounting.



Operating information

Supply pressure (max): Inlet 150 psig (10.0 bar)

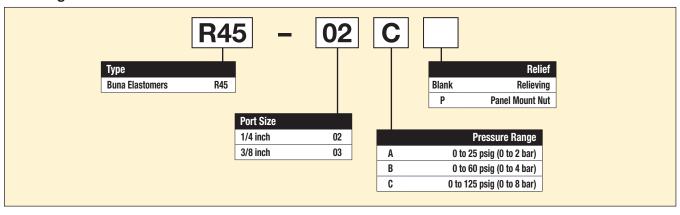
Operating temperature: 40°F to 125°F (4°C to 52°C)

Gauge ports (2): 1/4 inc

(can be used for full flow)

Weight: 0.38 lb (0.17 kg)

Ordering Information:



J26

Most popular.

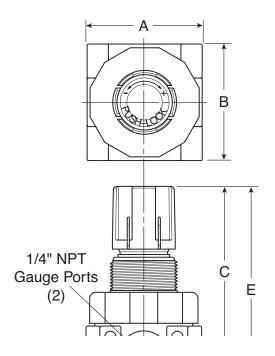




Adjusting screw	Steel
Body	Acetal
Bonnet and seat	Acetal
Diaphragm	Buna N
Seals	Buna N
Springs	Stainless steel
Valve Poppet	Buna N

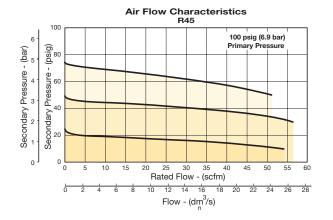
Repair and Service Kits

Panel mount nut, plastic	R05X51
Panel mount nut, aluminum	R05X51-A
Mounting bracket and nut	SA161X57
Relieving	RKR45Y
Non-Relieving	RKR45KY
0-25 psig spring	SPR-46
0-60 psig spring	SPR-47
0-125 psig spring	SPR-48



Flow Charts

R45 1/4" Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Lubricators

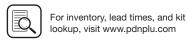
Filters

Coalescers

Regulators

Filter / Regulators





J27

Economy Regulators

15R Regulators - Economy

- Solid control piston with resilient seat for service-free operation
- Non-rising "locking" adjusting knob
- Compact, 3.30 inch (84 mm) high by 2.12 inch (54 mm) wide
- Easily serviced

Filters

Coalescers

Regulators

Regulators

Filter/

• 1/4", 3/8" ports (NPT)



Description	Part Number
Without Gauge	15R113FB
With Gauge	15R118FB
Without Gauge	15R213FB
With Gauge	15R218FB
	Without Gauge With Gauge Without Gauge

NOTE: 1.218 Dia. (31 mm) hole required for panel mounting.



Operating information

Supply pressure (max): 0 to 250 psig (0 to 17.2 bar)

Secondary pressure ranges

 Standard
 2 to 125 psig (0 to 8.6 bar)

 Medium
 1 to 60 psig (0 to 4.1 bar)

 Medium
 1 to 30 psig (0 to 1.7 bar)

 Low
 1 to 15 psig (0 to 1 bar)

Operating temperature: 32°F to 125°F (0°C to 52°C) Low temperature -4°F to 125°F (-20°C to 52°C)

Flow capacity[†]:

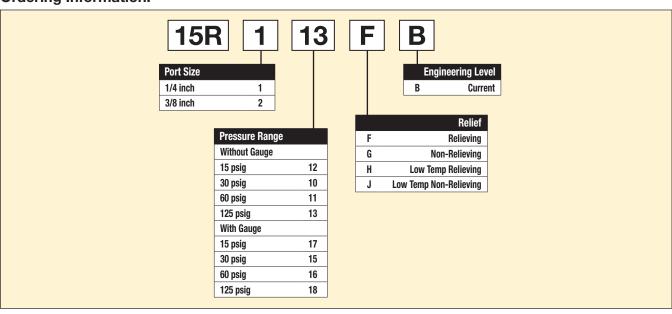
High flow 1/4" 21 scfm (9.9 dm³/s, ANR) 3/8" 28 scfm (13.2 dm³/s, ANR)

Gauge ports (2): 1/4 inch

(can be used at full flow)
Weight: 0.5 lb (0.23 kg)

 † scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

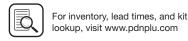
Ordering Information:



J28





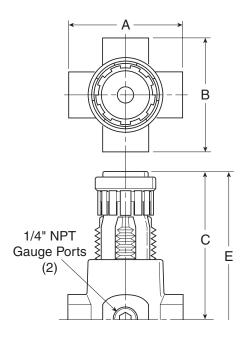


Adjusting nut	Brass
Adjusting stem & spring	Steel
Body	Zinc
Bonnet, seat, piston & valve poppet	Plastic
Seals	Nitrile

Repair and Service Kits

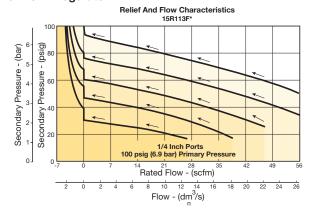
Body Service Kit – Unbalanced	PS424BP
Bonnet Assembly Kit	L01369
30 psig, 1/8" NPT (0 to 2.1 bar) gauge	K4515N18030
60 psig, 1/8" NPT (0 to 4.1 bar) gauge	K4515N18060
160 psig, 1/8" NPT (0 to 11.0 bar) gauge	K4515N18160
60 psig, 1/4" NPT (0 to 4.1 bar) gauge	K4520N14060
160 psig, 1/4" NPT (0 to 11.0 bar) gauge	K4520N14160
Mounting bracket kit* (Includes panel mount nut)	PS417BP
Panel mount nuts*, plastic	P78652
Panel mount nuts*, metal	P01531
Poppet / piston kit, unbalanced, non-relieving	PS428P
Poppet / piston kit, unbalanced, relieving	PS426P
Seal, unbalanced	PS454B
1-15 psig spring (yellow)	P01176
1-30 psig spring (black)	P01175
1-60 psig spring (white)	P01174
2-125 psig spring (gold)	P01173

^{*} Tighten panel mount nut 2.8 to 3.4 Nm (25 to 30 in-lbs) of torque.

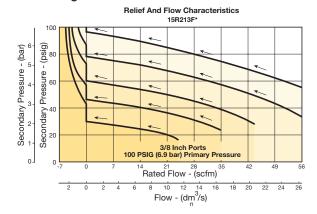


Flow Charts

15R 1/4" Regulator



15R 3/8" Regulator



↑ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

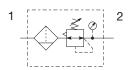
CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Mini Filter / Regulators

P31 Filter / Regulators – Mini

- Integral 1/4" ports (NPT, BSPP & BSPT)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminum construction
- Positive bayonet latch to ensure correct & safe fitting
- Secondary pressure ranges
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation



Port Size	Description (relieving)	Bowl / Drain Type	Part Number
1/4"	125 psig (8 bar)	Poly / Manual	P31EB92EGMBN5P
1/4"	125 psig (8 bar)	Poly / Pulse	P31EB92EGBBN5P
1/4"	125 psig (8 bar)	Metal / Manual	P31EB92EMMBN5P
1/4"	125 psig (8 bar)	Metal / Pulse	P31EB92EMBBN5P



Operating information

Flow capacity*: 1/4 32 scfm (15 dm³/s, ANR)

Operating temperature[‡]:

Plastic bowl 14°F to 125°F (-10°C to 52°C) Metal bowl 14°F to 150°F (-10°C to 65.5°C)

Supply pressure (max):

Plastic bowl 150 psig (10 bar) Metal bowl 250 psig (17 bar)

Standard filtration 5 micron

Useful retention[†]:

O.4 US oz. (12 cm³)

Adjusting range pressure:

O to 30 psig (0 to 2 bar)

O to 60 psig (0 to 4 bar)

0 to 60 psig (0 to 4 bar) 0 to 125 psig (0 to 8 bar) 0 to 250 psig (0 to 17 bar) 1/8 NPT, BSPP, BSPT

Gauge port (2 each)**: 1/8 NPT, BSPP, E Weight: 0.42 lb (0.19 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

** Non-gauge option only.

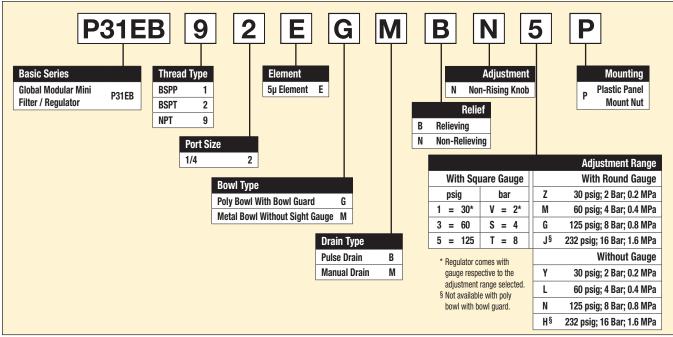
[‡] Units with square gauges: 5°F to 150°F (-15°C to 65.5°C)

[†] Useful retention refers to volume below the quiet zone baffle.

Air quality:

Within ISO 8573-1: 1991 Class 3 (Particulates) Within ISO 8573-1: 2001 Class 6 (Particulates)

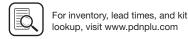
Ordering Information:



J30

Most popular.





M	ateria	I Spe	cific	atio	ns
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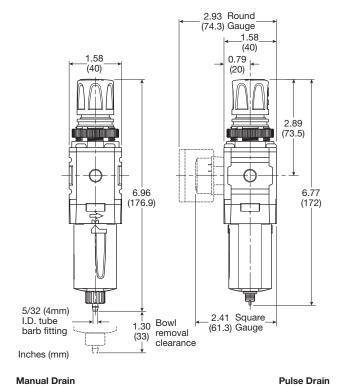
•	
Body	Aluminum
Adjustment knob	Acetal
Body cap	ABS
Bonnet	PBT
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Bowl guard	Nylon
Filter element	Polyethylene
Seals	Nitrile
Springs	Steel
Valve assembly	Brass / Nitrile
Diaphragm assembly	Brass / Nitrile
Panel nut	Acetal

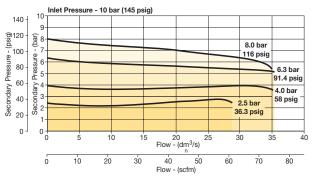
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Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





Repair and Service Kits

Plastic bowl / bowl guard manual drain	P31KB00BGM
Plastic bowl / bowl guard pulse drain	P31KB00BGB
Metal bowl / w/o sight gauge pulse drain	P31KB00BMB
5μ particle filter element	P31KA00ESE
Diaphragm repair kit - relieving	P31KB00RB
Diaphragm repair kit - non-relieving	P31KB00RC
Panel mount nut - aluminum	P31KA00MM
Panel mount nut - plastic	P31KA00MP
Angle bracket (attaches via panel nut)	P31KB00MR
C-bracket (fits to body)	P31KA00MW
T-bracket with body connector	P31KA00MT
Body connector	P31KA00CB

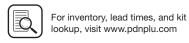
Gauges

J31

Square flush	0-4 bar	K4511SCR04B
mount gauge	0-11 bar	K4511SCR11B
	0-60 psig	K4511SCR060
	0-160 psig	K4511SCR160

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





Miniature Filter / Regulators

B34 Filter / Regulator - Miniature

- Excellent water removal efficiency
- Diaphragm operated for fast operation
- Large diaphragm to valve area for precise regulation and high flow capacity
- Balanced valve design for precise regulation
- Space saving package offers both filter and regulator features in one integral unit
- Non-rising adjustment knob
- 1/8", 1/4" ports (NPT, BSPP)





Description ‡	Part Number
Poly Bowl, Twist Drain	B344-01AGC
Metal Bowl, Twist Drain	B344-01DGC
Poly Bowl, Twist Drain	B344-02AGC
Metal Bowl, Twist Drain	B344-02DGC
	Poly Bowl, Twist Drain Metal Bowl, Twist Drain Poly Bowl, Twist Drain

[‡] For polycarbonate bowl, see caution in Engineering Section A. NOTE: 1.218 Dia. (31 mm) hole required for panel mounting.



Operating information

Supply pressure (max):

Zinc bowl (D) 0 to 300 psig (0 to 20.7 bar) Poly bowl (A) 0 to 150 psig (0 to 10.3 bar) 40°F to 150°F (4.4°C to 52°C) Operating temperature:

Reduced pressure range:

0 to 25 psig (0 to 1.7 bar) 0 to 60 psig (0 to 4.1 bar) 2 to 125 psig (0.15 to 8.5 bar)

Flow capacity†:

High flow 1/8" 17 scfm (8 dm³/s, ANR) 1/4" 19 scfm (9 dm³/s, ANR)

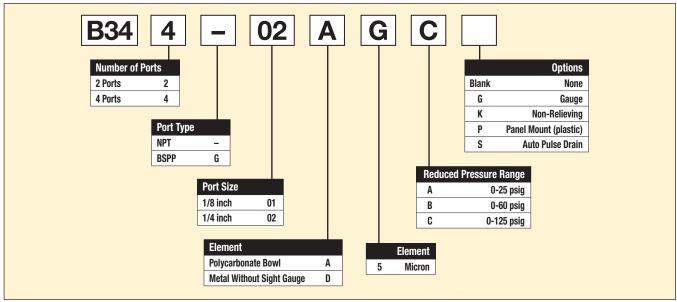
Bowl capacity: 1 oz.

0.6 lb (0.27 kg) Weight: Zinc bowl Poly bowl 0.3 lb (0.14 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet and 75 psig no psig no flow secondary setting and 25% pressure drop.

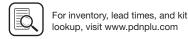
() Bowl type

Ordering Information:



Most popular.





Coalescers

Filters

Regulators

Regulators Filter/



Adjusting Knob	Acetal
Body	Aluminum
Polycarbonate bowl (A)	Polycarbonate
Metal bowl (D)	Zinc
Elastomers	Buna N
Filter Element	Sintered polyethylene
Filter retainer, vane plate	Acetal
Innervalve, diaphragm, button, drain	Brass

Repair and Service Kits

riepair and bervice rats	
Adjusting knob	RRP-16-005-000
Zinc bowl (D)	BK505Y
Zinc bowl with auto pulse drain (D)	BK505SY
Polycarbonate bowl (A)	BK504Y
Polycarbonate bowl with auto pulse drain (A)	BK504SY
Automatic pulse drain (Maximum pressure = 175 psig)	RK504SY
5 micron element (All)	FRP-96-729
1-1/2" dial size, 1/8" back connection 0 to 60 psig (0 to 400 kPa), gauge	K4515N18060
1-1/2" dial size, 1/8" back connection 0 to 160 psig (0 to 1100 kPa), gauge	K4515N18160
Mounting bracket kit (includes plastic panel nut)	SA161X57
Panel mount nut, plastic	R05X51-P
Panel mount nut, aluminum	R05X51-A
Non-relieving diaphragm, valve assembly (All)	GRP-96-726
Relieving diaphragm, valve assembly (All)	GRP-96-725
0-25 psig gauge	GRP-95-111
0-60 psig gauge	GRP-96-718
0-125 psig gauge	GRP-96-717

⚠ WARNING

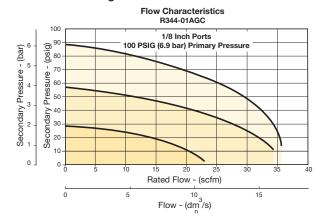
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

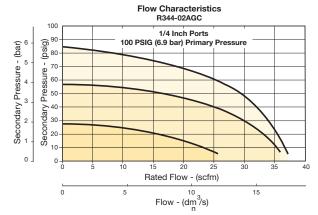
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

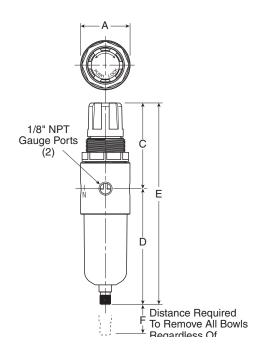
Flow Charts

B34 1/8" Filter / Regulator



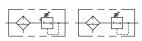
B34 1/4" Filter / Regulator





14E Filter / Regulator - Miniature

- Excellent water removal efficiency
- Unbalanced poppet standard
- Solid control piston for extended life
- · Space saving package offers both filter and regulator features in one integral unit
- Non-rising adjustment knob
- Two full flow 1/8" gauge ports
- 1/8", 1/4" ports (NPT, BSPP, BSPT)



Port		
Size	Description [‡]	Part Number
1/8"	Poly Bowl, Twist Drain	14E01B13FC
1/8"	Metal Bowl, Twist Drain	14E03B13FC
1/8"	Poly Bowl, Auto Pulse Drain	14E05B13FC
1/8"	Metal Bowl, Auto Pulse Drain	14E07B13FC
1/4"	Poly Bowl, Twist Drain	14E11B13FC
1/4"	Metal Bowl, Twist Drain	14E13B13FC
1/4"	Poly Bowl, Auto Pulse Drain	14E15B13FC
1/4"	Metal Bowl, Auto Pulse Drain	14E17B13FC

[‡] For polycarbonate bowl, see caution in Engineering Section A. NOTE: 1.218 Dia. (31 mm) hole required for panel mounting.



Operating information

Supply pressure (max): 0 to 150 psig (0 to 10.3 bar) Plastic bowl Metal bowl 0 to 250 psig (0 to 17.2 bar)

Secondary pressure ranges

2 to 125 psig (0 to 8.6 bar) Standard Medium 1 to 30 psig (0 to 2.1 bar) Medium 1 to 60 psig (0 to 4.1 bar) Low 1 to 15 psig (0 to 1 bar)

Operating temperature:

32°F to 125°F (0°C to 52°C) Plastic bowl Metal bowl 32°F to 175°F (0°C to 80°C)

Flow capacity†:

16 scfm (7.6 dm³/s, ANR) High flow 1/8" 18 scfm (8.5 dm³/s, ANR)

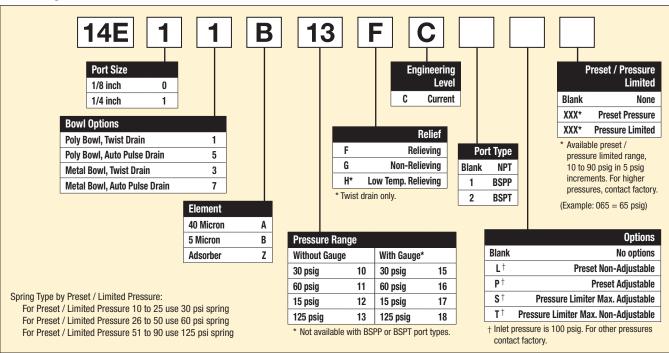
Bowl capacity: 1 oz. Auto pulse drain tube barb 1/8 inch Gauge ports (2): 1/8 inch

(can be used as additional full flow)

Weight: 0.4 lb (0.18 kg)

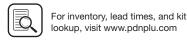
† scfm = Standard cubic feet per minute at 100 psig inlet and 10 psig

Ordering Information:









Filters

Coalescers

Regulators

Regulators

Filter /

Lubricators

Miniature Filter / Regulators

Material Specifications

Adjusting nut	Brass
Adjusting stem & spring	Steel
Body	Zinc
Bonnet, knob, seat, piston, holder & deflector	Plastic
Transparent bowl	Polycarbonate
Metal bowl (without sight gauge)	Zinc
Twist drain, body & stem	Plastic
Twist drain, seals	Nitrile
Auto pulse drain, piston & seals	Nitrile
Auto pulse drain, stem, seat, adaptor & washers	Aluminum
5 Micron elements (standard)	Plastic
40 Micron elements (optional)	Plastic
Adsorber elements (optional)	Activated charcoal
Seals	Nitrile

Repair and Service Kits

•	
Bonnet tamperproof kit	P01265
Poly bowl / auto drain	PS408BP
Poly bowl / twist drain	PS404P
Metal bowl / auto drain	PS451BP
Metal bowl / twist drain	PS447BP
40 micron element	PS401P
5 micron element	PS403P
Adsorber element	PS452P
30 psig (0 to 2.1 bar), gauge	K4515N18030
60 psig (0 to 4.1 bar)	K4515N18060
160 psig (0 to 11.0 bar) element	K4515N18160
Mounting bracket kit* (includes panel mount nut)	PS417BP
Panel mount nut*	P78652
Unbalanced, non-relieving	PS428P
Unbalanced, relieving	PS426P
1- 15 psig spring (yellow)	P01176
1- 30 psig spring (black)	P01175
1- 60 psig spring (white)	P01174
2- 125 psig spring (gold)	P01173

^{*}Tighten panel mount nut 2.8 to 3.4 Nm (25 to 30 in-lbs) of torque.

⚠ WARNING

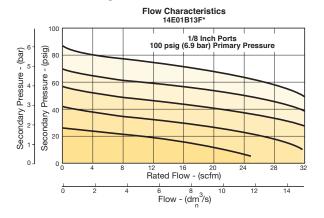
Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

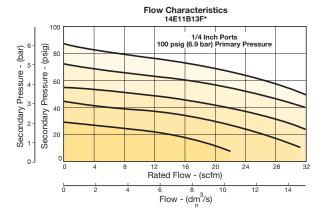
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

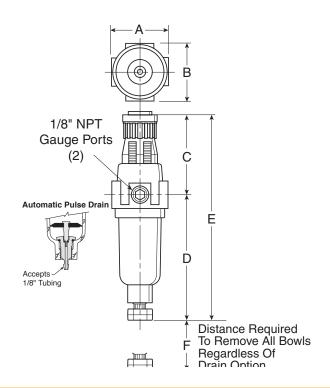
Flow Charts

14E 1/8" Filter / Regulator

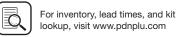


14E 1/4" Filter / Regulator







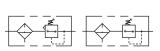


J35

Economy Filter / Regulators

05E Filter / Regulator - Economy

- Space saving package offers both filter and regulator features for optimal performance
- Excellent water removal efficiency
- Rolling diaphragm for extended life
- Removable non-rising knob for tamper resistance
- Quick response, and accurate pressure regulation regardless of changing flow or inlet pressure
- 40 micron filter element standard
- 1/4", 3/8" ports (NPT)



Port Size	Description ‡	Part Number
1/4"	Poly Bowl, Metal Guard, Twist Drain	05E12A13AB
1/4"	Poly Bowl, Metal Guard, Auto Pulse Drain	05E1PA13AB
3/8"	Poly Bowl, Metal Guard, Twist Drain	05E22A13AB
3/8"	Poly Bowl, Metal Guard, Auto Pulse Drain	05E2PA13AB

[‡] For polycarbonate bowl, see caution in Engineering Section A. NOTE: 1.53 Dia. (39 mm) hole required for panel mounting.



Operating information

Supply pressure (max):

Plastic bowl 0 to 150 psig (0 to 10.3 bar) 0 to 250 psig (0 to 17.2 bar) Metal bowl

Operating temperature:

Plastic bowl 32°F to 125°F (0°C to 52°C) Metal bowl 32°F to 175°F (0°C to 80°C)

Flow capacity†:

Bowl capacity:

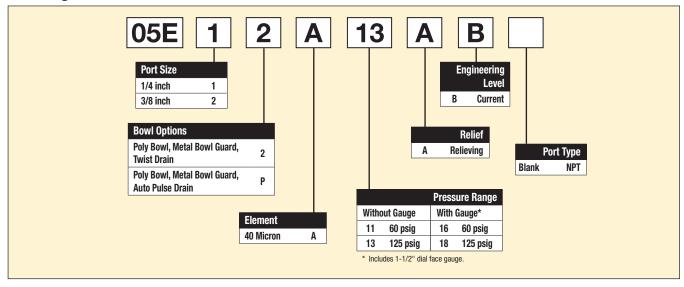
1/4" 30 scfm (14.2 dm³/s, ANR) High flow 3/8" 40 scfm (18.9 dm³/s, ANR)

2 oz.

Auto pulse drain tube barb: 1/8 inch 1/4 inch Gauge ports (2): Sump capacity: 0.9 oz. Weight: 1.35 lb (0.6 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

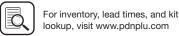
Ordering Information:



J36







Lubricators

Filters

Coalescers

Regulators

Regulators

Filter/

Adjusting stem	Steel
Body	Zinc
Bonnet, internal parts	Plastic
Transparent bowl	Polycarbonate
Bowl guard	Steel
Collar	Plastic
Diaphragm	Nitrile
Drain	Plastic
40 micron element (standard)	Plastic
5 micron element (optional)	Plastic
Adsorber element (optional)	Activated charcoal
Knob	Plastic
Seals	Nitrile
Sight gauge	Polyamide (nylon)
Springs, poppet & control	Steel

Repair and Service Kits

Bowl guard kit	PS905P
Poly bowl, automatic pulse drain	PS995P
Poly bowl, twist drain	PS932P
Auto pulse drain	PS998P
Twist drain	PS512P
40 micron element	PS901P
5 micron element	PS902P
Adsorber element	PS931P
Sight gauge kit	PS914P
1-1/2" dial face 30 psig (0 to 2.1 bar), gauge	K4515N14030
1-1/2" dial face 60 psig (0 to 4.1 bar), gauge	K4515N14060
1-1/2" dial face 160 psig (0 to 11.0 bar), gauge	K4515N14160
1-1/2" dial face 300 psig (0 to 20.7 bar), gauge	K4515N14300
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
Mounting bracket kit (includes panel mount nut)	PS963P
Panel mount nut – metal	PS964P
1-30 psig spring	P04427
1-60 psig spring	P04426
2-125 psig spring	P04425
2-200 psig spring	P02934
Relieving service kit	PS908P
Bonnet assembly kit	PS915P

⚠ WARNING

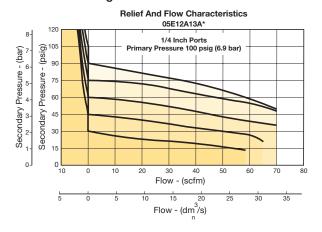
Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

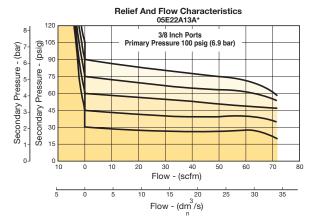
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

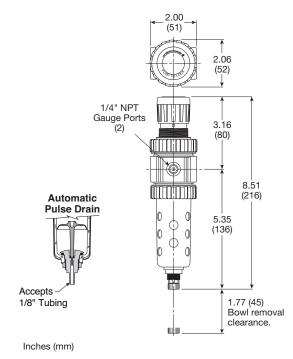
Flow Charts

05E 1/4" Filter / Regulator

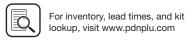


05E 3/8" Filter / Regulator









Miniature Mist Lubricators

02L Lubricator - Miniature

- Extends the service life of air operated hand tools
- Reduces downtime of air operated equipment, saves money
- Small / lightweight
- Automatic lubrication with air tool operation
- · Adjustable oil flow

Filters

Coalescers

Regulators

Regulators

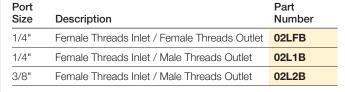
Filter/

- · Corrosion resistant
- Full swivel outlet port
- Integral 1/4", 3/8" ports (NPT, BSPT)



Application

In-Line Lubricators assure proper lubrication for small pneumatic hand tools. These in-line lubricators put the oil source right at the tool. Oil capacity is 1/4 oz. (1 ml), enough to last through an average 8-hour shift. This lubricator requires cyclical or intermittent airflow for proper operation, and consequently works best when installed at the tool inlet or on a short hose near the tool. The 02L cannot be filled under pressure.





Operating information

Supply pressure (max): 200 psig (13.8 bar)

Operating temperature: 32°F to 150°F (0°C to 65.6°C)

Flow capacity[†]:

1/4" 29 scfm (13.6 dm³/s, ANR) High flow 3/8" 30 scfm (14.2 dm³/s, ANR)

Oil capacity: 0.25 oz. (7.4 cm³) Weight: 0.2 lb (0.1 kg)

[†] scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.









Body	Aluminum
Seals	Nitrile

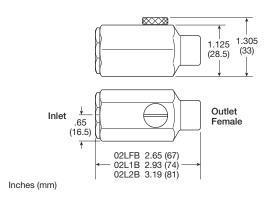
Suggested LubricantF442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C)

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

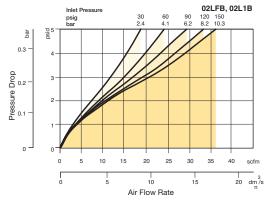
Replacement Kits

Fill plug kit, brass fill plug and o-ring	PS434
O-ring repair kit	PS435

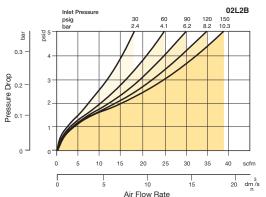


Flow Charts

02L 1/4" In-Line Lubricator



02L 3/8" In-Line Lubricator



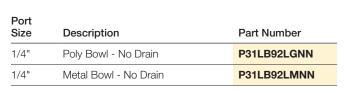


P31 Lubricators - Mini

- Integral 1/4" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Proportional oil delivery over a wide range of air flows
- Finger tip ratchet control for precise oil drip rate adjustment



Lubricator with drain





Operating information

Flow capacity*:

Metal bowl

40 scfm (19 dm³/s, ANR) 1/4

Operating temperature: Plastic bowl

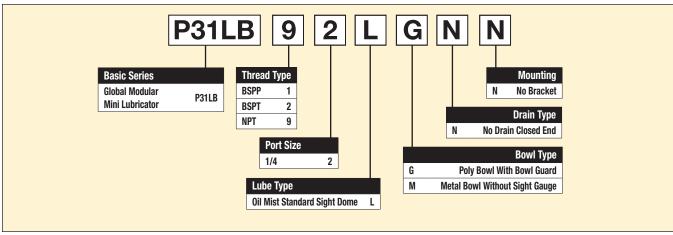
14°F to 125°F (-10°C to 52°C) 14°F to 150°F (-10°C to 65.5°C)

Supply pressure (max):

Plastic bowl 150 psig (10 bar) Metal bowl 250 psig (17 bar) 0.6 US oz. (18 cm³) Bowl capacity: Weight: 0.29 lb (0.13 kg)

* Inlet pressure 91.3 psig (6.3 bar). Pressure drop 4.9 psig (0.34 bar).

Ordering Information:



Suggested LubricantF442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C) (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)







J40

Coalescers

Filters

Air Preparation Products Miniature / Inline

Material Specifications

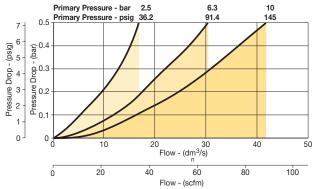
Body	Aluminum
Body cap	ABS
Plastic bowl	Polycarbonate
Metal bowl	Aluminum
Seals	Nitrile
Sight dome	Polycarbonate
Suggested lubricant	ISO / ASTM VG32
Pick-up filter	Sintered bronze

Repair and Service Kits

Plastic bowl / bowl guard no drain	P31KB00BGN
Metal bowl / w/o sight gauge no drain	P31KB00BMN
Drip control assembly	P32KA00PG
Fill plug	P31KA00PL
C-bracket (fits to body)	P31KA00MW
T-bracket with body connector	P31KA00MT
Body connector	P31KA00CB
Oil (1 quart)	F442001
Oil (1 gallon)	F442002
Oil (12 quart case)	F442003
Oil (4 gallon case)	F442005

P31LB 1/4" Lubricator

Flow Charts

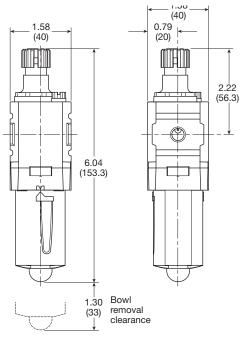


Filter/ Regulators

Filters

Coalescers

Regulators









04L Mist Lubricators - Miniature

- Proportional oil delivery over a wide range of air flows
- Precision needle valve assures repeatable oil delivery and provides simple adjustment of delivery rate
- Ideal for low and high flow applications with changing
- Transparent sight dome for 360° visibility
- Integral 1/8", 1/4" ports (NPT, BSPP, BSPT)



Port Size	Description ‡	Part Number
1/8"	Poly Bowl, No Drain	04L00GB
1/8"	Metal Bowl, No Gauge, Twist Drain	04L03GB
1/4"	Poly Bowl, No Drain	04L10GB
1/4"	Metal Bowl, No Gauge, Twist Drain	04L13GB

[‡] For polycarbonate bowl and sight dome, see caution in Engineering Section A.



Operating information

Supply pressure (max):

Plastic bowl 150 psig (10.3 bar) 250 psig (17.2 bar) Metal bowl

Operating temperature:

32°F to 125°F (0°C to 52°C) Plastic bowl Metal bowl 32°F to 175°F (0°C to 80°C)

Flow capacity[†]:

1/8" 20 scfm (9.4 dm³/s, ANR) High flow 20 scfm (9.4 dm³/s, ANR)

Minimum flow 0.5 scfm (0.24 dm³/s, ANR) at

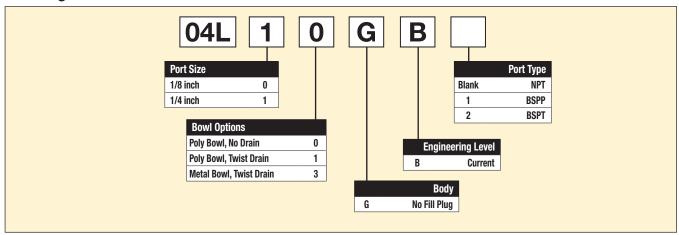
100 psig (6.9 bar)

Bowl capacity: 1 oz.

Weight: 0.4 lb (0.18 kg)

† scfm = Standard cubic feet per minute at 90 psig inlet and 5 psig pressure drop.

Ordering Information:



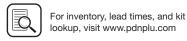
J42

Suggested Lubricant F442 Oil

Petroleum based oil of 100 to 200 SUS viscosity at 100°F (38°C) and an aniline point greater than 200°F (93°C) (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

Most popular.





Filters

Coalescers

Regulators

Regulators

Filter/

Air Preparation Products Miniature / Inline

Material Specifications

Body	Zinc
Transparent bowls	Polycarbonate
Metal bowl (without sight gauge)	Zinc
Drains, twist – body & nut	Plastic
Seals	Nitrile
Sight dome	Polycarbonate

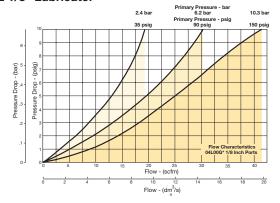
Repair and Service Kits

•	
Poly bowl / no drain kit	PS421P
Poly bowl / twist drain kit	PS420P
Metal bowl / twist drain (no sight gauge) kit	PS447BP
Mounting bracket kit	PS419
Oil (1 quart)	F442001
Oil (1 gallon)	F442002
Oil (12 quart case)	F442003
Oil (4 gallon case)	F442005

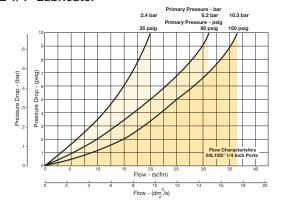
1.73 (44) 1.56 (40)2.16 (55) 5.80 (147) †5.94 (151) 3.64 (92) †3.78 (96) 1.60 (41) Bowl removal clearance.

Flow Charts

04L 1/8" Lubricator

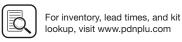


04L 1/4" Lubricator



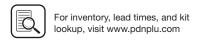


Inches (mm)



Filters







Air Preparation Products Regulators Products

General	K2-K41
Dial	K42-K49
Pilot	K50-K63
Proportional	K64-K89
Precision	K90-K103
Water	K104-K109





Miniature Regulators

Genera

Dial

Pilot

Proportional

Precision



Products

14R Regulators - Miniature

- Unbalanced poppet standard
- Solid control piston with lip seal for extended life
- Non-rising adjusting knob
- · Compact design
- Very easy to service
- 1/8", 1/4" ports (NPT, BSPP, BSPT)





Port Size	Description	Part Number
1/8"	Without Gauge	14R013FC
1/8"	With Gauge	14R018FC
1/4"	Without Gauge	14R113FC
1/4"	With Gauge	14R118FC

NOTE: 1.218 Dia. (31 mm) hole required for panel mounting.

Operating information

Supply pressure (max): 0 to 300 psig (0 to 20.7 bar)

Secondary pressure ranges

 Standard
 2 to 125 psig (0 to 8.6 bar)

 Medium
 1 to 60 psig (0 to 4.1 bar)

 Medium
 1 to 30 psig (0 to 2.1 bar)

 Low
 1 to 15 psig (0 to 1 bar)

 Operating temperature:
 32°F to 125°F (0°C to 52°C)

 Low temperature
 -4°F to 125°F (-20°C to 52°C)

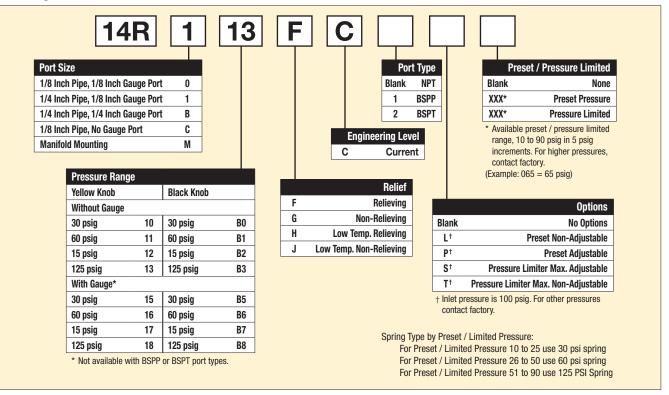
Flow capacity[†]:

High flow 1/8" 13 scfm (6.1 dm³/s, ANR) 1/4" 15 scfm (7.1 dm³/s, ANR)

Gauge ports (2): 1/8 or 1/4 inch
Weight: 0.3 lb (0.14 kg)

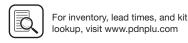
† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:









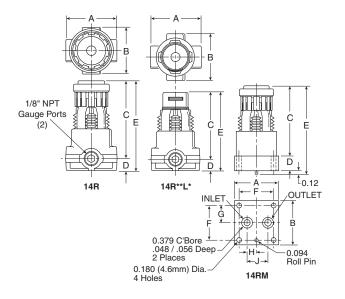
Miniature Regulators

Adjusting nut	Brass
Adjusting stem & spring	Steel
Body	Zinc
Bonnet, seat, piston & valve poppet	Plastic
Seals	Nitrile

Repair and Service Kits

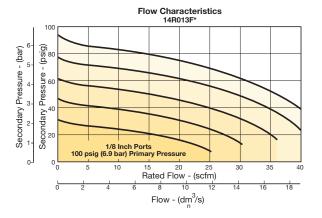
Bonnet assembly kit	L01369
Bonnet tamperproof kit	P01265
30 psig gauge, 1/8" NPT (0 to 2.1 bar)	K4515N18030
60 psig gauge, 1/8" NPT (0 to 4.1 bar)	K4515N18060
160 psig gauge, 1/8" NPT (0 to 11.0 bar)	K4515N18160
60 psig gauge, 1/4" NPT (0 to 4.1 bar)	K4520N14060
160 psig gauge, 1/4" NPT (0 to 11.0 bar)	K4520N14160
Mounting bracket kit* (includes panel mount nut)	PS417BP
Plastic panel mount nuts*	P78652
Metal panel mount nuts*	P01531
Unbalanced non-relieving, poppet / piston kit	PS428P
Unbalanced relieving, poppet / piston kit	PS426P
1-15 psig spring (yellow)	P01176
1-30 psig spring (black)	P01175
1-60 psig spring (white)	P01174
2-125 psig spring (gold)	P01173

^{*} Tighten panel mount nut 2.8 to 3.4 Nm (25 to 30 in-lbs) of torque.

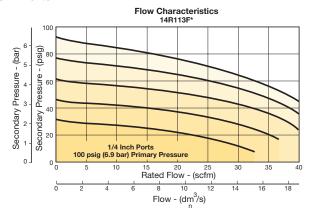


Flow Charts

1/8" Ports



1/4" Ports



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



(Revised 05-14-20)

Pilot

P3A-R Regulators – Miniature

- · Lightweight plastic body
- Non-rising adjusting knob
- · Solid control piston with lip seal for extended life
- Unbalanced poppet standard
- Two full flow 1/8" gauge ports
- · Reverse flow capability
- 1/8", 1/4" ports (NPT)



Port Size	Description	Part Number
1/4"	Without Gauge	P3A-RN92YNNN

NOTE: 1.218 Dia. (31 mm) hole required for panel mounting.



Operating information

Supply pressure (max): 120 psig (8.3 bar)

Secondary pressure:

15 psig spring 1 to 15 psig (0.07 to 1.0 bar) 30 psig spring 6 to 30 psig (0.4 to 2.1 bar) 60 psig spring 6 to 60 psig (0.4 to 4.1 bar) 110 psig spring 6 to 110 psig (0.4 to 7.6 bar) Operating temperature: 32°F to 125°F (0°C to 52°C)

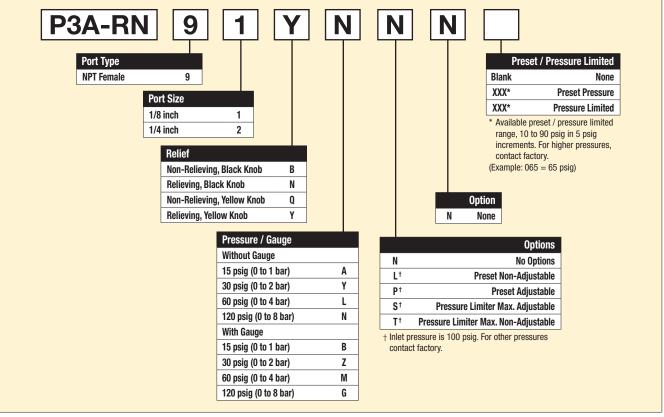
Flow capacity[†]:

High flow 1/8" 13 scfm (6.1 dm³/s, ANR) 1/4" 15 scfm (7.1 dm³/s, ANR)

Gauge ports (2): 1/8 inch
Weight: 0.3 lb (0.14 kg)

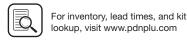
† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:



Most popular.





Air Preparation Products

P3A-R Series

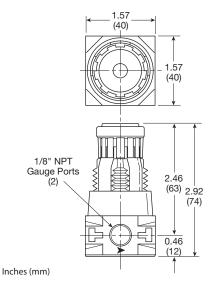
Material Specifications

Adjusting nut	Brass
Adjusting stem & spring	Steel
Poppet return spring	Stainless Steel
Body	Plastic
Bonnet, seat & piston	Plastic
Seals	Nitrile
Valve poppet	Plastic & nitrile

Repair and Service Kits

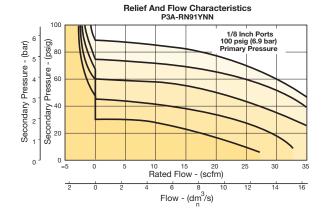
30 psig gauge, 1/8" NPT (0 to 2.1 bar)	K4515N18030
60 psig gauge, 1/8" NPT (0 to 4.1 bar)	K4515N18060
160 psig gauge, 1/8" NPT (0 to 11.0 bar)	K4515N18160
Mounting bracket kit* (includes panel mount nut)	PS417BP
Panel mount nut*	P78652
Unbalanced non-relieving, poppet / piston kit	PS428P
Unbalanced relieving, poppet / piston kit	PS426P
1-15 psig Spring (yellow)	P01176
1-30 psig spring (black)	P01175
1-60 psig spring (white)	P01174
5-110 psig spring (gold)	P01173

^{*} Tighten panel mount nut 2.8 to 3.4 Nm (25 to 30 in-lbs) of torque.

