

Automatic Tool Changers

04/11/2022

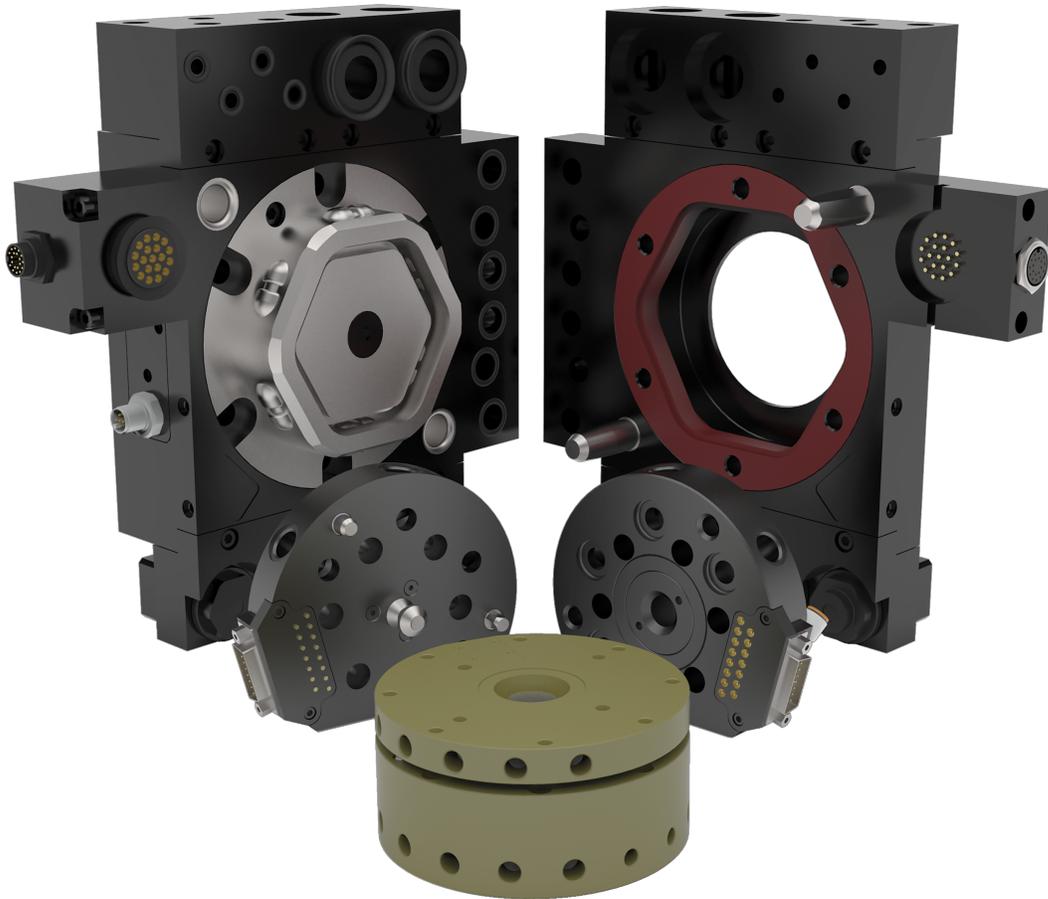


Motion & Flow Control Products

303-762-8012

digitalsales@mfcpc.com

automationsales@comoso.com



Automatic Tool Changers

04/11/2022

This catalog is a custom document and the products included is based on your unique selection from portions of complete catalogs that already exist. Please refer to our full catalogs for more information on products not included in this customized document.

Table of Contents

Technical Comparison Chart (TC)	TC-TCH-1
RQC/RTP Series Tool Changers	TC-RQTP-1
QC/TP Series Tool Changers	TC-QCTP-1
RHC Series Tool Changers	TC-RHC-1
CH Series Compliance Devices	TC-CH-1

Automatic Tool Changers

04/11/2022

Table of Contents (continued)