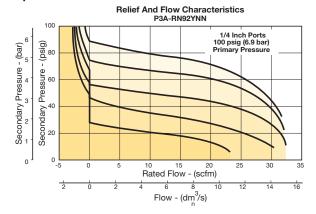


Flow Charts

1/8" port



1/4" port



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

K5

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Miniature Regulators

Genera

Dial

Pilot

Proportional

Precision

R34 Regulators - Miniature

- Diaphragm operated for fast response
- Large diaphragm to valve area ratio for precise regulation and high flow capacity
- Balanced valve design for precise regulation
- Available in 2 or 4 port design
- Available with a manifold mount to minimize plumbing
- Suitable for low temperature applications
- Non-rising adjusting knob
- 1/8", 1/4" ports (NPT, BSPP)





Non	-Relievino

Port		Part Number	
Size	Description	Without Gaug	e With Gauge
1/8"	Relieving, 0 to 30 psig	R344-01A	R344-01AG
1/8"	Relieving, 0 to 60 psig	R344-01B	R344-01BG
1/8"	Relieving, 0 to 125 psig	R344-01C	R344-01CG
1/4"	Relieving, 0 to 30 psig	R344-02A	R344-02AG
1/4"	Relieving, 0 to 60 psig	R344-02B	R344-02BG
1/4"	Relieving, 0 to 125 psig	R344-02C	R344-02CG
Manifold	Relieving, 0 to 30 psig	R342-0MA	-
Manifold	Relieving, 0 to 60 psig	R342-0MB	-
Manifold	Relieving, 0 to 125 psig	R342-0MC	-
	·		





R344-02C

R342-0MC

Operating information

Supply pressure (max): 300 psig (0 to 20.7 bar)

Operating temperature: -40°F to 150°F (-40°C to 65.5°C)

Flow capacity[†]:

High flow 1/8" 17 scfm (8.0 dm³/s, ANR) 1/4" 19 scfm (8.9 dm³/s, ANR)

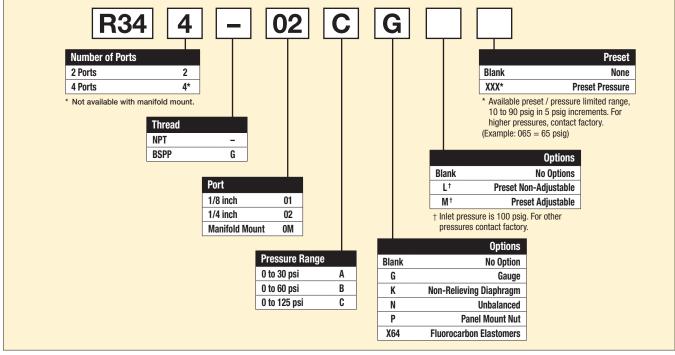
Gauge ports (2):

(no gauge port version available)

Weight: 0.25 lb (0.11 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:







www.parker.com/pneumatics

Material Specifications

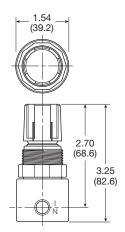
Miniature Regulators

Body	Aluminum
Bonnet	Acetal
Diaphragm & seals	Nitrile
Valve assembly	Brass
Springs	Steel
Panel Nut	Acetal

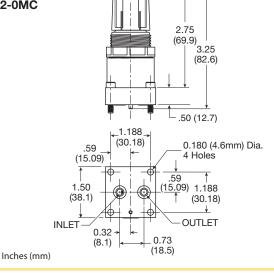
Repair and Service Kits

Diaphragm assembly, non-relieving	GRP-96-726
Diaphragm assembly, relieving	GRP-96-725
0 to 30 psig (0 to 2.1 bar), spring, regulating	GRP-95-111
0 to 60 psig (0 to 4.1 bar) spring, regulating	GRP-96-718
0 to 125 psig (0 to 8.6 bar) spring, regulating	GRP-96-717
Panel mount nut, aluminum	R05X51-A
Panel mount nut, plastic	R05X51-P
Mounting bracket kit (includes panel mount nut)	SA161X57
1-1/2" Dial Face, 1/8 NPT, CBM, 0 to 60 psig (0 to 4.1 bar), gauge	K4515N18060
1-1/2" Dial Face, 1/8 NPT, CBM,	
0 to 160 psig (0 to 11.0 bar), gauge	K4515N18160
Tamperproof knob kit	P31KB00AT

R342 / R344

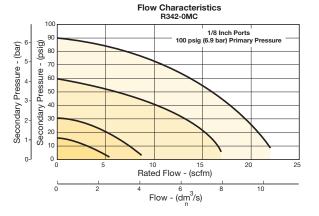


R342-0MC

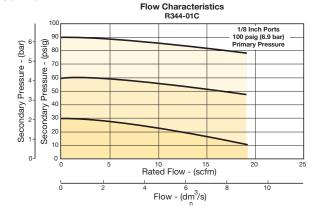


Flow Charts

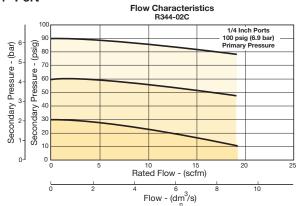
1/8" Manifold Mount



1/8" Port



1/4" Port



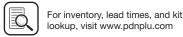
⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





Miniature Regulators

General

l di

Dial

Pilot

Proportional

Precision





roducts

R25 Regulators - Miniature

- Lightweight plastic body
- Unbalanced poppet standard
- Non-rising, push-to-lock adjusting knob
- Compact, 3.10 Inch (79 mm) high by 1.60 Inch (41 mm) wide
- Lightweight
- Diaphragm operated
- 1/8", 1/4" ports (NPT)





Port Size	Description	Part Number
1/8"	Relieving, 0-125 Reduced Pressure, without Gauge	R25-01C
1/4"	Relieving, 0-125 Reduced Pressure, without Gauge	R25-02C

NOTE: 1.250 Dia. (31.8 mm) hole required for panel mounting.

Operating information

Supply pressure (max): Inlet 150 psig (10.0 bar)

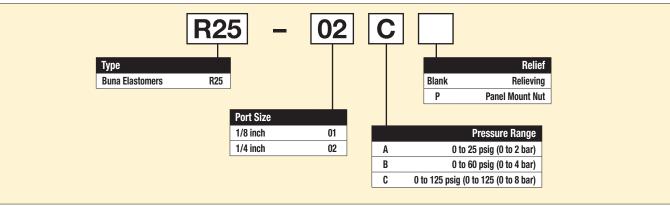
Operating temperature: 40°F to 125°F (4°C to 52°C)

Gauge ports (2): 1/8 inch

(can be used for full flow)

Weight: 0.25 lb (0.11 kg)

Ordering Information:

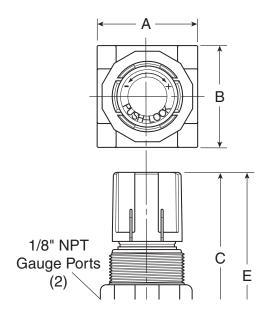




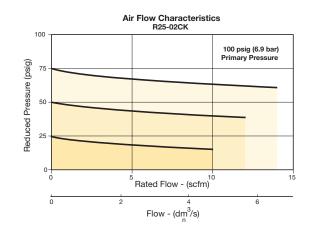
Adjusting screw	Steel
Body	Acetal
Bonnet and seat	Acetal
Diaphragm	Buna N
Seals	Buna N
Springs	Stainless steel
Valve poppet	Buna N

Repair and Service Kits

Panel mount nut, plastic	R05X51-P
Panel mount nut, aluminum	R05X51-A
Mounting bracket and nut	SA161X57
Relieving (Buna)	RKR25Y
Non-Relieving (Buna)	RKR25KY
0-25 psig spring	SPR-375-1
0-60 psig spring	SPR-376
0-125 psig spring	SPR-377



Flow Charts



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial control of the provided poly to provide design. For regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

General

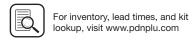
Dial

Pilot

Proportional

Precision

Water



Miniature Regulators

General

Je

Dial

Pilot

Proportional

Precision





Regulator Products

R45 Regulators - Miniature

- Lightweight plastic body
- Unbalanced poppet standard
- Non-rising, push-to-lock adjusting knob
- Compact, 3.43 inch (87.1 mm) high by 2.06 inch (52.3 mm) wide
- Lightweight
- Diaphragm operated
- 1/4", 3/8" ports (NPT, BSPP)



Port Size	Description	Part Number
1/4"	Relieving, 0-125 Reduced Pressure, without Gauge	R45-02C
3/8"	Relieving, 0-125 Reduced Pressure, without Gauge	R45-03C

NOTE: 1.250 Dia. (31.8 mm) hole required for panel mounting.



Operating information

Supply pressure (max): Inlet 150 psig (10.0 bar)

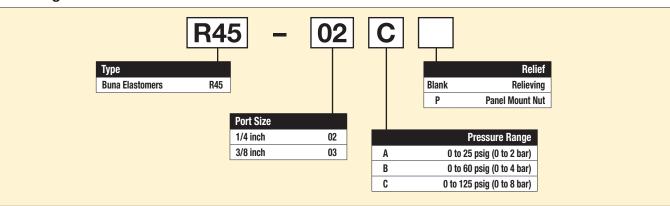
Operating temperature: 40°F to 125°F (4°C to 52°C)

Gauge ports (2):

(can be used for full flow)

Weight: 0.38 lb (0.17 kg)

Ordering Information:



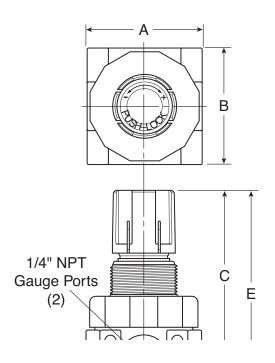




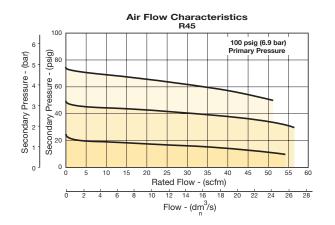
Adjusting screw	Steel
Body	Acetal
Bonnet and seat	Acetal
Diaphragm	Buna N
Seals	Buna N
Springs	Stainless steel
Valve Poppet	Buna N

Repair and Service Kits

•	
Panel mount nut, plastic	R05X51
Panel mount nut, aluminum	R05X51-A
Mounting bracket and nut	SA161X57
Relieving	RKR45Y
Non-Relieving	RKR45KY
0-25 psig spring	SPR-46
0-60 psig spring	SPR-47
0-125 psig spring	SPR-48



Flow Charts



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting. General

Dial

Pilot

Proportional

Precision

Water





Economy Regulators

General

Dial

Pilot

Proportional

Precision



Products

15R Regulators - Economy

- Solid control piston with resilient seat for service-free operation
- Non-rising "locking" adjusting knob
- Compact, 3.30 inch (84 mm) high by 2.12 inch (54 mm) wide
- Easily serviced
- 1/4", 3/8" ports (NPT)



Port Size	Description	Part Number
1/4"	Without Gauge	15R113FB
1/4"	With Gauge	15R118FB
3/8"	Without Gauge	15R213FB
3/8"	With Gauge	15R218FB

NOTE: 1.218 Dia. (31 mm) hole required for panel mounting.



Operating information

Supply pressure (max): 0 to 250 psig (0 to 17.2 bar)

Secondary pressure ranges

 Standard
 2 to 125 psig (0 to 8.6 bar)

 Medium
 1 to 60 psig (0 to 4.1 bar)

 Medium
 1 to 30 psig (0 to 1.7 bar)

 Low
 1 to 15 psig (0 to 1 bar)

 Operating temperature:
 32°F to 125°F (0°C to 52°C)

Flow capacity[†]:

Low temperature

High flow 1/4" 3/8"

21 scfm (9.9 dm³/s, ANR) 28 scfm (13.2 dm³/s, ANR)

-4°F to 125°F (-20°C to 52°C)

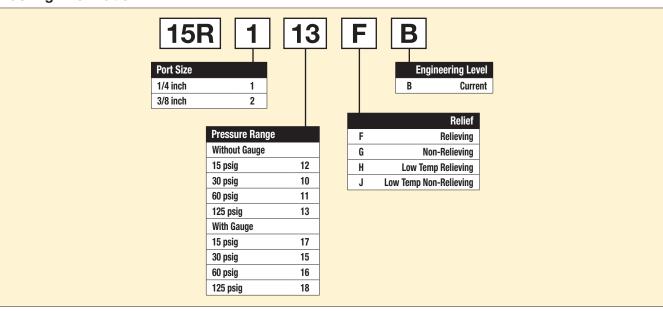
Gauge ports (2): 1/4 inch

(can be used at full flow)

Weight: 0.5 lb (0.23 kg)

 † scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:





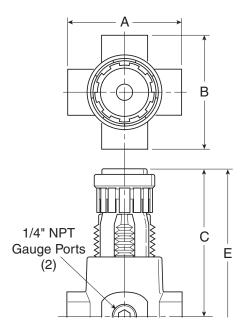


Adjusting nut	Brass
Adjusting stem & spring	Steel
Body	Zinc
Bonnet, seat, piston & valve poppet	Plastic
Seals	Nitrile

Repair and Service Kits

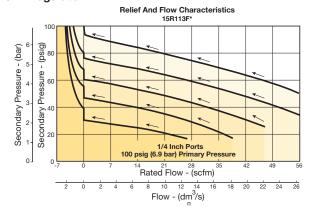
Body Service Kit – Unbalanced	PS424BP
Bonnet Assembly Kit	L01369
30 psig, 1/8" NPT (0 to 2.1 bar) gauge	K4515N18030
60 psig, 1/8" NPT (0 to 4.1 bar) gauge	K4515N18060
160 psig, 1/8" NPT (0 to 11.0 bar) gauge	K4515N18160
60 psig, 1/4" NPT (0 to 4.1 bar) gauge	K4520N14060
160 psig, 1/4" NPT (0 to 11.0 bar) gauge	K4520N14160
Mounting bracket kit* (Includes panel mount nut)	PS417BP
Panel mount nuts*, plastic	P78652
Panel mount nuts*, metal	P01531
Poppet / piston kit, unbalanced, non-relieving	PS428P
Poppet / piston kit, unbalanced, relieving	PS426P
Seal, unbalanced	PS454B
1-15 psig spring (yellow)	P01176
1-30 psig spring (black)	P01175
1-60 psig spring (white)	P01174
2-125 psig spring (gold)	P01173
* T	

^{*} Tighten panel mount nut 2.8 to 3.4 Nm (25 to 30 in-lbs) of torque.

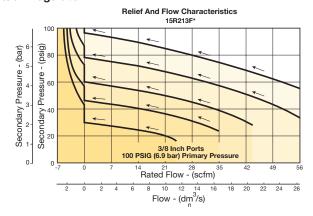


Flow Charts

1/4" Regulator



3/8" Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

K13

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Semi-Precision Regulators

General

Dia

Pilot

Proportional

Precision

27R Regulators - Semi-Precision

(Revised 12-2-20)

- Fine adjustment sensitivity
- Good repeatability and minimal pressure drop
- · High flow capacity
- Two 1/4" gauge ports
- Brass Poppet for long life
- Modular with 05 Series FRL
- Non-rising, removable knob
- Multiple porting options
- 1/4", 3/8" ports (NPT, BSPP, BSPT)





Operating information

Bleed rate: 0.033 scfm (0.016 dm³/s, ANR)

Effect of supply variation: 0.5 psig (0.04 bar) for 25 psig (1.7 bar) change P¹

Relief capacity: 0.5 scfm (0.24 dm³/s, ANR) @

5 psig (0.4 bar) increase P²

Flow capacity[†]: 28 scfm (13.2 dm³/s, ANR) @ 100 psig (6.9 bar) P¹ and

20 psig (1.4 bar) P²

Inlet pressure (max): 250 psig (17.2 bar)

Temperature rating: 32°F to 175°F (0°C to 80°C)
Relief flow: 5.0 scfm (2.4 dm³/s, ANR)
Repeatability: ± .5 psig (±0.034 bar)

Response: 510 ms

The valve will open to full flow and

fill a volume of 100 in³

Gauge ports (2): 1/4 inch
Weight: 1.0 lb (0.45 kg)

† scfm = Standard cubic feet per minute at 150 psig inlet, 90 psig no flow secondary setting and 5 psig pressure drop.

Ordering Information:

Port Size	Description	Part Number
1/4"	1-15 psi w/out Gauge, Relieving	27R112AD
1/4"	0-60 psi w/out Gauge, Relieving	27R114AD
1/4"	2-125 psi w/out Gauge, Relieving	27R113AD

NOTE: 1.53 Dia. (39 mm) hole required for panel mounting. Max panel thickness 1/4"



Most popular.



Air Preparation Products

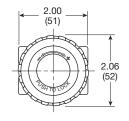
Regulator Products

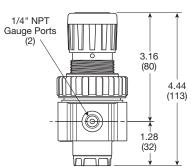
Material Specifications

Poppet	Brass
Bonnet	Plastic
Body	Zinc
Collar, knob	Plastic
Diaphragm	Nitrile
Bottom Cap	Plastic
Seals	Nitrile
Springs – poppet & control	Steel

Repair and Service Kits

riopaii aria ocivioc itito	
Bonnet assembly kit	PS910P
Control knob	P0442001
1-1/2" dial face 30 psig (0 to 2.1 bar), gauge	K4515N14030
1-1/2" dial face 60 psig (0 to 4.1 bar), gauge	K4515N14060
1-1/2" dial face 160 psig (0 to 11.0 bar), gauge	K4515N14160
1-1/2" dial face 300 psig (0 to 20.7 bar), gauge	K4515N14300
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
Mounting bracket kit	PS963P
Panel mount nut, metal	PS964P
Service kit	PS907P
1-30 psig spring	P04427
1-15 psig spring	P04428
0-60 psig spring	P04426
2-125 psig spring	P04425

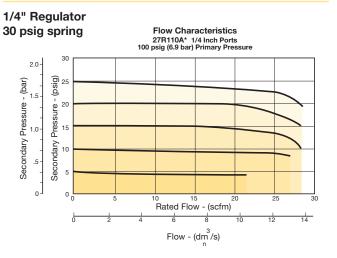


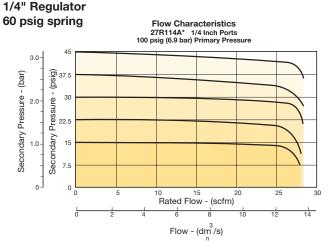


⚠ WARNING

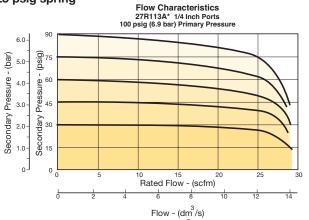
Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

Flow Charts









CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





www.parker.com/pneumatics

Dial

Pilot

Proportional

Precision

Water



Mini Regulators

Genera

Dial

P31 Regulators - Mini

- Integral 1/4" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Secondary pressure ranges
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation.
- Relieving & non-relieving types
- Non-rising knob





Self relieving regulator with gauge



Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
1/4"	125 psig (8 bar)	None	P31RB92BNNP
1/4"	125 psig (8 bar)	Square	P31RB92BN5P

Operating information

Flow capacity*: 1/4 68 scfm (32 dm³/s, ANR)

Operating temperature[†]: -4°F to 150°F (-20°C to 65.5°C) Supply pressure (max): 300 psig (20 bar)

Adjusting range pressure: 30 psig (0-2 bar) 60 psig (0-4 bar) 125 psig (0-8 bar) 232 psig (0-16 bar)

Gauge port (2 each)** 1/8 BSPP, BSPT, NPT

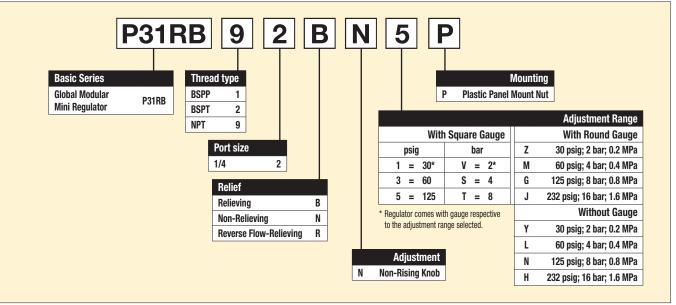
Weight: 0.37 lb (0.17 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar).

** Non-gauge option only.

Units with square gauges: 5°F to 150°F (-15°C to 65.5°C)

Ordering Information:







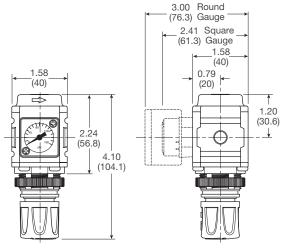
Air Preparation Products **Regulator Products**

Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Bonnet	PBT
Diaphragm assembly	Brass / Nitrile
Valve assembly	Brass / Nitrile
Springs	Steel
Seals	Nitrile
Panel nut	Acetal

Repair and Service Kits

Diaphagm repair kit - relieving	P31KB00RB
Diaphagm repair kit - non-relieving	P31KB00RC
Panel mount nut - aluminum	P31KA00MM
Panel mount nut - plastic	P31KA00MP
Angle bracket (attaches via panel nut)	P31KB00MR
C-bracket (fits to body)	P31KA00MW
T-bracket with body connector	P31KA00MT
Body connector	P31KA00CB
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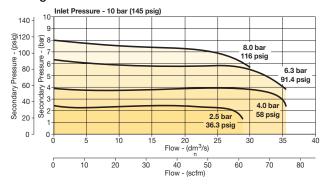


Inches (mm)

NOTE: 1.20 in. (30mm) hole required for panel nut mounting.

Flow Charts

1/4 Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

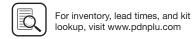
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Gauges

K17

Square flush	0-4 bar	K4511SCR04B
mount gauge	0-11 bar	K4511SCR11B
	0-60 psig	K4511SCR060
	0-160 psig	K4511SCR160
Square with	0-4 bar	P6G-PR10040
adapter kit	0-11 bar	P6G-PR10110
	0-60 psig	P6G-PR90060
	0-160 psig	P6G-PR90160
1.00" Round 1/8"	0-60 psig / 0-4 bar	K4510N18060
center back mount	0-160 psig / 0-11 bar	K4510N18160
40mm Round 1/8"	0-30 psig / 0-2 bar	K4515N18030
center back mount (Not for use with common	0-60 psig / 0-4 bar	K4515N18060
port regulators)	0-160 psig / 0-11 bar	K4515N18160

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Mini Common P1 Regulators

General

7

Dial

Pilot

Proportional

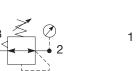
Precision

Water

K

P31 Common P1 Regulators - Mini

- · Manifold style regulator with line pressure on both sides
- Pressure output is at front or rear
- Inlet port 1/4" (NPT, BSPP & BSPT)
- Working port 1/8"
- Robust construction
- Secondary pressure ranges
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & non-relieving types
- Non-rising knob

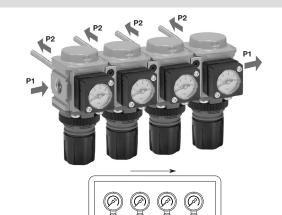


Self relieving regulator with gauge



Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
1/4"	125 psig (8 bar)	None	P31HB92BNNP
1/4"	125 psig (8 bar)	Square	P31HB92BN5P



Operating information

Flow capacity*:

1/4 42 scfm (20 dm³/s, ANR)

Operating temperature: -4°F to 150°F (-20°C to 65.5°C)

Supply pressure (max): 300 psig (20 bar)

Adjusting range pressure: 30 psig (0-2 bar)
60 psig (0-4 bar)

60 psig (0-4 bar) 125 psig (0-8 bar) 232 psig (0-16 bar) 1/4 NPT, BSPP, BSPT

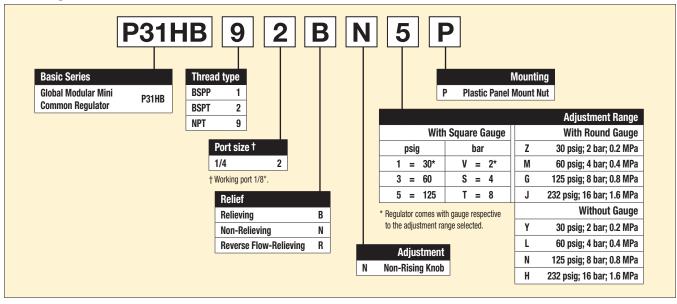
P1 port size (inlet/outlet) 1/4 NPT, BSPP, BSPT
P2 regulated ports (2 ea.) 1/8 NPT, BSPP, BSPT

Weight: 0.00 lb (0.00 lb)

Weight: 0.66 lb (0.30 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar).

Ordering Information:









Pilot

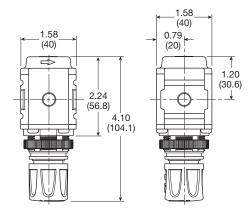
Mini Common P1 Regulators

Materials of Construction

Body	Aluminum
Adjustment knob	Acetal
Bonnet	Glass-filled PBT
Diaphragm assembly	Brass / Nitrile
Valve assembly	Brass / Nitrile

Repair and Service Kits

Diaphagm repair kit - relieving	P31KB00RB
Diaphagm repair kit - non-relieving	P31KB00RC
Panel mount nut - aluminum	P31KA00MM
Panel mount nut - plastic	P31KA00MP
Angle bracket (attaches via panel nut)	P31KB00MR
T-bracket with body connector	P31KA00MT
Body connector	P31KA00CB



Inches (mm)

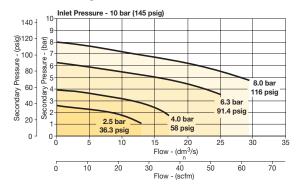
NOTE: 1.20 in. (30mm) hole required for panel nut mounting.

Flow Charts

1/4 Common Regulator

Air Preparation Products

Regulator Products



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

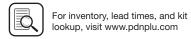
Gauges

K19

_		
Square with adapter kit	0-4 bar	P6G-PR10040
	0-11 bar	P6G-PR10110
	0-60 psig	P6G-PR90060
	0-160 psig	P6G-PR90160
1.00" round 1/8" center back mount	0-60 psig / 0-4 bar	K4510N18060
	0-160 psig / 0-11 bar	K4510N18160

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





Air Preparation Products **Regulator Products**

Economy Regulators

General

Dial

Pilot

Proportional

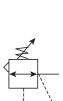
Precision



Regulator Products

05R Regulators - Economy

- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation.
- Rolling diaphragm for extended life.
- Removable non-rising knob for panel mounting and tamper resistance.
- Easily serviced.
- · Reverse Flow.
- 1/4", 3/8" ports (NPT, BSPP)



Description	Part Number
Without Gauge	05R113A*
With 160 Psi Gauge	05R118A*
Without Gauge	05R213A*
With 160 Psi Gauge	05R218A*
	Without Gauge With 160 Psi Gauge Without Gauge

NOTE: 1.53 Dia. (39 mm) hole required for panel mounting.



Operating information

Supply pressure (max): 0 to 300 psig (0 to 20.7 bar) For secondary pressure ranges see charts next page.

Operating temperature: 32°F to 175°F (0°C to 80°C) Low temperature -4°F to 125°F (-20°C to 52°C)

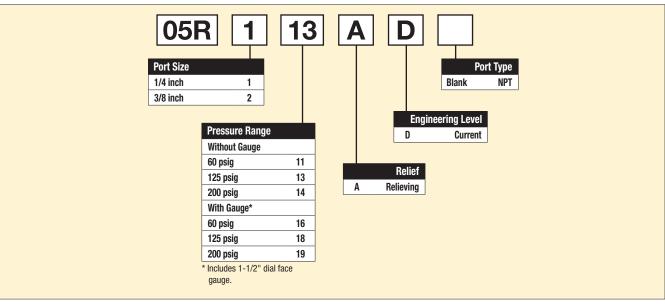
Flow capacity[†]:

High flow 1/4" 30 scfm (14.2 dm³/s, ANR) 3/8" 40 scfm (18.9 dm³/s, ANR)

Gauge ports (2): 1/4 inch
Weight: 1.1 lb (0.49 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:



Most popular.



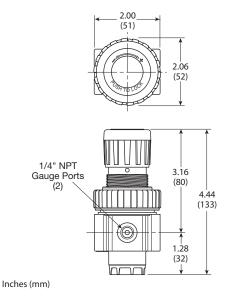


Material Specifications

Adjusting stem	Brass
Bonnet	Plastic
Body	Zinc
Collar, Knob	Plastic
Diaphragm	Nitrile
Poppet & cap	Plastic
Seals	Nitrile
Springs – poppet & control	Steel

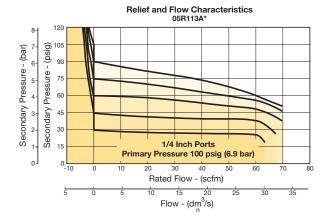
Repair and Service Kits

P04420
K4515N14030
K4515N14060
K4515N14160
K4515N14300
K4520N14060
K4520N14160
K4520N14300
PS963P
PS964P
P04427
P04426
P04425
P02934
PS908P

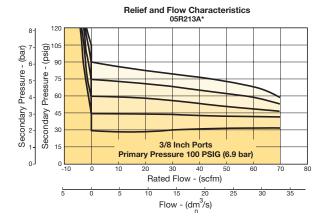


Flow Charts

1/4" Regulator



3/8" Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





Compact Regulators

06R Regulators - Compact

- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- · Rolling diaphragm for extended life
- Two high flow 1/4" gauge ports can be used as additional outlets
- · Easily serviced
- Removable non-rising knob for panel mounting and tamper resistance
- 1/4", 3/8", 1/2" ports (NPT, BSPP)



Port Size	Description	Part Number
1/4"	Without Gauge	06R113AC
1/4"	With 160 Psi Gauge	06R118AC
3/8"	Without Gauge	06R213AC
3/8"	With 160 Psi Gauge	06R218AC
1/2"	Without Gauge	06R313AC
1/2"	With 160 Psi Gauge	06R318AC

NOTE: 2.0 Dia. (51 mm) hole required for panel mounting.



Operating information

Supply pressure (max): 250 psig (17.2 bar)

Secondary pressure ranges:

 Standard
 2 to 125 psig (0 to 8.6 bar)

 Low
 1 to 60 psig (0 to 4.1 bar)

 High
 5 to 250 psig (0.4 to 17.2 bar)

 Operating temperature:
 32°F to 175°F (0°C to 80°C)

Low temperature

-4°F to 125°F (-20°C to 52°C)

Flow capacity[†]: High flow

Weight:

igh flow 1/4" 3/8" 53 scfm (25 dm³/s, ANR) 60 scfm (28.3 dm³/s, ANR) 75 scfm (35.4 dm³/s, ANR)

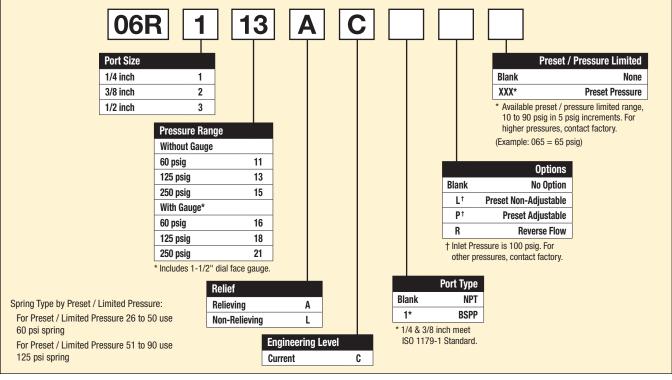
1/2" 75 scfm Gauge ports (2): 1/4 inch

(can be used as additional full flow 1/4 inch outlet ports)

1.6 lb (0.7 kg)

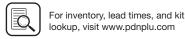
[†] scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:



Most popular.





Proportional

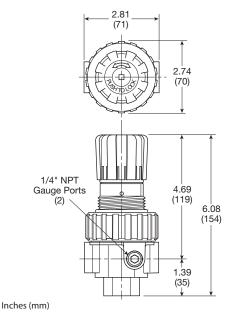
Compact Regulators

Material Specifications

Adjusting stem	Steel
Body	Zinc
Bonnet, piston stem, valve poppet & cap	Plastic
Collar, knob	Plastic
Diaphragm	Nitrile
Seals	Nitrile
Spring, poppet	Stainless
Spring, control	Steel

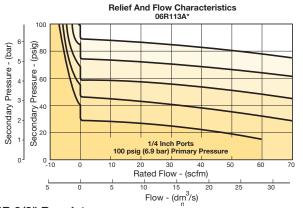
Repair and Service Kits

•	
Bonnet assembly kit	PS715P
Control knob	P04069B
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar) gauge	K4517N14160D
Mounting bracket kit (includes panel mount nut)	PS707P
Panel mount nut, plastic	P04082
Panel mount nut, metal	P04079B
Reverse flow service conversion kit, relieving	PS708RP
Relieving (includes poppet)	PS708P
Non-relieving (includes poppet)	PS709P
1-30 psig spring	P01698
1-60 psig spring	P04062
2-125 psig spring	P04063
5-250 psig spring	P04064
Tamperproof kit	PS737P

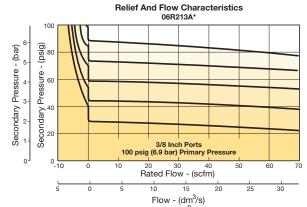


Flow Charts

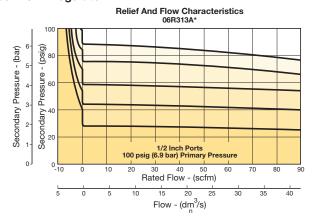
06R 1/4" Regulator



06R 3/8" Regulator



06R 1/2" Regulator



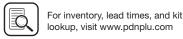
⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





Compact Regulators

Genera

Dial

Pilot

Proportional

Precision

Water



Regulator Products

P32 Regulators - Compact

- Integral 1/4", 3/8" or 1/2" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Secondary pressure ranges
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & non-relieving types
- Non-rising knob
- Available T-handle



Self relieving regulator with gauge

Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
1/4"	125 psig (8 bar)	None	P32RB92BNNP
1/4"	125 psig (8 bar)	Round	P32RB92BNGP
3/8"	125 psig (8 bar)	None	P32RB93BNNP
3/8"	125 psig (8 bar)	Round	P32RB93BNGP
1/2"	125 psig (8 bar)	None	P32RB94BNNP
1/2"	125 psig (8 bar)	Round	P32RB94BNGP

Operating information

Flow capacity*:

1/4 148 scfm (70 dm³/s, ANR) 3/8, 1/2 165 scfm (78 dm³/s, ANR) Operating temperature: -13°F to 150°F (-25°C to 65.5°C)

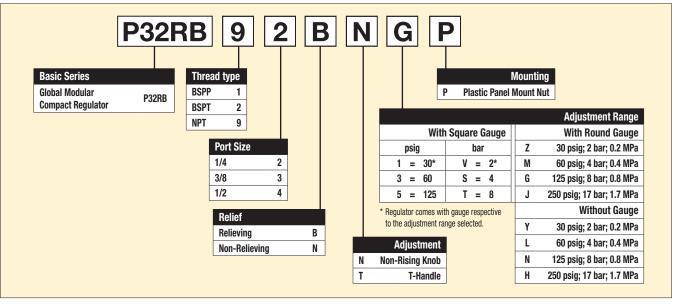
Supply pressure (max): 300 psig (20 bar)
Adjusting range pressure: 30 psig (0-2 bar)

60 psig (0-4 bar) 125 psig (0-8 bar) 250 psig (0-17 bar) 1/4 NPT, BSPP, BSPT

Gauge port (2 each) 1/4 NPT, BSPP, B3
Weight: 0.90 lb (0.41 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar).

Ordering Information:







Air Preparation Products **Regulator Products**

Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Bonnet	Glass-filled nylon
Diaphragm assembly	Nitrile / Zinc
Valve assembly	Brass / Nitrile
Springs	Steel, stainless steel
Seals	Nitrile
Panel nut	Acetal

Repair and Service Kits

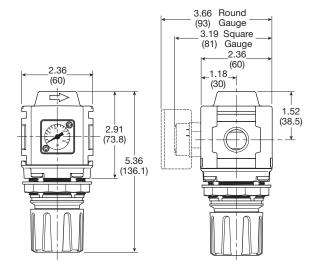
Diaphagm repair kit - relieving	P32KB00RB
Diaphagm repair kit - non-relieving	P32KB00RC
Panel mount nut - aluminum	P32KA00MM
Panel mount nut - plastic	P32KA00MP
Angle bracket (attaches via panel nut)	P32KB00MR
T-bracket with body connector	P32KA00MT
T-bracket	P32KA00MB
Body connector	P32KA00CB

MARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

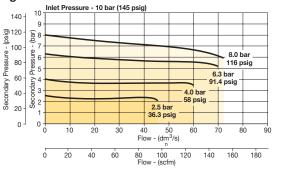


Inches (mm)

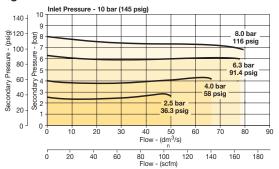
NOTE: 1.90 in. (48mm) hole required for panel nut mounting.

Flow Charts

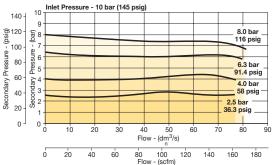
1/4 Regulator



3/8 Regulator



1/2 Regulator



Gauges

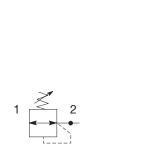
Square flush mount gauge	0-4 bar	K4511SCR04B
	0-11 bar	K4511SCR11B
	0-60 psig	K4511SCR060
	0-160 psig	K4511SCR160
Square with	0-4 bar	P6G-PR10040
adapter kit	0-11 bar	P6G-PR10110
	0-60 psig	P6G-PR90060
	0-160 psig	P6G-PR90160
50mm (2") round	0-30 psig / 0-2 bar	K4520N14030
1/4" center back mount	0-60 psig / 0-4 bar	K4520N14060
	0-160 psig / 0-11 bar	K4520N14160
	0-300 psig / 0-20 bar	K4520N14300

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



P32 Common - P1 Regulator - Compact

- Manifold style regulator with line pressure on both sides.
- Pressure output is at front or rear.
- Inlet ports 1/4", 3/8" or 1/2" (NPT, BSPP & BSPT)
- Working port 1/4"
- Robust construction
- Secondary pressure ranges
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & non-relieving types
- Non-rising knob



Non-relieving regulator

3 1 [≤]	*	2

Self relieving regulator with gauge

Port Size	Description (Relieving)	Gauge	Part Number
1/4"	125 psig (8 bar)	None	P32HB92BNNP
3/8"	125 psig (8 bar)	None	P32HB93BNNP
1/2"	125 psig (8 bar)	None	P32HB94BNNP

Operating information

Flow capacity*:

1/4, 3/8, 1/2 30 dm³/s (64 scfm)

Operating temperature: -25°C to 65.5°C (-13°F to 150°F)

Supply pressure (max): 300 psig (20 bar) Adjusting range pressure:

0 to 30 psig (0 to 2 bar) 0 to 60 psig (0 to 4 bar)

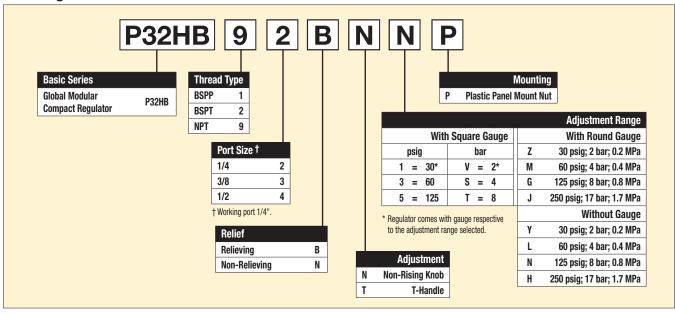
0 to 125 psig (0 to 8 bar) 0 to 232 psig (0 to 16 bar)

Gauge port (2 each): 1/4 NPT, BSPP, BSPT

Weight: 0.50 lb (1.10 kg)

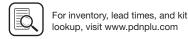
* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar).

Ordering Information:









Dial

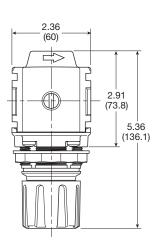
Compact Common P1 Precision Regulator

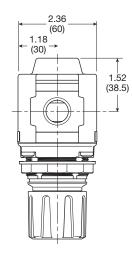
Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Bonnet	Glass-filled nylon
Diaphragm assembly	Nitrile / zinc
Valve assembly	Brass / nitrile
Springs	Steel, stainless steel
Seals	Nitrile
Panel nut	Acetal

Repair and Service Kits

Diaphagm repair kit - relieving	P32KB00RB
Diaphagm repair kit - non-relieving	P32KB00RC
Panel mount nut - aluminum	P32KA00MM
Panel mount nut - plastic	P32KA00MP
Angle bracket (attaches via panel nut)	P32KB00MR
T-bracket with body connector	P32KA00MT
T-bracket	P32KA00MB
Body connector	P32KA00CB



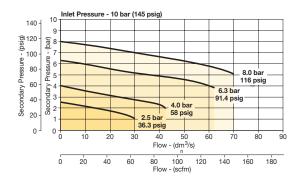


Inches (mm)

NOTE: 1.90 in. (48mm) hole required for panel nut mounting.

Flow Charts

P32 Common Port Regulator



⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

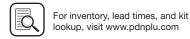
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Gauges

0-4 bar	K4511SCR04B
0-11 bar	K4511SCR11B
0-60 psig	K4511SCR060
0-160 psig	K4511SCR160
0-4 bar	P6G-PR10040
0-11 bar	P6G-PR10110
0-60 psig	P6G-PR90060
0-160 psig	P6G-PR90160
0-30 psig / 0-2 bar	K4520N14030
0-60 psig / 0-4 bar	K4520N14060
0-160 psig / 0-11 bar	K4520N14160
0-300 psig / 0-20 bar	K4520N14300
	0-11 bar 0-60 psig 0-160 psig 0-4 bar 0-60 psig 0-160 psig 0-160 psig 0-30 psig / 0-2 bar 0-60 psig / 0-4 bar 0-160 psig / 0-11 bar

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





Standard Regulators

Genera

Dial

Pilot

Proportional

Precision

Wdtel



Regulator Products

07R Regulators - Standard

- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Rolling diaphragm for extended life
- Two high flow 1/4" gauge ports can be used as additional outlets
- Easily serviced
- Removable non-rising knob for panel mounting and tamper resistance
- 1/2", 3/4" ports (NPT, BSPP)



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Port Size	Description	Part Number
1/2"	Without Gauge	07R313AC
1/2"	With 160 Psi Gauge	07R318AC
3/4"	Without Gauge	07R413AC
3/4"	With 160 Psi Gauge	07R418AC

NOTE: 2.0 Dia. (51 mm) hole required for panel mounting.

Operating information

Supply pressure (max): 250 psig (17.2 bar)

Secondary pressure ranges

 Standard
 2 to 125 psig (0 to 8.6 bar)

 Low
 1 to 60 psig (0 to 4.1 bar)

 High
 5 to 250 psig (0.4 to 17.2 bar)

Operating temperature: Low temperature 32°F to 175°F (0°C to 80°C) -4°F to 125°F (-20°C to 52°C)

Flow capacity[†]:

High flow 1/2" 3/4"

90 scfm (42.5 dm³/s, ANR) 90 scfm (42.5 dm³/s, ANR)

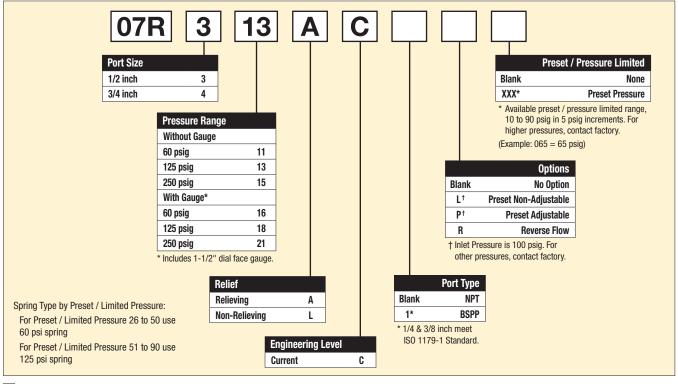
Gauge ports (2): 1/4 inch

(can be used as additional full flow 1/4 inch outlet ports)

Weight: 2.5 lb (1.1 kg)

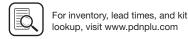
 † scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.

Ordering Information:









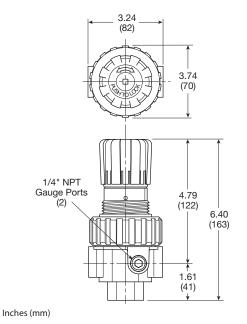
Air Preparation Products **Regulator Products**

Material Specifications

Adjusting stem	Steel
Body	Zinc
Bonnet, piston stem, valve poppet & cap	Plastic
Collar, knob	Plastic
Diaphragm	Nitrile
Seals	Nitrile
Spring, poppet	Stainless
Spring, control	Steel

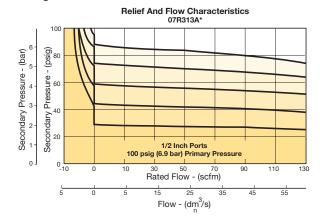
Repair and Service Kits

Repair and Service Kits	
Bonnet assembly kit	PS715P
Control knob	P04069B
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar), gauge	K4517N14160D
Mounting bracket kit (includes panel mount nut)	PS807P
Panel mount nut, plastic	P04082
Panel Mount nut, metal	P04079B
Reverse flow service conversion kit, relieving	PS808RP
Relieving (includes poppet)	PS808P
Non-relieving (includes poppet)	PS809P
1-30 psig spring	P01698
1-60 psig spring	P04062
2-125 psig spring	P04063
5-250 psig spring	P04064
Tamperproof kit	PS737P
<u> </u>	

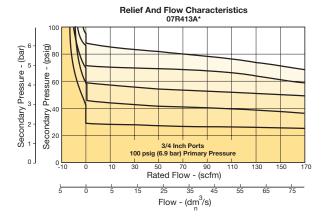


Flow Charts

1/2" Regulator



3/4" Regulator

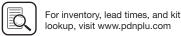


⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Standard Regulators

General

Dial

Pilot

P33 Regulators - Standard

- Integral 1/2" or 3/4" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Secondary pressure ranges
- · Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & non-relieving types
- Non-rising knob



Self relieving regulator with gauge



Non-relieving regulator

Port Size	Description (Relieving)	Gauge	Part Number
1/2"	125 psig (8 bar)	None	P33RA94BNNP
1/2"	125 psig (8 bar)	Round	P33RA94BNGP
3/4"	125 psig (8 bar)	None	P33RA96BNNP
3/4"	125 psig (8 bar)	Round	P33RA96BNGP



Operating information

Flow capacity*:

1/2, 3/4 233 scfm (110 dm³/s, ANR) -13°F to 150°F (-25°C to 65.5°C) Operating temperature:

Supply pressure (max): 300 psig (20 bar)

Adjusting range pressure: 0 to 30 psig (0 to 2 bar)

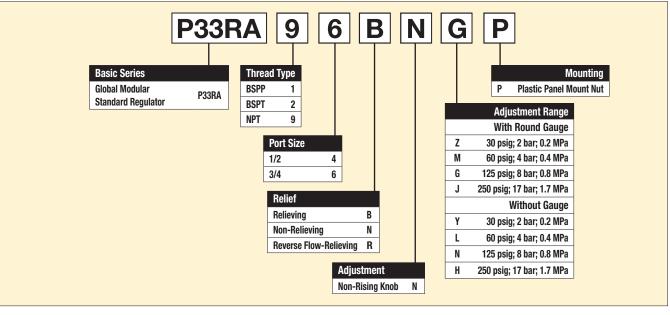
0 to 60 psig (0 to 4 bar) 0 to 125 psig (0 to 8 bar) 0 to 250 psig (0 to 17 bar) 1/4 NPT, BSPP, BSPT

Gauge port (2 each):

Weight: 1.61 lb (0.62 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar).

Ordering Information:







Air Preparation Products **Regulator Products**

Material Specifications

Standard Regulators

Body	Aluminum
Adjustment knob	Acetal
Body cap	ABS
Bonnet	Glass-filled nylon
Diaphragm assembly	Nitrile / zinc
Valve assembly	Brass / nitrile
Springs	Steel, stainless steel
Seals	Nitrile
Panel nut	Acetal

Repair and Service Kits

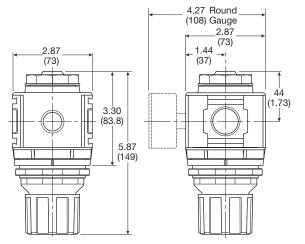
P33KA00RC
P33KA00MM
P33KA00MP
P33KA00MR
P32KA00MT
P32KA00MB
P32KA00CB

⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

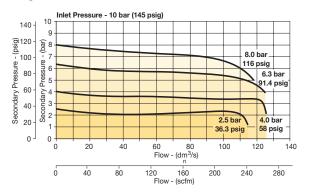


Inches (mm)

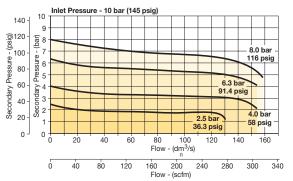
NOTE: 2.40 in. (61mm) hole required for panel nut mounting.

Flow Charts

1/2 Regulator



3/4 Regulator

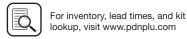


Gauges

50mm (2") round 1/4" center back mount	0-30 psig / 0-2 bar	K4520N14030
	0-60 psig / 0-4 bar	K4520N14060
	0-160 psig / 0-11 bar	K4520N14160
	0-300 psig / 0-20 bar	K4520N14300

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





Regulators

General

Dial

Pilot

Proportional

Precision

Water



P3Y Regulators

- Integral 3/4" or 1" ports (BSPP and NPT)
- Robust but lightweight aluminium construction
- Secondary pressure ranges 12 and 16 bar
- · Rolling diaphragm for extended life
- Secondary aspiration plus rolling diaphragm provides quick response and accurate pressure regulation
- Optional tamperproof regulator padlock
- Reverse flow / relieving option
- Low temperature -40°C (-40°F)



Self relieving regulator with gauge



Reverse flow relieving regulator



Non-relieving regulator

Port Size	Description	Part Number
3/4"	174 psig relieving	P3YRA96BNEN
3/4"	174 psig relieving + pressure gauge	P3YRA96BNFN
1"	174 psig relieving	P3YRA98BNEN
1"	174 psig relieving + pressure gauge	P3YRA98BNFN



Operating information

Supply pressure (max)*: 254 psig (17.5 bar)

Operating temperature: -40°F to 140°F (-40°C to 60°C)

Flow capacity[†]: 3/4" 380 scfm (179.3 dm³/s, ANR) 1" 550 scfm (259.6 dm³/s, ANR)

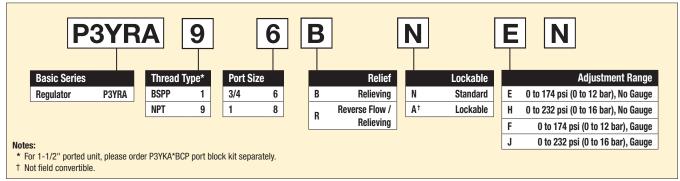
Fluid: Compressed air

Gauge port (x2) 1/4"

Weight: 2.4 lb (1.08 kg)

 † Inlet pressure 145 psig (10 bar) inlet pressure, 91.4 psig (6.3 bar) set pressure and 7.3 psig (0.5 bar) pressure drop.

* Air supply must be dry enough to avoid ice formation at temperatures below 35.6°F (2°C).









Pilot

Dial

Material specifications

Body	Aluminium
Bonnet	Glass filled polyamide
Regulator cover	ABS
Control knob	Glass filled polyamide
Valve	Brass / NBR
Seals	Nitrile NBR
Screws	Steel / zinc plated

Repair and Service Kits

Angle bracket + metal lock ring	P3YKA00MS
Panel mounting nut	P3YKA00MM
Diaphragm kit (relieving type)	P3YKA00RR
Diaphragm kit (non-relieving type)	P3YKA00RN
0 to 160 psig (0 to 10 bar), gauge 1/4" port	K4520N14160
0 to 300 psig (0 to 20 bar), gauge 1/4" port	K4520N14300

⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

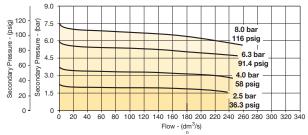
CAUTION:

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Air Preparation Products **Regulator Products**

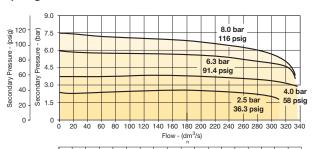
Flow characteristics

(3/4") Regulator

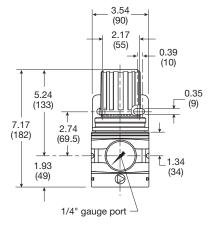


0 40 80 120 160 200 240 280 320 360 400 440 480 520 560 600 640 680 720

(1") Regulator

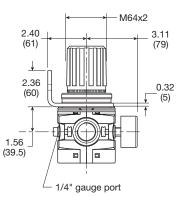


0 40 80 120 160 200 240 280 320 360 400 440 480 520 560 600 640 680 720 Flow - (scfm)

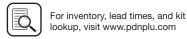


K31









P3NR Regulators - Hi-Flow

- Port blocks (PB) available to provide 1-1/2" port extension to 1" ported bodies
- Self relieving feature plus balanced poppet provides quick response and accurate pressure regulation
- Solid control piston for extended life
- 3/4", 1", 1-1/2" ports (NPT, BSPP)

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Port Size	Description	Part Number
3/4"	Without Gauge	P3NRA96BNN
3/4"	With 160 Psi Gauge	P3NRA96BNG
1"	Without Gauge	P3NRA98BNN
1"	With 160 Psi Gauge	P3NRA98BNG
1-1/2"#	Without Gauge	P3NRA9PBNN
1-1/2"#	With 160 Psi Gauge	P3NRA9PBNG

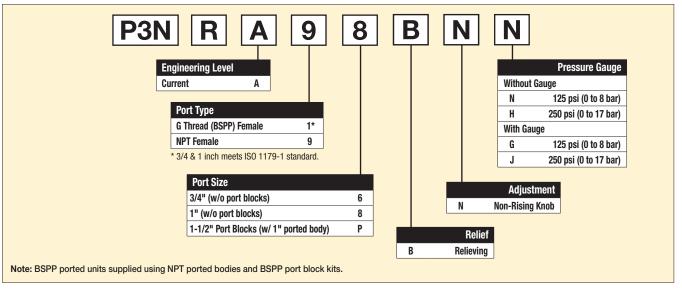
^{1&}quot; port body with 1-1/2" port block.

NOTE: 2.0 Dia. (51 mm) hole required for panel mounting.



Operating information		
Supply pressure	(max):	250 psig (17.2 bar)
Operating temper	rature:	32°F to 175°F (0°C to 80°C)
Flow capacity [†] : High flow	3/4" 1" 1-1/2"	200 scfm (94.4 dm³/s, ANR) 300 scfm (141.6 dm³/s, ANR) 300 scfm (141.6 dm³/s, ANR)
Gauge ports (2):		1/4 inch (can be used as additional full flow 1/4 inch outlet ports)
Weight:	3/4", 1" 1-1/2" #	4.2 lb (1.9 kg) 5.3 lb (2.4 kg)

- [†] scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.
- # 1" port body with 1-1/2 port block



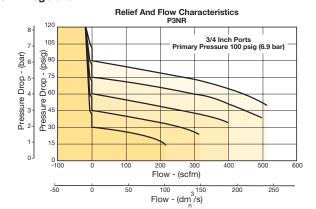




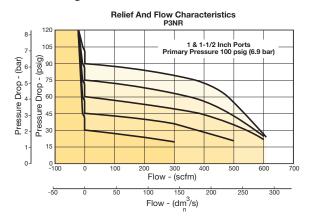
Air Preparation Products **Regulator Products**

Flow Charts

3/4" Regulator



1" & 1-1/2" Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

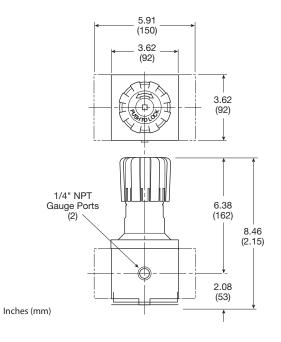
Material Specifications

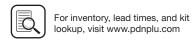
Adjusting stem	Steel
Body	Aluminum
Bonnet	Aluminum
Knob	Plastic
Piston	Plastic
Poppet assembly	Brass
Seals	Nitrile
Springs, poppet & control	Steel

Repair and Service Kits

Control knob	P3NKA00PN
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 70 11.0 bar), gauge	K4517N14160D
Mounting bracket kit*	P3NKA00MW
Relieving	P3NKA00RR
Non-relieving	P3NKA00RN
1-60 psig spring	C10A1304
2-125 psig spring	C10A1308
5-250 psig spring	C10A1317

^{*} If 1-1/2 BSPP E02 fittings are required, use P3NKA0BMW.





Standard Regulators

Genera

Dial

Pilot

Proportional

Precision

Water



Regulator Products

R119 Regulators - Standard

- High flow performance featuring rugged design for the most demanding applications
- Ideal for those installations calling for constant pressure with wide variation in flow
- Diaphragm operated design with balanced poppet design for quick and accurate regulation
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Heavy duty tee handle adjustment
- Reverse flow version available
- Panel mount version available
- 1/4", 3/8", 1/2" ports (NPT, BSPP)



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Port Size	Description (0-125 psig reduced pressure)	Part Number
1/4"	Without Gauge, Relieving, NPT	R119-02C
1/4"	With Gauge, Relieving, NPT	R119-02CG
3/8"	Without Gauge, Relieving, NPT	R119-03C
3/8"	With Gauge, Relieving, NPT	R119-03CG
1/2"	Without Gauge, Relieving, NPT	R119-04C
1/2"	With Gauge, Relieving, NPT	R119-04CG

Operating information Supply pressure (max): 300 psig (0 to 20.7 bar) Reduced pressure range: 2 to 125 psig (0.15 to 8.5 bar) Operating temperature: 40°F to 125°F (4.4°C to 52°C) Flow capacity†: 1/4" High flow 1/4" 3/8" 110 scfm (47.2 dm³/s, ANR) 1/2" 150 scfm (70.8 dm³/s, ANR) Gauge ports (2): 1/4 inch

1/4"

3/8"

1/2"

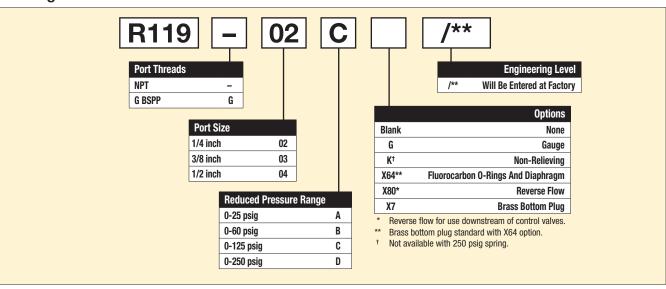
† scfm = Standard cubic feet per minute at 100 psig inlet, 75 psig no flow secondary setting and 20 psig pressure drop.

1.8 lb (0.82 kg)

1.8 lb (0.82 kg)

3.2 lb (1.45 kg)

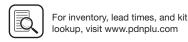
Ordering Information:



Weight:







Material Specifications

material operations	
Adjusting screw, springs	Steel
Body, spring cage	Zinc
Bottom plug	Nylon
Innervalve	Brass
Seals	Buna N

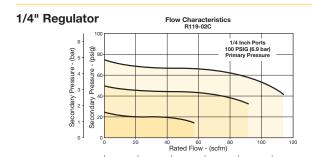
Repair and Service Kits

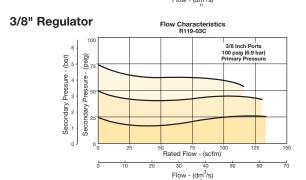
nepair and Service Kits	
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar), gauge	K4517N14160D
Mounting bracket, 1/4", 3/8"	SA15Y57
Mounting bracket, 1/2"	18A57
Panel mount conversion kit, 1/4", 3/8"	4202
Panel mount conversion kit, 1/2"	4204
Non-relieving diaphragm, valve assembly (1/4", 3/8"; all psig)	RK118Y
Relieving diaphragm, valve assembly (1/4", 3/8"; all psig)	RK119Y
Non-Relieving diaphragm, valve assembly (1/2"; 25, 60, 125 psig)	RK118A
Relieving diaphragm, valve assembly (1/2"; 25, 60, 125 psig)	RK119A
Relieving diaphragm, valve assembly (1/2"; 250 psig)	RK119A250
Spring cage & T-handle kit (1/4 & 3/8)	RKC119Y
Spring cage & insert only kit (1/2)	SAC18A3/BK
For fluorocarbon repair kits, add X64 to kit number suffix	

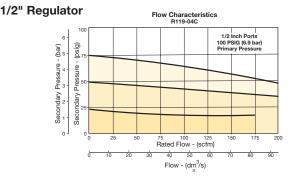
For fluorocarbon repair kits, add X64 to kit number suffix.

CAUTION:

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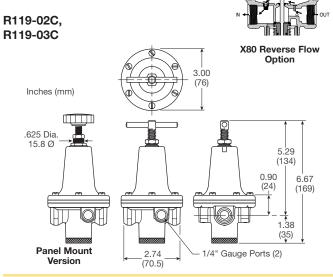


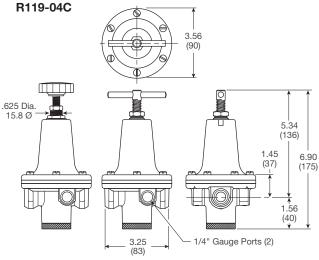




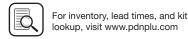
⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.









Air Preparation Products **Regulator Products**

Hi-Flow Regulators

Genera

Dial

Pilot

Proportional

Precision

R119 Regulators - Hi-Flow

- High flow performance featuring rugged design for the most demanding applications
- Ideal for those installations calling for constant pressure with wide variation in flow
- Diaphragm operated design with balanced poppet design for quick and accurate regulation
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Heavy duty tee handle adjustment
- Reverse flow version available
- 3/4", 1", 1-1/2" ports (NPT, BSPP)



Port Size	Description (0-125 psig reduced pressure)	Part Number
3/4"	Without gauge, relieving, NPT	R119-06C
3/4"	With gauge, relieving, NPT	R119-06CG
1"	Without gauge, relieving, NPT	R119-08C
1"	With gauge, relieving, NPT	R119-08CG
1-1/2"	Without gauge, relieving, NPT	R119-12C
1-1/2"	With gauge, relieving, NPT	R119-12CG



Operating information

Supply pressure (max): 300 psig (0 to 20.7 bar)

Reduced pressure range: 2 to 125 psig (0.15 to 8.5 bar)

Operating temperature: 40°F to 125°F (4.4°C to 52°C)

Flow capacity[†]:

High flow 3/4" 300 scfm (141.6 dm³/s, ANR)

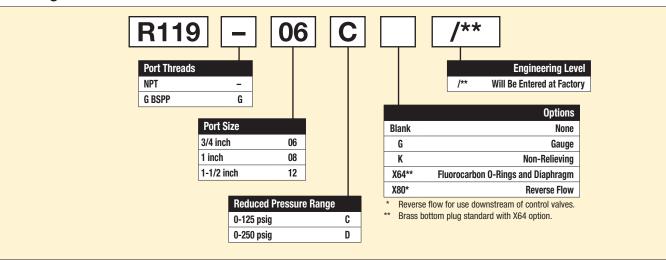
1" 400 scfm (188.8 dm³/s, ANR) 1-1/2" 500 scfm (236 dm³/s, ANR)

Gauge ports (2): 1/4 inch

Weight: 3/4" 6.2 lb (2.81 kg) 1" 6.2 lb (2.81 kg)

1" 6.2 lb (2.81 kg) 1-1/2" 7.2 lb (3.27 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet, 75 psig no flow secondary setting and 20 psig pressure drop.









Material Specifications

Hi-Flow Regulators

Adjusting screw, springs Steel	
Body, spring cage	Zinc
Bottom plug	Nylon
Innervalve	Brass
Seals	Buna N

Repair and Service Kits

2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar), gauge	K4517N14160D
Mounting bracket kit	18B57
Non-relieving diaphragm, valve assembly (3/4", 1")	RK118B
Non-relieving diaphragm, valve assembly (1-1/2")	RK118D
Relieving diaphragm, valve assembly (3/4", 1")	RK119B
Relieving diaphragm, valve assembly (1-1/2")	RK119D
For Fluoropping Denois Kita, add VC4 to Lit number outfliv	

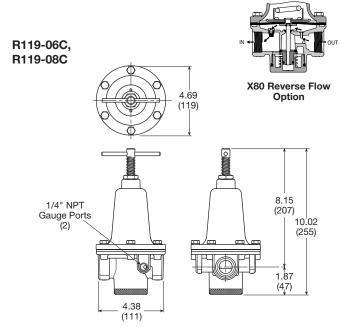
For Fluorocarbon Repair Kits, add X64 to kit number suffix.

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

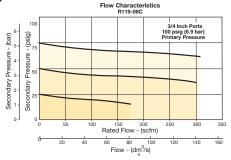
CAUTION:

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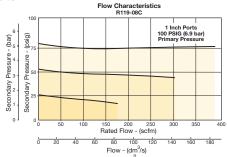


Flow Charts

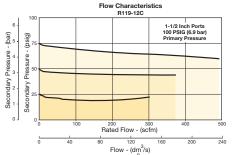
3/4" Regulator



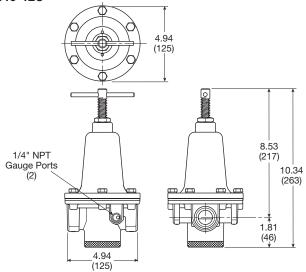
1" Regulator



1-1/2" Regulator

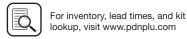


R119-12C



Inches (mm)





- High flow performance featuring rugged design for the most demanding applications
- Ideal for those installations calling for constant pressure with wide variation in flow
- Diaphragm operated with large surface area and aspirator for quick and precise regulation
- Heavy duty tee handle adjustment
- Panel mount version available
- 1/4", 3/8" ports (NPT BSPP)





Port		
Size	Description (Relieving Type)	Part Number
1/4"	Tee Handle, Without Gauge, NPT	R216-02F
1/4"	Hand Wheel Knob, Without Gauge, NPT	R216-02FP
3/8"	Tee Handle, Without Gauge, NPT	R216-03F
3/8"	Hand Wheel Knob, Without Gauge, NPT	R216-03FP

Operating information

Supply pressure: 300 psig (20.7 bar)

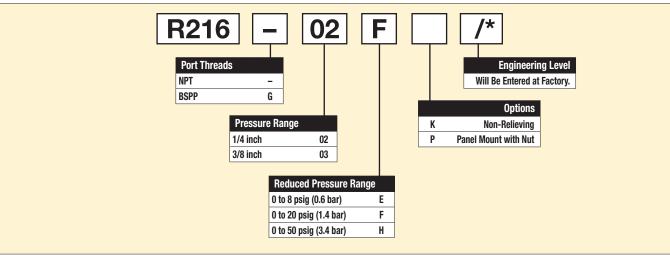
Reducted pressure range: 0.5 to 20 psig (0.03 to 1.4 bar)

Operating temperature: 40°F to 125°F (4.4°C to 52°C)

Flow capacity†: 40 scfm (19.3 dm³/s, ANR)

Gauge ports (1): 1/8 inch
Weight: 2.2 lb (100 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet, 75 psig no flow secondary setting and 20 psig pressure drop.









R216 1/4" & 3/8" Regulator

Material Specifications

Body, spring cage	Zinc
Bottom plug	Brass
Seals	Buna N

Repair and Service Kits

Round plastic knob	118Y51
Panel mount conversion kit (Spring cage, knob, hardware)	4206
Non-relieving diaphragm, valve assembly (1/4", 3/8")	RK216KY
Relieving diaphragm, valve assembly (1/4", 3/8")	RK216Y

Flow Characteristics R216 2.0 Secondary Pressure - (bar) - 20 - 20 1/4 & 3/8 Inch Ports 100 psig (6.9 bar) Primary Pressure Pressu Secondary Rated Flow - (scfm)

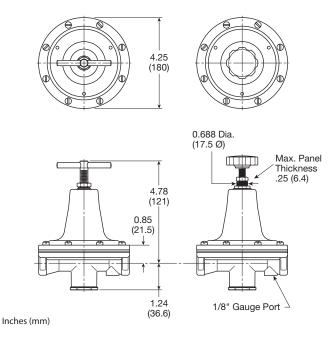
Flow - (dm³/s)

⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.







www.parker.com/pneumatics

Hi-Flow Regulators

General

_

Dial

Pilot

Proportional

Port Size

2"

Precision

Mare



Regulator Products

09R Regulators - Hi-Flow

- Piston design for reduced downtime
- High flow
- Balanced poppet for quick and accurate regulation.
- Two full flow 1/4" gauge ports which can be used as additional outlets
- · Self relieving piston standard

Description

Without gauge, relieving

• 2" ports (NPT)





Part Number

09R813BA



Operating information

 Supply pressure (max):
 300 psig (0 to 20.7 bar)

 Secondary pressure range:
 10 to 125 psig (0.7 to 8.6 bar)

 10 to 180 psig (0.7 to 12.4 bar)

 Operating temperature:
 32°F to 150°F (0°C to 65.6°C)

Flow capacity[†]:

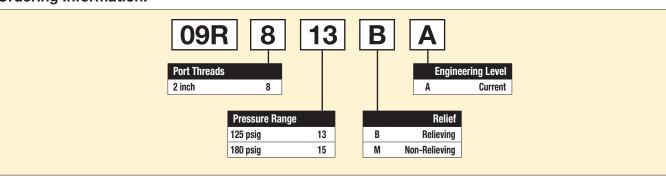
High flow 1000 scfm (472 dm³/s, ANR)

Gauge ports (2): 1/4 inch

(can be used as additional full flow 1/4 inch outlet ports)

eight: 10.82 lb (53 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.



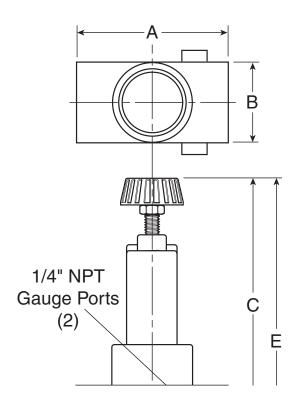


Material Specifications

•	
Adjusting stem & springs	Steel
Body	Zinc Alloy
Bonnet, piston stem, valve poppet & cap	Aluminum
Piston, cap	Plastic
Seals	Nitrile

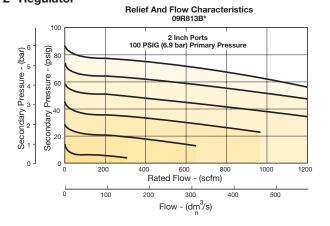
Repair and Service Kits

-	
Body service kit	PS603P
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar), gauge	K4517N14160D
Mounting bracket kit	PS605P
Non-relieving	PS604P
Relieving	PS626P
0 to 125 psig spring	PS602P
0 to 180 psig spring	PS627



Flow Charts

2" Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





General

Dial

Proportional

Pilot

Precision

51R Regulators - Relieving

- Pressure reference indicating dial face
- Non-rising, pressure-adjustment dial
- Self-relieving
- Full pressure adjustment in less than one full turn
- Recommended for pilot-air applications
- · Constant bleed, piston operated
- 1/4" port (NPT, BSPP)







Port Size	Description	Part Number
1/4"	Standard Pressure 5 to 160 psig (0.34 to 11 bar)	51R126RA
1/4"	Low Pressure 2 to 40 psig (0.14 to 3 bar)	51R125RA

Operating information

Adjusting pressure range: 2 to 40 psig (0 to 2.8 bar) 5 to 160 psig (0 to 11.0 bar)

Bleed Rate: 0.05 scfm (0.02 dm³/s, ANR)

Operating temperature (max): 32°F to 150°F (0°C to 65.6°C)

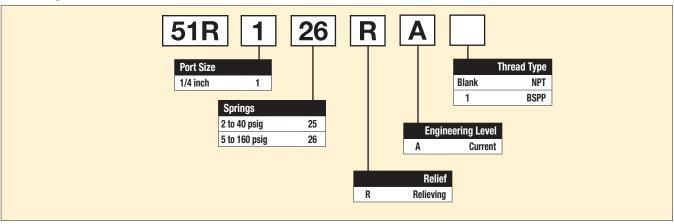
Supply pressure (max): 300 psig (20.7)

Flow capacity[†]: 0.7 scfm (0.3 dm³/s, ANR)

Weight: 1.3 lb (0.5 kg)

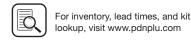
† scfm = Inlet pressure 100 psig (6.9 bar) inlet. Secondary pressure

90 psig (6.2 bar).









Air Preparation Products **Regulator Products**

Material Specifications

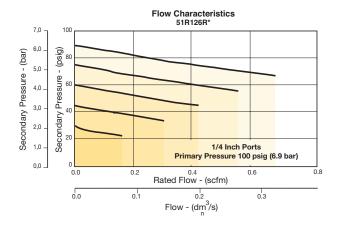
Body	Zinc
Bonnet	Zinc / brass
Piston	Acetal
Seals	Nitrile
Springs	Steel
Valve assembly	Brass / nitrile / acetal

Repair and Service Kits

Adjustment dial knob	RRP-16-024
O-ring, repair kit	GRP-95-260
Piston and bonnet repair kit	RRP-95-765
Spring, regulation, belleville washer, 2 to 40 psig (2.8 bar)	RRP-95-906
Spring, regulation, belleville washer, 5 to 160 psig (11.0 bar)	RRP-95-905
Tamper resistant kit	RRP-95-585
Valve, pilot with o-ring and valve spring	RRP-96-934

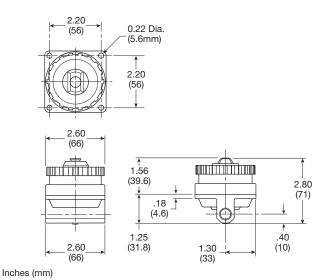
Flow Charts

51R 1/4" Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.



General

Dial

Pilot

Proportional

Precision

Water

K43

General

Dial

Pilot

Proportional

Precision

52R Regulators - Relieving

- Balanced poppet design
- Non-rising, pressure-adjusting dial
- High-relief flow (3/16" relief orifice)
- Two 1/4" gauge ports
- Constant bleed, piston operated
- 1/4", 3/8", 1/2", 3/4" ports (NPT, BSPP)



Port Size	Description	Part Number
1/4"	Standard Pressure 5 to 160 psig (0.34 to 11 bar)	52R126RA
1/4"	Low Pressure 2 to 40 psig (0.14 to 3 bar)	52R125RA
3/8"	Standard Pressure 5 to 160 psig (0.34 to 11 bar)	52R226RA
3/8"	Low Pressure 2 to 40 psig (0.14 to 3 bar)	52R225RA
1/2"	Standard Pressure 5 to 160 psig (0.34 to 11 bar)	52R326RA
1/2"	Low Pressure 2 to 40 psig (0.14 to 3 bar)	52R325RA
3/4"	Standard Pressure 5 to 160 psig (0.34 to 11 bar)	52R426RA
3/4"	Low Pressure 2 to 40 psig (0.14 to 3 bar)	52R425RA





Operating information

Adjusting pressure range: 2 to 40 psig (0 to 2.8 bar) 5 to 160 psig (0 to 11.0 bar) Bleed Rate: 0.05 scfm (0.02 dm³/s, ANR) Operating temperature (max): 32°F to 150°F (0°C to 65.6°C)

Supply pressure (max): 300 psig (20.7)

Flow capacity[†]: 1/4" 117 scfm (55.2 dm³/s, ANR) 3/8" 180 scfm (85 dm³/s, ANR) 1/2" 195 scfm (92 dm³/s, ANR)

3/4" Gauge ports: Two ports 1/4"

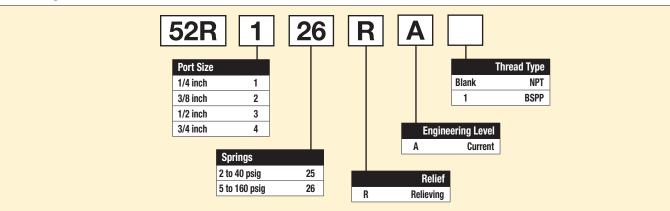
(can be used as additional high flow 1/4 inch outlet ports)

220 scfm (103.8 dm³/s, ANR)

2.3 lb (1.04 kg)

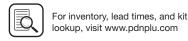
Weight: † scfm = Inlet pressure 100 psig (6.9 bar) inlet. Secondary pressure

90 psig (6.2 bar).









Air Preparation Products **Regulator Products**

Material specifications

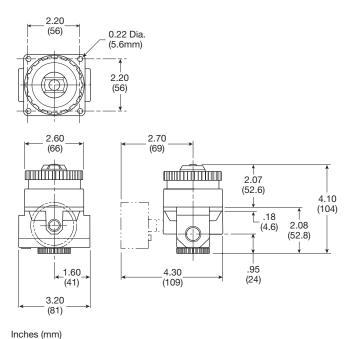
Body	Zinc
Bonnet	Zinc / brass
Piston	Acetal
Seals	Nitrile
Springs	Steel
Valve assembly	Brass / nitrile / acetal

Repair and Service Kits

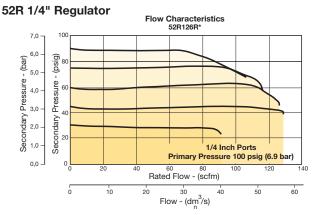
•	
Adjustment dial knob	RRP-16-024
O-ring, repair kit	GRP-95-260
Piston bottom and o-ring seal	RRP-95-192
Pistons and bonnet repair kit	RRP-95-766
Spring, regulation, belleville washer – 2 to 40 psig range	RRP-95-906
Spring, regulation, belleville washer – 5 to 160 psig range	RRP-95-905
Tamper resistant kit	RRP-95-585
Valve, main with U-cup seal & bottom plug	RRP-95-914
Valve, main with U-cup seal	RRP-95-151
Valve, pilot with o-ring and valve spring	RRP-96-934

↑ WARNING

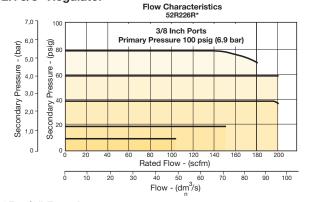
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.



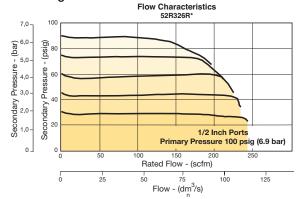
Flow Charts



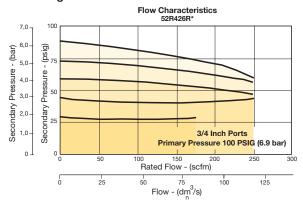
52R 3/8" Regulator



52R 1/2" Regulator



52R 3/4" Regulator



Dial

Pilot

Proportional

Precision

General

Dial

Pilot Proportional

Precision



Water

53R Regulators - Relieving

- Balanced poppet design
- Non-rising, pressure-adjusting dial
- High-relief flow (3/16" relief orifice)
- Two 1/4" gauge ports
- Constant bleed, piston operated
- 3/4", 1", 1-1/4" ports (NPT, BSPP)

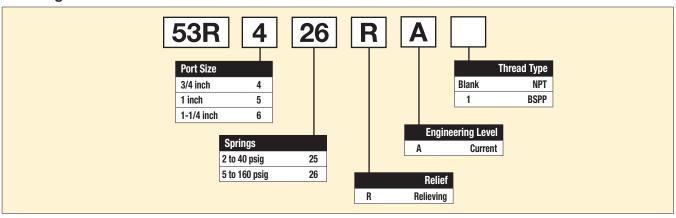




Port Size	Description	Part Number
3/4"	Standard pressure 5 to 160 psig (0.34 to 11 bar)	53R426RA
3/4"	Low Pressure 2 to 40 psig (0.14 to 3 bar)	53R425RA
1"	Standard pressure 5 to 160 psig (0.34 to 11 bar)	53R526RA
1"	Low Pressure 2 to 40 psig (0.14 to 3 bar)	53R525RA
1-1/4"	Standard Pressure 5 to 160 psig (0.34 to 11 bar)	53R626RA
1-1/4"	Low pressure 2 to 40 psig (0.14 to 3 bar)	53R625RA

Operating information			
Adjusting pressure	range:	2 to 40 psig (0 to 2.8 bar) 5 to 160 psig (0 to 11.0 bar)	
Bleed Rate:		0.05 scfm (0.02 dm ³ /s, ANR)	
Operating tempera	ture (max):	32°F to 150°F (0°C to 65.6°C)	
Supply pressure (m	ax):	300 psig (20.7)	
Flow capacity [†] :	3/4" 1" 1-1/4"	400 scfm (188.8 dm³/s, ANR) 650 scfm (306.8 dm³/s, ANR) 700 scfm (330.4 dm³/s, ANR)	
Gauge ports:		Two ports 1/4" (can be used as additional high flow 1/4 inch outlet ports)	
Weight:		2.3 lb (1.04 kg)	
† scfm = Inlet pressure 100 psig (6.9 bar) inlet. Secondary pressure			

Ordering Information:



80 psig (5.5 bar).







Air Preparation Products **Regulator Products**

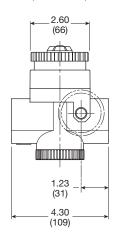
Material Specifications

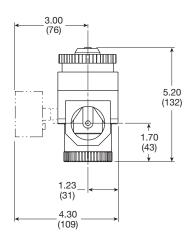
Body	Zinc
Bonnet	Zinc / brass
Piston	Acetal
Seals	Nitrile
Springs	Steel
Valve assembly	Brass / nitrile / acetal

Repair and Service Kits

Adjustment dial knob	RRP-16-024
O-ring, repair kit	GRP-95-261
Piston, bottom and o-ring seal	RRP-95-192
Pistons and bonnet repair kit	RRP-95-766
Spring, regulation, belleville washer – 2 to 40 psig range	RRP-95-906
Spring, regulation, belleville washer – 5 to 160 psig range	RRP-95-905
Tamper resistant kit	RRP-95-585
Valve, main with o-ring seal	RRP-95-152
Valve, pilot with o-ring and valve spring	RRP-96-935

2.20 0.22 Dia. (5.6mm) 2.20 (56)

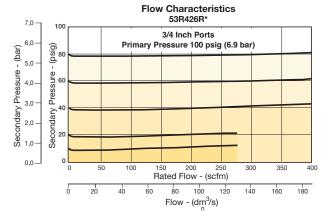




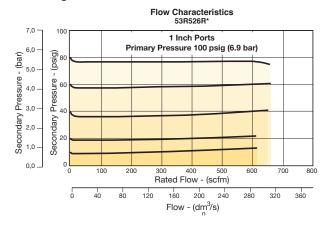
Inches (mm)

Flow Charts

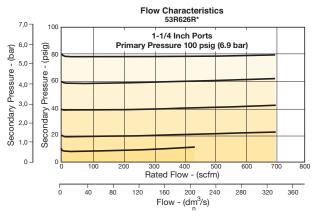
53R 3/4" Regulator



53R 1" Regulator



53R 31-14" Regulator



WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

K47

General

Dial

Pilot

Proportional Precision



Regulator Products

54R Regulators - Relieving

- Balanced poppet design
- Non-rising, pressure-adjusting dial
- High-relief flow (3/16" relief orifice)
- Two 1/4" gauge ports
- · Constant bleed, piston operated
- 1-1/2", 2" ports (NPT, BSPP)





Port Size	Description	Part Number
1-1/2"	Standard Pressure 5 to 160 psig (0.34 to 11 bar)	54R726RA
1-1/2"	Low Pressure 2 to 40 psig (0.14 to 3 bar)	54R725RA
2"	Standard Pressure 5 to 160 psig (0.34 to 11 bar)	54R826RA
2"	Low Pressure 2 to 40 psig (0.14 to 3 bar)	54R825RA

Operating information

Adjusting pressure range: 2 to 40 psig (0 to 2.8 bar) 5 to 160 psig (0 to 11.0 bar)

Bleed Rate: 0.05 scfm (0.02 dm³/s, ANR) 32°F to 150°F (0°C to 65.6°C) Operating temperature (max):

Supply pressure (max): 300 psig (20.7)

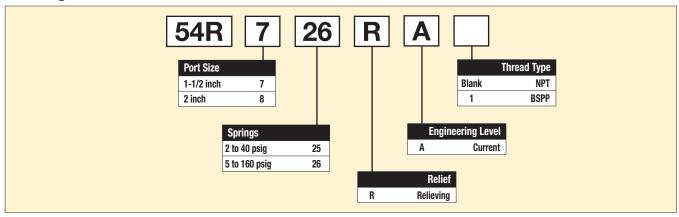
1-1/2" 2" Flow capacity[†]: 1,600 scfm (755 dm³/s, ANR) 1,600 scfm (755 dm³/s, ANR)

Two ports 1/4" Gauge ports:

(can be used as additional high flow 1/4 inch outlet ports)

Weight: 9 lb (4.1 kg)

[†] scfm = Inlet pressure 100 psig (6.9 bar) inlet. Secondary pressure 80 psig (5.5 bar).







Air Preparation Products **Regulator Products**

Material Specifications

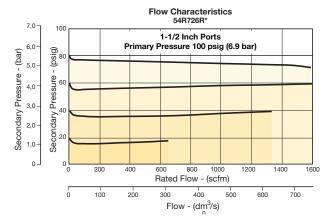
Body	Zinc
Bonnet	Zinc / brass
Piston	Zinc
Seals	Nitrile
Springs	Steel
Valve assembly	Brass / nitrile / acetal

Repair and Service Kits

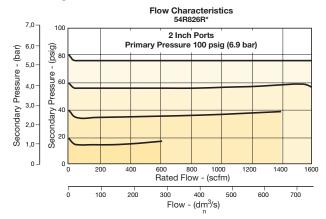
Hopan and Corrido Mito	
Adjustment dial knob	RRP-16-024
O-ring, repair kit	GRP-95-262
Piston, bottom and o-ring seal	RRP-95-192
Pistons and bonnet repair kit	RRP-95-766
Spring, regulation, belleville washer – 2 to 40 psig range	RRP-95-906
Spring, regulation, belleville washer – 5 to 160 psig range	RRP-95-905
Spring, main valve	RRP-95-024
Tamper resistant kit	RRP-95-585
Valve, main with o-ring seal	RRP-95-153
Valve, pilot with o-ring and valve spring	RRP-96-935

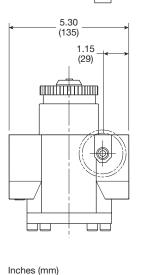
Flow Charts

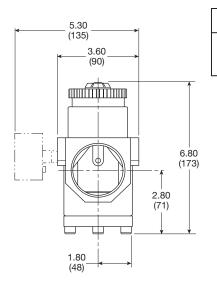
54R 1-1/2" Regulator



54R 2" Regulator







K49

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.





Compact Pilot Controlled Regulators

Genera

Dial

Pilot

Proportional

Precision





Regulator Products

11R Pilot Controlled Regulator - Compact

- Balanced poppet provides quick response and accurate pressure regulation
- Pilot controlled regulators can be mounted "out of reach" with pilot regulator installed in a convenient location
- Solid control piston for extended life
- Two full flow 1/4" gauge ports can be used as additional outlets
- Pilot port 1/4 Inch
- 1/4", 3/8", 1/2" ports (NPT, BSPP)



Port		
Size	Description	Part Number
1/4"	Without Gauge	11R115PC
1/4"	With 160 psi Gauge	11R121PC
3/8"	Without Gauge	11R215PC
3/8"	With 160 psi Gauge	11R221PC
1/2"	Without Gauge	11R315PC
1/2"	With 160 psi Gauge	11R321PC

NOTE: 2.0 Dia. (51 mm) hole required for panel mounting.



Operating information

Supply pressure (max): 0 to 250 psig (0 to 17.2 bar)

Operating temperature: 32°F to 175°F (0°C to 80°C)

Flow capacity[†]:

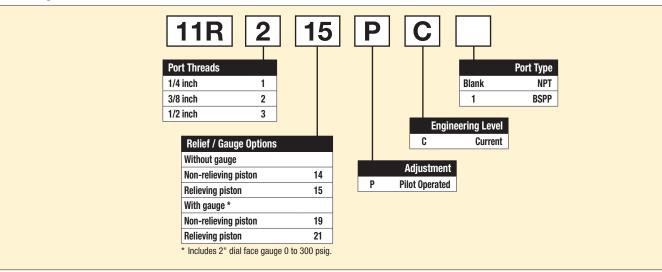
High flow 1/4" 85 scfm (40 dm³/s, ANR) 3/8" 95 scfm (44.8 dm³/s, ANR) 1/2" 95 scfm (44.8 dm³/s, ANR)

Gauge ports (2): 1/4 inch

(can be used as additional full flow 1/4 inch outlet ports)

Weight: 1.3 lb (0.53 kg)

 † scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.







Air Preparation Products

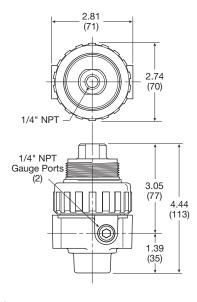
Regulator Products

Material Specifications

Body & pilot cap	Zinc
Piston, valve poppet, & collar	Plastic
Seals	Nitrile
Springs	Steel

Repair and Service Kits

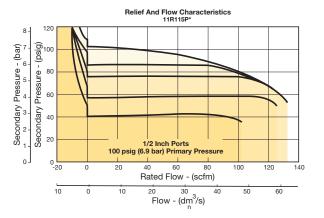
-	
Seat Insert kit	PS713P
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar), gauge	K4517N14160D
Mounting bracket kit (includes panel mount nut)	PS707P
Panel mount nut, plastic	P04082
Panel mount nut, metal	P04079B
Pilot conversion kit – relieving	PS745P
Non-Relieving	PS747P
Relieving	PS749P



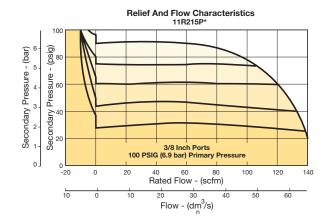
Inches (mm)

Flow Charts

1/2" Regulator



3/8" Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.



K51

Standard Pilot Controlled Regulators

General

Dial

Pilot

Proportional

Precision

Water



Regulator Products

12R Pilot Controlled Regulator - Standard

- Balanced poppet provides quick response and accurate pressure regulation
- Pilot controlled regulators can be mounted "out of reach" with pilot regulator installed in a convenient location
- · Solid control piston for extended life
- Two full flow 1/4" gauge ports can be used as additional outlets
- Pilot port 1/4 Inch
- 1/2", 3/4" ports (NPT, BSPP, BSPT)



Port Size	Description	Part Number
1/2"	Without Gauge	12R315PB
1/2"	With 160 psi Gauge	12R321PB
3/4"	Without Gauge	12R415PB
3/4"	With 160 psi Gauge	12R421PB

NOTE: 2.0 Dia. (51 mm) hole required for panel mounting.

Operating information

Supply pressure (max): 0 to 250 psig (0 to 17.2 bar)

Operating temperature: 32°F to 175°F (0°C to 80°C)

Flow capacity[†]: High flow

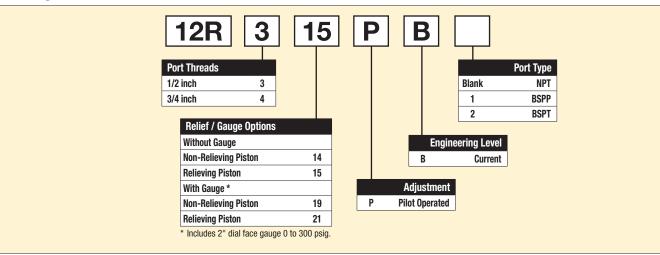
1/2" 140 scfm (66 dm³/s, ANR) 3/4" 140 scfm (66 dm³/s, ANR)

Gauge ports (2): 1/4 inc

(can be used as additional full flow 1/4 inch outlet ports)

Weight: 2.0 lb (0.91 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.







Body & pilot cap	Zinc
Piston, valve poppet, & collar	Plastic
Seals	Nitrile
Springs	Steel

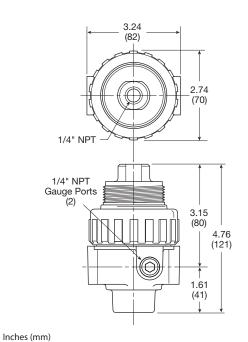
Repair and Service Kits

Seat insert kit	PS813P
2" dial face 60 psig (0 to 4.1 bar)	K4520N14060
2" dial face 160 psig (0 to 11.0 bar)	K4520N14160
2" dial face 300 psig (0 to 20.7 bar)	K4520N14300

1-3/4" digital round face 160 psig (0 to 11.0 bar)

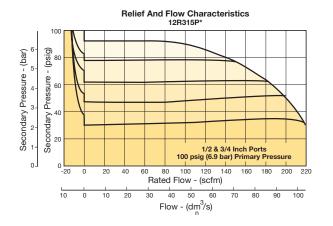
K4517N14160D

Mounting bracket kit (includes panel mount nut)	PS807P
Panel mount nut, plastic	P04082
Panel mount nut, metal	P04079B
Pilot conversion kit – relieving	PS745P
Non-relieving	PS847P
Relieving	PS849P



Flow Charts

1/2 and 3/4" Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.





Hi-Flow Pilot Controlled Regulators

General

7

Dial

Pilot

Proportional

Precision





Products

P3NR Pilot Controlled Regulator - Hi-Flow

- Port blocks (PB) available to provide 1-1/2" port extension to 1" ported bodies
- Self relieving feature plus balanced poppet provides quick response and accurate pressure regulation
- Solid control piston for extended life
- 3/4", 1" 1-1/2" ports (NPT, BSPP)

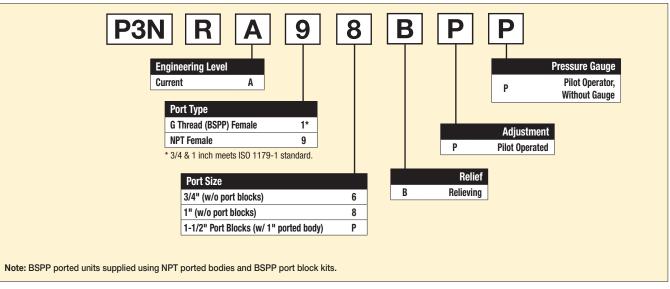


Port Size	Description	Part Number
3/4"	Without Gauge	P3NRA96BPP
1"	Without Gauge	P3NRA98BPP
1-1/2"#	Without Gauge	P3NRA9PBPP

^{* 1&}quot; port body with 1-1/2" port block.

Operating information			
Supply pressure (max):		250 psig (17.2 bar)	
Operating temperature:		32°F to 175°F (0°C to 80°C)	
Flow capacity [†] : High flow	3/4" 1" 1-1/2"	300 scfm (141.6 dm ³ /s, ANR) 300 scfm (141.6 dm ³ /s, ANR) 350 scfm (165.2 dm ³ /s, ANR)	
Gauge ports (2):		1/4 inch	
Weight:	3/4", 1" 1-1/2" #	3.3 lb (1.5 kg) 4.4 lb (2.0 kg)	
+ (0, 1 1 1			

[†] scfm = Standard cubic feet per minute at 100 psig inlet, 90 psig no flow secondary setting and 10 psig pressure drop.







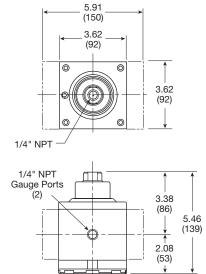
^{# 1&}quot; port body with 1-1/2 port block

Adjusting stem	Steel
Body	Aluminum
Bonnet	Aluminum
Piston	Plastic
Poppet assembly	Brass
Seals	Nitrile
Springs – poppet	Steel

Repair and Service Kits

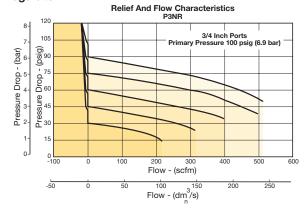
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 70 11.0 bar), gauge	K4517N14160D
Mounting bracket kit*	P3NKA00MW
Relieving	P3NKA00PD

^{*} If 1-1/2 BSPP E02 fittings are required, use P3NKA0BMW.

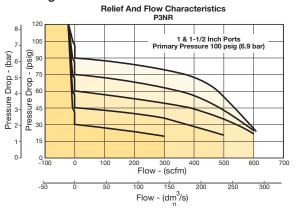


Flow Charts

3/4" Regulator



1" & 1-1/2" Regulator



⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.



Inches (mm)



K55

R119 Regulators

Genera

Dial

Pilot

Proportional

Precision



R119 - Pilot Operated Regulators

- Adapted for control by a remote or distant small pilot regulator. Ideal for maximum capacity requirements in applications where units are not readily accessible
- High flow performance featuring rugged design for the most demanding applications
- Ideal for those installations calling for constant pressure with wide variation in flow
- Diaphragm operated design with balanced poppet and constant bleed pilot for quick and accurate regulation.
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Reverse flow available
- 1/4", 3/8", 1/2" ports (NPT, BSPP)



Port Size	Description (0-125 psig reduced pressure)	Part Number
1/4"	Without Gauge, Relieving, NPT	R119-02J/M2
3/8"	Without Gauge, Relieving, NPT	R119-03J/M2
1/2"	Without Gauge, Relieving, NPT	R119-04J/M2



Operating information

Supply pressure (max): 300 psig (0 to 20.7 bar) Constant bleed from air pilot Air consumption: chamber: approx. 0.17 scfm

40°F to 125°F (4.4°C to 52°C) Operating temperature: 1/4", 3/8" thread - 1/8" Pilot pressure:

1/2" thread - 1/4"

Reduced pressure range: Adjustable to within 5 to 7 psig

(0.34 to 0.48 bar) of supply

pressure

Flow capacity[†]:

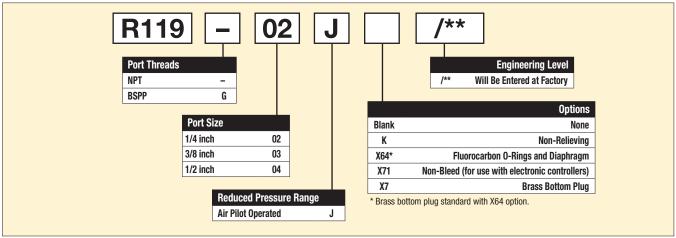
1/4" 100 scfm (47.2 dm³/s, ANR) High flow 3/8" 110 scfm (51.9 dm³/s, ANR) 1/2" 150 scfm (70.8 dm³/s, ANR)

1/4 inch

Gauge ports (2): Weight: 1/4" 1.6 lb (0.73 kg) 3/8" 1.6 lb (0.73 kg)

1/2" 2.6 lb (1.18 kg)

Ordering Information:



K56







[†] scfm = Standard cubic feet per minute at 100 psig inlet, 75 psig no flow secondary setting and 20 psig pressure drop.

R119 Regulators

Material Specifications

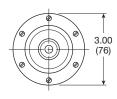
•	
Body, ring, top plate	Zinc
Bottom plug	Nylon
Innervalve	Brass
Seals	Buna N

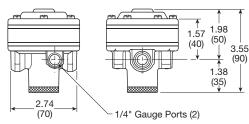
Repair and Service Kits

riopair aria oci vioc rato	
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar), gauge	K4517N14160D
Non-relieving diaphragm, valve assembly (1/2")	RK118X20A
Non-relieving diaphragm, valve assembly (1/4", 3/8")	RK118X20Y
Relieving diaphragm, valve assembly (1/2")	RK119X20A
Relieving diaphragm, valve assembly (1/4", 3/8")	RK119X20Y
E 6	

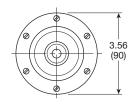
For fluorocarbon repair kits, add X64 to kit number suffix. For non-bleed pilot repair kits, add X71 to kit number suffix.

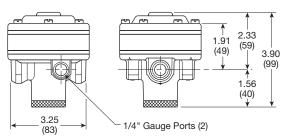
R119-02J, R119-03J





R119-04J



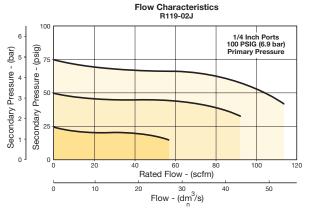


Inches (mm)

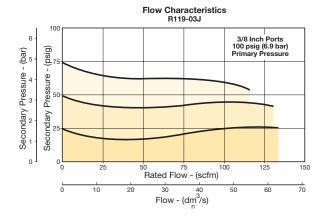
Air Preparation Products **Regulator Products**

Flow Charts

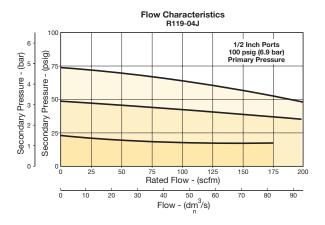
1/4" Regulator



3/8" Regulator



1/2" Regulator



MARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.





Hi-Flow Regulators

Genera

Dial

Pilot

Proportional

Precision

R119 Pilot Operated Regulators - Hi-Flow

- Adapted for control by a remote or distant small pilot regulator. Ideal for maximum capacity requirements in applications where units are not readily accessible
- High flow performance featuring rugged design for the most demanding applications
- Ideal for those installations calling for constant pressure with wide variation in flow
- Diaphragm operated design with balanced poppet and constant bleed pilot for quick and accurate regulation
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Reverse flow version available
- 3/4", 1", 1-1/2" ports (NPT, BSPP)



Size (0-125 psig reduced press	
3/4" Without gauge, relieving, NI	PT R119-06J/M2
1" Without gauge, relieving, NI	PT R119-08J/M2
1-1/2" Without gauge, relieving, NI	PT R119-12J/M2



Operating information

Supply pressure (max): 300 psig (0 to 20.7 bar)

Air consumption: Constant bleed from air pilot chamber: approx. 0.17 scfm

(10 scfh)

Operating temperature: 40°F to 125°F (4.4°C to 52°C)

Reduced pressure range: Adjustable to within 5 to 7 psig

(0.34 to 0.48 bar) of supply

pressure

Flow capacity[†]:

High flow

3/4" 300 scfm (141.6 dm³/s, ANR) 1" 300 scfm (141.6 dm³/s, ANR)

1-1/2"

500 scfm (236 dm³/s, ANR)

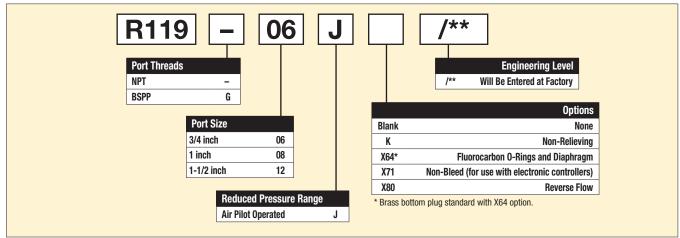
Gauge ports (2):

Weight:

3/4" 5.2 lb (2.36 kg)

1" 5.2 lb (2.36 kg) 1-1/2" 5.6 lb (2.54 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet, 75 psig no flow secondary setting and 20 psig pressure drop.









Air Preparation Products **Regulator Products**

Material Specifications

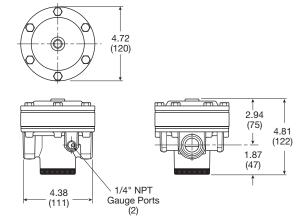
Body, ring, top plate	Zinc
Bottom plug, innervalve	Brass
Seals	Buna N

Repair and Service Kits

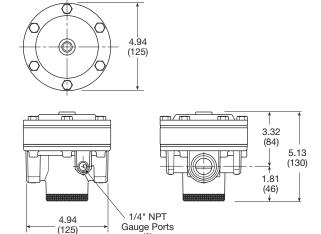
2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar), gauge	K4517N14160D
Non-relieving diaphragm, valve assembly (3/4", 1")	RK118X20B
Non-relieving diaphragm, valve assembly (1-1/4", 1-1/2")	RK118X20D
Relieving diaphragm, valve assembly (3/4", 1")	RK119X20B
Relieving diaphragm, valve assembly (1-1/4", 1-1/2")	RK119X20D

For Fluorocarbon Repair Kits, add X64 to Kit Number suffix.

R119-06J, R119-08J

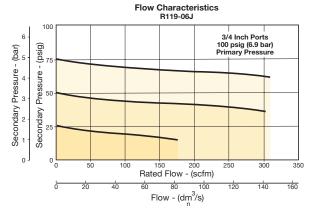


R119-12J

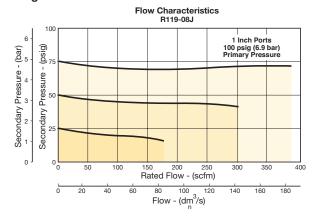


Flow Charts

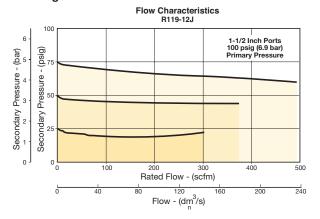
3/4" Regulator



1" Regulator



1-1/2" Regulator

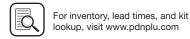


⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.







Hi-Flow Regulators

Genera

Dial

Pilot

Proportional

Precision





Regulator Products

R119 Pilot Operated Regulators - Hi-Flow

- Adapted for control by a remote or distant small pilot regulator. Ideal for maximum capacity requirements in applications where units are not readily accessible
- High flow performance featuring rugged design for the most demanding applications
- Ideal for those installations calling for constant pressure with wide variation in flow
- Piston operated design with balanced poppet and dual constant bleed for quick and accurate regulation
- 2", 2-1/2" ports (NPT, BSPP)





Port Size	Description (0-125 psig reduced pressure)	Part Number
2"	Without Gauge, Relieving, NPT	R119-16J
2-1/2"	Without Gauge, Relieving, NPT	R119-20J

Operating information

Supply pressure (max): 300 psig (0 to 20.7 bar)

Air consumption:

Constant bleed from Air pilot chamber: approx.

0.17 scfm (10 scfh)

Reduced pressure: approx.

0.17 scfm (10 scfh)

Operating temperature: 40°F to 120°F (4.4°C to 48.9°C)

Reduced pressure range: Adjustable to within 5 to 7 psig (0.34 to 0.48 bar) of supply

pressure

Flow capacity[†]:

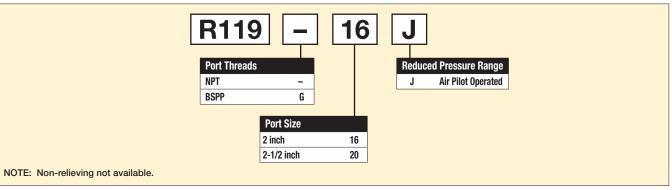
High flow 2" 1800 scfm (850 dm³/s, ANR) 2-1/2" 1800 scfm (850 dm³/s, ANR)

Gauge ports (2):

Can be used for full flow
High pressure outlet for pilot
Weight:

1/4 inch
1/4 inch
1/4 inch
1/5 lb (6.8 kg)

† scfm = Standard cubic feet per minute at 100 psig inlet, 75 psig no flow secondary setting and 20 psig pressure drop.









Air Preparation Products **Regulator Products**

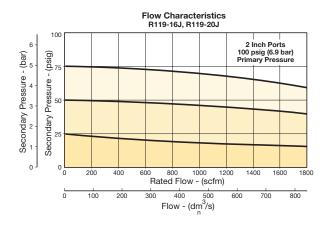
Material Specifications

Body, piston	Aluminum
Seals	Buna N
Innervalve	Brass & stainless

Repair and Service Kits

2" dial face 60 psig (0 to 4.1 bar), gauge	K4520N14060
2" dial face 160 psig (0 to 11.0 bar), gauge	K4520N14160
2" dial face 300 psig (0 to 20.7 bar), gauge	K4520N14300
1-3/4" digital round face 160 psig (0 to 11.0 bar), gauge	K4517N14160D
Piston type regulation (2", 2-1/2")	RK119G

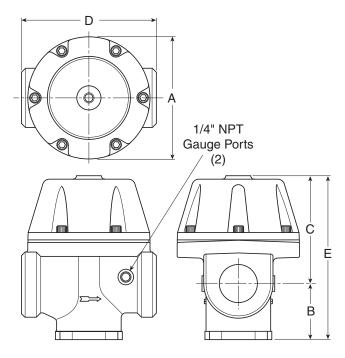
Flow Charts



⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

R119-16J, R119-20J





General

Dial

Pilot

Proportional

Regulator Products



Pilot Operated Regulators

General

Dial

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Proportional

Precision





Products

P3Y Pilot Operated Regulator

- Integral 3/4" or 1" ports (BSPP & NPT)
- Pilot controlled regulators can be mounted "out of reach" with pilot regulator installed in a convenient location
- Constant pilot bleed control for accurate pressure control
- Balanced poppet provides quick response
- · High flow





Port Size	Description	Part Number
3/4"	Pilot Operated Regulator	P3YRA96BPPN
1"	Pilot Operated Regulator	P3YRA98BPPN

Operating information

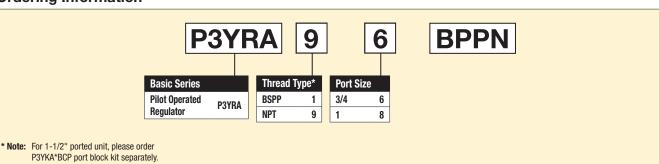
Supply pressure (max): 254 psig (17.5 bar)

Operating temperature: -40°F to 140°F (-40°C to 60°C)
Flow capacity†: 3/4" 550 scfm (259.6 dm³/s, ANR)
1" 550 scfm (259.6 dm³/s, ANR)

Fluid: Compressed air Weight: 2.6 lb (1.2 kg)

 † Inlet pressure 145 psig (10 bar) inlet pressure, 91.4 psig (6.3 bar) set pressure and 7.3 psig (0.5 bar) pressure drop.

Ordering Information



K62







Pilot

Water

Pilot Operated Regulators

Material specifications

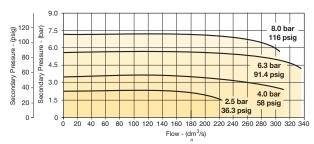
Body	Aluminium
Body cover	ABS
Valve	Brass / NBR composite
Pilot valve booster	Aluminum
Seals	Nitrile NBR
Screws	Zinc plated steel

⚠ WARNING

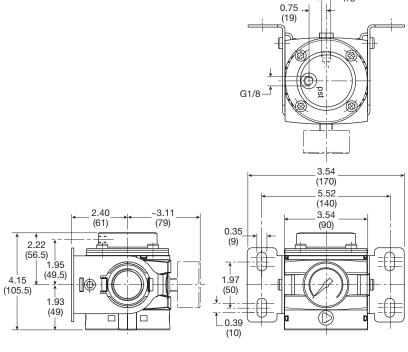
Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

Flow characteristics

3/4" and 1" Pilot Regulator



0 40 80 120 160 200 240 280 320 360 400 440 480 520 560 600 640 680 720



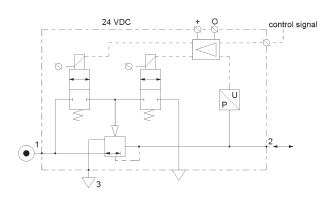






P31P & P32P Proportional Regulators

- Very fast response times
- Accurate output pressure
- Parameter settings
- Selectable I/O parameters
- · Quick, full flow exhaust
- LED display indicates output pressure
- No air consumption in steady state
- Multiple mounting options
- Protection to IP65



Port Size	Description	Part Number
1/4"	145 psig (0-10 bar), NC 0-10V	P31PA92AD2VD1A
1/2"	145 psig (0-10 bar), NC 0-10V	P32PA92AD2VD1A



P31P Series **Bottom exhaust**



P32P Series **Bottom exhaust**

Operating information

Flow capacity*: P31P 40 scfm (19 dm³/s, ANR) P32P 120 scfm (57 dm³/s, ANR)

Temperature range: 32°F to 122°F (0°C to 50°C)

Supply pressure (max):

2 bar unit 36.3 psig (2.5 bar) 10 bar unit 152 psig (10.5 bar)

Operating pressure (min): P2 pressure + 7.3 psig (0.5 bar) Compressed air or inert gasses,

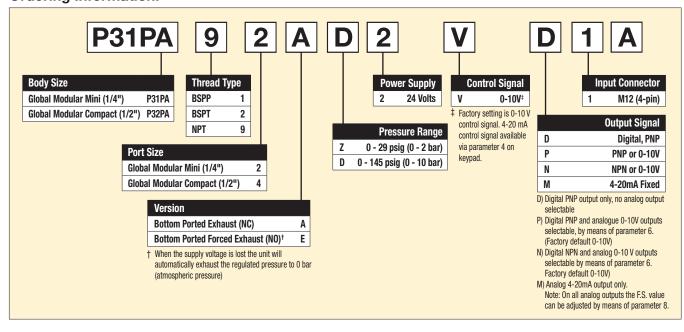
Working medium:

filtered to 40µ

Pressure range: 0 to 30 psig (0 to 2 bar) 0 to 145 psig (0 to 10 bar)

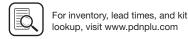
P31P 0.64 lb (0.291 kg) Weight: P32P 1.42 lb (0.645 kg)

* Inlet pressure 91.3 psig (6.3 bar), inlet pressure and 4.9 psig (0.34 bar) pressure drop.









Pilot

Dial

Proportional Regulators

Technical Information

Accuracy

+/- 1.0% of F.S.*

* Full scale (F.S.) - For 2 bar (29 psig) versions this will be 2 bar (29 psig), for the 10 bar (145 psig) version full scale will be 10 bar (145 psig).

Air consumption

No consumption in stable regulated situation.

Display

The regulator is provided with a digital display, indicating the output pressure, either in bar or psig.

The factory setting is as indicated on the label, can be changed through to software at all times (parameter 14)

Supply voltage

24 VDC +/- 10%

Power consumption

Max. 1.1W with unloaded signal outputs

Control signals

The electronic pressure regulator can be externally controlled through an analogue control signal of either 0-10V or 4-20mA. (parameter 4).

Output signals

As soon as the output pressure is within the signal band a signal is given of 24VDC, PNP Ri = 1 kOhm Outside the signal band this connection is 0V.

Connections

(In case of output signal (Option D) Central M12 connector 4-pole The electrical connections are as follows:

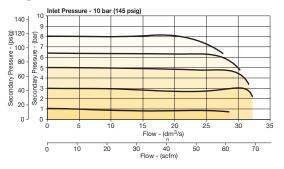
Pin N	lo.	Function	Color
1	24 V	Supply	Brown
2	0 to 10 V	Control Signal Ri = 100k Ω	White
2	4 to 20mA	Control Signal Ri = 500 Ω	vvriite
3	0 V (GND)	Supply & Set Point Ground	Blue
4	24 V	Alarm Output Signal	Black

Flow Charts

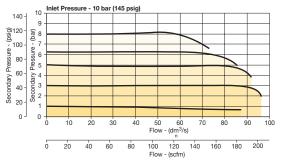
P31P Regulator 1/4" Ports

Regulator Products

Air Preparation Products



P32P Regulator 1/2" Ports



Degree of protection: IP65

EU conformity

CE: standard

EMC: according to directive 89/336/EEC This pressure regulator is in accordance with:

> EN 61000-6-1:2001 EN 61000-6-2:2001 EN 61000-6-3:2001 EN 61000-6-4:2001

Mounting position

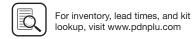
K65

Preferably vertical, with the cable gland on top.

Materials: P31P & P32P

Magnet core	Steel
Solenoid valve poppet	FPM
Solenoid valve housing	Techno polymer
Regulator body (P31P & P32P versions)	Aluminum
Regulator top housing	Nylon
Valve head	Brass & NBR
Remaining seals	NBR





How to change parameters - How to Videos available at www.parker.com/pneu/propreg

Pressing the Accept key "acc" for more than 3 seconds, will activate parameter change mode. The user can then select the parameters by pressing up or down key (display will show Pxx). When parameter number is correct, pressing accept again will enter parameter number (display will show parameter value).

Pressing the up or down key will change the parameter itself (display will flash indicating parameter editing mode). Pressing the accept key will accept the new parameter value (all digits will flash whilst being accepted).

After releasing all keys, the next parameter number will be presented on the display (you may step to the next parameter). When no key is pressed, after 3 seconds the display will show the actual output pressure.

When the unit is initially powered up allow approximately 10 seconds for the unit to "boot-up" before changing parameter settings.

Only parameter numbers 0, 4, 6, 8, 9, 14, 18, 19, 20, 12, 13 and 21 are accessible to edit. All other parameters are fixed.

Manual mode:

When keys DOWN and UP are pressed during startup, (connecting to the 24V power supply) manual mode is activated. This means that the user is able to in/decrease the output pressure of the regulator, by pressing the UP or DOWN key. During this action the display will blink, indicating that the manual mode is activated. After powering up again, the unit will revert back to normal mode.

Back to Factory Setting

After start up. (Power is on)

Entering this value in parameter 0 will store the calibrated factory data into the working parameters. (Default calibration data is used)

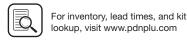
Parameter Nu	umber 0 – Res	et Back to Fa	ctory Settings			
Step	1	2	3	4	5	
Press	acc 3-6 seconds	or	acc	or	acc	
Until Display Reads	Pxx	P00	Flashing Decimal	Flashing Decimal	Flashing	PO 1
Description	Accesses changeable parameters.	Accesses parameter no. 0.	Displays current parameter value.	Edits parameter. 3 = standard factory settings. If other than 3, use Up or Down Arrow and accept 3	Accepts and saves new parameter setting.	Sequences to next parameter.

Set Control Signal

The unit is factory set for 0-10 V control signal. If 4-20 mA control signal is required, change parameter 4.

Parameter Number 4 – Set Control Signal in Volts or Milliamps								
Step	1	2	3	4	5			
Press	acc 3-6 seconds	or	acc	or	acc			
Until Display Reads	Pxx	PD4	Flashing Decimal	Flashing Decimal	Flashing	P05		
				Trasming Decimal	<u> </u>			
Description	Accesses changeable parameters.	Accesses parameter no. 4.	Displays current parameter value. 1 = V 0 = mA	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.		





Dial

Set Output Signal

Parameter 6 is used to set the type of output signal to your PLC. This parameter is used as follows:

Output Signal option "0" = Digital Output - PNP

Factory set at "0" Non Adjustable

Output Signal option "P" = Digital PNP or Analog 1-10V

- Factory set at "1" for Analog Signal
- Convert to Digital PNP by changing parameter to "0" setting

Output Signal option "N" = Digital NPN or Analog 1-10V

- Factory set at "1" Analog Signal
- Convert to Digital NPN by changing parameter to "0"

Output Signal option "M" = Analog 4-20 mA

• Factory set at "2" Non Adjustable

Parameter Number 6 – Set Output Signal							
Step	1	2	3	4	5		
Press	acc 3-6 seconds	or	acc	or	acc		
Until Display Reads	Pxx	P06	Flashing Decimal	### Flashing Decimal (Value 0, 1 or 2)	###	P07	
Description	Accesses changeable parameters.	Accesses parameter no. 6.	Displays current parameter value. 1 = m factory default for P3H with analog options	Edits parameter. 0 = digital (NPN or PNP) 1 = analog 010V 2 = analog 420 mA	Accepts and saves new parameter setting.	Sequences to next parameter.	

Adjust Span Analog Output Signal

Set value is a % of Full Analog range. As an example for a 0-10V output signal, the original factory setting of 100% will give you an adjustment of 0-10V. If you reset Parameter 8 to 50%, the new output range would be 0-5V or 50% of the full range.

In the event that the output signal is to low, in a certain application, you can adjust it by increasing Parameter 8 to a maximum value of 130% of scale.

Note that all values are nominal and that an actual measurement may be required to ensure signal strength.

Parameter Nu	umber 8 – Adji	ust Span Anal	og Output Sig	nal		
Step	1	2	3	4	5	
Press	acc 3-6 seconds	or	acc	or	acc	
Until Display Reads	Pxx	P08	Flashing Decimal (For 2 bar versions value = 92)	Flashing Decimal (Value between 0 and 130)	###	P[]9
Description	Accesses changeable parameters.	Accesses parameter no. 8.	Displays current parameter value.	Edits parameter.	Accepts and saves new parameter setting and implements the new analog signal span.	Sequences to next parameter.





sensor.

setting.

next parameter.

Proportional Regulators

Regulator Products

General

Dial

Adjust Digital Display

If necessary, adjustments can be made to the digital display when using an external pressure sensor.

parameter no. 9.

Parameter Number 9 – Adjust Digital Display Value (Pressure Calibration)								
Step	1	2	3	4	5			
Press								
	3-6 seconds	or	acc	or	acc			
Until Display Reads	Pxx	P[]9	###	####	###	P 10		
Description	Accesses changeable	Accesses	Displays current	Use up or down arrows and accept to adjust the display value if using an external pressure	Accepts and saves new parameter	Sequences to		

digital display

Set Pressure Scale

parameters.

Units with NPT port threads are supplied with a factory set psig pressure scale. Use parameter 14 to change scale to bar.

Parameter No	Parameter Number 14 – Set Pressure Scale in psig or bar							
Step	1	2	3	4	5			
Press	acc 3-6 seconds	or	acc	or	acc			
Until Display Reads	Pxx	PIY	Flashing Decimal	Flashing Decimal	Flashing	P 15		
Description	Accesses changeable parameters.	Accesses parameter no. 14.	Displays current parameter value. 1 = psig 0 = bar 2 = MPa	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.		



Preset Minimum Pressure

If there is a need for a pre-set Minimum pressure, use parameter 18. (Note: preset pressure is affected by % P19.)

Parameter Number 18 – Set Minimum Preset Pressure								
Step	1	2	3	4	5			
Press	acc 3-6 seconds	or	acc	or	acc			
Until Display Reads	Pxx	P 18	Flashing Decimal	#### Flashing Decimal (value between 0 and 200)	###	P 19		
Description	Accesses changeable parameters.	Accesses parameter no. 18.	Displays current parameter value. Incremental value is: 2 bar unit: x 2 mbar x % P19 10 bar unit: x 10 mbar x % P19	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.		

Set Pressure Correction

Pressure correction allows the user to set a Maximum pressure as a percentage of secondary pressure F.S.

Example: If F.S. is 10 bar, set parameter 19 to 50 for Maximum preset pressure of 5 bar.

Pressure correction also affects the Minimum preset pressure in parameter 18.

Example: If F.S. is 10 bar and parameter 18 is set to a value of 100 (1 bar), and parameter 19 is set to 50%, then the actual Minimum preset pressure seen is 0.5 bar.

Parameter No	umber 19 – Se	t Maximum Pr	eset Pressure			
Step	1	2	3	4	5	
Press	acc 3-6 seconds	or	acc	or	acc	
Until Display Reads	Pxx	P 19	Flashing Decimal	#### Flashing Decimal (value between 0 and 100)	###	P20
Description	Accesses changeable parameters.	Accesses parameter no. 19.	Displays current parameter value. Incremental value is: % of F.S.	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

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Regulator Products

General

Dial

Pilot

Proportional

Behavior Control

The regulation speed of the pressure regulator can be modified by means of one parameter. (P 20) The value in this parameter has a range from 0-5. A higher value indicates slower regulation speed, but will be more stable.

Parameter Number 20 – Set Behavior Control								
Step	1	2	3	4	5			
Press	acc 3-6 seconds	or	acc	or	acc			
Until Display Reads	Pxx	P20	Flashing Decimal	#### Flashing Decimal (value between 0 and 5)	###	P2 I		
Description	Accesses changeable parameters.	Accesses parameter no. 20.	Displays current parameter value.	Edits parameter 0 = custom set* 1 = fastest (narrow proportional band) 2 = fast 3 = normal 4 = slow 5 = slowest (proportional band is broad)	Accepts and saves new parameter setting.	Sequences to next parameter.		

^{*} When the value 0 is entered, you are able to create your own custom settings true parameters 12, 13 and 21.

Fine Settings Set Proportional Band

Proportional band is used for setting the reaction sensitivity of the regulator. The displayed value is X 10 mbar and has a range between 50 (0.5 bar) and 250 (2.5 bar).

Parameter Nu	Parameter Number 12 – Set Proportional Band (P20 Must be Set to 0)						
Step	1	2	3	4	5		
Press	acc 3-6 seconds	or	acc	or	acc		
Until Display Reads	Pxx	P 12	Flashing Decimal	#### Flashing Decimal (value between 50 and 250)	###	P 13	
Description	Accesses changeable	Accesses parameter no.	Displays current parameter value. Incremental value is:		Accepts and saves new parameter	Sequences to	

How to Videos at www.parker.com/pneu/propreg

parameters.



12.

x 10 mbar

Edits parameter.

next parameter.

setting.

Regulator Products

Set Deadband

Deadband is the Minimum limit of accuracy at which the regulator is set for normal operation. The displayed value is X 10 mbar and has a range between 4 (40 mbar) and 40 (400 mbar).

Parameter Number 13 - Set Deadband (P20 Must be Set to 0)

	(== 1111111111111111111111111111111111					
Step	1	2	3	4	5	
Press	acc 3-6 seconds	or	acc	or	acc	
Until Display Reads	Pxx	P 13	Flashing Decimal	#### Flashing Decimal (value between 4 and 40)	###	P 14
Description	Accesses changeable parameters.	Accesses parameter no. 13.	Displays current parameter value. Incremental value is x 10 mbar	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

Proportional Effect

Parameter Number 21 – Set Proportional Effect (P20 Must be Set to 0)

· aramotor re	aramotor rambor in the report of the report					
Step	1	2	3	4	5	
Press	acc 3-6 seconds	or	acc	or	acc	
Until Display Reads	Pxx	P2 I	Flashing Decimal	#### Flashing Decimal (value between 5 and 100)	###	<i>P22</i>
Description	Accesses changeable parameters.	Accesses parameter no. 21.	Displays current parameter value.	Edits parameter. 5 = fastest regulation 100 = slowest regulation.	Accepts and saves new parameter setting.	Sequences to next parameter.

Parameter Number 39 – Displays Current Software Version

Step	1	2	3
Press			
	3-6 seconds	or	acc
Until Display Reads	Pxx	P39	###
Description	Accesses changeable parameters.	Accesses parameter no. 39.	Displays current parameter value. XXX = current software version





Air Preparation Products **Regulator Products**

Proportional Regulators

General

Dial

Pilot

Proportional

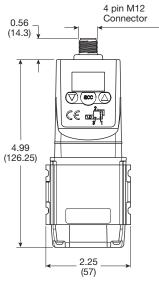
Precision

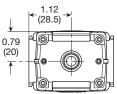






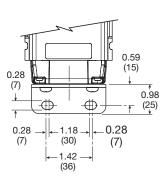
P31P Dimensions inches (mm)

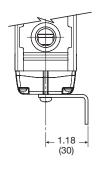


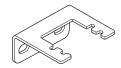


3.51 (89)1.47 (37.25) 0.79 (20) 1.58 (40)

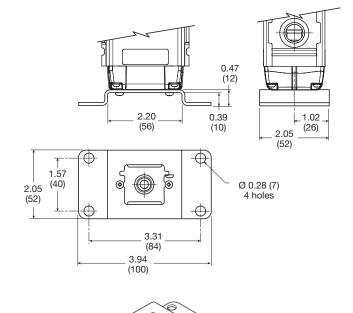
L-Bracket P3HKA00ML







Foot Bracket P3HKA00MC

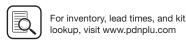


Cables

Description Part Number 2 mtr. cable with moulded straight M12x1 connector CB-M12-4P-2M







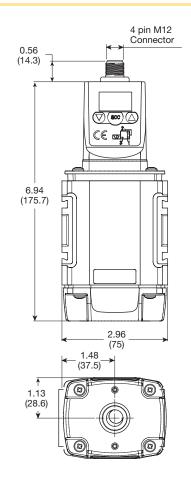


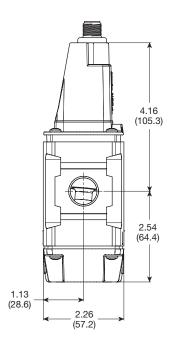
Air Preparation Products **Regulator Products**

Proportional Regulators

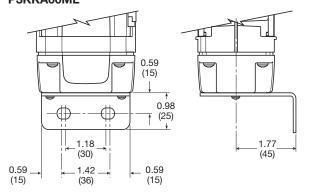
P32P

Dimensions inches (mm)



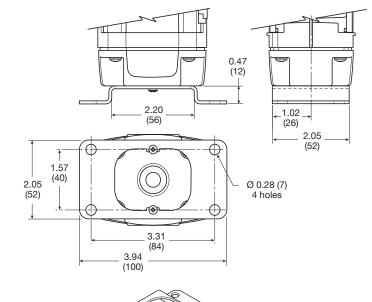


L-Bracket P3KKA00ML





Foot Bracket P3KKA00MC



Cables

 Description
 Part Number

 2 mtr. cable with moulded straight M12x1 connector
 CB-M12-4P-2M







Programmable Air Regulating Valve

Genera

Dia

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Proportional

Precision



PAR™-15 Programmable Air Regulating Valve

PAR™-15 is a unique 3-Way, programmable, air regulating valve that functions as a precise, high-flow, multi-purpose

Signals from a computer, programmable controllers or from simple electrical switches, fed to the valve's four solenoids. control the division of a single inlet pressure into any one of fifteen equally spaced output pressures.

The valve's response is instant and repeatable, reducing the need for expensive feedback controls.

It goes far beyond the capabilities of conventional controls by providing a limitless range of application possibilities including cylinder pressure/stroke control, clamping, retracting, approach, flow, and impact.

PAR™-15 eliminates shock absorbers, increases tool life, saves air, and reduces workpiece damage.

- Full flow capacity for direct air device operation.
- · Quick, full flow exhaust.
- Instantly repeatable response.
- Air saving design, close crossover, non-constant bleed.
- Wide range of discrete output pressures.
- Normally closed or normally open operators.
- Compatible with computers and programmable controllers with digital solid state relay outputs.
- Meets NEMA 4 standard (6-Pin option only).

Life Expectancy

Normal multi-million cycle life expectancy of these valves is based on the use of properly filtered air at room temperature.



No Enclosure



NEMA 4 Enclosure -6-Pin Connector

Operating information

Pressure range:

150 psig (1035 kPa) Inlet (max) Output (min) 6 psig (41 kPa)

32°F to 140°F (0°C to 60°C) Temperature range (ambient)†: +10% to -10% of rating Voltage range:

Flow capacity:

Inlet to outlet 275 scfm (129.8 dm³/s, ANR) Outlet to exhaust 225 scfm (106.2 dm³/s, ANR)

Output response: 20 milliseconds

Weight:

Without enclosure 6.3 lb (2.9 kg) With 6-pin & cord 8.0 lb (3.6 kg)

/!\ † Caution: If it is possible that the ambient temperature may fall below freezing, the media must be moisture free to prevent internal damage or unpredictable behavior.

Solenoid Operated - Normally Closed - Internal Pilot*

Port Size			No	NEMA 4 Enclosure	NEMA 4 Enclosure - 6-Pin Connector		
Body	Pilot	Voltage/Cycle	Enclosure	Quadrant 2 †	Quadrant 4 †		
1/2"	1/8"	24V/60Hz	W21540172B	W21542172B	W21544172B		
1/2"	1/8"	12VDC	W21540175B	W21542175B	W21544175B		
1/2"	1/8"	24VDC	W21540179B	W21542179B	W21544179B		
1/2"	1/8"	110/120V / 50/60Hz	W21540183B	W21542183B	W21544183B		

^{*} Normally open and external pilot options also available.

Material Specifications

Body, Bottom and Top Plates	Aluminum
Divider	Aluminum
Piston	Acetal
Poppet	Aluminum
Poppet guide	Aluminum
Poppet seal	Fluorocarbon
Seals	Nitrile
Spring	Stainless steel

Lubrication

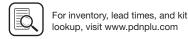
Although the valve does not require lubrication for a normal service life, use of SAE 10 mineral base oil is recommended to extend component life. This should be supplied using a 1/2 inch full flow lubricator located upstream of the valve inlet port.

DO NOT USE SYNTHETIC, RECONSTITUTED, OR OILS WITH AN ALCOHOL CONTENT.

Follow all national and local electrical codes.

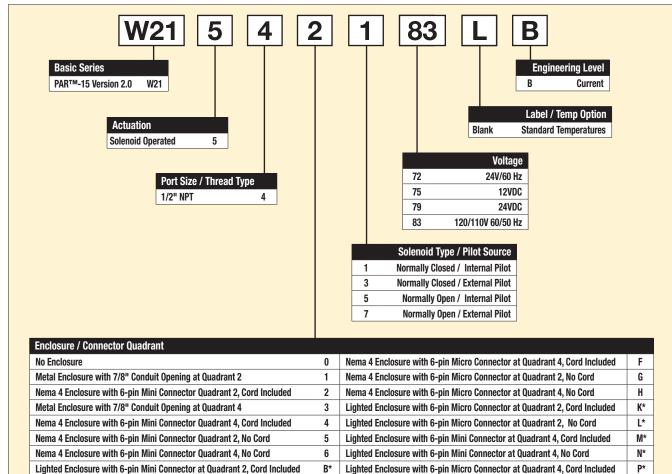


Most popular.



[†] Theoretically Quadrant 1 is defined as the 6-Pin connector on the same face with the inlet port. Looking from the top down and rotating the enclosure clockwise 90° you get Quadrant 2 or 270° for Quadrant 4.

Ordering Information:



Theoretically, Quadrant 1 is defined as the 6-Pin Connector on the same face with the inlet port. Looking from the top down and rotating the enclosure clockwise 90° you get Quadrant 2 or 270° for Quadrant 4.

K75

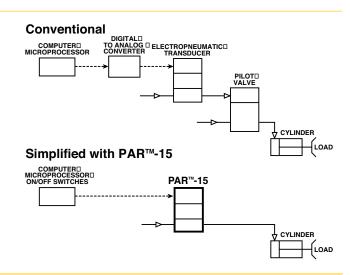
C*

Lighted Enclosure with 6-pin Mini Connector at Quadrant 2, No Cord Nema 4 Enclosure with 6-pin Micro Connector at Quadrant 2, Cord Included

Electropneumatic System

A conventional system is usually composed by several electronic and pneumatic components as shown on the schematic. The cylinder which is moving a load is operated with a pilot valve which receives the instructions from an electropneumatic transducer. The transducer converts electronic signals to pneumatic signals. These electronic signals are usually of an analog type, but controllers/computer microprocessors send digital signals as outputs, therefore, a digital to analog signal converter is required.

The simplified schematic with the PARTM-15 is reduced to fewer components since the PARTM-15 takes the place of the digital to analog converter, the electropneumatic transducer, and the pilot valve. The benefits being fewer components, and less maintenance and downtime.



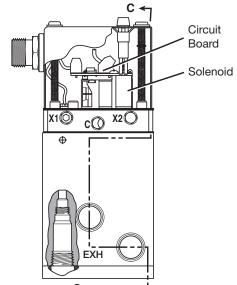
Lighted Enclosure with 6-pin Micro Connector at Quadrant 4, No Cord

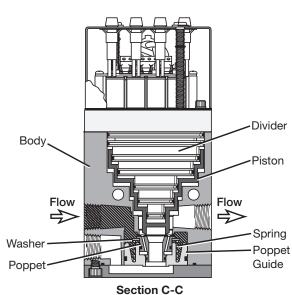




Q*

^{*} Available in 24VDC and 120VAC Only. Not NEMA 4 rated.





Application

Pressure

Exhaust

Pneumatic systems operating under multiple pressures, and requiring almost instantaneous pressure changes are good application cases for the PAR™-15. Usually the more pressures needed for a particular operation, the easier it is to justify the valve, since it will take the place of several pneumatic regulators and selector valves.

Among the most common applications are brakes and clutches, painting, printing feeds and tension, robotics, and spot welding.

Other Applications:

- Air Chucks
- Air Cylinder Control
- Air Winches
- Blow Molding Control
- Contact Force Control
- Conveyor Control
- Die Cushioning
- Dynamic Braking

- Fuel Control
- Hopper Control
- Robot Gripper Control
- Valve Positioning
- Variable Clamping
- Variable Pressure Processing
- Torque Control
- Wire Tensioning

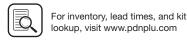
Operation

Four solenoids are controlled by on/off signals that selectively divide any input pressure into any one of 15 equally spaced pressures plus zero. See the truth table.

Full flow exhaust permits instant reduction to any lower selected pressure or zero. High relief capacity quickly vents downstream overpressure. The output pressure will begin to change within 20 milliseconds after a change in the electrical input to one or more of the solenoids. However, the time which elapses until the output pressure reaches the new level will depend upon the volume of air, the size of the connection from the PAR™-15 valve and the magnitude of the pressure change.

A small regulator may be used to feed the external pilot port X1 on units with normally closed solenoid operators or X2 on units with normally open solenoid operators. The PAR™-15 valve will then divide this pressure independent of mainline supply pressure so long as the pilot regulator is set to a pressure below the mainline supply pressure. A regulated external supply will eliminate the effects of fluctuating mainline pressures. (NOTE: A regulator placed upstream of the inlet also eliminates the effects of fluctuating pressures).

The PAR™-15 is available with two types of output pressure regulation: increasing output and decreasing output. In the increasing output pressure regulation type, normally closed solenoid operators are used to divide the input pressure into 15 equal steps, ranging from 0 PSIG (all solenoid operators de-energized) to full line pressure (all solenoid operators energized). With the decreasing output pressure regulation type, normally open solenoid operators are used to divide the input pressure into 15 equal steps, but starting with full line pressure (all solenoid operators de-energized) and ending with 0 PSIG (all solenoid operators energized).



Regulator Products

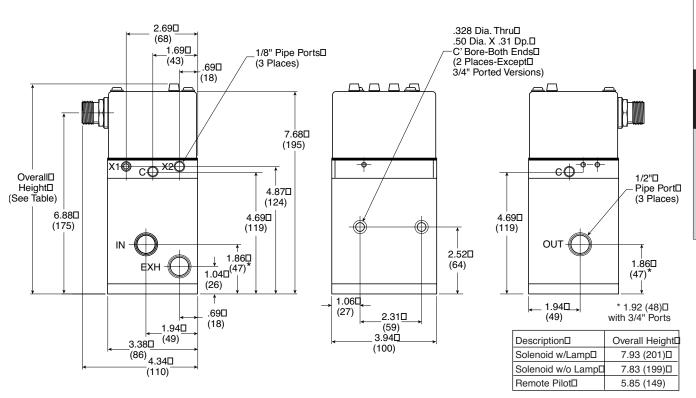
Truth Table

Normally Closed Valves / Solenoids	Normally Open Valves / Solenoids			
Binary Input * 8 4 2 1	Binary Input * 8 4 2 1	_ Proportion	PSIG Output@	PSIG Output@
Pin Number [†] 5 3 2 1	Pin Number [†] 5 3 2 1	of Inlet Pressure	75 PSIG Inlet ^{††}	90 PSIG Inlet
0000	1111	0	0	0
0001	1110	1/15	5	6
0010	1101	2/15	10	12
0011	1100	3/15	15	18
0100	1011	4/15	20	24
0101	1010	5/15	25	30
0110	1001	6/15	30	36
0111	1000	7/15	35	42
1000	0111	8/15	40	48
1001	0110	9/15	45	54
1010	0101	10/15	50	60
1011	0100	11/15	55	66
1100	0011	12/15	60	72
1101	0010	13/15	65	78
1110	0001	14/15	70	84
1111	0000	15/15	75	90

Table above illustrates available output pressures for inlet pressures of 75 PSIG and 90 PSIG. Inlet pressure may be any value between 15 and 150 PSIG. Output pressure increment will be 1/15 of inlet pressure.

- 0 = Voltage "OFF"
 - 1 = Voltage "ON"
- [†] Available only on units with 6-Pin connector.

^{††} Shaded output pressures shown are theoretical and are below the minimum operating range of the valve and should not be used. Please refer to the Engineering Specifications for minimum output.



K77





Dial

Programmable Air Regulating Valve

Narrow Band Control

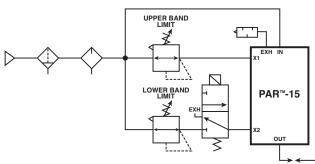
The PAR™-15 can also be used to provide a narrower band of output pressures with the lowest selected pressure greater than zero.

EXAMPLE:

Assume valve with normally closed solenoids. Customer desires to divide a range from 25 PSIG to 100 PSIG into 15 increments of 5 PSIG each. This is done by applying 100 PSIG to the external pilot supply port X1 and 25 PSIG to the pilot exhaust port X2.

Two 1/8 inch relieving regulators are required. The addition of one 3-Way normally closed solenoid operated valve allows the additional selection of 0 PSIG. These are connected as shown in the diagram. The relieving regulators set the upper and lower band limits. With a normally closed PAR™-15 valve, zero output pressure may be selected by simultaneously deenergizing the 3-Way valve and the PAR™-15 valve solenoids. With a normally open PAR™-15 valve, zero output pressure may be selected by simultaneously de-energizing the 3-Way valve and energizing the PAR™-15 valve solenoids.

Narrow Band Control Diagram



Note: For valves with normally open solenoids, reverse the X1 and X2 connections.

Cascading

Two PARTM-15's can also be used in conjunction to provide 240 steps (versus 15 steps from one valve), therefore more output pressures. See diagram.

Connect the outlet port marked OUT of the valve upstream to the 1/8" port marked C of the valve downstream. A port/pipe reducer(s) must be used to accomplish this task. If desired, a pressure gauge can be installed between these two points. A gauge isolator should be used to protect the gauge from pulsating pressures.

Connect the outlet port marked OUT of the valve downstream to the supply side of the system requiring multiple pressures. If desired, a pressure gauge can be installed downstream of the outlet port. A gauge isolator should be used to protect the gauge from pulsating pressures.

Air Preparation Products **Regulator Products**

DO NOT PLUG THE 1/8" PORTS MARKED C AND X2 ON THE VALVE UPSTREAM AND X2 ON THE VALVE DOWNSTREAM.

Operation of the valves is the same as mentioned previously under the Operation section. See Cascading Truth Table for the proper input signal to each solenoid, and the resulting proportion of inlet pressure for an output pressure.

A formula can be used to calculate the output pressure of the valve downstream.

Where:

LINE PRESSURE is the supply pressure to both valves and it must be equal.

BINARY INPUT UPSTREAM VALVE is the binary number, a number from 0 to 15 depending on which solenoids are energized (normally closed solenoids) or de-energized (normally open solenoids) on the valve upstream.

BINARY INPUT DOWNSTREAM VALVE is the binary number, a number from 0 to 15 depending on which solenoids are energized (normally closed solenoids) or de-energized (normally open solenoids) on the valve downstream.

EXAMPLE:

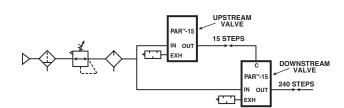
Assume the line pressure is 120 PSIG, the valve upstream has inputs 1 & 2 energized, and the valve downstream has inputs 1 & 8 energized. Also, assume normally closed solenoids. What is the output pressure of the valve downstream?

SOLUTION:

BINARY INPUT VALVE UPSTREAM = 1 + 2 = 3 BINARY INPUT VALVE DOWNSTREAM = 1 + 8 = 9

OUTPUT PRESSURE =
$$\frac{120}{15} \times \left(\frac{3}{16} + 9\right) = 8 \times 9.1875 = 73.5 \text{ PSIG}$$

Cascade Diagram







Truth Table

	Clo	mally sed noids	Norn Op Soler	en				
	Down- Step Valve	Up- stream Valve	Down- stream Valve	Up- stream Valve	Down- stream Valve	Up- stream Valve		
	Binary 8 4 2 1	Input* 8 4 2 1	Binar 8 4 2 1	y Input* 8 4 2 1	Proportion	Proportion	PSIG Output @	PSIG Output @
	Pin Nu 5 3 2 1	mber † 5 3 2 1	Pin Ni 5 3 2 1	umber † 5 3 2 1	of Inlet + Pressure	of Inlet Pressure	60 PSIG Inlet ^{††}	120 PSIG Inlet ^{††}
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0000 0000 0000 0000 0000 0000 0000 0000 0000	0000 0001 0010 0011 0100 0101 0111 1000 1001 1010 1100 1101 1110	1111 1111 1111 1111 1111 1111 1111 1111 1111	1111 1110 11101 1100 1011 1001 1000 0111 0100 0111 0100 0011 0001 0001		0 1/240 2/240 3/240 4/240 5/240 6/240 7/240 8/240 9/240 10/240 11/240 12/240 13/240 15/240	0.00 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.25 2.50 2.75 3.00 3.25 3.50 3.75	0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50
16 17 18 19 20 21	0001 0001 0001 0001 0001	0000 0001 0010 0011 0100 0101	1110 1110 1110 1110 1110	1111 1110 1101 1100 1011	1/15 1/15 1/15 1/15 1/15 1/15	0 1/240 2/240 3/240 4/240 5/240	4.00 4.25 4.50 4.75 5.00 5.25	8.00 8.50 9.00 9.50 10.00 10.50
22	000	0111	0010	1100	1/15	6/240 7/240	5.50 5.75	11.00
212 213 214 215 216 217 218 219	0001 0000 0000 0000 0000 0000 0000	1000 1111 0000 0000 0000 0000 0000	0010 0010 0010 0010 0010 0010	0111 1011 1010 1001 1000 0111 0110	13/15 13/15 13/15 13/15 13/15 13/15 13/15 13/15	4/240 5/240 6/240 7/240 8/240 9/240 10/240 11/240	53.00 53.25 53.50 53.75 54.00 54.25 54.50 54.75	106.00 106.50 107.00 107.50 108.00 108.50 109.00 109.50
220	1110	0101	0001	1011	14/15	12/240	55.00	
231 232 233 234 235 236 237 238 239	1110 1110 1110 1110 1110 1110 1110 111	0 1 1 1 1 0 0 0 1 0 0 1 1 0 1 0 1 0 1 1 1 1 1 0 0 1 1 1 1	0001 0001 0001 0001 0001 0001 0001	1 0 0 1 1 0 0 0 0 1 1 1 0 1 1 0 0 1 0 1 0 1 0 0 0 0 0 1 0 0 0 0	14/15 14/15 14/15 14/15 14/15 14/15 14/15 14/15 14/15	7/240 8/240 9/240 10/240 11/240 12/240 13/240 14/240 15/240	57.75 58.00 58.25 58.50 58.75 59.00 59.25 59.50 59.75	115.50 116.00 116.50 117.00 117.50 118.00 118.50 119.00 119.50
240	1111	0000	0000	1111	15/15	0	60.00	120.00

Table above illustrates available output pressures for inlet pressures of 75 PSIG and 90 PSIG. Inlet pressure may be any value between 15 and 150 PSIG. Output Pressure increment will be 1/15 of inlet pressure.

Note: Full table appears in instruction sheet enclosed with the product.





General

Dial

Proportional

Precision

^{* 0 =} Voltage "OFF" 1 = Voltage "ON"

Available only on units with 6-Pin connector.

Shaded output pressures shown are theoretical and are below the minimum operating range of the valve and should not be used. Please refer to the Engineering Specifications for minimum output.

Solenoid Kits & Electrical Data

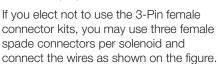
Class F Solenoids

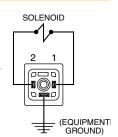
Voltage / Cycles	Solenoid Type*	Power Consumption (watts)	Holding Current (AMPS)	Part Number
12VDC	NC	1.2W	0.1	PS2982B45P
24VDC	NC	1.2W	0.05	PS2982B49P
120V/60Hz	NC	1.6VA	0.013	PS2982B53P
24V/60Hz	NC	1.6VA	0.066	PS2982B42P
24V/60Hz	NO	2.4VA	0.1	PS3202B42P
12VDC	NO	1.8W	0.15	PS3202B45P
24VDC	NO	1.8W	0.075	PS3202B49P
120V/60Hz	NO	2.4VA	0.02	PS3202B53P

^{*} NC = Normally Closed NO = Normally Open

Units with No Enclosure

Connect input and common signals to each one of the solenoids marked with the binary inputs 1, 2, 4 and 8, using the 3-Pin female connector kits shown in the catalog. Follow the installation instructions included with the 3-Pin female connector kits for the proper installation.





Units with Enclosure and Without 6-Pin Receptacle

Connect input and common signals to the terminal block on the circuit board labelled TB1. Connect each solenoid input (1, 2, 4, & 8) to the respective label on the circuit board. Connect each common to the input labelled C on the circuit board.

Units with Enclosure and 6-Pin Micro Receptacle

These units use the following brand names for 6-Pin micro connectors:

		Connector
Brand name	Receptacle	w/ 6 foot cord
Brad Harrison	7R6006A19A120	706000D02F060
Joy	5000127-41	5000127-2

Connection is made as shown in the chart below.



Micro

FIII	AAII & COIC
1	Red-White
2	Red
3	Green
4	Red-Yellow
5	Red-Black
6	Red-Blue

Din Wire color **Function** Input 1 Input 2 Equipment Ground Common Input 8 Input 4

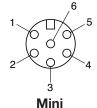
Air Preparation Products **Regulator Products**

Units with Enclosure and 6-Pin Mini Connector

These units use either one of the following brand names for 6-Pin mini connectors:

		Connector
Brand Name	Receptacle	w/ 6 Foot Cord
Brad Harrison	42605	42602
Joy	X8987-2	X8987-4

Connection is made as shown in the chart below.



Pin	Wire color	Function
1	Orange	Input 1
2	Blue	Input 2
3	Black	Input 4
4	White	Common
5	Red	Input 8
6	Green	Equipment Ground

Units with Enclosure, 6-Pin Connector and **Indicator Lamps**

Each indicator lamp signals when the corresponding solenoid operator is actuated. Lamps that fail to light may need to be replaced or a check made to see if a connection has become

Follow the service kit instructions included with the repair kits for proper installation of replacement lamps.

For units with DC solenoids and indicator lamps red wire is (+) positive white wire is (-) negative.



Caution: DC solenoids with indicator lamps are polarity sensitive. Observe polarities indicated above.

Available Lamps

Description	Part number
Lamp (120/60AC) with spring clip	K352428B
Lamp (24VDC) with spring clip	K352429B

15mm 3-Pin DIN 43650C

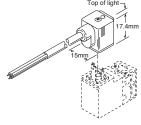
Description	Connector	Connector with 6' (2m) Cord
Unlighted	PS2932BP	PS2932JBP
Light – 12VAC or DC	PS294675BP	PS2946J75BP*
Light – 24VAC or DC	PS294679BP	PS2946J79BP*
Light - 110/120VAC	PS294683BP	PS2946J83BP*

^{*} LED with surge suppression.

Note: Max ø6.5mm cable size required for connector w/o 6' (2m) cord.

Engineering Data:

Conductors: 2 Poles Plus Ground Cable Range (Connector Only): 4 to 6mm (0.16 to 0.24 Inch) Contact Spacing: 8mm



Service Kit

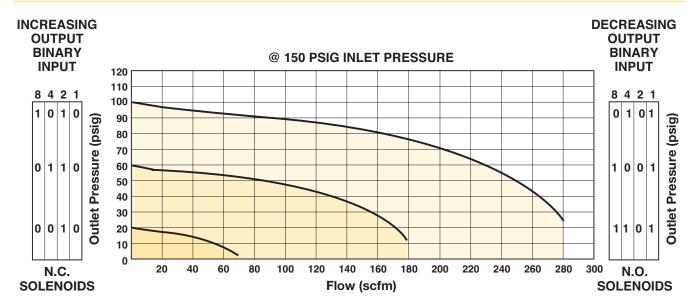
Piston, poppet assembly, all rubber seals and gaskets

K352413B





Flow Characteristics



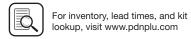
Typical Time Response



Actual test results show rapid response on a robot welding operation at a major U.S. automotive manufacturer.

NOTE: Although graph illustrates pressure dropping to 0 PSIG at the end of each cycle, the PAR™-15 valve can shift down to intermediate pressure steps, i.e. from 75 PSIG to 45 PSIG, without returning to 0 PSIG first.





Electronic Proportional Regulator

General

Dial

Pilot

Proportional

Precision

Lucifer® EPP4 1/4", 1/2" & 1/2" HP







	5.	Max inlet pressure	Pressure range	Control
Part number	Pipe	bar (PSIG)	bar (PSIG)	signal
P4CN2001C001	1/4 NPT	1 to 12 (15 to 174)	0 to 10 (0 to 145)	0 to 10 V **
P4CN4001C001	1/2 NPT	1 to 12 (15 to 174)	0 to 10 (0 to 145)	0 to 10 V **
P4CG4201D003*†	1/2 BSPP	1 to 21 (15 to 305)	0 to 20 (0 to 290)	0 to 10 V **

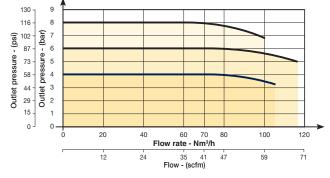
Notes: For thread type NPT use $\underline{\mathbf{N}}$, for BSPP use $\underline{\mathbf{G}}$.

- * HP (High Pressure).
- ** 4-20mA available via Calys software.
- † Only available in BSPP.

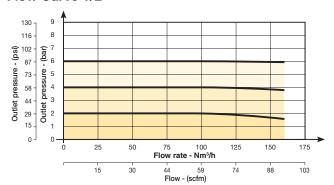
For other configurations not listed please consult factory. (Example: ATEX Series EX: II 3 D/G, O2 compatible, External Pilot, etc.)

Flow Curves

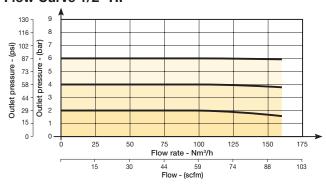
Flow Curve 1/4"



Flow Curve 1/2"



Flow Curve 1/2" HP







Lucifer® EPP4 1/4" & 1/2"

Technical Data	EPP4 1/4"	EPP4 1/2"	
Fluids:		icated air and neutral gases -	
	Recommended filtration: 40 µm or better		
Temperature range:	Ambient: 0° C to 50° C (32° F to 122° F) Fluid: 0° C to 50° C (32° F to 122° F)		
Inlet pressure range: The inlet pressure must always be at least 1 bar above the regulated pressure.	1 to 12 bar (14.5 to 174 PSIG)	1 to 12 bar (14.5 to 174 PSIG)	
Outlet pressure range:	0.05 to 10 ba	ar (.725 to 145 PSIG)	
Hysteresis:	± 50 mbar (.72	5 PSIG) (factory set up)	
Air consumption at constant control signal:		0	
Supply voltage:	24 V DC ± 1.	5 % (Max. ripple 1 V)	
Power consumption:	Max. 2.8 W with 24 V DC and constant changes of the control signal < 1.5 W without change of control signal		
Control signal:		log 0 - 10 V) mA field convertible	
Outlet sensor signal:	Analog 0 - 10 V Standard for 0 - 10 bar; Adjustable Analog 4 - 20 mA Standard for 0 - 10 bar; Adjustable	Digital 0 - 24 V for alarm features: Adjustable pressure error (+/-) Adjustable delay ON Adjustable delay OFF Adjustable logic (+/-)	
Max. flow:	70 m ³ /h (41 SCFM)	150 m ³ /h (88 SCFM)	
Indicative response time:	With a volume of 330 cm ³ (20.14 in ³) at the outlet of the regulator		
Filling 2 to 4 bar (29 to 58 PSI): Filling 2 to 8 bar (29 to 116 PSI): Emptying 4 to 2 bar (29 to 116 PSI): Emptying 8 to 2 bar (29 to 116 PSI):	50 msec 100 msec 70 msec 130 msec	60 msec 120 msec 90 msec 190 msec	
Safety position:	In case of control signal failure or if it is less than 50 mV, the regulated pressure drops automatically to 0 bar (atmospheric pressure). In case of voltage supply failure, the regulated pressure will be kept constant.		
Electrical connection:	M12 - 8 pin; male connector power supply/control signal M12 - 5 pin; male connector communication		
Life expectancy:	> 50 million chang	ges of control signal steps	
Mounting position:	Indifferent (recommended po	sition: upright; electronic part on top)	
Resistance to vibrations:	30 g iı	n all directions	
Degree of protection:		IP65	
Assembly:	Si	licone free	
Electromagnetic compatibility: In accordance with:	EN 61000-6-1: 2001 EN 61000-6-2: 2001 EN 61000-6-3: 2001 + A11 2004 edition (01/07/07) EN 61000-6-4: 2001		
Installation and setting instructions:	See Bulletin 408128, 408134 and appendix supplied with the product.		
<u> </u>		<u>.</u>	





K83

Technical Data

Lucifer® EPP4 1/2" HP

EPP4 1/2" HP Fluids: Lubricated or non lubricated air and neutral gases - Recommended filtration: 50 µm

	•
Temperature range:	Ambient: 0°C to 50°C (32°F to 122°F) Fluid: 0°C to 50°C (32°F to 122°F)
Inlet pressure range: The inlet pressure must always be at least 1 bar above the regulated pressure.	1 to 21 bar (14.5 to 305 PSIG)
Outlet pressure range:	0.05 to 20 bar (.73 to 290 PSIG)
Hysteresis:	\leq 100 mbar (1.45 PSIG) if P inlet \leq 10 bar (145 PSIG) \leq 200 mbar (2.90 PSIG) if P inlet $>$ 10 bar (145 PSIG)
Air consumption at constant control signal:	0
Supply voltage:	24V DC ± 15%
Power consumption:	Max. 6 W with 24 V DC and constant changes of the control signal < 2 W without change of control signal
Control signal:	Analog 0 - 10 V Analog 4 - 20 mA field convertible
Outlet sensor signal:	Analog 0 - 10 V Standard for 0 - 10 bar; Adjustable Analog 4 - 20 mA
Max. flow:	Standard for 0 - 10 bar; Adjustable 150 m³/h (88 SCFM)
Indicative response time:	With a volume of 330 cm³ (20.14 in³) at the outlet of the regulator
Filling 2 to 8 bar (29 to 116 PSI): Emptying 8 to 2 bar (116 to 29 PSI):	120 msec 190 msec
Safety position:	In case of control signal failure or if it is less than 50 mV, the regulated pressure drops automatically to 0 bar atmospheric pressure (for pressure ranges from 0-10 bar, 100 mV for pressure range over 10 bar). In case of voltage supply failure, the regulated pressure will be kept constant.
Flectrical connection:	M12 - 8 pin; male connector power supply/control signal

Electrical connection:

M12 - 8 pin; male connector power supply/control sign M12 - 5 pin; male connector communication

Life expectancy:

> 20 Million changes of control signal steps

Mounting position: Indifferent (recommended position: upright; electronic part on top)

Resistance to vibrations: 30 g in all directions

Degree of protection: IP65
Assembly: Silicone free

Electromagnetic compatibility:

In accordance with:

EN 61000-6-1: 2001

EN 61000-6-2: 2001

EN 61000-6-3: 2001

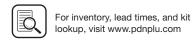
+ A11 2004 edition (01/07/07)

EN 61000-6-4: 2001

Installation and setting instructions:See Bulletin 408193 and appendix supplied with the product.

Note: Parker reserves the right to change specifications without notification.





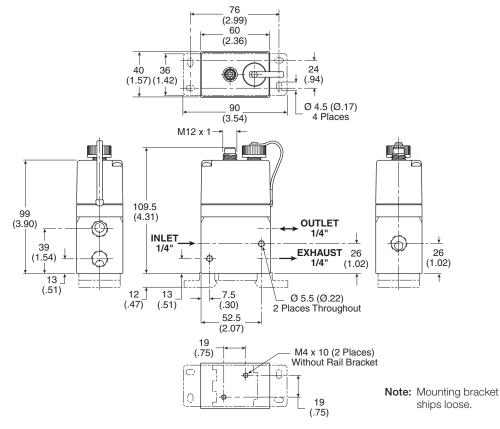
General

Precision

Lucifer® EPP4 1/4" & 1/2"

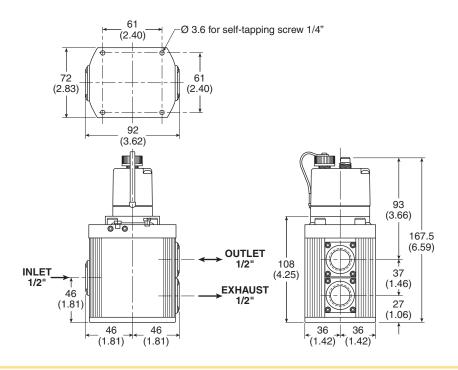
Dimensions EPP4 1/4"





Dimensions EPP4 1/2"









Electronic Proportional Regulator

General

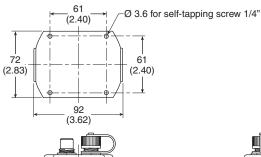
Dial

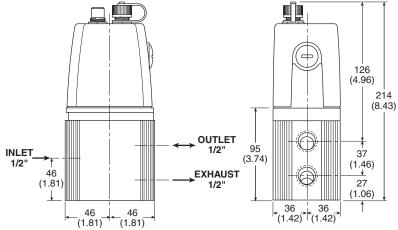
Pilot

Lucifer® EPP4 1/2" HP

Dimensions EPP4 1/2" HP









K86

Regulator Products

Lucifer® EPP4 Accessories

Mounting Brackets for EPP4 1/4"

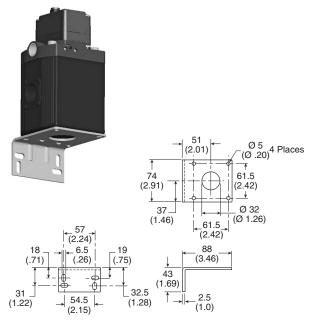






Note: Mounting bracket comes standard with all EPP4 1/4" units, and is shipped loose.

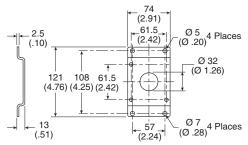
Mounting Brackets for EPP4 1/2"



L Bracket

Part Number 491367

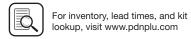




Foot Bracket

Part Number 491366





Dial

Pilot

Blue Red

Lucifer® EPP4 Accessories

Power Supply / Control Signal and Communication Cables

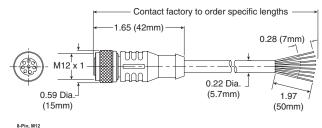
EPP4 Cable

• 2m cable with molded straight M12-8 pole to flying lead

EPP4 Cable

• 2m cable with molded straight M12-5 pole to USB

Part Number RKC8T-2





Part Number 496449



First M12 / 8 pole connector: power supply & control signal

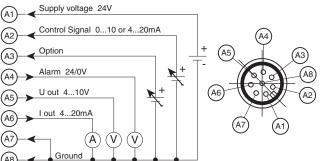
Electrical Connection (A)



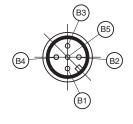
K88

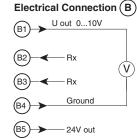
Second M12 / 5 pole connector: remote display or PC communication

Electrical Connection (B)



Electrical Connection (A)









General

Lucifer® EPP4 Accessories

calys Software

Calys is developed to configure all the parameters of the EPP4. A specific cable is needed for the communication between the EPP4 and a PC.

To download free Calys software click on

www.parker.com/fcde/support

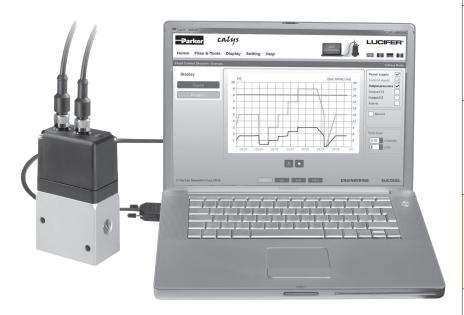
Calys offers many capabilities:

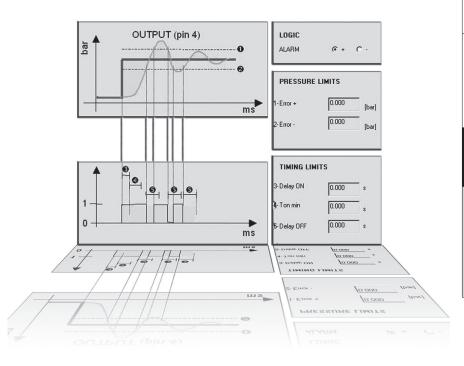
- Live monitoring (control signal, regulated pressure, supply voltage,...)
- Recording of the main parameters (control signal, regulated pressure, supply voltage,...) in an Excel file
- Free calibration for the inputs and outputs
- Adjustable alarm (positive-negative, pressure limits, delays)
- Configuration files are easy to duplicate
- Complete and interactive help file
- Data in 4 different pressure units
- Menus in 4 languages (English, German, French and Italian)



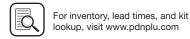
Specific communication cable with M12, 5-pole to USB connection

Part Number 496449









K89

Compact High Precision Regulator

Genera

Dial

Pilot

Proportional

Precision





Regulato

P3RA302 High Precision Regulators

The P3RA302 Regulator is designed for applications that require high capacity and accurate process control in a small package. A poppet valve which is balanced by utilizing a convoluted diaphragm, insures a constant output pressure even during wide supply pressure variations. Stability of regulated pressure is maintained under varying flow conditions through the use of an aspirator tube which adjusts the air supply in accordance with the flow velocity.

- Control sensitivity of .250" (.010 psig) (.64 cm) water column variation allows use in precision applications
- A compensating diaphragm lets the regulator remain unaffected by supply pressure changes
- An aspirator tube compensates downstream pressure droop under flow conditions
- A separate control chamber isolates the diaphragm from the main flow to eliminate hunting and buzzing
- Unit construction lets you service the regulator without removing it from the line
- 1/4" port (NPT)



Port Size	Description	Part Number
1/4"	0.5 to 30 psig	P3RA30232
1/4"	1 to 60 psig	P3RA30242
1/4"	2 to 100 psig	P3RA30252



Operating information

Supply pressure: 250 psig (17.2 bar), (1700 kPa) max Ambient temperature: -40°F to 200°F (-40°C to 93°C) Sensitivity: .250" (.010 psig) (.64 cm)

water column

Flow capacity: 40 scfm (68 m³/HR) @

100 psig (7.0 bar), (700 kPa) supply and 20 psig (1.5 bar), (150 kPa)

setpoint

Exhaust capacity: 2.0 scfm (3.4 m3/HR) where

downstream pressure is 5 psig (.35 bar), (35 kPa) above 20 psig (1.5 bar), (150 kPa) setpoint

Supply pressure effect: Less than 0.2 psig, (.014 bar),

(.14 kPa) for 100 psig, (7.0 bar), (700 kPa) change in supply pressure

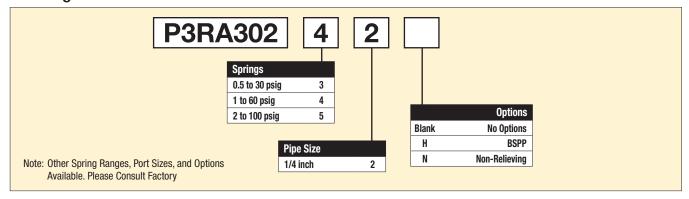
Hazardous locations: Acceptable for use in zones 1 and

2 for gas atmosphere:

Groups IIA and IIB and zones 21 and

22 for dust atmospheres

Ordering Information:









Air Preparation Products **Regulator Products**

Compact High Precision Regulator

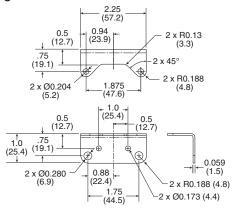
Body and housing	Aluminum
Diaphragms	Nitrile on dacron
Trim	Brass

Repair and Service Kits

Material Specifications

Mounting Bracket Kit	PS21667-1
Tamper Resistant Kit	PS12163
Nitrile, non-relieving - 1/2 to 30, 1 to 60, & 2 to 100 psig	PS16116-14
Nitrile, standard - 1/2 to 30, 1 to 60, & 2 to 100 psig	PS16116-13

Mounting bracket

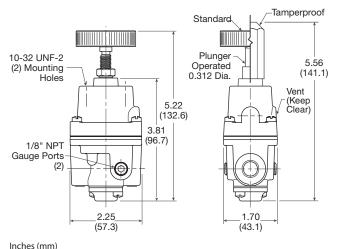


♠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

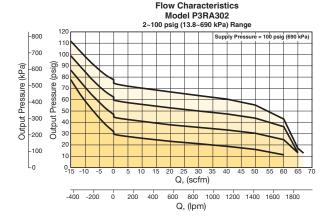
CAUTION:

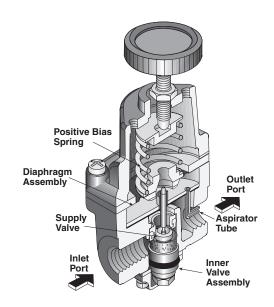
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Flow Charts

P3RA302 1/4" Regulator





Operating Principles

The P3RA302 Regulator uses the force balance principal to control the movement of the valve assembly which in turn controls the output pressure. When the regulator is adjusted for a specific set point, the downward force of the Positive Bias Spring causes the Diaphragm Assembly to move downward. The Supply Valve opens and allows air to pass to the Outlet Port. As the set point is reached, the downward force exerted by the Positive Bias spring is balanced by the upward force of the downstream pressure acting on the bottom of the Diaphragm Assembly. The resultant force moves the supply Valve upward to reduce the flow of air to the Outlet Port.

Outlet pressure is maintained as a result of balance between forces acting on the top and bottom of the Diaphragm Assembly.





Dial

Pilot

Proportional

Precision

Water



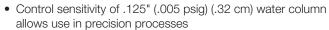
Standard High Precision Regulator

Regulator Products

P3RA102 High Precision Regulators

(Revised 03-13-20)

The P3RA102 Regulator is designed for applications that require high capacity and accurate process control. A poppet valve which is balanced by utilizing a rolling diaphragm, insures a constant output pressure even during wide supply pressure variations. Stability of regulated pressure is maintained under varying flow conditions through the use of an aspirator tube which adjusts the air supply in accordance with the flow velocity.



- Pressure balanced supply valve prevents supply pressure changes from affecting the setpoint
- Optional check valve permits dumping of downstream pressure when supply is opened to atmosphere
- Separate control chamber isolates the diaphragm from the main flow to eliminate hunting and buzzing
- An aspirator tube compensates downstream pressure droop under flow conditions



Port Size	Description	Part Number
1/4"	0.5 to 30 psig	P3RA10232
1/4"	1 to 60 psig	P3RA10242
1/4"	2 to 150 psig	P3RA10262



Operating information

Supply pressure: 500 psig (35 bar), (3500 kPa) max -40°F to 200°F (-40°C to 93°C) Ambient temperature: Sensitivity: .125" (.005 psig) (.32 cm) water

column

40 scfm (68 m³/HR) @ 100 psig Flow capacity:

(7.0 bar), (700 kPa) supply and 20 psig (1.5 bar), (150 kPa) setpoint

Exhaust capacity: 5.5 scfm (9.35 m3/HR) where

downstream pressure is 5 psig, (.35 bar), (35 kPa) above 20 psig (1.5 bar), (150 kPa) setpoint

Supply pressure effect: Less than 0.1 psig (.007 bar),

(.7 kPa) for 100 psig, (7.0 bar), (700 kPa) change in supply pressure

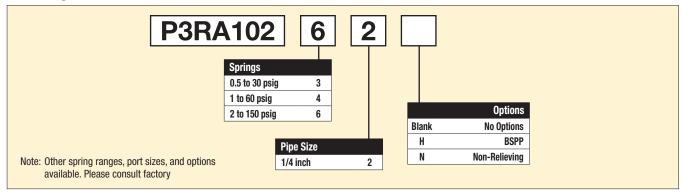
Hazardous locations: Acceptable for use in zones 1 and 2

for gas atmosphere:

Groups IIA and IIB and zones 21 and

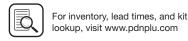
22 for dust atmospheres

Ordering Information:









Air Preparation Products **Regulator Products**

Standard High Precision Regulator

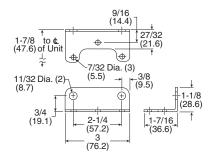
Material Specifications

Body and housing	Aluminum
Diaphragms	Buna N on dacron (standard unit only)
Trim	zinc plated steel, brass

Repair and Service Kits

0 to 200 psig, relieving	PS12125-1
0 to 200 psig, non-relieving	PS12125-4
Tamper resistant kit	PS12165
Mounting bracket kit, zinc plated steel	PS09921

Mounting bracket

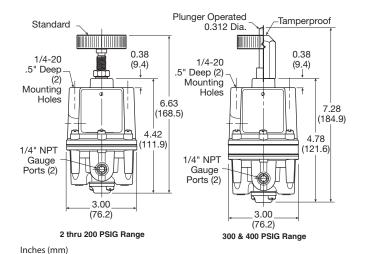


♠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

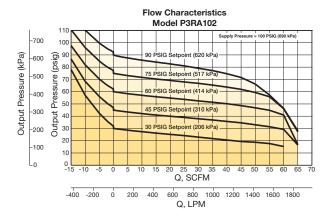
CAUTION:

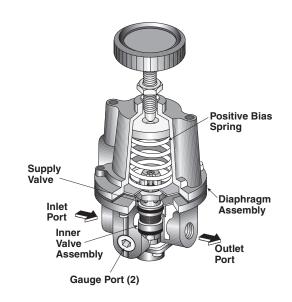
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Flow Charts

P3RA102 1/4" Regulator





Operating Principles

The P3RA102 Series regulator use the force balance principal to control the movement of the Valve Assembly that controls the output pressure. When the regulator is adjusted for a specific set point, the downward force of the Positive Bias Spring moves the Diaphragm Assembly downward. The Supply Valve opens and allows air to pass to the Outlet Port. As the set point is reached, the downward force exerted by the Positive Bias Spring is balanced by the force of the downstream pressure that acts on the Diaphragm Assembly. The resultant force moves the Supply Valve upward to reduce the flow of air to the Outlet Port.

Outlet pressure is maintained as a result of balance between forces acting on the top and bottom of the Diaphragm Assembly.



Dial

Pilot

Proportional

Precision

Water

P3RA102BP High Precision Relief Valves

The P3RA102BP is a high capacity relief valve that relieves excess pressure in a pneumatic system.

The P3RA102BP provides greater accuracy than standard relief valves over a narrow pressure range. The P3RA102BP is an excellent choice for a wide range of precision applications.

- Control sensitivity of .125" (.005 psig) (.32 cm) water column allows use in precision applications
- A separate control chamber and Aspirator Tube isolate the diaphragm from the main flow to eliminate hunting
- Unit construction lets you service without removing it from
- Mounting bracket is available



Port Size	Description	Part Number
1/4"	0.5 to 30 psig	P3RA10232BP
1/4"	1 to 60 psig	P3RA10242BP
1/4"	2 to 150 psig	P3RA10262BP



Operating information

Setpoint range

2 to 200 psig (0.15 to 14 bar) (15 to 1400 kPa)

300 to 400 psig (21 to 28 bar)

500 psig (35 bar), (2100 to 2800 kPa) (3500 kPa) max

-40°F to 200°F (-40°C to 93°C) Ambient temperature:

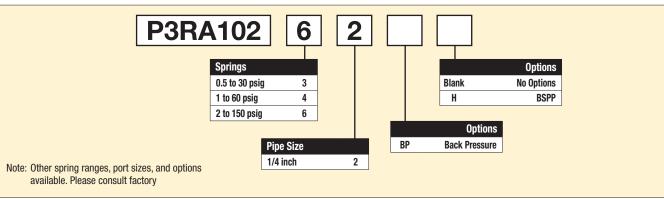
Sensitivity: .125" (.005 psig) (.32 cm) water column Flow capacity:

40 scfm (68 m3/HR) @ 100 psig, (7.0 bar), (700 kPa) system pressure

System pressure (maximum) 300 psig (20.7 bar),

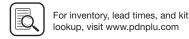
(2100 kPa) max

Ordering Information:



Most popular.





Air Preparation Products Regulator Products

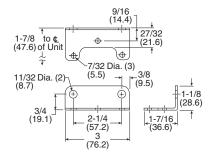
Material Specifications

Body and housing	Aluminum	
Trim	Zinc plated steel, brass	
Nozzle	Nitrile on dacron	

Repair and Service Kits

0 to 200 psig, standard	PS12127-1
Tamper resistant kit	PS12165
Mounting bracket kit, zinc plated steel	PS09921

Mounting bracket

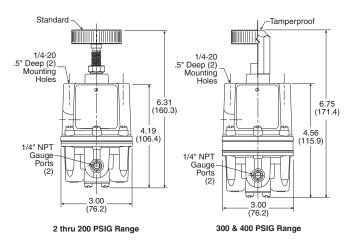


⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

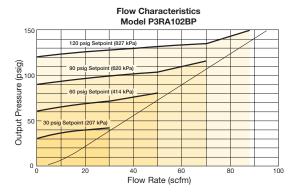
CAUTION:

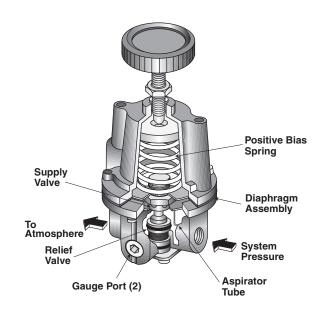
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Flow Charts

P3RA102BP 1/4" Regulator





Operating Principles

The P3RA102BP Regulator uses the force balance principle to open the Relief Valve and vent system pressure when the set point is exceeded.

Downstream pressure is transmitted through the Aspirator Tube to the bottom of the Diaphragm Assembly. When you adjust the range screw for a specific set point, the Positive Bias Spring compresses and exerts a force on the top of the Diaphragm Assembly. As long as the pressure acting on the bottom of the Diaphragm Assembly produces a force less than the spring force acting on the top of the Diaphragm Assembly, the Relief Valve remains closed. When system pressure increases, the force on the bottom of the Diaphragm Assembly increases until it reaches the set point. When system pressure increases beyond the set point, the assembly moves upward, lifting the Relief Valve from its seat and vents the downstream air.

If downstream pressure decreases below the set point, the assembly moves downward closing the Relief Valve.





K95

P3RA171 High Precision Vacuum Regulator

The P3RA171 is a high accuracy vacuum regulator that provides uniform vacuum regulation independent of vacuum supply changes and flow demand.

This unit has a diaphragm assembly with three springs to provide a more balanced loading of the diaphragm.

- Control sensitivity of .125" (.005 PSIG) (.32 cm) water column allows use in precision applications
- Balanced supply valve minimizes effects of vacuum variation
- Aspirator tube compensates for downstream pressure droop under flow conditions
- Separate control chamber isolates the diaphragm from the main flow to eliminate hunting and buzzing
- Construction allows servicing without removing from the line



Port Size	Description	Part Number
1/4"	0 to 30 Hg	P3RA17132NNKN



Operating information

Vacuum supply: 29.92 Hg (760 torr) max

Ambient temperature: -40°F to 200°F (-40°C to 93°C)

Sensitivity:

.125" (.005 psig) (.32 cm) water column

Flow capacity:

3 scfm @ 650 torr supply,

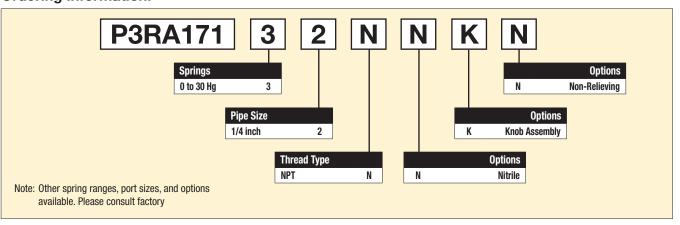
250 torr setpoint

Vacuum supply effect:

Less than 1 torr for 100 torr (.04 Hg for 3.94 Hg) change in

vacuum supply

Ordering Information:





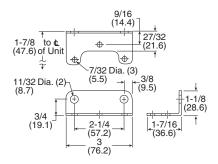


Body and housing	Aluminum
Trim	Zinc plated steel, brass
Elastomers	Nitrile

Repair and Service Kits

Service kits – (includes diaphragm assy, valve assy, seat assy & gasket)	
0-30" Hg, nitrile, non-relieving	PS20966-9
Tamper resistant kit	PS20967-1
Mounting bracket	PS09921

Mounting bracket

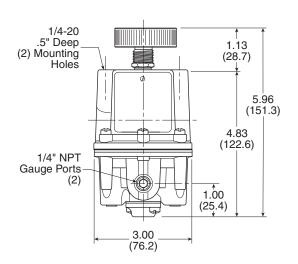


⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

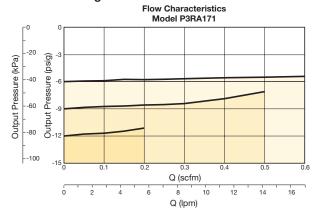
CAUTION:

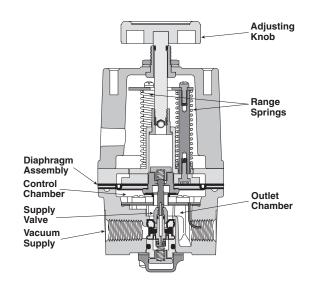
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Flow Charts

P3RA171 1/4" Regulator





Operating Principles

The Model P3RA171 Series vacuum regulator uses the force balance principle to control the movement of the Valve Assembly that controls output vacuum.

When the regulator is adjusted for a specific set point, the upward force of the Range Springs moves the Diaphragm Assembly upward. The Supply Valve opens and allows air to pass to the inlet port. As the set point is reached, the upward force exerted by the Range Springs is balanced by the force of the vacuum that pulls downward on the Diaphragm Assembly. The resultant force moves the Supply Valve downward to reduce the flow of air to the inlet port. Outlet vacuum is maintained as a result of balance between forces acting on the top and bottom of the Diaphragm Assembly.



K97

Pilot

P3EA632 Precision Filter / Regulators

(Revised 03-14-18)

- The no-brass construction is well suited to harsh environments
- Internal and external epoxy finish for superior corrosion resistance
- Non-bleed design to reduce consumption
- Integral relief valve
- A gauge port provides convenient pressure gauge mounting
- The standard 5-micron filter minimizes internal contamination
- The filter dripwell contains a drain plug to easily drain trapped
- Standard tapped exhaust
- · Soft relief seat minimizes air loss



Port Size	Description	Part Number
1/4"	1 to 60 psig	P3EA63242NS
1/4"	2 to 120 psig	P3EA63252NS



Operating information

Supply pressure: 250 psig (17.2 bar), (1700 kPa) max -40°F to 160°F (-40°C to 71°C) Temperature range: Sensitivity: 1.0" (.036 psig) (2.54 cm) water column

25 scfm (42.5 m³/HR) @ Flow capacity:

100 psig (7 bar), (700 kPa) supply and 20 psig (1.5 bar), (150 kPa) setpoint

0.8 scfm (1.36 m³/HR) where Exhaust capacity:

downstream pressure is 5 psig, (.35 bar) (35 kPa) above 20 psig (1.5 bar), (150 kPa) setpoint (0.8 SCFM for 120 # unit)

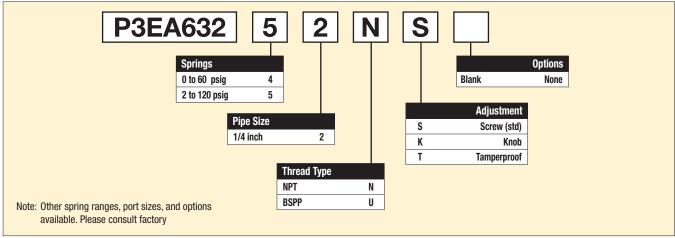
Consumption: Undetectable

Supply pressure effect:

Less than 1.25 psig (.09 bar), (9 kPa) change for 100 psig (7.0 bar), (700 kPa)

change in supply pressure (1.90 psig for 120 # unit)

Ordering Information:









High Precision Filter / Regulator

Material Specifications

Body and housing	Epoxy coated Aluminum
Trim	Stainless steel, nickel plated steel
Elastomers	Nitrile

Repair and Service Kits

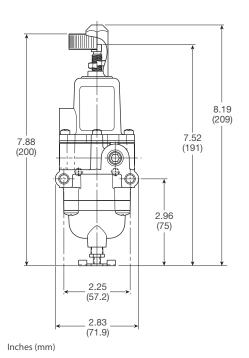
1 to 60, 2 to 120 psig	PS19968-NR	
Tamper resistant kit	PS12165	

↑ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

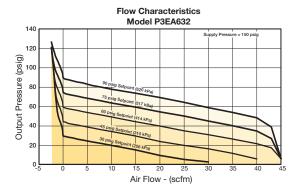


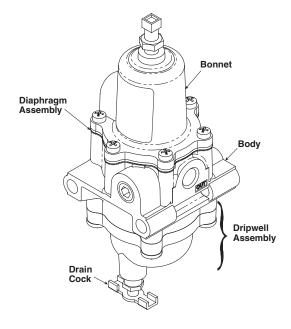
Flow Charts

P3EA632 1/4" Filter / Regulator

Air Preparation Products

Regulator Products





Operating Principles

When you turn the Adjustment Screw to a specific setpoint, the Spring exerts a downward force against the top of the Diaphragm Assembly. This downward force opens the Supply Valve. Output pressure flows through the Outlet Port and the passage to the Control Chamber where it creates an upward force on the bottom of the Diaphragm Assembly.

When the setpoint is reached, the force of the Spring that acts on the top of the Diaphragm Assembly balances with the force of output pressure that acts on the bottom of the Diaphragm Assembly and closes the Supply Valve.

When the output pressure increases above the setpoint, the Diaphragm Assembly moves upward to close the Supply Valve and open the Exhaust Valve. Output pressure flows through the Exhaust Valve and out of the Exhaust Vent on the side of the unit until it reaches the setpoint.





P3BA208 Precision Pneumatic Input Signal Amplifier

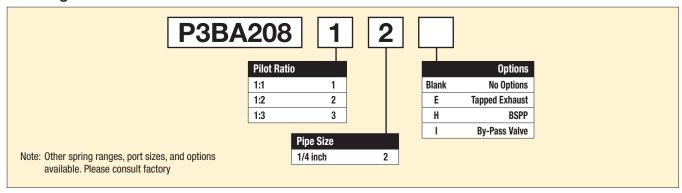
- The P3BA208 uses a pneumatic input signal to accurately control output pressure based on a predetermined ratio
- A balanced supply valve minimizes the effects of supply pressure variation
- An aspirator tube compensates downstream pressure droop under flowing conditions
- A separate control chamber isolates the diaphragm from the main flow to eliminate hunting and buzzing
- Unit construction allows servicing without removal
- Mounting bracket available

Port Size	Description	Part Number	
1/4"	1:1 pilot ratio	P3BA20812	
1/4"	1:2 pilot ratio	P3BA20822	
1/4"	1:3 pilot ratio	P3BA20823	



Operating information			
Signal : Output	1:1	1:2	1:3
Output pressure, maximum:	150 psig (10 bar)	150 psig (10 bar)	150 psig (10 bar)
Supply pressure, maximum:	250 psig (17 bar)	250 psig (17 bar)	250 psig (17 bar)
Flow capacity – 100 psig (7 bar), supply 20 psig, (1.5 bar) output	45 scfm (76.5 m³/HR)	45 scfm (76.5 m³/HR)	45 scfm (76.5 m³/HR)
Exhaust capacity – Downstream pressure 5 psig (0.35 bar) above 20 psig (1.5 bar) setpoint	11 scfm (18.7 m³/HR)	11 scfm (18.7 m³/HR)	11 scfm (18.7 m³/HR)
Sensitivity, water column:	0.250" (0.64 cm)	0.500" (1.27 cm)	0.750" (1.9 cm)
Ratio accuracy – % of 100 psig (7 bar) output span % of output span with 100 psig (7 bar) input span	1.0	1.0	1.0
Supply pressure effect – for change of 100 psig (7 bar)	0.10 psig (.007 bar)	0.20 psig (.014 bar)	0.30 psig (.021 bar)
Ambient temperature:	-40°F to 200°F (-40°C to 93°C)	-40°F to 200°F (-40°C to 93°C)	-40°F to 200°F (-40°C to 93°C)

Ordering Information:









By-Pass

Valve

Upper

Lower

Diaphragm

Diaphragm

Seat Assembly Supply

Exhaust Valve

Inner Valve

Assembly

Outlet

Material Specifications

Body and housing	Aluminum
Diaphragm	Nitrile on dacron fabric
Trim	Zinc plated steel, brass

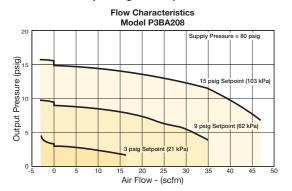
Precision Pneumatic Input Signal Amplifier

Repair and Service Kits

Mounting bracket	PS09921
1:1 Ratio	PS19513-11
1:1 Ratio w/ by-pass valve	PS19513-11I
1:2 Ratio	PS19513-12
1:3 Ratio	PS19513-13

Flow Charts

P3RA102BP 1/4" Input Signal Amplifier



Mounting bracket 9/16 (14.4)27/32 1-7/8 to c (21.6)(47.6) of Unit \bigoplus -7/32 Dia. (3) (5.5) 3/8 (9.5) 11/32 Dia. (2) (8.7) $\dot{\oplus}$ -1-1/8 (28.6) 1-7/16 2-1/4 (57.2) (76.2)

⚠ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

Operating Principles

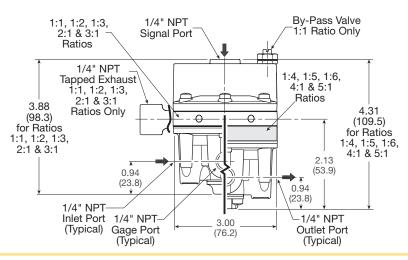
Inlet

The P3BA208 Input Signal Amplifier is a pneumatic device capable of high flow and exhaust capacity. This device uses a force balance system to control the movement of the supply and exhaust valves.

At set point, the force due to signal pressure that acts on the top of the Upper Diaphragm balances with the force due to output pressure acting on the bottom of the Lower Diaphragm.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.









P3BA45 Precision Pneumatic Input Signal Amplifier

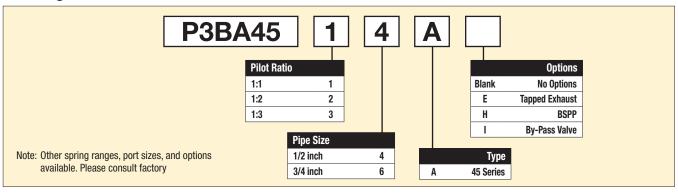
- Five signal to output ratios meet most control element requirements.
- Control sensitivity of water column allows use in precision applications.
- Large Supply and Exhaust Valves provide high forward and exhaust flows.
- Soft Supply and Exhaust Valve seats minimize air consumption.
- A balanced Supply Valve minimizes the effect of supply pressure variation.
- An Aspirator Tube compensates downstream pressure droop under flow conditions.
- A separate Control Chamber isolates the diaphragm from the main flow to eliminate hunting and buzzing.
- Unit construction lets you service the P3BA45 without removing it from the line

from the	line.	
Port Size	Description	Part Number
1/2"	1:1 pilot ratio	P3BA4514A
3/4"	1:1 pilot ratio	P3BA4516A



Operating information Signal: Output	1:1	1:2	1:3
Output pressure, maximum:	150 psig (10 bar)	150 psig (10 bar)	150 psig (10 bar)
Supply pressure, maximum:	250 psig (17 bar)	250 psig (17 bar)	250 psig (17 bar)
Flow capacity – 100 psig (7 bar), supply 20 psig (1.5 bar) output	150 scfm (255 m³/HR)	150 scfm (255 m³/HR)	150 scfm (255 m³/HR)
Exhaust capacity – Downstream pressure 5 psig (.35 bar) above 20 psig (1.5 bar) setpoint	40 scfm (62.5 m ³ /HR)	40 scfm (62.5 m³/HR)	40 scfm (62.5 m ³ /HR)
Sensitivity, water column:	1.0" (2.54 cm)	2.0" (5.08 cm)	3.0" (7.62 cm)
Ratio Accuracy – % of 100 psig (7 bar) output span % of output span with 100 psig (7 bar) input span	3.0	3.0	3.0
Supply pressure effect – for change of 100 psig (7 bar)	0.10 psig (0.007 bar)	0.20 psig (0.014 bar)	0.30 psig (0.021 bar)
Ambient temperature:	-40°F to 200°F (-40°C to 93°C)	-40°F to 200°F (-40°C to 93°C)	-40°F to 200°F (-40°C to 93°C)
Hazardous locations:	Acceptable for use in zone zones 21 and 22 for dust	es 1 and 2 for gas atmosphere atmospheres.	es; Groups IIA and IIB and

Ordering Information:



Most popular.





Material Specifications

Body and housing	Aluminum
Diaphragm	Nitrile on dacron fabric
Trim	Zinc plated steel, brass

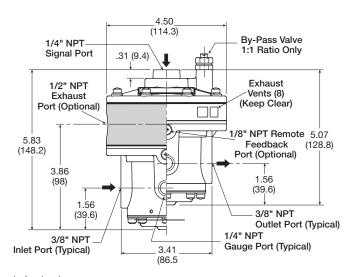
Repair and Service Kits

1:1 ratio	PS19549-1
1:1 ratio w/ tapped exhaust	PS19549-1E
1:3 ratio	PS19549-3
1:2 ratio	PS19549-2
1:1 w/ tapped exhaust, I option	PS19549-20E

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

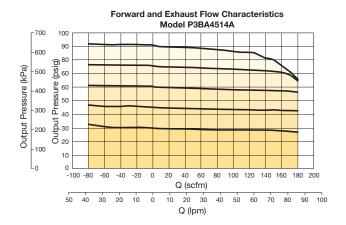
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

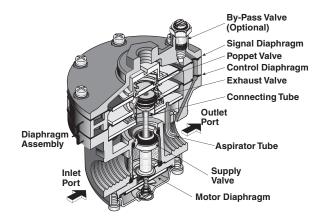


Inches (mm)

Flow Charts

P3BA45 1/2" & 3/4" Input Signal Amplifier





Operating Principles

When signal pressure on the top of the Signal Diaphragm creates a downward force on the Diaphragm Assembly, the Supply Valve opens. Output pressure flows through the Outlet Port and the Aspirator Tube to the Control Chamber to create an upward force on the bottom of the Control Diaphragm. When the setpoint is reached, the force of the signal pressure that acts on the top of the Signal Diaphragm balances with the force of the output pressure that acts on the bottom of the Control Diaphragm to close the Supply Valve.

When the output pressure increases above the signal pressure, the Diaphragm Assembly moves upward to close the Supply Valve and open the Exhaust Valve. Because the Poppet Valve is closed, pressure flows down the Connecting Tube to the bottom of the Motor Diaphragm. This pressure keeps the Supply Valve tightly closed while in the exhaust mode. The Poppet Valve opens and excess output pressure exhausts through the vent in the side of the unit until it reaches the setpoint.



K103

General

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Dial

Pilot

Proportional

Precision







20R Regulators - Miniature Water

- · Rugged brass body for water service
- Unbalanced poppet standard
- Diaphragm operated for fast response
- Non-rising adjusting knob
- Compact, 3.06 inch (77.79mm) high by 1.56 inch (36.69mm) wide
- High Flow: 1.25 GPM
- 1/8:, 1/4" ports (NPT, BSPP)



Port Size	Description	Part Number
1/8"	Without gauge	20R013GC
1/4"	Without gauge	20R113GC

NOTE: 1.25 Dia. (31.8 mm) hole required for panel mounting.



Operating information

Supply pressure (max):

0 to 300 psig (0 to 20.7 bar)

Secondary pressure ranges

 Standard
 2 to 125 psig (0 to 8.6 bar)

 Medium
 1 to 60 psig (0 to 4.1 bar)

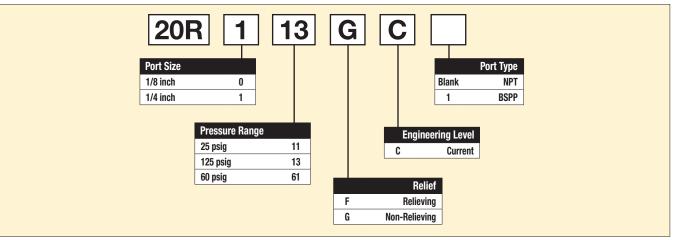
 Medium
 1 to 25 psig (0 to 1.7 bar)

 Operating temperature:
 32°F to 125°F (0°C to 52°C)

High flow: 1.25 GPM Gauge ports (2): 1/8 inch

Weight: 0.5 lb (0.23 kg)

Ordering Information:

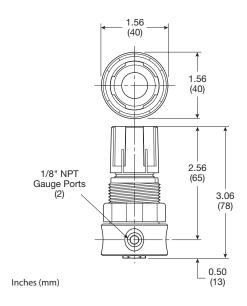




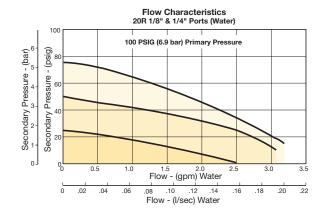
Adjusting nut & stem	Steel
Body, valve poppet, bottom plug, diaphragm button	Brass
Bonnet, knob	Plastic
Seals, diaphragm	Buna N
Springs	Steel

Repair and Service Kits

Bonnet kit	PCKR364Y
Bonnet tamperproof kit	PCKR364T
Panel mount nut, aluminum	R05X51-A
Panel mount nut, plastic	R05X51-P
Mounting bracket kit	SA161X57
Relieving	PRKR164Y
Non-Relieveing	PRKR163Y



Flow Charts



⚠ WARNING

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Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



K105

General

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Pilot

Proportional

Precision





R24 Regulators - Miniature Water

Water service

- Constructed with a combination of N.S.F. and F.D.A. compliant materials
- Lightweight plastic body
- Unbalanced poppet standard
- Non-rising, push-to-lock adjusting knob
- Compact, 3.10 Inch (79mm) high by 1.60 Inch (41mm) wide
- Lightweight
- Diaphragm operated
- 1/8", 1/4" ports (NPT)



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Port Size	Description	Part Number
1/8"	Non-Relieving, 0-125 Reduced Pressure, Without Gauge	R24-01CK
1/4"	Non-Relieving, 0-125 Reduced Pressure, Without Gauge	R24-02CK

NOTE: 1.250 Dia. (31.8 mm) hole required for panel mounting.

Operating information

Supply pressure (max): Inlet 150 psig (10.0 bar)

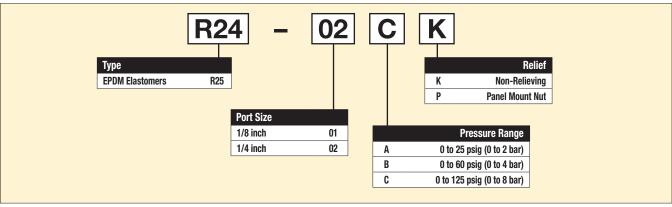
Operating temperature: 40°F to 125°F (4°C to 52°C)

Gauge ports (2): 1/8 inch

(can be used for full flow)

Weight: 0.25 lb (0.11 kg)

Ordering Information:



K106



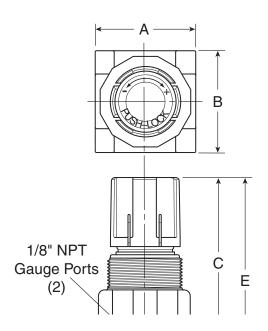


Material Specifications

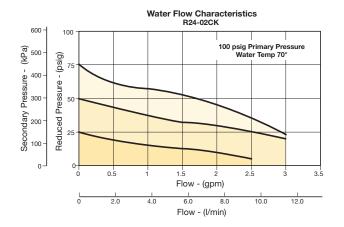
Adjusting screw	Steel
Body	Acetal
Bonnet and seat	Acetal
Diaphragm	EPDM
Seals	EPDM
Springs	Stainless steel
Valve poppet	EPDM

Repair and Service Kits

•	
Panel mount nut, plastic	R05X51-P
Mounting bracket and nut	SA161X57
Relieving (EPDM)	RKR24Y
Non-Relieving (EPDM)	RKR24KY
0-25 psig spring	SPR-375-1
0-60 psig spring	SPR-376
0-125 psig spring	SPR-377
Tamperproof kit	CKR364T



Flow Charts



⚠ WARNING

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Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





General

31

Dial

Pilot

Proportional







R46 Regulators - Miniature Water

Water service

- Constructed with a combination of N.S.F. and F.D.A. compliant materials
- Lightweight plastic body
- Unbalanced poppet standard
- Non-rising, push-to-lock adjusting knob
- Compact, 3.43 inch (87.1mm) high by 2.06 inch (52.3mm) wide
- Lightweight
- Diaphragm operated
- 1/4", 3/8" ports (NPT)



Port Size	Description	Part Number
1/4"	Non-Relieving, 0-125 Reduced Pressure, Without Gauge	R46-02CK
3/8"	Non-Elieving, 0-125 Reduced Pressure, Without Gauge	R46-03CK

NOTE: 1.250 Dia. (31.8 mm) hole required for panel mounting.



Operating information

Supply pressure (max): Inlet 150 psig (10.0 bar)

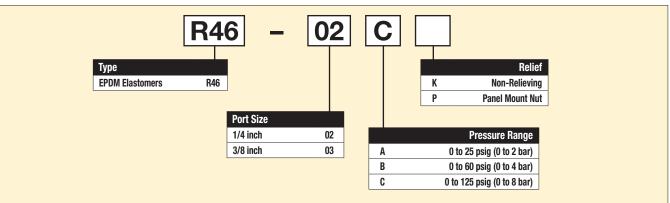
Operating temperature: 40°F to 125°F (4°C to 52°C)

Gauge ports (2): 1/4 inc

(can be used for full flow)

Weight: 0.38 lb (0.17 kg)

Ordering Information:

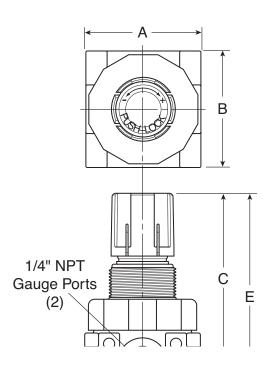




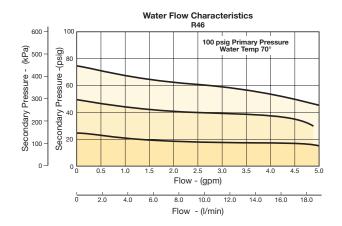
-	
Adjusting screw	Steel
Body	Acetal
Bonnet and seat	Acetal
Diaphragm	EPDM
Seals	EPDM
Springs	Stainless steel
Valve Poppet	EPDM

Repair and Service Kits

Panel mount nut, plastic	R05X51-P
Mounting bracket and nut	SA161X57
Relieving	RKR45Y
Non-Relieving	RKR45KY
0-25 psig spring	SPR-46
0-60 psig spring	SPR-47
0-125 psig spring	SPR-48



Flow Charts



↑ WARNING

Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



General

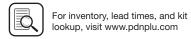
Dial

Pilot

Proportional

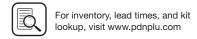
Precision

Water



K109





Air Preparation Products Bulk Liquid Separators

L2-L5 P3TF





L1

P3TF Bulk Liquid Separators

- Tested in accordance with ISO 8573.9
- High liquid removal efficiencies at all flow conditions
- Low pressure losses for low operational costs
- Suitable for variable flow compressors
- Low maintenance
- External surface epoxy painted for maximum corrosion resistance
- 1/4" to 3" ports (NPT, BSPP)

Applications

- Bulk liquid removal at any point in a compressed air system
- Protection of refrigeration and heatless regenerative desiccant dryers
- Liquid removal from compressor Inter-coolers / after-coolers
- Liquid separation within refrigeration dryers
- Pre-filtration

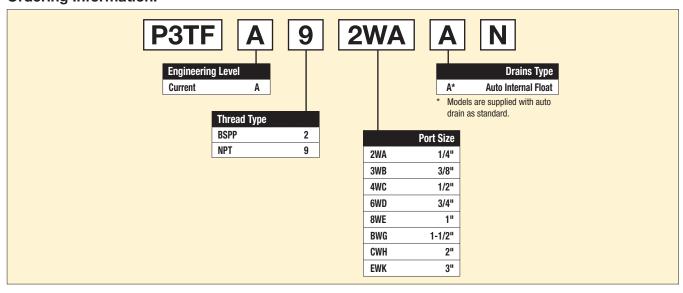
Pipe Size	Part Number (NPT)
1/4"	P3TFA92WAAN
3/8"	P3TFA93WBAN
1/2"	P3TFA94WCAN
3/4"	P3TFA96WDAN
1"	P3TFA98WEAN
1-1/2"	P3TFA9BWGAN
2"	P3TFA9CWHAN
3"	P3TFA9EWKAN

Pressure differential at rated flow ... 1.0 psid (0.07 bar)
Stated flows are for operation at 102 psig (7 bar) with reference to 68°F (20°C), 1 bar (a), 0% relative water vapor pressure.



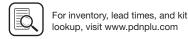
Operating information							
Operating pressure	e (max):	232 psig (16 bar)					
Operating tempera	ture:	35°F to 176°F (1.5°C to 80°C)					
Pressure differentia	l at rated flow:	1.0 psid (0.07 bar)					
Flow:	1/4" 3/8", 1/2" 3/4", 1" 1-1/2", 2" 3"	21 scfm (10 L/s) 85 scfm (40 L/s) 233 scfm (110 L/s) 742 scfm (350 L/s) 1695 scfm (800 L/s)					
Weight:	1/4" 3/8", 1/2" 3/4", 1" 1-1/2", 2" 3"	1.3 lb (0.6 kg) 2.4 lb (1.1 kg) 4.8 lb (2.2 kg) 11.2 lb (5.1 kg) 22.0 lb (10.0 kg)					

Ordering Information:



Most popular.





Bulk Liquid Separators

Air Preparation Products **Bulk Liquid Separator**

Inlet air pressure correction

psi	15	29	44	58	73	87	100	116	131	145	160	174	189	203	218	232
bar	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Factor	4.00	2.63	2.00	1.59	1.33	1.14	1.00	0.94	0.89	0.85	0.82	0.79	0.76	0.73	0.71	0.68

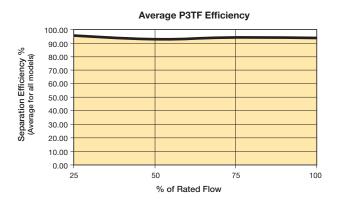
Material Specifications

Automatic float drain	Plastic
Housing / bowl	Aluminum
Seals	Fluorocarbon

Repair and Service Kits

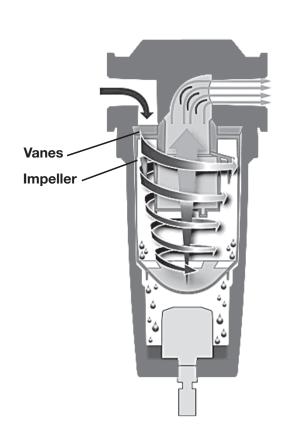
- 1		 		
Drain kit			EFI	

Flow



Operation

- Air enters the bulk liquid separator inlet and turns into the separator module.
- The inlet of the separator module contains a set of fixed vanes which the air must pass through.
- The vanes force the air to spin inside the vessel.
- The spinning air is then forced to change direction as it passes the impeller.
- A vortex is created which, due to the design of the separator module, narrows and intensifies as it reaches the lower part of the separator module.
- Bulk liquid is removed from the airstream due to:
 - directional changes of the airstream
 - velocity changes
 - centrifugal action of the vortex
- As the vortex reaches the bottom of the module, air is forced through the center of the vortex.
- Aerospace turning vanes, located in the outlet of the separator module, turn an inefficient corner into a number of more efficient corners.
- Turning vanes reduce turbulence, minimizing pressure loss and cost of ownership.
- The number of vanes required is dependent upon the conduit diameter.



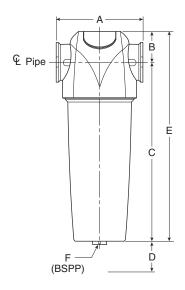


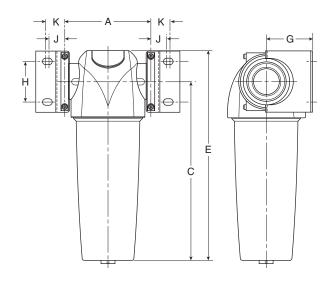
L3

(Revised 01-14-19)

Bulk Liquid Separators

P3TF (Bulk Liquid Separator)





Dimensions

Part Number	Pipe size	Α	В	С	D	E	BSPP F	G	Н	J	К	Wall Mounting Bracket Kit
P3TFA92WAAN	1/4"	3.00 (76)	1.12 (28.5)	6.02 (153)	1.58 (40)	7.15 (181.5)	1/2	2.05 (50)	1.18 (30)	0.71 (18)	0.96 (24.5)	P3TKA00MWA
P3TFA93WBAN	3/8"	3.83 (97.5)	1.34 (34)	7.91 (201)	1.97 (50)	9.25 (235)	1/2	2.36 (60)	1.57 (40)	0.81 (20.5)	1.00 (25.5)	P3TKA00MWB
P3TFA94WCAN	1/2"	3.83 (97.5)	1.34 (34)	7.91 (201)	1.97 (50)	9.25 (235)	1/2	2.36 (60)	1.57 (40)	0.81 (20.5)	1.00 (25.5)	P3TKA00MWB
P3TFA96WDAN	3/4"	5.07 (129)	1.67 (42.5)	9.20 (232.5)	2.76 (70)	10.80 (275)	1/2	2.68 (68)	2.36 (60)	0.91 (23)	1.10 (28)	P3TKA00MWD
P3TFA98WEAN	1	5.07 (129)	1.67 (42.5)	12.68 (322)	2.76 (70)	14.35 (364.5)	1/2	2.68 (68)	2.36 (60)	0.91 (23)	1.10 (28)	P3TKA00MWD
P3TFA9BWGAN	1-1/2"	6.70 (170)	1.97 (50)	18.68 (474.5)	3.94 (100)	20.64 (524.5)	1/2	3.62 (92)	3.31 (84)	1.26 (32)	1.54 (39)	P3TKA00MWF
P3TFA9CWHAN	2"	6.70 (170)	1.97 (50)	18.68 (474.5)	3.94 (100)	20.64 (524.5)	1/2	3.62 (92)	3.31 (84)	1.26 (32)	1.54 (39)	P3TKA00MWF
P3TFA9EWKAN	3"	8.07 (205)	2.36 (60)	30.39 (772)	4.72 (120)	32.76 (832)	1/2	5.31 (135)	3.94 (100)	1.40 (35.5)	1.67 (42.5)	P3TKA00MWJ

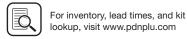
Inches (mm)

Wall Mounting Bracket Kit

Mounting brackets provide additional support to filters installed in flexible piping systems or OEM equipment.







(Revised 03-14-19)

- High liquid removal efficiencies at all flow conditions
- Suitable for variable flow compressors
- Works with all types of compressor and compressor condensate
- External surface epoxy painted for maximum corrosion resistance
- 4" & 6" flange*
- Auto float drain standard, shipped loose



P3TF Series

Port Size	Part Number
4" Flange	P3TFAFFW2AN
6" Flange	P3TFAFGW3AN
* 150# Flange	

Operating information

Operating Pressure: 15 to 232 psi (1 to 232 bar) 35°F to 140°F (1.5°C to 60°C) Operating Temperature: Flow capacity †: 2100 scfm (991.1 dm³/s, ANR) 6" 3780 scfm (1783.9 dm³/s, ANR) 4" Weight: 180 lb (81.6 kg)

257 lb (116.6 kg)

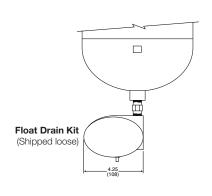
† Stated flows at 100 psi (7 bar), 68°F (20°C), 0% relative water vapor pressure.

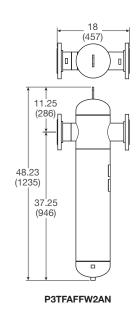
Material specifications

Baffle	Plated steel
Body	Steel
Deflector	Plated steel
Seals	Fluorocarbon
Stud	Plated steel

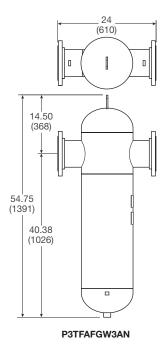
Repair and Service Kits

Auto float drain kit - 1/2" NPT HDF-120-NPT-A



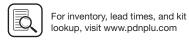


L5



Most popular.









Air Preparation Products

Contents - www.parker.com/pneu/frl



SPE / DRD Refrigeration	M2-M5
DD Disposable	M6
DD Inline Desiccant	M7-M8
TW Heatless Desiccant	M9-M12



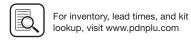












SPE / DRD Refrigeration Dryer Series

(Revised 02-07-20)



SPE010 - SPE0250

- "Plug & Play" design for easy installation and operation
- Small space saving design
- High reliability, easy to use and maintain
- · All models equipped standard with a digital controller
 - controls integral timed drain
 - various warning and alarms
 - on/off indicator
- Drain has access from both sides
- · Non cycling dryer



DRD325 - DRD2400

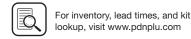
- Optimum dewpoint levels for highest system performance
- Advanced patented design solutions
- High reliability, easy to use and maintain
- Unique 4-in-1 SmartPack heat exchanger
- Integral drain
- Extremely low pressure drop design
- SmartControl energy saving function (cycling dryer)
- Excellent dewpoint performances
- · Advanced compliant scroll compressor

Capacity			Pipe	Recommended Filt	ration	
SCFM @ 100 psig			Size	Bulk	Pre-Filter	Post-Filter
(m³/min @ 6.9 bar)	Primary Voltage	Part Number	(NPT) ‡	Separator	(5µ particulate)*†	(.01µ coalescing w DPI)
10 (17)	115V/1 ph / 60 Hz	SPE010-A11516016TIU	1/2"	P3TFA94WCAN	P32FB94QSAN*	P32FB94DSAN
15 (26)	115V/1 ph / 60 Hz	SPE015-A11516016TIU	1/2"	P3TFA94WCAN	P32FB94QSAN*	P32FB94DSAN
25 (43)	115V/1 ph / 60 Hz	SPE025-A11516016TIU	1/2"	P3TFA94WCAN	P32FB94QSAN*	P32FB94DSAN
35 (60)	115V/1 ph / 60 Hz	SPE035-A11516016TIU	3/4"	P3TFA96WDAN	P33FA96QSAN*	P33FA96DSAN
50 (85)	115V/1 ph / 60 Hz	SPE050-A11516016TIU	3/4"	P3TFA96WDAN	P33FA96QSAN*	P33FA96DSAN
75 (127)	115V/1 ph / 60 Hz	SPE075-A11516016TIU	1"	P3TFA98WEAN	P3YFA98ESAN	P3YFA98DSAN
100 (170)	115V/1 ph / 60 Hz	SPE0100-A11516016TIU	1"	P3TFA98WEAN	P3YFA98ESAN	P3YFA98DSAN
125 (212)	115V/1 ph / 60 Hz	SPE0125-A11516016TIU	1"	P3TFA98WEAN	P3YFA98ESAN	P3YFA98DSAN
150 (255)	115V/1 ph / 60 Hz	SPE0150-A11516016TIU	1-1/2"	P3TFA9BWGAN	P3NFA9PGSA†	P3NFA9PDSA
175 (297)	115V/1 ph / 60 Hz	SPE0175-A11516016TIU	1-1/2"	P3TFA9BWGAN	35F77BAP	35F77EAP
175 (297)	230 V/1 ph / 60 Hz	SPE0175-A23016016TIU	1-1/2"	P3TFA9BWGAN	35F77BAP	35F77EAP
200 (340)	230 V/1 ph / 60 Hz	SPE0200-A23016014TIU	1-1/2"	P3TFA9BWGAN	35F77BAP	35F77EAP
250 (425)	230 V/1 ph / 60 Hz	SPE0250-A23016014TIU	1-1/2"	P3TFA9BWGAN	35F77BAP	35F77EAP
325 (552)	230V/3ph/60Hz & 460V/3ph/60Hz	DRD325-A23036014EI DRD325-A46036014EI	2" NPT-F	P3TFA9CWHAN	35F87BAP	35F87EAP
400 (680)	230V/3ph/60Hz & 460V/3ph/60Hz	DRD400-A23036014EI DRD400-A46036014EI	2" NPT-F	P3TFA9CWHAN	35F87BAP	35F87EAP
500 (849)	230V/3ph/60Hz & 460V/3ph/60Hz	DRD500-A23036014EI DRD500-A46036014EI	2" NPT-F	P3TFA9CWHAN	35F87BAP	35F87EAP
700 (1189)	230V/3ph/60Hz & 460V/3ph/60Hz	DRD700-A23036014EI DRD700-A46036014EI	3" NPT-M	P3TFA9EWKAN	43FN7BAP	43FN7EAP
800 (1359)	230V/3ph/60Hz & 460V/3ph/60Hz	DRD800-A23036014EI DRD800-A46036014EI	3" NPT-M	P3TFA9EWKAN	43FN7BAP	43FN7EAP
1000 (1700)	460V/3ph/60Hz	DRD1000-A46036014EI	3" NPT-M	P3TFA9EWKAN	43FN7BAP	43FN7EAP
1200 (2039)	460V/3ph/60Hz	DRD1200-A46036014EI	3" NPT-M	P3TFA9EWKAN	43FN7BAP	43FN7EAP
1600 (2718)	460V/3ph/60Hz	DRD1600-A46036014EI	4" Flg.	P3TFAFFW2AN	P3TFAFFQ2AN*	P3TFAFFD2AN
2000 (3400)	460V/3ph/60Hz	DRD2000-A46036014EI	6" Flg.	P3TFAFGW3AN	P3TFAFGQ3AN*	P3TFAFGD3AN
2400 (4078)	460V/3ph/60Hz	DRD2400-A46036014EI	6" Flg.	P3TFAFGW3AN	P3TFAFGQ3AN*	P3TFAFGD3AN

^{*} SPE010-025 are 1/2" NPT compatible. SPE035-0250 are manufactured with BSPP-F ports, but come standard with BSP to NPT adapter.

^{† 40} micron







Most popular.

^{* 1}µ coalescing

The importance of compressed air as a provider of energy for modern industrial processes is widely known. What is often overlooked however is the need to provide quality treatment for this air.

In fact, the air entering the system contains condensate which, when cooled, will turn into liquid water, causing extensive damage not only to the compressed air network, but also to the finished product.

DRD refrigeration dryers actively remove this condensate to achieve extremely dry compressed air.

Our SmartPack heat exchanger offers minimal pressure drops and class leading performance, and significantly increases the efficiency of the whole compressed air treatment process. The innovative SmartControl function automatically and continuously adjusts dryer operation to the effective working conditions, minimizing operating costs and maximizing performances.

Compressed air purification equipment must deliver uncompromising performance and reliability while providing the right balance of air quality with the lowest cost of operation. Many manufacturers offer products for the filtration and purification of contaminated compressed air, which are often selected only upon their initial purchase cost, with little or no regard for the air quality they provide, the cost of operation throughout their life or their environmental impact. When purchasing purification equipment, delivered air quality, the overall cost of ownership and the equipment's environmental impact must always be considered.



SmartPack heat exchanger provides less than 2 PSI pressure drop

The SmartPack (patent pending) heat exchanger features an extremely robust, all-in-one aluminum design, with no interconnecting tubing.

The geometry of the heat exchanger has been designed in order to optimize its performances. In particular, large volumes allow low air velocity through the heat exchanger section, resulting in high exchange efficiency and low pressure drops. Pressure drops are further improved thanks to the absence of interconnecting pipes through the different sections of the heat exchanger and to a straight forward path of the compressed air flow with smooth and minimum changes of flow directions.

Smart BMS interface

- Simple BMS interface includes:
- RS485 serial card provides direct communication to Modbus. Requires no gateway or A.N.I.
- Provides visualization of dewpoint, alarm conditions and service indication
- Provides remote control of the dryer including on/off and alarm reset (depending on actual alarm)



SmartDrain - Dual mode zero air loss drain

The drainage chamber is integrated into the heat exchanger while the valve mechanism is fitted in an easily accessible drain niche. The SmartDrain continuously adjusts itself to the actual working conditions, ensuring zero air loss and a notable reduction in system power consumption.

An innovative control system continuously monitors for fault situations. If a fault does occur, an alarm is signaled and the drain switches to conventional timed solenoid drain operation. The dual mode circuitry ensures maximum reliability.

Smart control with SmartSave cycling

The multifunction SmartControl provides a versatile platform for user interface and SmartSave Cycling (if enabled). The innovative SmartSave (patent pending)

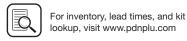
Cycling Control continuously monitors the demand placed on the dryer. At conditions of low demand the refrigerant compressor is cycled off to save energy. A sophisticated algorithm continuously adapts the operation of the dryer for optimum energy efficiency while minimizing the dewpoint spikes common to traditional thermal mass dryers.

Compliant scroll compressors

M3

These units feature Compliant Scroll compressors, offering energy savings of 20 -30% when compared with piston compressors. The ability to tolerate liquid returns coupled with 50% less moving parts render them nearly indestructible and highly reliable. Low vibration levels increase overall refrigeration circuit







Refrigeration

Disposable

Desiccant

Regenerative

Refrigeration Dryers

Operating information

		Operating pr	essure	Operating temperature		Ambient	Electrical		Noise level	Refrigerant
Dryer Models	Dewpoint	Min	Max	Min	Max	maximum	supply	Thread	bB(A)	type
SPE010 - SPE050			000 (10)				115)/1-5-0015			
SPE075 - SPE0175	ISO 8573-1 Class 5	29 psig (2 bar)	232 psig (16 bar)	41°F (5°C)	149°F (65°C)	122°F (50°C)	115V 1ph 60 Hz	NPT	<75	R134a
SPE0200 - SPE0250	0.000		203 psig (14 bar)	(5 5)	(00 0)		230 1ph 60 Hz			

Controller Functions

Dryer Models	Power on indication	Visual fault indication	Compressed air temperature	Dryer service indicator	Fault relay power loss
SPE010-0250	X	X	X	X	Χ

Quality Assurance / IP Rating / Pressure Vessel Approvals

Development/Manufacture ISO 9001 / ISO 14001 Ingress Protection Rating IP22 Indoor Use Only

Product Selection and Correction Factors

Capacities are based upon: Ambient temperature - 100°F (38°C); inlet temperature - 100°F (38°C); and working pressure - 100 psig (7 bar g)

Minimum Drying Capacity = System flow x CFIT x CFATx CFMIP

NOTE: Flowrate, temperatures, and pressure MUST be provided by customer.

Example: 50 scfm flowrate Inlet temperature - 100° F (38° C) = 1.0

Max ambient temperature $-110^{\circ}F$ (43°C) = 1.08 Min inlet pressure $-80^{\circ}F$ (27°C) = 1.09

50 (1.0) + 1.08 + 1.09 = 59, therefore, a larger 75 scfm dryer is required

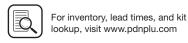
	SPE01	0 - SPE	0250									DRD3	25 - DR	D2400				
CFIT - Correction	CFIT - Correction factor minimum inlet temperature																	
°F	90	95	100	110	120	130	140	149				90	100	110	120	130	140	
°C	32	35	38	43	49	54	60	65				32	38	43	49	54	60	
Factor	0.74	0.82	1.00	1.33	1.76	2.38	2.60	2.67				1.22	1.00	0.82	0.68	0.56	0.46	
CFAT - Correction factor maximum ambient temperature																		
°F	60	70	80	90	95	100	110	120	122			70	80	90	100	110	120	122
°C	16	21	27	32	35	38	43	49	50			21	27	32	38	43	49	50
Factor	0.93	0.93	0.93	0.93	0.96	1.00	1.08	1.16	1.18			1.22	1.15	1.05	1.00	0.94	0.79	0.71
CFMIP - Correct	CFMIP - Correction factor minimum inlet pressure																	
psig	45	60	80	100	125	145	150	160	175	200	232	60	80	100	125	150	174	203
bar	3	4	6	7	9	10	10	11	12	14	16	3	6	7	9	10	12	14
Factor	1.40	1.17	1.09	1.00	0.88	0.83	0.82	0.81	0.79	0.75	0.71	0.83	0.93	1.00	1.07	1.12	1.15	1.18

Dimensions	Part Number	A width	B height	C depth	Weight (kg)
SPE010-SPE0250	SPE010-A11516016TIU	11.8 (300)	20.5 (520)	15.7 (400)	53 (24)
	SPE015-A11516016TIU	11.8 (300)	20.5 (520)	15.7 (400)	53 (24)
	SPE025-A11516016TIU	11.8 (300)	20.5 (520)	15.7 (400)	55 (25)
	SPE035-A11516016TIU	13.0 (330)	22.8 (580)	21.7 (550)	77 (35)
\uparrow	SPE050-A11516016TIU	13.0 (330)	22.8 (580)	21.7 (550)	79 (36)
Starlette	SPE075-A11516016TIU	15.7 (400)	25.6 (650)	24.8 (630)	101 (46)
В	SPE0100-A11516016TIU	15.7 (400)	25.6 (650)	24.8 (630)	101 (46)
	SPE0125-A11516016TIU	15.7 (400)	25.6 (650)	24.8 (630)	104 (47)
-Parker	SPE0150-A11516016TIU	15.7 (400)	25.6 (650)	24.8 (630)	117 (53)
	SPE0175-A11516016TIU	15.7 (400)	25.6 (650)	24.8 (630)	121 (55)
A C	SPE0175-A23016016TIU	15.7 (400)	25.6 (650)	24.8 (630)	121 (55)
	SPE0200-A23016014TIU	17.7 (450)	33.1 (840)	30.7 (780)	176 (80)

Most popular.

Inches (mm)





SPE0250-A23016014TIU



17.7 (450)

33.1 (840)

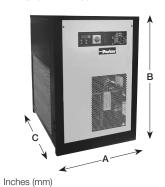
176 (80)

30.7 (780)

Air Preparation Products **Dryers**

DRD325-DRD2400

Dimensions



Part Number	A width	B height	C depth	Weight (kg)
DRD325-A23036014EI	28.0 (711)	42.0 (1067)	41.0 (1041)	320 (145)
DRD400-A23036014EI	28.0 (711)	42.0 (1067)	41.0 (1041)	320 (145)
DRD500-A23036014EI	28.0 (711)	42.0 (1067)	41.0 (1041)	342 (155)
DRD700-A23036014EI	32.0 (813)	52.0 (1321)	46.0 (1168)	529 (240)
DRD800-A23036014EI	32.0 (813)	52.0 (1321)	46.0 (1168)	529 (240)
DRD1000-A46036014EI	32.0 (813)	52.0 (1321)	46.0 (1168)	551 (250)
DRD1200-A46036014EI	40.0 (1016)	67.0 (1702)	43.0 (1092)	816 (370)
DRD1600-4A6036014EI	40.0 (1016)	68.0 (1727)	71.0 (1803)	1279 (580)
DRD2000-A46036014EI	40.0 (1016)	68.0 (1727)	71.0 (1803)	1477 (670)
DRD2400-A46036014EI	40.0 (1016)	68.0 (1727)	71.0 (1803)	1521 (690)





M5

DD10 Mini Disposable Dryer

Mini disposable inline desiccant dryer – DD10

Used at the point-of-use, this disposable, mini inline desiccant dryer removes all traces of water vapor, oil vapor and dirt. It is often used directly upstream of blow guns or spray guns as final protection for critical parts blow off and paint spraying. Install in either direction; it functions in both directions.

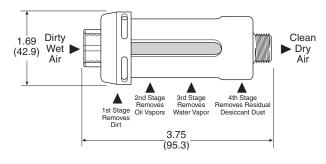
A 40 micron, porous bronze element removes fine dirt particles, an oil removing media removes oil vapor, and desiccant beads adsorb water vapor. The see-through housing shows desiccant color change from the original orange to a green color in the desiccant beads, which indicates that the dryer needs to be replaced.

Features

- Polycarbonate material allows clear desiccant visibility
- Disposable
- Used for parts blow off
- Protection for paint guns
- Non-toxic desiccant standard
- 1/4" port (NPT)

Non-metalic material is highly resistant to chemicals.

See through housing shows color change when dryer needs replacement.





DD10-02

Operating information

Operating temperature: 32°F to 130°F (0°C to 54°C)

130°F (54°C) Maximum

Flow capacity: 15 scfm (7.1 dm³/s, ANR)

Pressure rating (max.): 125 psig (8.6 bar) Weiaht: 2.8 oz (79.4 g)

Installation

The DD10 is equipped with a 1/4" NPT (F) and (M) ports and can be installed in either direction. When installing the filter/dryer hand tighten to a leak proof seal. Do not use any mechanical means to hold the filter/dryer and do not over torque the threads.

Operation

M6

- 1. The unique feature of the filter/dryer design allows you to visually see when it is time to install a new DD10 by observing the color change from the original orange color to a complete green color in the desiccant beads.
- 2. Do not attempt to clean the filter/dryer as the use of solvents, ketones, etc., will adversely affect the plastic housing.
- 3. Keep the hose free of snags. Extra tension on the filter/dryer assembly could break the unit at the connecting ports. To clear stuck hoses, grasp hose below the filter/dryer.





DD Inline Desiccant Dryers

- Inline desiccant dryers are a convenient and cost effective means of ensuring your sensitive intermittent pneumatic applications are never exposed to damaging moisture
- Compact size for point-of-use applications
- Drying efficiency down to -40°F pressure dew point
- · Easily and quickly serviced
- Sight glass in bowl to monitor desiccant
- Built-in particulate after filter prevents downstream dust
- No electricity needed
- Low pressure drop
- No purge air lost as with other dryer types
- · Check valve required on inlet
- Desiccant must be ordered separately

Inline Desiccant Dryers

	Part Number scfm / desicc	Part Number scfm / desiccant Capacity ¹							
Port Size	15 scfm / 2.5 lb.	30 scfm / 5 lbs.	60 scfm / 10 lbs.						
1/42	DD15-02								
3/82	DD15-03								
1/22	DD15-04	DD30-04	DD60-04						
3/4	DD15-06	DD30-06	DD60-06						
1		DD30-08	DD60-08						

Notes:

- 1. Desiccant must be ordered separately.
- 2. These units supplied with reducer bushings.

Installation tips

- Always place a moisture separator / particulate filter to remove bulk moisture and a coalescing filter to remove oil upstream of desiccant dryer. Desiccant coated with oil will not adsorb water vapor.
- Automatic drains should be used in prefilters
- A spring ball check valve should be installed at the dryer inlet to maximize the life of the desiccant.



Operating information

Below 100°F Optimum working temperature: Operating temperature: 32°F to 180°F (0°C to 82°C)

Operating pressure (max.): Filter element rating:

DD15, DD30 **DD60**

Desiccant capacity:

DD15 DD30 **DD60**

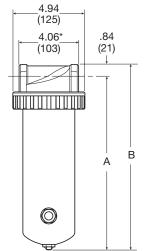
Weight: DD15 (add 2.5 lb for weight full) DD30 (add 5 lb for weight full) DD60 (add 10 lb for weight full)

0 to 300 psig (21 bar)

90 micron 40 micron

2.5 lb. (1.1 kg) 5 lb. (2.3 kg) 10 lb. (4.5 kg)

8 lb. (3.6 kg) 13 lb. (5.9 kg) 20 lb. (9.1 kg)



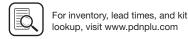
	Α	В
DD15	12.69 (322)	13.5 (343)
DD30	22.44 (570)	23.25 (591)
DD60	29.44 (748)	30.25 (768)
+ 0'		and the art of a

* Dimension does not include reducer bushings for 1/4", 3/8", 1/2" versions.

Inches (mm)







Refrigeration

Disposable

Desiccant

Regenerative Desiccant

Desiccant Heatless

Desiccant Dryers

As the wet compressed air enters through the inlet, the air travels down through the bed of desiccant which adsorb the water vapor and aerosols. The silica gel desiccant beads will reduce the humidity down to a -40°F pressure dew point. After the moisture has been removed, the dry air passes through a sintered bronze filter element (eliminating dust downstream), up the tube and out the outlet port.

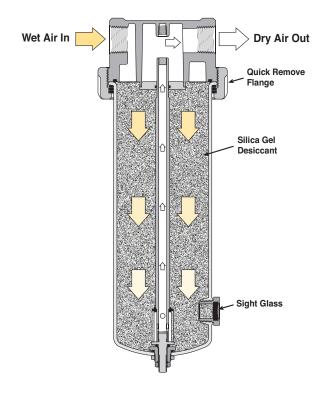
As the desiccant becomes saturated with moisture, the dew point will begin to rise. This is evident when the orange silica gel desiccant beads in the sight glass change to green, indicating the need for desiccant replacement. Simply remove the flange and bowl and replace with new desiccant or regenerate saturated desiccant by heating to 275°F.

Material specifications

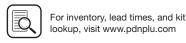
Bowl, DD15	Aluminum
Bowl, DD30	Aluminum
Bowl, DD60	Steel
Flow tube	CPVC
Filter element	Sintered bronze
Head & flange ring	Zinc
Other hardware	Brass
Seals	Buna-N
Sight glass	Glass & steel

Renair and Service Kits

Repair and Service Kits	
Desiccant - 100% Indicating silica gel, DD15	DRP-14-447/003
Desiccant - 100% Indicating silica gel, DD30	DRP-14-447/006
Desiccant - 100% Indicating silica gel, DD60	DRP-14-447/012
Mounting brackets (pair of pipe mounted brackets), 1 inch pipe size	SA200CW57
Flow tube repair kit (tube, filter element(s), adaptor), DD15	RKDD15-02-06
Flow tube repair kit (tube, filter element(s), adaptor), DD30	RKDD30-03-08
Flow tube repair kit (tube, filter element(s), adaptor), DD60	RKDD60-03-08
Mounting brackets (DD15 & DD30 only) – 1 inch pipe size (pair of pipe mounted brackets)	SA200CW57
1/4 inch NPT, spring check valve for inlet (250 psig max.)	003393001
3/8 inch NPT, spring check valve for inlet (250 psig max.)	003393002
1/2 inch NPT, spring check valve for inlet (250 psig max.)	003393003
3/4 inch NPT, spring check valve for inlet (250 psig max.)	003393004







Parker TW Series Heatless Desiccant Air Dryers remove water vapor from compressed air through a process known as pressure swing adsorption. Pressure dewpoints of -40°F (-40°C) standard are attained by directing the flow of saturated compressed air over a bed of desiccant.

Features

Allen-Bradley® PLC

- Two year dryer warranty (parts and labor)
- 4 line display
- NEMA 4X enclosure
- · Selectable cycles

Switching Valves

 Five year switching valve warranty from manufacturer's defects (see warranty policy)

Factory Installed Filtration

- Single point connection for system integrity
- Differential pressure gauges for element condition
- Filter drains

Regulated Purge

- · Factory set
- Optimum purge regardless of operating pressure
- Repressurization circuit



Operating information

Inlet or ambient air temperature: 50°F to 120°F

(10°C to 49°C) maximum

Operating pressure: 80 psig (5.5 bar) minimum

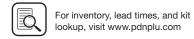
Working pressure: 150 psig (10.5 bar) maximum
Pressure drop at rated flow: less than 5 PSI (0.34 bar)

Primary voltage: 120V/1ph/60Hz

Heatless Desiccant Air Dryers, Filtration comes with Dryer unit as standard.

Part Number	Capacity SCFM @ 100 psig	Approximate Purge scfm	Dryer Air Port in/out (NPT)	Pre-Filter	After-Filter
TW41BN14NNN	40	6	1/2"	AAP015CFNI	AOP015CNFI
TW56BN14NNN	55	8	3/4"	AAP020DFNI	AOP020DNFI
TW76BN14NNN	75	11	3/4"	AAP025DNFI	AOP025DNMI
TW101BN14NNN	100	15	1"	AAP025ENFI	AOP025ENMI
TW131BN14NNN	130	20	1"	AAP025ENFI	AOP025ENMI
TW201BN14NNN	200	30	1-1/2"	AAP030GNFI	AOP030GNMI
TW251BN14NNN	250	38	1/1/2"	AAP035GNFI	AOP035GNMI
TW301BN14NNN	300	45	1-1/2"	AAP035GNFI	AOP035GNMI
TW401BN14NNN	400	60	2"	AAP040HNFI	AOP040HNMI
TW501BN14NNN	500	75	2"	AAP045INFI	AOP045INMI
TW601BN14NNN	600	90	2"	AAP045INFI	AOP045INMI
TW801BN14NNN	800	120	2"	AAP050INFI	AOP050INMI

M9



Refrigeration

Disposable

Desiccant

Regenerative

Desiccant

LED Din Connectors

- · Easy to maintain and service
- Valve(s) may be serviced without opening electrical enclosure
- No hard wiring required
- · Visual indication of valve activation
- Valve labeling



Additional Features

- Separate tower pressure gauges
- OSHA approved mufflers with safety relief
- ASME/CRN vessels (TW101 and larger)
- Desiccant fill and drain ports
- Safety relief valves
- · Stainless steel diffuser screens
- CycleLoc® demand control
- · Control air line filter
- ETL listed (UL/CSA standards)
- LED din connector(s) all solenoid valves
- 120 VAC power (other options available consult factory)
- · Power cord with basic controller
- Power din connector with advanced controller
- Power On/Off switch with advanced controller
- Steel base TW1001 and larger

Options

- PowerLoc Energy Demand Control (TW41 TW801) optional
- All NEMA classifications
- · Control air tubing stainless steel
- Low ambient package (-20°F to +40°F air temperature)
- Instrumentation
- Locally mounted pressure and temperature gauges at inlet and outlet
- · Pneumatic controls
- ASME B31.3 piping
- Corrosion allowance
- High pressure applications: 200 psig design & 250 psig design adders are available

System Integrity

Air Preparation Products

Parker TW Series Heatless Desiccant Air Dryers remove water vapor from compressed air through a process known as Pressure Swing Adsorption. Pressure dewpoints ranging from -40°F (-40°C) are attained by directing the flow of saturated compressed air over a bed of desiccant.

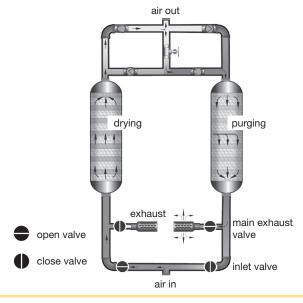
The most commonly used desiccant is activated alumina, a spherical shaped, hygroscopic material, selected for its consistent size, shape and extreme surface to mass ratio. This physically tough and chemically inert material is contained in two separate but identical pressure vessels commonly referred to as "dual" or "twin" towers.

As the saturated compressed air flows up through the "on-line" tower, its moisture content adheres to the surface of the desiccant. The dry compressed air is then discharged from the chamber into the distribution system.

An Allen-Bradley® PLC controller automatically cycles the flow of compressed air between the towers while the "on-line" tower is drying, the "off-line" tower is regenerating. Regeneration, sometimes referred to as purging, is the process by which moisture accumulated during the "on-line" cycle is stripped away during the "off-line" cycle. As dry low pressure purge air flows gently through the regenerating bed, it attracts the moisture that had accumulated on the surface of the desiccant during the drying cycle and exhausts it to the atmosphere.

To protect the desiccant bed from excess liquid, all Parker TW Series Heatless Air Dryers are designed to work with the natural pull of gravity. By directing the saturated air into the bottom of the "on-line" tower and flowing up through the bed, liquid condensate caused by system upset, is kept away from the desiccant and remains at the bottom of the tower where it can be easily exhausted during the regeneration cycle. Counter flow purging ensures optimum performance by keeping the driest desiccant at the discharge end of the dryer.

Heatless dryers in general are the most reliable and least expensive of all desiccant type dryers. Parker Airtek TW Series Heatless Desiccant Air Dryers are more energy efficient than competitors thanks to standard features such as: variable cycle control, CycleLoc® and regulated purge flow.







M₁₀

Heatless Desiccant Dryers

Basic Controller

(Standard on Models TW41 - TW801)

- Allen-Bradley® PLC
- Nema 4X enclosure
- LCD user interface
- Four line digital display features:
 - Tower drying indication
 - Tower regenerating indication
 - Run status
 - Time remaining in cycle
- Selectable cycle settings
- Programmable drain timer (drain on, time and test)
- Compressor demand via external dry contact (CycleLoc®)
- Power ON/OFF switch
- Step-through regeneration for maintenance
- Cycle counter
- Hours of operation

Advanced Controller

(Optional on Models TW41-801)

- Allen-Bradley® PLC
- Powerloc® Energy Demand System
 - Energy savings percentage
 - Hours in power save
- Nema 4X enclosure
- 3.5" LCD user interface
- Dew point sensor input (-148°F to 68°F)
- Optional 4-20 mA output for remotely monitoring dew point
- Tower pressure sensors
- Inlet pressure and temperature sensors
- Compressor demand via external dry contact (CycleLoc®)
- Modbus/TCP communications via standard ethernet port
- Modbus RTU communications via optional RS232/485 port (Using external gateway device)
- SD card slot for accessing historical data and alarm information
- Selectable cycle settings
- Programmable drain timer (drain on, time and test)
- User selectable alarms with common alarm relay
 - High inlet temperature
 - Low inlet pressure
 - Tower failed to blow down (switch failure)
 - Tower failed to pressurize
 - High dew point
 - Sensor failure for all sensors
 - Switch failure
- Inlet filter pressure
- Filter maintenance timer & alarm
- Clogged muffler maintenance and alarm
- Power ON/OFF switch
- Alarm log stores most recent alarms
- Flashes green when in energy savings mode
- Flashes red when an alarm is present
- Dry contact for common alarm



PowerLoc® Energy **Management System**

(Optional on Models TW41-801)**

Energy savings of up to 80% can be achieved with the proven PowerLoc® energy management system.

Regeneration requirements are dependent on flow, pressure and temperature. The

PowerLoc® system allows the cost of drying compressed air to be matched exactly to your plant conditions.

PowerLoc® controls the drying cycle by continuously reacting to the loading under which the dryer is operating and minimizes the energy input required.

As dryers rarely operate at full rated capacity all of the time (eg. during shift work and periods of low demand), this energy management system can provide considerable savings.

The Advanced Controller is designed to accomodate Parker Airtek's PowerLoc Energy Management System. Flashes green when in energy saving mode.

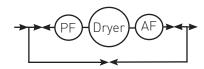
High Performance Components

Poppet Valve

TW41 - TW801

- Stainless steel body
- · Stainless steel internals
- PTFE seal
- Air activated, spring return
- Visual position indicator on exhaust valves
- · ANSI Class VI shutoff
- · Long service life
- · Repair kits available
- 5 year valve warranty

Filter Package Schematic

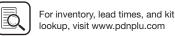


Package "B"

(Standard TW41 - TW801)

Includes dryer with factory installed pre-filter and after-filter with system bypass







Dryers

Flow correction factors

Heatless Desiccant Dryers

Capacities are based upon:

- Maximum inlet air or ambient air temperature 120°F (49°C)
- Maximum working pressure: 150 psig (10.5 bar g) standard units for high maximum working pressure are available
- Minimum operating pressure: 80 psig (5.5 bar g)

Correction Factors

Refrigeration

Disposable

Desiccant

Regenerative Desiccant

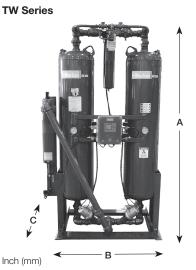
Desiccant Heatless

Temperature Correction Factor								
Maximum inlet temperature	°F	90	95	100	105	110	115	120
(C1)	°C	32	35	38	41	43	46	49
	CF	1.17	1.15	1.00	0.87	0.76	0.66	0.58

Pressure Correction Factor	•						
Minimum inlet pressure	psi g	80	90	100	110	120	130
(C2)	bar g	5.5	6.2	6.9	7.6	8.3	9.0
	CF	0.83	0.91	1.00	1.09	1.17	1.26

Flows are at 100 psig inlet pressure, 100°F inlet temperature, and 100°F ambient temperature. Weight includes desiccant dryer with basic controller FLA 2 amps, advanced controller FLA 3 amps.

Heatless Desiccant Air Dryers

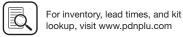


Part Number	A (length)	B (width)	C (depth)	Weight lbs. (kg)
TW41BN14NNN	49 (1245)	21 (533)	25 (635)	190 (86)
TW56BN14NNN	65 (1651)	22 (559)	31 (787)	230 (104)
TW76BN14NNN	80 (2032)	34 (864)	29 (737)	384 (174)
TW101BN14NNN	79 (2007)	36 (914)	30 (762)	468 (212)
TW131BN14NNN	79 (2007)	36 (914)	30 (762)	496 (225)
TW201BN14NNN	81 (2057)	42 (1067)	34 (864)	692 (314)
TW251BN14NNN	81 (2057)	45 (1143)	36 (914)	776 (352)
TW301BN14NNN	81 (2057)	45 (1143)	36 (914)	796 (361)
TW401BN14NNN	83 (2108)	48 (1219)	41 (1041)	1626 (738)
TW501BN14NNN	83 (2108)	51 (1295)	43 (1092)	1735 (787)
TW601BN14NNN	84 (2134)	50 (1270)	44 (1118)	1740 (789)
TW801BN14NNN	88 (2235)	56 (1422)	45 (1143)	2120 (962)

Repair and Service Kits

-				
Dryer Model	Pre-Filter	Pre-Filter Element	After-Filter	After-Filter Element
TW41	AAP015CFNI	P015AA	AOP015CNFI	P015AO
TW56	AAP020DFNI	P020AA	AOP020DNFI	P020AO
TW76	AAP025DNFI	P025AA	AOP025DNMI	P025AO
TW101	AAP025ENFI	P025AA	AOP025ENMI	P025AO
TW131	AAP025ENFI	P025AA	AOP025ENMI	P025AO
TW201	AAP030GNFI	P030AA	AOP030GNMI	P030AO
TW251	AAP035GNFI	P035AA	AOP035GNMI	P035AO
TW301	AAP035GNFI	P035AA	AOP035GNMI	P035AO
TW401	AAP040HNFI	P040AA	AOP040HNMI	P040AO
TW501	AAP045INFI	P045AA	AOP045INMI	P045AO
TW601	AAP045INFI	P045AA	AOP045INMI	P045AO
TW801	AAP050INFI	P050AA	AOP050INMI	P050AO





Air Preparation Products Contents - www.parker.com/pneu/frl





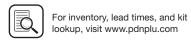




Air Preparation Products Airline Accessories

Drains	N2-N4
Lockout Valves	N5-N11
AirGuard Protection System	N12-N13
Mufflers	N14-N19





N1

Drains

Drains

Lockout Valves

AirGuard

Mufflers

Ball Valve / Plug Valves

Quick Couplings

Hose Products

Fittings

N

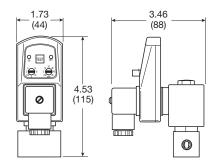
Accessories

Automatic Electrical Drain Valve - WDV3-G

The WDV3 Electrical Drain is designed to remove condensate from compressors, compressed air dryers and receivers up to any size, type or manufacturer.

Benefits

- Does not air-lock during operation
- Compressed air systems up to any size
- The direct acting valve is serviceable
- Suitable for all types of compressors
- Test (micro-switch) feature
- High time cycle accuracy
- Large (4.5mm) valve orifice



Automatic Electrical Drain Valve

Port Size	Primary Voltage	Weight (kg)	Model Number
1/4	120VAC	1.8 (0.8 kg)	WDV3-G12BL
1/4	230VAC	1.8 (0.8 kg)	WDV3-G22BL
3/8	120VAC	1.8 (0.8 kg)	WDV3-G13BL
3/8	230VAC	1.8 (0.8 kg)	WDV3-G23BL
1/2	120VAC	1.8 (0.8 kg)	WDV3-G14BL
1/2	230VAC	1.8 (0.8 kg)	WDV3-G24BL
1/2	24VDC	1.8 (0.8 kg)	WDV3-G34BL



Operating information

Operating pressure: 230 psig (16 bar)

Ambient operating temperature: 34°F to 130°F (1.1°C to 54°C)

Voltages: 115VAC, 230/50-60Hz, 24VDC

Coil insulation: Class H, 340°F (171.1°C)

Current rating: 4mA maximum

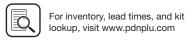
Timer -

Open time .5 to 10 sec., adjustable Cycle time .5 to 45 min., adjustable

Material specifications

Valve body	Brass / stainless steel
Enclosure (IP65 / NEMA 4)	ABS plastic
Internal parts	Brass / stainless steel
Valve seals	FPM (Fluorocarbon)





ED Zero Air Loss Condensate Drains

Zero air loss condensate drains are designed for economical removal of unwanted water, oil emulsions, and other liquids. These drains will only open when liquid is present and will not allow any compressed air to escape from the system.

Operating information

Maximum pressure: 232 psig (16 bar)

35°F to 140°F (1.6°C to 60°C) Ambient operating temperature:

Voltages optional - NPT 115/50-60Hz, standard

BSPP ports 230/50-60Hz & 24VDC

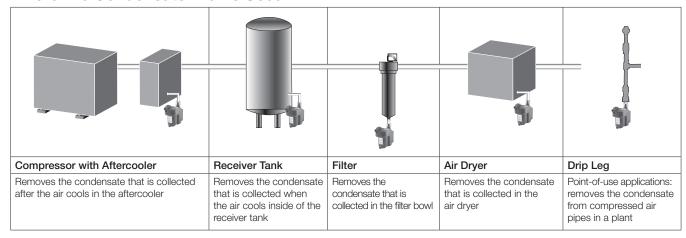


Zero Air Loss Condensate Drains

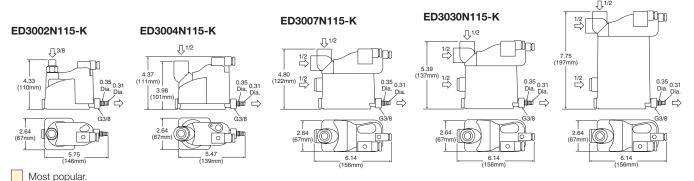
Port Size (NPT)	Compressor Aftercooler (scfm)*	Capacity Refrigeration Dryer (scfm)**	Filter (scfm)	Drain Capacity per Day (gal/liter)	Model Number	Service Kit
1 @ 3/8 (in), 1 @ 3/8 (out)	_	_	424	6 (22.7)	ED3002N115-K	SKED3000N115
1 @ 1/2 (in), 1 @ 3/8 (out)	141	282	1,413	13 (49.2)	ED3004N115-K	SKED3000N115
2 @ 1/2 (in), 1 @ 3/8 (out)	247	494	2,472	23 (87.1)	ED3007N115-K	SKED3000N115
2 @ 1/2 (in), 1 @ 3/8 (out)	1,059	2,119	10,594	100 (378.5)	ED3030N115-K	SKED3000N115
2 @ 1/2 (in), 1 @ 3/8 (out)	3,532	7,063	35,315	330 (1,249.2)	ED3100N115-K	SKED3000N115

Based on 100 PSI working pressure, air compressor inlet at 77°F (25°C) at 60% RH, air discharge temperature of 95°F (35°C) following the aftercooler, pressure dewpoint of 37°F (2.8°C) after the refrigerated dryer.

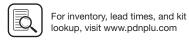
Where Are Condensate Drains Used?



Dimensions







ED3100N115-K

^{**} Condensate from aftercooler or refrigerated dryer to be drained upstream – only for residual oil content or small quantities of condensate. Note: A 6 ft, line cord will be included with each drain.

Air Preparation Products **Accessories**

Drain Cocks

Drains

Lockout Valves

AirGuard

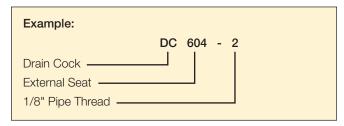
Mufflers

Ball Valve / Plug Valves

Quick Couplings

Drain cocks are manufactured in external seats. Hand tightening provides a metal - to - metal seal.

Drain Cock Nomenclature





External Seal - Drain Cock DC604

Temperature Range: -25° to 250°F

	O .				
Part Number	Pipe Thread	C Hex	L	M	
DC604-2*	1/8	7/16	.85	1.25	
DC604-4	1/4	9/16	1.00	1.38	
DC604-6*	3/8	11/16	1.22	1.68	

*When assembled handle wings are down facing



Operating information

Operating pressure: 150 psig (150 bar)

Temperature ranges:

-65°F to 250°F (-53.9°C to 12.1°C) Internal seal External seal -25°F to 250°F (-31.7°C to 12.1°C) Operating fluid: Air, water, gas and certain other fluids Note: Lubricant may not be compatible with some fluids, contact factory for

special fluid requirements.

Lockout Valves

Air Preparation Products

Lockout valves are installed in pneumatic drop legs, or individual pneumatic control lines. In accordance with OSHA procedures, lockout valves are used during maintenance and service procedures of pneumatically (air) operated equipment.

- Used for compliance with OSHA 29 CFR part 1910
- 1/4" to 2" pipe sizes. NPT or BSPP
- Yellow cast aluminum body with red handle or stainless steel (NACE MR0175 / ISO 15156)
- Inline or surface mountable
- Built in port for pressure verification to meet ANSI B11 and PMMI B155 requirements
- Fluorocarbon slipper seals for easy shifting, even after long periods of inactivity

Material specifications

Description	LV	LVSS	
Body:	Cast aluminum alloy	Stainless steel	
Handle: Plastic		Stainless steel	
Spool:	Aluminum	Stainless steel	
Seals:	Carboxylated nitrile	Fluorocarbon	
Detent spring:	Stainless steel	Stainless steel	
Grease:	Magnalube G [†]	Magnalube G†	



40°F to 175°F

Operating media: Clean, dry, compressed air (5 micron)

Compact

T	_12 _{}_{}_{}_{}_{}_{}_{}_{}_{}_{}_{}_{}_{}_	Port in/out	Port Exhaust	SCFM in/out	SCFM Exhaust	Wt (lb)	Part Number *
	3	1/4	3/8	41.8	40.7	0.9	LV2N3B
1	1 2	3/8	3/8	60.7	60.7	0.9	LV3N3B

temperature:

Standard





Port in/out	Port Exhaust	SCFM in/out	SCFM Exhaust	Wt (lb)	Part Number *
3/8	3/4	107.7	81.1	2.0	LV3N6B
1/2	3/4	161.4	90.9	2.0	LV4N6B
3/4	3/4	187.7	93.2	2.0	LV6N6B
3/4	1-1/4	297.7	204	3.2	LV6NAB
1	1-1/4	375	216	3.2	LV8NAB
1-1/4	1-1/4	436.4	221	3.2	LVANAB

High Flow





Port in/out	Port Exhaust	SCFM in/out	SCFM Exhaust	Wt (lb)	Part Number *
1-1/2	2	761.4	1156	8.2	LVBNCB
2	2	918.2	1186	8.2	LVCNCB

Stainless Steel



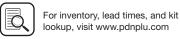


Port Exhaust	SCFM in/out	SCFM Exhaust	VVT (ID)	Part Number *
1/4	48.6	47.2	3.8	LV2N2BSS
1/2	131.6	142	6.0	LV3N4BSS
1/2	131.6	142	6.0	LV4N4BSS
1	325	386	13	LV6N8BSS
1	325	386	13	LV8N8BSS
2	889	1023	35	LVBNCBSS
2	889	1023	35	LVCNCBSS
	1/4 1/2	1/4 48.6 1/2 131.6 1/2 131.6 1 325 1 325 2 889	1/4 48.6 47.2 1/2 131.6 142 1/2 131.6 142 1 325 386 1 325 386 2 889 1023	1/4 48.6 47.2 3.8 1/2 131.6 142 6.0 1/2 131.6 142 6.0 1 325 386 13 1 325 386 13 2 889 1023 35

NOTE: Exhaust flow rates calculated using inlet pressure 100 psig (6.7 bar), pressure drop 5 psi (0.34 bar), air temp 68°F (20°C), and 36% relative humidity. * For BSPP ports, change 4th digit from "N" to "B"







Most popular.

30°F to 175°F

[†] Trademark Magnalube

Lockout Valves

Drains

Lockout Valves

AirGuard

EZ Series

The EZ series meets all the same standards as the LV series with the added feature of a soft start when opened. There are still 2 detented positions for the handle (push close, pull to open), but when pulled open, an adjustable needle valve controls the rate of pressure build-up. This can protect equipment during start up after maintenance. The EZ is distinguishable from the LV series by the blue dot on the label.

Features

- Combines lockout and soft-start functions in a single unit
- Used in systems for compliance with OSHA standard 29 CFR part 1910
- 3/8 Inch to 1-1/4 inch pipe sizes
- Cv's from 3.7 to 13.7
- 3/4 and 1-1/4 inch: exhaust ports available
- Exhaust port threaded for installation of silencer or line for remote exhausting
- Inline or surface mountable
- Yellow cast aluminum body with red handle. Blue dot on body indicates EZ Series valve
- Fluorocarbon slipper seals for easy shifting, even after long periods of inactivity



3/4" Exhaust Shown

Operating information

Operating pressure:

Standard 15 to 300 PSIG

Operating temperature: 40°F to 175°F

Operating media: Clean, dry, compressed air (5 micron)

Material specifications

Description	
Body:	Cast aluminum alloy
Handle:	Plastic
Spool:	Aluminum
Seals:	Carboxylated nitrile
Detent spring:	Stainless steel
Grease:	Magnalube G [†]
arease.	Magnalube G

[†] Trademark Magnalube

EZ Series



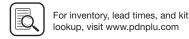
Port in/out	Port Exhaust	SCFM in/out	SCFM Exhaust	Wt (lb)	Part Number *
3/8	3/4	136.4	181	2.1	EZ03NB6
1/2	3/4	161.4	189	2.1	EZ04NB6
3/4	3/4	181.9	216	2.1	EZ06NB6
3/4	1-1/4	272.7	248	3.2	EZ06NBA
1	1-1/4	311.4	273	3.2	EZ08NBA
1-1/4	1-1/4	368.2	291	3.2	EZOANBA

NOTE: Exhaust flow rates calculated using inlet pressure 100 psig (6.7 bar), pressure drop 5 psi (0.34 bar), air temp 68°F (20°C), and 36% relative humidity.

* For BSPP ports, change 5th digit from "N" to "B"







Lockout Valves

Air Preparation Products Accessories

Applications

Lockout valves are installed in pneumatic drop legs, or individual pneumatic control lines (see Figure 1). In accordance with OSHA procedures, EZ valves are used during maintenance and service procedures of pneumatically (air) operated equipment. Prior to servicing, the red handle is pressed inward, blocking pressure and relieving all downstream air pressure. A padlock is installed through the locking hasp, preventing accidental actuation during the maintenance procedure. Following maintenance, the padlock is removed and the red handle is pulled outward, gradually returning air pressure to the system. (For complete Lockout / Tagout procedures, consult OSHA Standard 29 CFR Part 1910 in U.S. Federal Register/Vol. 54 No. 169, Friday, September 1, 1989 / Page 36644.)

Mounting

Valves can be inline mounted or surface mounted using the two mounting holes provided in the valve body. Mount valves in plain view with the handle oriented for accessibility.

Placement of Lockout Device

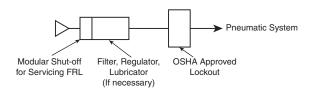
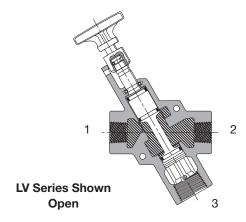


Figure 1.

LV / LVSS Operation

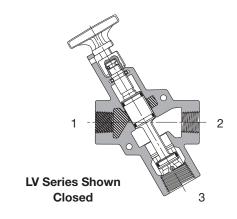
Normal Machine Operation - Valve Open

With the handle pulled outward. Inlet Port 1 is open to outlet Port 2. Exhaust Port 3 is blocked.



Lockout Operation - Valve Closed

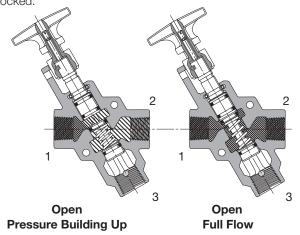
With the handle pushed inward. Inlet Port 1 is blocked. Outlet Port 2 is open to Exhaust Port 3.



EZ Operation

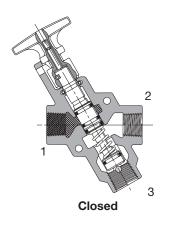
Normal Machine Operation - Valve Open

When the red handle is pulled outward, the adjustable needle valve (accessed through the top of the handle) setting determines the rate of pressure buildup. When downstream pressure reaches the full flow described in the specifications below, Inlet Port 1 is open to outlet Port 2. Exhaust Port 3 is blocked.

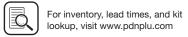


Lockout Operation - Valve Closed

When the red handle is pushed inward, the Inlet Port 1 is blocked. Downstream air is exhausted through Exhaust Port 3.







N7

Corrosion resistant mufflers for harsh environments



Port			Dimensions Ir	n. (Mm)		
Size	Construction	Threads	Width	Length	Part Number	
1/4	Stainless steel	Male. NPT	0.56 (14.2)	1.75 (44.5)	5500A2004	
1/2	Stainless steel	Male, NPT	0.87 (22.1)	2.75 (69.7)	5500A4004	
1	Stainless steel	Male, NPT	1.31 (33.3)	3.87 (98.3)	5500B6004	
2	Nickel plated	Male, NPT	2.37 (60.2)	5.50 (139.7)	5500A9004*	

High Flow Silencers



Part Number *	ES25MC	ES37MC	ES50MC	ES75MC	ES100MC	ES125MC	ES150MC	ES200MC
Pipe size	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Flow (scfm)	129	219	549	893	1013	1486	1580	1580
Hex In. (mm)	0.63 (16)	1.00 (25)	1.00 (25)	1.62 (41)	1.62 (41)	_	_	2.99 (76)
Length In. (mm)	1.85 (47)	3.31 (84)	3.31 (84)	4.56 (116)	4.56 (116)	5.69 (145)	5.69 (145)	7.68 (195)

^{*} NPT ports standard, for BSPT ports, add a "B" after the "S"

Pop-up Pressure Indicator



Brass - Part # 988A30 - Can be used on all LV or EZ series to provide visual verification of line exhaust



Stainless - Part# 1155H30 - Can be used on SS LV series to provide visual verification of line

Pressure Switch



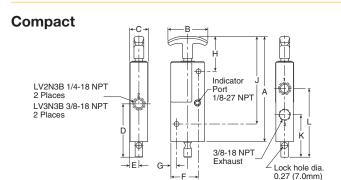
- Part # PPS1-2C3-RHM (DIN 9.4mm connector)
- Part # **PPS1-2C3-RWL** (18" leads)
- Signal verification of line exhaust
- Field adjustable set point

N8

^{*} Nickel plated

Lockout Valves

LZ Series, Exhaust Port - Compact, Standard, High Flow

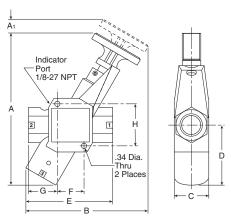


Compact LV Series, 3/8" Exhaust Port Dimensions

A	B	C	D	E	F
6.50	2.25	1.05	3.04	.51	1.58
(165)	(57)	(27)	(77)	(13)	(40)
G .33 (8)	H 1.99 (51)	J 4.99 (127)	K 2.42 (62)	L 3.92 (100)	

Inches (mm)

Standard



Compact LV Series, 3/4" Exhaust Port Dimensions

A	A1	B	C	D	E
8.32	0.64	6.60	2.00	3.06	4.24
(211)	(16)	(168)	(51)	(78)	(108)
F 1.32 (111)	G 1.56 (40)	H 2.21 (56)			

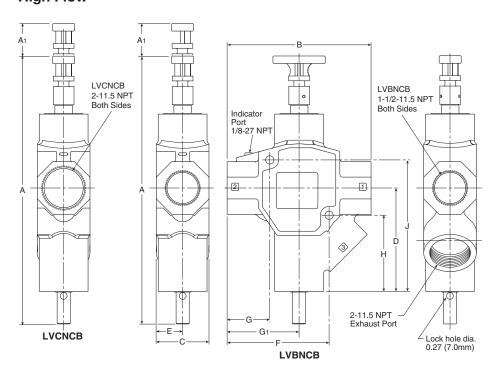
Inches (mm)

Compact LV Series, 1-1/4" Exhaust Port Dimensions

A	A 1	B	C	D	E	
9.91	0.85	7.95	2.25	3.91	5.65	
(252)	(22)	(202)	(57)	(99)	(144)	
F 1.74 (44)	G 1.89 (48)	H 2.74 (70)				

Inches (mm)

High Flow



High Flow LV Series, 2" Exhaust Port Dimensions

A 14.82 (376)	A 1 1.87 (47)	B 8.20 (208)	
C 3.00 (76)	D 5.89 (150)	E 1.50 (38)	
F 5.81 (148)	G 2.43 (62)	G 1 4.10 (104)	
H 4.34 (110)	J 7.49 (190)		

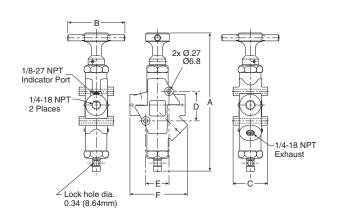
Inches (mm)





LZ Series, Exhaust Port - Compact, Standard, High Flow

Stainless Steel



1/8-27 NPT Indicator Port LV3N4BSS 3/8-18 NPT 2 Places LV4N4BSS 1/2-14 NPT 2 Places L2-14 NPT Exhaust

Stainless Steel LV Series, 1/4" Exhaust Port Dimensions

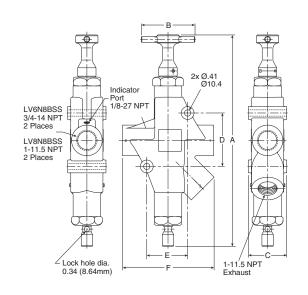
Α	В	С	D	E	F
8.47	3.50	2.11	1.81	1.43	3.54
(215)	(89)	(54)	(46)	(36)	(90)

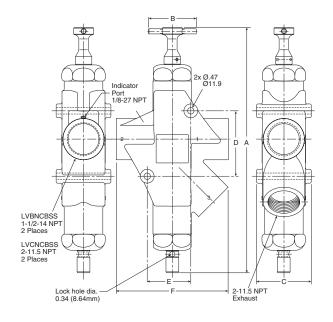
Inches (mm)

Stainless Steel LV Series, 1/2" Exhaust Port Dimensions

Α	В	С	D	E	F	
10.24	3.50	1.75	2.40	190	4.00	
(260)	(89)	(45)	(61)	(48)	(102)	

Inches (mm)





Stainless Steel LV Series, 1" Exhaust Port Dimensions

Α	В	С	D	Е	F
13.80	3.50	2.50	3.49	2.67	5.99
(351)	(89)	(64)	(89)	(68)	(152)

Inches (mm)

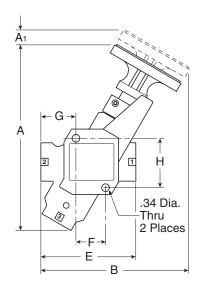
Stainless Steel LV Series, 2" Exhaust Port Dimensions

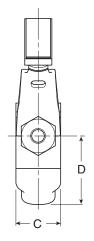
Α	В	С	D	Е	F	
17.92	3.50	4.00	4.77	3.18	8.16	
(455)	(89)	(102)	(121)	(81)	(207)	

Inches (mm)









EZ 3/4" Exhaust Port Dimensions

A	A 1	B	C	D
8.32	0.64	6.60	2.00	3.06
(211)	(16)	(168)	(51)	(78)
E	F	G	H	
4.24	1.32	1.56	2.21	
(108)	(111)	(40)	(56)	

Inches (mm)

EZ 1-1/4" Exhaust Port Dimensions

A	A 1	B	C	D
9.91	0.85	7.95	2.25	3.91
(252)	(22)	(202)	(57)	(99)
E 5.65 (144)	F 1.74 (44)	G 1.89 (48)	H 2.74 (70)	

Inches (mm)

Drains

Lockout Valves

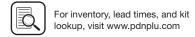
AirGuard

ers

Ball Valve / Plug Valves

> Quick Couplings





Mufflers

AirGuard Protection System





Product Features:

- Maintenance Friendly
 Repair possible while plant is still operating
- Economic Competitive pricing
- Complies with EU Standard EN 983 - § 5.3.4.3.2
- Reliable and Tamperproof
 No adjustment necessary
- Complies with ISO Standard 4414 - § 5.4.5.11.1
- Complies with MSHA Regulation 30CFR 56.13021, 57.13021 and 57.1730
- Lightweight Compact size
- Compatible with all Pneumatic Systems
- Can be used as a Flow Blocker
- TUV Approval No. 01-02-0145
- EU Registered Utility
 Model No. 0025 73 525
- Complies with OSHA Regulation Standard 29CFR 1926.302 (Partial)

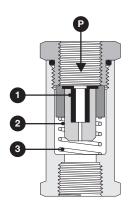
Protect your most important assets: your employees and their equipment!

The AirGuard offers simple but efficient protection of a broken compressed-air hose. The air supply is immediately shut off by the AirGuard, should the volume of air exceed a set value. This "value" is factory preset and is set to allow normal air consumption when using air tools.

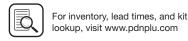
Should the air consumption exceeds the set value, e.g. the air line is severed, then the internal piston instantly shuts off the main flow. An integral bleed hole allows some air to flow though. This enables the line pressure to automatically reset the AirGuard once the main line break is repaired.

Function:

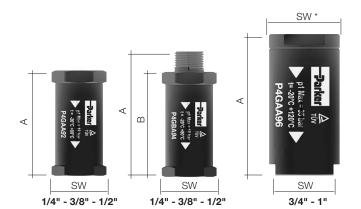
(P) is the inlet. Air passes the piston (1) and continues through the seat (3). The air flow, passing the piston, is slowed down by means of length wise grooves on the outer side of the piston. If the flow is too high, the air cannot pass the piston quickly enough, and the piston is forced against the spring (2) and towards the seat. The maximum flow is shown in the graph. If the value indicated is exceeded e.g. if the hose suddenly breaks - the air supply is automatically shut of. An integral bleed hole allows some air to flow though. This enables the line pressure to automatically reset the AirGuard once the main line break is repaired.







AirGuard Protection System

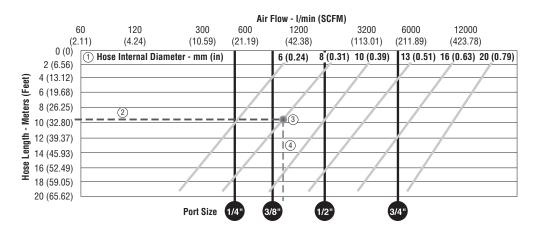


Weight and Dimensions metric (imperial)

Thread	Dimensions	inch (mm)		Weight	Max. Inlet			P1 Inlet	P2 Outlet	Part Number
Connection	Α	В	SW	oz. (g)	Pressure	Temp. Range	Material	Thread	Thread	NPT
1/4"	1.89 (48)	-	.87 (22)	1.06 (30)				Female	Female	P4GAA92
1/4"	2.28 (58)	49 (1.93)	.87 (22)	1.27 (36)	-			Male	Female	P4GBA92
3/8"	2.32 (59)	-	1.10 (28)	2.05 (58)	- _ 255 psig	-4°F to 176°F	Housing: Aluminum	Female	Female	P4GAA93
3/8"	2.80 (71)	59 (2.32)	1.10 (28)	2.19 (6²)	_ (18 bar) _	(000C to 000C)	Piston: Polyacetal	Male	Female	P4GBA93
1/2"	2.56 (65)	-	1.22 (31)	2.75 (78)				Female	Female	P4GAA94
1/2"	3.15 (80)	65 (2.56)	1.22 (31)	3.00 (85)	_			Male	Female	P4GBA94
3/4"	2.99 (76)	-	1.18/1.42* (30/36*)	3.77 (107)	_	4°F to 248°F	Housing: Aluminum	Female	Female	P4GAA96
1"	3.94 (100)	-	1.61/1.97* (41/50*)	10.58 (300)	500 psig (35 bar)	(-20°C to 120°C)	Piston: Aluminum	Female	Female	P4GAA98

How to Select the Optimal Size of an AirGuard

Information based on an inlet pressure of 7 bar (100 psig)



- a. Determine the internal diameter of the hose, tube or pipe being used ① (see specification Hose-internal Diameter, diagonal line).
- b. Determine the length of the hose, tube or pipe ② (Hose length in meters).
- c. Define the intersection of point a and b, and mark a vertical line downwards. ③ ④ In the example chart (dot ③) and the dashed line (④).
- d. The next vertical black line, left of the intersection line (4) tells the correct AirGuard size (in inches).
- e. Important: Every flow value to the right of the respective vertical line (black) would activate the AirGuard in case of a bursting hose, pipe or tube. All AirGuard sizes right of the intersection line (4) are too big and will not close up.
- f. Example: Which air fuse should be used for a hose, pipe or tube bearing 8 mm inner diameter and 10 meters of length follow the 10 meter line (2) to the intersection point (dot 3). Now the next left black line marks the correct size.
- g. Result: The correct size in our example is the AirGuard 3/8"





Mufflers

EM Series - Sintered Bronze Muffler / Filters

Muffler / filters effectively reduce air exhaust noises to an industry accepted level with minimum flow restriction. They protect valves, impact wrenches, screw drivers and other air tools by preventing dirt and other foreign matter from entering the system. Non-corrosive. Can be cleaned with many common solvents.





EM Series

Pipe Thread	Overall Length	Hex Size	Part Number
M5	.75	5/16"	EMM5
1/8"	1.00	7/16"	EM12
1/4"	1.32	9/16"	EM25
3/8"	1.54	11/16"	EM37
1/2"	1.85	7/8"	EM50
3/4"	2.29	1-1/6"	EM75
1"	2.91	1-5/16"	EM100
1-1/4"	3.25	1-11/16"	EM125
1-1/2"	3.69	2"	EM150

Operating information

Operating pressure: 250 psig (Air)

Cracking pressure 1 to 2 psig

Operating temperature:* 0°F to 300°F

* Ambient temperatures below freezing require moisture-free air. Ambient temperatures below freezing and above 180° require lubricants especially selected for suitability at these temperatures. Pneumatic valves should be used with filtered and lubricated air.

Muffler / Flow Controls

Muffler / flow controls provide an acceptable exhaust noise level and effectively meter exhaust. Installed in valve exhaust ports, they control cylinder piston speeds throughout a wide range. The adjusting screw cannot be accidently blown out, can be locked to maintain setting. Brass and bronze construction. Clean with commonly used solvents.

Muffler / Flow Controls

Pipe Thread	Overall Length	Hex Size	Part Number
1/8"	1.15	9/16"	045020002
1/4"	1.42	1/2"	045040004
3/8"	1.49	11/16"	045060060
1/2"	1.77	7/8"	045080080
3/4"	1.98	1-1/16"	045120012
1"	2.15	1-5/16"	045160016



Operating information

Operating pressure: 250 psig (Air)

Cracking pressure 1 to 2 psig

Operating temperature:*

0°F to 300°F

* Ambient temperatures below freezing require moisture-free air. Ambient temperatures below freezing and above 180° require lubricants especially selected for suitability at these temperatures. Pneumatic valves should be used with filtered and lubricated air.







Breather Vents

These low silhouette versions of the muffler / filter are useful where space is a problem and / or to prevent contamination. Use for vacuum relief or pressure equalization in gear boxes, oil tanks, reservoirs, etc. Non-corrosive.

Breather Vent

Pipe Thread	Overall Length	Hex Size	Part Number
1/8"	0.44	7/16"	047020002
1/4"	0.63	9/16"	047040004
3/8"	0.75	11/16"	047060006
1/2"	0.88	7/8"	047080008
3/4"	1.00	1-1/6"	047120012
1"	1.31	1-5/16"	047160016
1-1/4"	1.41	1-11/16"	047200020
1-1/2"	1.50	2"	047240024





NOTE: Breather vents should not be used as exhaust mufflers.

Operating information

Operating pressure: 150 psig (Air) max.

Operating temperature:* 0°F to 300°F

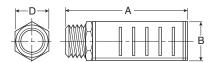
* Ambient temperatures below freezing require moisture-free air.
Ambient temperatures below freezing and above 180° require lubricants especially selected for suitability at these temperatures. Pneumatic valves should be used with filtered and lubricated air.

ES Series - Silencer

The silencer is designed to give superior performance in noise control with a minimum effect on air efficiency. "Trimline" design allows location in the tightest places without extra plumbing and fittings. Fits directly into the exhaust port of more than 90% of present commercial valves. Slotted body permits rapid discharge of air without undesirable back pressure. Unique nylon screen element resists dirt buildup or clogging.







Operating information

Operating pressure: 250 psig (Air) max.

Operating temperature:* 0°F to 300°F

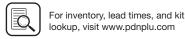
* Ambient temperatures below freezing require moisture-free air. Ambient temperatures below freezing and above 180° require lubricants especially selected for suitability at these temperatures. Pneumatic valves should be used with filtered and lubricated air.

ES Series - Silencer

	Flow scfm	Dimension	S		Part Numbers	
Pipe Thread	@ 100 psig inlet	A	В	D	NPTF	BSPT (R)
1/8"	115	1.85	0.81	0.63	ES12MC	ESB12MC
1/4"	129	1.85	0.81	0.63	ES25MC	ESB25MC
3/8"	219	3.31	1.26	1.00	ES37MC	ESB37MC
1/2"	549	3.31	1.26	1.00	ES50MC	ESB50MC
3/4"	893	4.56	2.01	1.62	ES75MC	ESB75MC
1"	1,013	4.56	2.01	1.62	ES100MC	ESB100MC
1-1/4"	1,486	5.69	2.88	_	ES125MC	ESB125MC
1-1/2"	1,580	5.69	2.88	_	ES150MC	ESB150MC

Most popular.





Stainless Steel Mufflers

Accessories

Drains

Lockout Valves

Stainless Steel Mufflers

Corrosion resistant mufflers for harsh environments



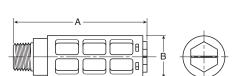
Port			Dimensions Ir	Dimensions In. (mm)		
Size	Construction	Threads	Width	Length	Part Number	
1/4	Stainless steel	Male. NPT	0.56 (14.2)	1.75 (44.5)	5500A2004	
1/2	Stainless steel	Male, NPT	0.87 (22.1)	2.75 (69.7)	5500A4004	
1	Stainless steel	Male, NPT	1.31 (33.3)	3.87 (98.3)	5500A6004	
2	Nickel plated	Male, NPT	2.37 (60.2)	5.50 (139.7)	5500A9004*	

^{*} Nickel plated

ASN Air Line Silencer, Plastic

- Compact
- Lightweight
- Easy to Install
- Excellent Noise Reduction
- Protects Components from Contamination
- NPT and BSPT Threads Available

The plastic silencer is designed to give excellent noise reduction with a minimum effect on air efficiency. The "Trimline" design allows for locating the silencer in the tightest places without extra plumbing or fittings. Fits directly into the exhaust port of most commercial valves. Open surface area of element allows for rapid discharge of air without undesirable back pressure.





Operating information

Operating pressure: 0 to 150 psig

(0 to 10 bar, 0 to 1034 kPa)

14°F to 140°F (-10°C to 60°C) Operating temperature:

Material Specifications

Body	Acetal (Plastic)
Element	Polyethylene

ASN Air Line Silencer, Plastic

Thread	ead A B Maximum Flow (scfm		Maximum Flow (scfm)	Sound Pressure Level (dBA)		Part Number	
Size	,	20 psig inlet	100 psig inlet	NPT	BSPT		
M5	0.43 (11)	0.32 (8)	15	69	79	AS-5	
1/8"	1.57 (40)	0.63 (16)	51	69	81	ASN-6	AS-6
1/4"	2.56 (65)	0.83 (21)	124	67	84	ASN-8	AS-8
3/8"	3.35 (85)	0.98 (25)	247	83	98	ASN-10	AS-10
1/2"	3.74 (95)	1.18 (30)	370	69	96	ASN-15	AS-15

Lockout Valves

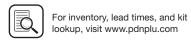
AirGuard

Mufflers

Ball Valve / Plug Valves







P6M Series, Air Line Silencers

Drains

Lockou Valves

AirGuard

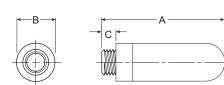
Mufflers

Ball Valve / Plug Valves

P6M G Thread Air Line Silencer, Plastic

- All Plastic Ultra Light Weight Versions
- High Noise Level Reduction
- Low Back Pressure Generation

The plastic silencer is designed to give excellent noise reduction with a minimum effect on air efficiency. The "Trimline" design allows for locating the silencer in the tightest places without extra plumbing or fittings. Fits directly into the exhaust port of most commercial valves. Open surface area of element allows for rapid discharge of air without undesirable back pressure.







Operating information

Operating pressure: 0 to 246 psig

(0 to 17 bar, 0 to 1700 kPa)

Operating temperature:

Plastic Metal 14°F to 176°F (-10°C to 80°C) 14°F to 165°F (-10°C to 74°C)

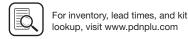
Efficiency 92%

P6M G Thread, Air Line Silencer, Plastic

Port Thread	Α	Diameter B	С	Weight (grams)	Part Number
M5	0.91 (23)	0.26 (6,5)	0.16 (4)	0.01	P6M-PAC5
G1/8	1.14 (29)	0.55 (14)	0.24 (6)	0.02	P6M-PAB1
G1/4	1.34 (34)	0.67 (17)	0.24 (6)	0.04	P6M-PAB2
G3/8	2.36 (60)	0.98 (25)	0.35 (9)	0.06	P6M-PAB3
G1/2	2.52 (64)	0.98 (25)	0.43 (11)	0.10	P6M-PAB4
G3/4	5.51 (140)	1.50 (38)	0.55 (14)	0.50	P6M-PAB6
G1	6.30 (160)	1.89 (48)	0.79 (20)	0.62	P6M-PAB8







ECS Reclassifier, Air Line Muffler

The ECS (Muffler-Reclassifier) eliminates unwanted oil mist and reduces exhaust noise from pneumatic valves, cylinders and air

- 99.97% Oil Removal Efficiencies
- 25 dBA Noise Attenuation
- 1/2" NPT and 1" NPT
- Disposable Units
- Continuous or Plugged Drain Option
- Metal Retained Construction
- Fast Exhaust Time

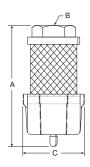
Improve Overall Plant Environment

Exhaust oil mist and noise pollution have a direct impact on worker productivity.

Oil aerosol mist from lubricators and compressors is pervasive and enters the industrial plant environment through the exhaust ports of valves, cylinders and air motors. This rapidly expanding exhaust also produces sudden and excessive noise.

The ECS (Muffler-Reclassifier) is 99.97% efficient at removing the oil aerosols. The ECS also acts as a silencer to lower the dBA levels below O.S.H.A. requirements.

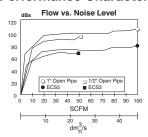
The result is a cleaner, quieter environment which equates to greater work productivity and safety.



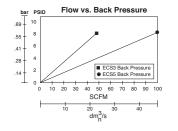
ECS Reclassifier, Air Line Muffler

Thread Size	Α	В	С	Part Number
1/2	5.30 (135mm)	1/2" NPT	2.57 (65mm)	ECS3
1	7.30 (185mm)	1" NPT	2.57 (65mm)	ECS5

Performance Characteristics



Most popular.



Air Preparation Products **Accessories**



Operating information

Maximum line pressure: 100 psig (6.8 bar) 125°F (52°C) Maximum operating temperature:

Operation

Compressor oils and lubricating oils are exhausted from valves, cylinders and air motors into the ECS. Oil aerosols are "coalesced" into larger droplets and gravity pulls them into the attached drain sump. The sump can then be drained manually or by using a 1/4" ID plastic tube drain. The air flowing into the ECS is also muffled or silenced as it enters the inside of the ECS and passes through the filter media into the atmosphere.

Proven Technology

The ECS units are constructed from the same materials that go into our oil removal coalescing filter elements.

The seamless design insures media uniformity and strength. This proven technology provides high coalescing efficiency with low pressure drop.

The filter media is supported by cylindrical perforated steel retainers both inside and out. These retainers, fully plated for excellent corrosion resistance, give the ECS units high rupture strength in either flow direction. These filters can also be used as high efficiency inlet or bypass filters for vacuum pumps, or breather elements to protect the air above critical process liquids.

ECS3 / ECS5

N19

The ECS solves two problems inherent in compressed air exhaust from valves, cylinders and air motors - oil mist removal and noise abatement.

The ECS will improve your industrial plant environment, thereby improving worker productivity.









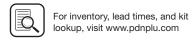


(Revised 06-24-20)

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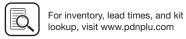


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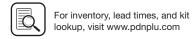
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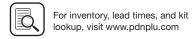
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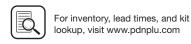
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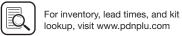
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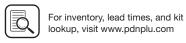


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Safety Guide

Safety Guide For Selecting And Using Pneumatic Division Products And Related Accessories

/ WARNING:

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF PNEUMATIC DIVISION PRODUCTS, ASSEMBLIES OR RELATED ITEMS ("PRODUCTS") CAN CAUSE DEATH, PERSONAL INJURY, AND PROPERTY DAMAGE. POSSIBLE CONSEQUENCES OF FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THESE PRODUCTS INCLUDE BUT ARE NOT LIMITED TO:

- Unintended or mistimed cycling or motion of machine members or failure to cycle
- Work pieces or component parts being thrown off at high speeds.
- Failure of a device to function properly for example, failure to clamp or unclamp an associated item or device.
- Explosion
- Suddenly moving or falling objects.
- Release of toxic or otherwise injurious liquids or gasses.

Before selecting or using any of these Products, it is important that you read and follow the instructions below.

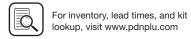
1. GENERAL INSTRUCTIONS

- **1.1. Scope:** This safety guide is designed to cover general guidelines on the installation, use, and maintenance of Pneumatic Division Valves, FRLs (Filters, Pressure Regulators, and Lubricators), Vacuum products and related accessory components.
- **1.2. Fail-Safe:** Valves, FRLs, Vacuum products and their related components can and do fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so that failure of associated valves, FRLs or Vacuum products will not endanger persons or property.
- **1.3 Relevant International Standards:** For a good guide to the application of a broad spectrum of pneumatic fluid power devices see: ISO 4414:1998, Pneumatic Fluid Power General Rules Relating to Systems. See www.iso.org for ordering information.
- **1.4. Distribution:** Provide a copy of this safety guide to each person that is responsible for selection, installation, or use of Valves, FRLs or Vacuum products. Do not select, or use Parker valves, FRLs or vacuum products without thoroughly reading and understanding this safety guide as well as the specific Parker publications for the products considered or selected.
- 1.5. User Responsibility: Due to the wide variety of operating conditions and applications for valves, FRLs, and vacuum products Parker and its distributors do not represent or warrant that any particular valve, FRL or vacuum product is suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:
 - Making the final selection of the appropriate valve, FRL, Vacuum component, or accessory.
 - Assuring that all user's performance, endurance, maintenance, safety, and warning requirements are met and that the application
 presents no health or safety hazards.
 - Complying with all existing warning labels and / or providing all appropriate health and safety warnings on the equipment on which the valves, FRLs or Vacuum products are used; and,
 - Assuring compliance with all applicable government and industry standards.
- 1.6. Safety Devices: Safety devices should not be removed, or defeated.
- 1.7. Warning Labels: Warning labels should not be removed, painted over or otherwise obscured.
- **1.8. Additional Questions:** Call the appropriate Parker technical service department if you have any questions or require any additional information. See the Parker publication for the product being considered or used, or call 1-800-CPARKER, or go to www.parker.com, for telephone numbers of the appropriate technical service department.

2. PRODUCT SELECTION INSTRUCTIONS

- **2.1. Flow Rate:** The flow rate requirements of a system are frequently the primary consideration when designing any pneumatic system. System components need to be able to provide adequate flow and pressure for the desired application.
- **2.2. Pressure Rating:** Never exceed the rated pressure of a product. Consult product labeling, Pneumatic Division catalogs or the instruction sheets supplied for maximum pressure ratings.
- 2.3. Temperature Rating: Never exceed the temperature rating of a product. Excessive heat can shorten the life expectancy of a product and result in complete product failure.
- 2.4. Environment: Many environmental conditions can affect the integrity and suitability of a product for a given application. Pneumatic Division products are designed for use in general purpose industrial applications. If these products are to be used in unusual circumstances such as direct sunlight and/or corrosive or caustic environments, such use can shorten the useful life and lead to premature failure of a product.
- 2.5. Lubrication and Compressor Carryover: Some modern synthetic oils can and will attack nitrile seals. If there is any possibility of synthetic oils or greases migrating into the pneumatic components check for compatibility with the seal materials used. Consult the factory or product literature for materials of construction.
- 2.6. Polycarbonate Bowls and Sight Glasses: To avoid potential polycarbonate bowl failures:
 - Do not locate polycarbonate bowls or sight glasses in areas where they could be subject to direct sunlight, impact blow, or temperatures outside of the rated range.
 - Do not expose or clean polycarbonate bowls with detergents, chlorinated hydro-carbons, keytones, esters or certain alcohols.
 - Do not use polycarbonate bowls or sight glasses in air systems where compressors are lubricated with fire resistant fluids such as phosphate ester and di-ester lubricants.





- 2.7. Chemical Compatibility: For more information on plastic component chemical compatibility see Pneumatic Division technical bulletins Tec-3, Tec-4, and Tec-5
- 2.8. Product Rupture: Product rupture can cause death, serious personal injury, and property damage.
 - Do not connect pressure regulators or other Pneumatic Division products to bottled gas cylinders.
 - Do not exceed the maximum primary pressure rating of any pressure regulator or any system component.
 - Consult product labeling or product literature for pressure rating limitations.

3. PRODUCT ASSEMBLY AND INSTALLATION INSTRUCTIONS

- **3.1. Component Inspection:** Prior to assembly or installation a careful examination of the valves, FRLs or vacuum products must be performed. All components must be checked for correct style, size, and catalog number. DO NOT use any component that displays any signs of nonconformance.
- **3.2.** Installation Instructions: Parker published Installation Instructions must be followed for installation of Parker valves, FRLs and vacuum components. These instructions are provided with every Parker valve or FRL sold, or by calling 1-800-CPARKER, or at www.parker.com.
- **3.3.** Air Supply: The air supply or control medium supplied to Valves, FRLs and Vacuum components must be moisture-free if ambient temperature can drop below freezing

4. VALVE AND FRL MAINTENANCE AND REPLACEMENT INSTRUCTIONS

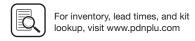
- **4.1. Maintenance:** Even with proper selection and installation, valve, FRL and vacuum products service life may be significantly reduced without a continuing maintenance program. The severity of the application, risk potential from a component failure, and experience with any known failures in the application or in similar applications should determine the frequency of inspections and the servicing or replacement of Pneumatic Division products so that products are replaced before any failure occurs. A maintenance program must be established and followed by the user and, at minimum, must include instructions 4.2 through 4.9.
- **4.2. Installation and Service Instructions:** Before attempting to service or replace any worn or damaged parts consult the appropriate Service Bulletin for the valve or FRL in question for the appropriate practices to service the unit in question. These Service and Installation Instructions are provided with every Parker valve and FRL sold, or are available by calling 1-800-CPARKER, or by accessing the Parker web site at www.parker.com.
- **4.3. Lockout / Tagout Procedures:** Be sure to follow all required lockout and tagout procedures when servicing equipment. For more information see: OSHA Standard 29 CFR, Part 1910.147, Appendix A, The Control of Hazardous Energy (Lockout / Tagout)
- **4.4. Visual Inspection:** Any of the following conditions requires immediate system shut down and replacement of worn or damaged components:
 - Air leakage: Look and listen to see if there are any signs of visual damage to any of the components in the system. Leakage is an indication of worn or damaged components.
 - Damaged or degraded components: Look to see if there are any visible signs of wear or component degradation.
 - Kinked, crushed, or damaged hoses. Kinked hoses can result in restricted air flow and lead to unpredictable system behavior.
 - Any observed improper system or component function: Immediately shut down the system and correct malfunction.
 - Excessive dirt build-up: Dirt and clutter can mask potentially hazardous situations.

Caution: Leak detection solutions should be rinsed off after use.

4.5. Routine Maintenance Issues:

- · Remove excessive dirt, grime and clutter from work areas.
- Make sure all required guards and shields are in place.
- **4.6. Functional Test:** Before initiating automatic operation, operate the system manually to make sure all required functions operate properly and safely.
- 4.7. Service or Replacement Intervals: It is the user's responsibility to establish appropriate service intervals. Valves, FRLs and vacuum products contain components that age, harden, wear, and otherwise deteriorate over time. Environmental conditions can significantly accelerate this process. Valves, FRLs and vacuum components need to be serviced or replaced on routine intervals. Service intervals need to be established based on:
 - Previous performance experiences.
 - Government and / or industrial standards.
 - When failures could result in unacceptable down time, equipment damage or personal injury risk.
- **4.8. Servicing or Replacing of any Worn or Damaged Parts:** To avoid unpredictable system behavior that can cause death, personal injury and property damage:
 - Follow all government, state and local safety and servicing practices prior to service including but not limited to all OSHA Lockout Tagout procedures (OSHA Standard 29 CFR, Part 1910.147, Appendix A, The Control of Hazardous Energy Lockout / Tagout).
 - Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
 - Disconnect air supply and depressurize all air lines connected to system and Pneumatic Division products before installation, service, or conversion
 - Installation, servicing, and / or conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
 - After installation, servicing, or conversions air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or if the product does not operate properly, do not put product or system into use.
 - Warnings and specifications on the product should not be covered or painted over. If masking is not possible, contact your local representative for replacement labels.
- **4.9. Putting Serviced System Back into Operation:** Follow the guidelines above and all relevant Installation and Maintenance Instructions supplied with the valve FRL or vacuum component to insure proper function of the system.





PARKER-HANNIFIN CORPORATION OFFER OF SALE

1. <u>Definitions</u>. As used herein, the following terms have the meanings indicated.

Buyer: means any customer receiving a

Quote for Products.

Goods: means any tangible part, system or

component to be supplied by Seller.

Products: means the Goods, Services and/or Software as described in a Quote.

Quote: means the offer or proposal made by

Seller to Buyer for the supply of

Products.

Seller: means Parker-Hannifin Corporation,

including all divisions and

businesses thereof.

Services: means any services to be provided

by Seller.

Software: means any software related to the

Goods, whether embedded or

separately downloaded.

Terms: means the terms and conditions of

this Offer of Sale.

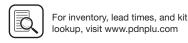
- 2. Terms. All sales of Products by Seller are expressly conditioned upon, and will be governed by the acceptance of, these Terms. These Terms are incorporated into any Quote provided by Seller to Buyer. Buyer's order for any Products whether communicated to Seller verbally, in writing, by electronic data interface or other electronic commerce, shall constitute acceptance of these Terms. Seller objects to any contrary or additional terms or conditions of Buyer. Reference in Seller's order acknowledgement to Buyer's purchase order or purchase order number shall in no way constitute an acceptance of any of Buyer's terms or conditions of purchase. modification to these Terms will be binding on Seller unless agreed to in writing and signed by an authorized representative of Seller.
- 3. <u>Price; Payment</u>. The Products set forth in the Quote are offered for sale at the prices indicated in the Quote. Unless otherwise specifically stated in the Quote, prices are valid for thirty (30) days and do not include any sales, use, or other taxes or duties. Seller reserves the right to modify prices at any time to adjust for any raw material price fluctuations. Unless otherwise specified by Seller, all prices are F.C.A. Seller's facility (INCOTERMS 2020). All sales are contingent upon credit approval and full payment for all purchases is due thirty (30) days from the date of invoice (or such date as may be specified in the Quote). Unpaid invoices beyond the specified payment date incur interest at the rate of 1.5% per month or the maximum allowable rate under applicable law.
- 4. <u>Shipment; Delivery; Title and Risk of Loss</u>. All delivery dates are approximate, and Seller is not responsible for damages resulting from any delay. Regardless of the manner of shipment, delivery occurs and title and risk of loss or damage pass to Buyer, upon placement of the Products with the carrier at Seller's facility. Unless otherwise agreed prior to shipment and for domestic delivery locations only, Seller will select and arrange, at Buyer's sole expense, the carrier and means of delivery. When Seller selects and

arranges the carrier and means of delivery, freight and insurance costs for shipment to the designated delivery location will be prepaid by Seller and added as a separate line item to the invoice. Buyer shall be responsible for any additional shipping charges incurred by Seller due to Buyer's acts or omissions. Buyer shall not return or repackage any Products without the prior written authorization from Seller, and any return shall be at the sole cost and expense of Buyer.

- **5. Warranty.** The warranty for the Products is as follows: (i) Goods are warranted against defects in material or workmanship for a period of twelve (12) months from the date of delivery or 2,000 hours of use, whichever occurs first; (ii) Services shall be performed in accordance with generally accepted practices and using the degree of care and skill that is ordinarily exercised and customary in the field to which the Services pertain and are warranted for a period of six (6) months from the date of completion of the Services; and (iii) Software is only warranted to perform in accordance with applicable specifications provided by Seller to Buyer for ninety (90) days from the date of delivery or, when downloaded by a Buyer or end-user, from the date of the initial download. All prices are based upon the exclusive limited warranty stated above, and upon the following disclaimer: **EXEMPTION CLAUSE**; **DISCLAIMER OF** WARRANTY, CONDITIONS, REPRESENTATIONS: THIS WARRANTY IS THE SOLE AND ENTIRE WARRANTY. CONDITION, AND REPRESENTATION, PERTAINING TO PRODUCTS. **SELLER DISCLAIMS** ALL **OTHER** WARRANTIES. CONDITIONS, AND REPRESENTATIONS, **WHETHER** STATUTORY. **EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED THOSE** RELATING TO DESIGN. TO NONINFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE. SELLER DOES NOT WARRANT THAT THE SOFTWARE IS ERROR-FREE OR FAULT-TOLERANT, OR THAT BUYER'S USE THEREOF WILL BE SECURE OR UNINTERRUPTED. UNLESS OTHERWISE AUTHORIZED IN WRITING BY SELLER. THE SOFTWARE SHALL NOT BE USED IN CONNECTION WITH HAZARDOUS OR HIGH RISK ACTIVITIES OR ENVIRONMENTS. EXCEPT AS EXPRESSLY STATED HEREIN, ALL PRODUCTS ARE PROVIDED "AS IS".
- **6.** <u>Claims; Commencement of Actions.</u> Buyer shall promptly inspect all Products upon receipt. No claims for shortages will be allowed unless reported to Seller within ten (10) days of delivery. Buyer shall notify Seller of any alleged breach of warranty within thirty (30) days after the date the non-conformance is or should have been discovered by Buyer. Any claim or action against Seller based upon breach of contract or any other theory, including tort, negligence, or otherwise must be commenced within twelve (12) months from the date of the alleged breach or other alleged event, without regard to the date of discovery.
- 7. <u>LIMITATION OF LIABILITY</u>. IN THE EVENT OF A BREACH OF WARRANTY, SELLER WILL, AT ITS OPTION, REPAIR OR REPLACE THE NON-CONFORMING PRODUCT, RE-PERFORM THE SERVICES, OR REFUND THE PURCHASE PRICE PAID WITHIN A REASONABLE PERIOD OF TIME. **IN NO EVENT IS SELLER LIABLE FOR**

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- ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING ANY LOSS OF REVENUE OR PROFITS, WHETHER BASED IN CONTRACT, TORT OR OTHER LEGAL THEORY. IN NO EVENT SHALL SELLER'S LIABILITY UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE PAID FOR THE PRODUCTS.
- 8. <u>Confidential Information</u>. Buyer acknowledges and agrees that any technical, commercial, or other confidential information of Seller, including, without limitation, pricing, technical drawings or prints and/or part lists, which has been or will be disclosed, delivered or made available, whether directly or indirectly, to Buyer ("Confidential Information"), has been and will be received in confidence and will remain the property of Seller. Buyer further agrees that it will not use Seller's Confidential Information for any purpose other than for the benefit of Seller.
- **9.** Loss to Buyer's Property. Any tools, patterns, materials, equipment or information furnished by Buyer or which are or become Buyer's property ("Buyer's Property"), will be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer ordering the Products manufactured using Buyer's Property. Furthermore, Seller shall not be responsible for any loss or damage to Buyer's Property while it is in Seller's possession or control.
- 10. Special Tooling. "Special Tooling" includes but is not limited to tools, jigs, fixtures and associated manufacturing equipment acquired or necessary to manufacture Goods. Seller may impose a tooling charge for any Special Tooling. Such Special Tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in the Special Tooling, even if such Special Tooling has been specially converted or adapted for manufacture of Goods for Buyer and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller has the right to alter, discard or otherwise dispose of any Special Tooling or other property owned by Seller in its sole discretion at any time.
- 11. Security Interest. To secure payment of all sums due from Buyer, Seller retains a security interest in all Products delivered to Buyer and, Buyer's acceptance of these Terms is deemed to be a Security Agreement under the Uniform Commercial Code. Buyer authorizes Seller as its attorney to execute and file on Buyer's behalf all documents Seller deems necessary to perfect Seller's security interest.
- 12. <u>User Responsibility</u>. Buyer, through its own analysis and testing, is solely responsible for making the final selection of the Products and assuring that all performance, endurance, maintenance, safety and warning requirements of the application of the Products are met. Buyer must analyze all aspects of the application and follow applicable industry standards, specifications, and any technical information provided with the Quote or the Products, such as Seller's instructions, guides and specifications. If Seller provides options of or for Products based upon data or specifications provided by Buyer, Buyer is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the Products. In the event Buyer is not the end-user

- of the Products, Buyer will ensure such end-user complies with this paragraph.
- 13. <u>Use of Products, Indemnity by Buyer</u>. Buyer shall comply with all instructions, guides and specifications provided by Seller with the Quote or the Products. Unauthorized Uses. If Buyer uses or resells the Products in any way prohibited by Seller's instructions, guides or specifications, or Buyer otherwise fails to comply with Seller's instructions, guides and specifications, Buyer acknowledges that any such use, resale, or non-compliance is at Buyer's sole risk. Further, Buyer shall indemnify, defend, and hold Seller harmless from any losses, claims, liabilities, damages, lawsuits, judgments and costs (including attorney fees and defense costs), whether for personal injury, property damage, intellectual property infringement or any other claim, arising out of or in connection with: (a) improper selection, design, specification, application, or any misuse of Products; (b) any act or omission, negligent or otherwise, of Buver: (c) Seller's use of patterns, tools. equipment, plans, drawings, designs, specifications or other information or things furnished by Buyer; (d) damage to the Products from an external cause, repair or attempted repair by anyone other than Seller, failure to follow instructions, guides and specifications provided by Seller, use with goods provided by Seller, or opening, modifying, deconstructing, tampering with or repackaging the Products; or (e) Buyer's failure to comply with these Terms. Seller shall not indemnify Buyer under any circumstance except as otherwise provided in these Terms.
- 14. <u>Cancellations and Changes</u>. Buyer may not cancel or modify, including but not limited to movement of delivery dates for the Products, any order for any reason except with Seller's written consent and upon terms that will indemnify, defend and hold Seller harmless against all direct, incidental and consequential loss or damage and any additional expense. Seller, at any time, may change features, specifications, designs and availability of Products.
- **15.** <u>Limitation on Assignment</u>. Buyer may not assign its rights or obligations without the prior written consent of Seller.
- 16. Force Majeure. Seller is not liable for delay or failure to perform any of its obligations by reason of events or circumstances beyond its reasonable control. circumstances include without limitation: accidents, labor disputes or stoppages, government acts or orders, acts of nature, pandemics, epidemics, other widespread illness, or public health emergency, delays or failures in delivery from carriers or suppliers, shortages of materials, war (whether declared or not) or the serious threat of same. riots, rebellions, acts of terrorism, fire or any reason whether similar to the foregoing or otherwise. Seller will resume performance as soon as practicable after the event of force majeure has been removed. All delivery dates affected by force majeure shall be tolled for the duration of such force majeure and rescheduled for mutually agreed dates as soon as practicable after the force maieure condition ceases to exist. Force majeure shall not include financial distress, insolvency, bankruptcy, or other similar conditions affecting one of the parties, affiliates and/or subcontractors.

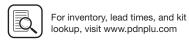




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- 17. <u>Waiver and Severability</u>. Failure to enforce any provision of these Terms will not invalidate that provision; nor will any such failure prejudice either party's right to enforce that provision in the future. Invalidation of any provision of these Terms shall not invalidate any other provision herein and, the remaining provisions will remain in full force and effect.
- **18.** <u>Termination.</u> Seller may terminate any agreement governed by or arising from these Terms for any reason and at any time by giving Buyer thirty (30) days prior written notice. Seller may immediately terminate, in writing, if Buyer: (a) breaches any provision of these Terms, (b) becomes or is deemed insolvent, (c) appoints or has appointed a trustee, receiver or custodian for all or any part of Buyer's property, (d) files a petition for relief in bankruptcy on its own behalf, or one is filed against Buyer by a third party, (e) makes an assignment for the benefit of creditors; or (f) dissolves its business or liquidates all or a majority of its assets.
- **19.** Ownership of Software. Seller retains ownership of all Software supplied to Buyer hereunder. In no event shall Buyer obtain any greater right in and to the Software than a right in the nature of a license limited to the use thereof and subject to compliance with any other terms provided with the Software.
- **Indemnity for Infringement of Intellectual Property** Rights. Seller is not liable for infringement of any patents. trademarks, copyrights, trade dress, trade secrets or similar rights ("Intellectual Property Rights") except as provided in this Section. Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on a third party claim that one or more of the Products sold hereunder infringes the Intellectual Property Rights of a third party in the country of delivery of the Products by Seller to Buyer. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of any such claim, and Seller having sole control over the defense of the claim including all negotiations for settlement or compromise. If one or more Products sold hereunder is subject to such a claim, Seller may, at its sole expense and option, procure for Buyer the right to continue using the Products, replace or modify the Products so as to render them non-infringing, or offer to accept return of the Products and refund the purchase price less a reasonable allowance for depreciation. Seller has no obligation or liability for any claim of infringement: (i) arising from information provided by Buyer; or (ii) directed to any Products provided hereunder for which the designs are specified in whole or part by Buyer; or (iii) resulting from the modification, combination or use in a system of any Products provided hereunder. The foregoing provisions of this Section constitute Seller's sole and exclusive liability and Buver's sole and exclusive remedy for claims of infringement of Intellectual Property Rights.
- 21. Governing Law. These Terms and the sale and delivery of all Products are deemed to have taken place in, and shall be governed and construed in accordance with, the laws of the State of Ohio, as applicable to contracts executed and wholly performed therein and without regard to conflicts of laws principles. Buyer irrevocably agrees and consents to the exclusive jurisdiction and venue of the courts of

- Cuyahoga County, Ohio with respect to any dispute, controversy or claim arising out of or relating to the sale and delivery of the Products.
- 22. Entire Agreement. These Terms, along with the terms set forth in the main body of any Quote, forms the entire agreement between the Buyer and Seller and constitutes the final, complete and exclusive expression of the terms of sale and purchase. In the event of a conflict between any term set forth in the main body of a Quote and these Terms, the terms set forth in the main body of the Quote shall prevail. All prior or contemporaneous written or oral agreements or negotiations with respect to the subject matter shall have no effect. These Terms may not be modified unless in writing and signed by an authorized representative of Seller.
- 23. Compliance with Laws. Buyer agrees to comply with applicable laws, regulations, and industry and professional standards, including those of the United States of America, and the country or countries in which Buyer may operate, including without limitation the U.S. Foreign Corrupt Practices Act ("FCPA"), the U.S. Anti-Kickback Act ("Anti-Kickback Act"), U.S. and E.U. export control and sanctions laws ("Export Laws"), the U.S. Food Drug and Cosmetic Act ("FDCA"), and the rules and regulations promulgated by the U.S. Food and Drug Administration ("FDA"), each as currently amended. Buyer agrees to indemnify, defend, and hold harmless Seller from the consequences of any violation of such laws, regulations and standards by Buyer, its employees or agents. Buyer acknowledges that it is familiar with all applicable provisions of the FCPA, the Anti-Kickback Act, Export Laws, the FDCA and the FDA and certifies that Buyer will adhere to the requirements thereof and not take any action that would make Seller violate such requirements. Buyer represents and agrees that Buyer will not make any payment or give anything of value, directly or indirectly, to any governmental official, foreign political party or official thereof, candidate for foreign political office, or commercial entity or person, for any improper purpose, including the purpose of influencing such person to purchase Products or otherwise benefit the business of Seller. Buyer further represents and agrees that it will not receive, use, service, transfer or ship any Products from Seller in a manner or for a purpose that violates Export Laws or would cause Seller to be in violation of Export Laws. Buyer agrees to promptly and reliably provide Seller all requested information or documents, including end-user statements and other written assurances, concerning Buyer's ongoing compliance with Export Laws.



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Parker Hannifin Corporation **Pneumatic Division** 8676 E. M89 Richland, MI 49083 USA

Tel: 269 629 5000

Applications Engineering: pdnapps@parker.com Customer Support: pdncustsvc@parker.com Web site: www.parker.com/pneumatics



Authorized Distributor

800-525-9085 www.mfcpinc.com