SIZING AND APPLICATION CHART

Automatic Tool Changers



Series	Page-TC-#	Max Moment Kg [lb]				Max Payload Kg [lb]				Weight Kg [lb]				Features										
		0 to 50 [0 to 110]	50 to 100 [110 to 220]	100 to 500 [220 to 1100]	500 to 1000 [1100 to 2200]	1000 to 2000 [2200 to 4400]	2000 to 3000 [4400 to 6600]	3000 to 4000 [6600 to 8800]	4000+ [9120+]	0 to 50 [0 to 110]	50 to 100 [110 to 220]	100 to 500 [220 to 1100]	500 to 1000 [1100 to 2200]	1000+ [2280+]	0 to 2 [0 to 4.4]	2 to 4 [4.4 to 8.8]	4 to 6 [8.8 to 13.2]	6 to 8 [13.2 to 17.6]	8+ [17.6+]	Optional Modules	High Temperature	Round Design	Rectangular Design	Failsafe Locking
	RQC/RTP-200	RQTP-3			●					●										✓			✓	✓
	RQC/RTP-400	RQTP-7			●					●						●				✓			✓	✓
	RQC/RTP-800	RQTP-7				●				●						●				✓			✓	✓
	RQC/RTP-1200	RQTP-7					●				●							●		✓			✓	✓
	RQC/RTP-2400	RQTP-13						●				●						●		✓			✓	✓
	QC/TP-30	QCTP-5	●						●					●						✓			✓	✓
	QC/TP-60	QCTP-7		●					●					●						✓			✓	✓
	QC/TP-60-10	QCTP-9		●					●					●						✓			✓	✓
	QC/TP-150	QCTP-11			●				●					●						✓			✓	✓
	RHC-1	RHC-3	●						●					●						✓			✓	✓
	RHC-2	RHC-5			●				●					●						✓			✓	✓
	RHC-3	RHC-7				●			●					●						✓			✓	✓
	RHC-4	RHC-9					●		●					●				●		✓			✓	✓

Technical Information

Pneumatic Specification

Pressure Range (Locked Cylinder):
 3~7 bar [40~100 psi] (QC/TP, RHC Series)
 4~7 bar [60~100 psi] (RQC/RTP Series)

Cylinder Type: Double Acting, Spring Assist

Valve Required to Actuate:

3-way, 2-position (QC-30 only)
 4-way, 2-Position

Air Quality Requirements

Air Filtration: 40 Microns or Better

Air Lubrication: Not Necessary*

Air Humidity: Low Moisture Content (Dry)

(*Addition of lubrication will greatly increase service life.)

Temperature Operating Range

Buna-N-Seals: -35°~80° C [-30°~180° F] (All Models)
Viton® Seals: -30°~150° C [-20°~300° F] (RHC Series)

Maintenance Specification

Expected Life: Normal Application: 5 Million Cycles

With Preventative Maintenance: 10+ Million Cycles

Repeatability: ±0.025mm [±0.001 in]

Field Repairable: Yes

Seal Repair Kits Available: Yes

Application Restrictions

- Dirty or Gritty Environments
- Machining Operations Generating Chips
- Environments with Loose Particulates

Features and Benefits

Robotic applications:

Perfect for those flexible/multiple tooling applications utilizing one Robot. This product was designed with exceptional repeatability, high rigidity & load capacity to make it ideal for any robotic application.

Automation applications:

End effector tooling and interchangeable fixturing can be changed quickly and easily to accommodate many different styles of parts on the same assembly machine or machining center.

Highly configurable, modular design (RQC/RTP):

The Modular RQC series easily accommodates up to (4) optional modular interfaces, offering a high level of flexibility.

SIZING AND APPLICATION CHART

Cylindrical Horizontal Compliance Device



Series	Page-TC-#	Max Centering Force	Max Payload	Weight	Misalignment	Features	
		Kg [lb]	Kg [lb]	Kg [lb]	±mm [±in]		
	CH-3	0 to 500 [0 to 1100]	0 to 5 [0 to 110]	0 to 1 [0 to 4.4]	3 [0.12]	Custom Misalignment	
	CH-4	500 to 1000 [1100 to 2200]	5 to 10 [110 to 220]	1 to 2 [4.4 to 8.8]	5 [0.20]	Optional Spring Assist	
	CH-5	1000 to 2000 [2200 to 4400]	10 to 20 [220 to 1100]	2 to 4 [8.8 to 13.2]	6.5 [0.25]	Harsh Environments	
	CH-6	2000 to 3000 [4400 to 6600]	20 to 40 [1100 to 2200]	4+ [17.6+]	8 [0.31]	Field Repairable	
	CH-7	3000 to 4000 [6600 to 8800]	4000+ [9120+]		12 [0.47]		
	CH-140	CH-6					
	CH-165	CH-7					

Technical Information

Pneumatic Specification

Pressure Range (w/o springs): 2-7 bar [30-100 psi]
 Pressure Range (w/springs CH-50): 3-7 bar [43-100 psi]
 Pressure Range (w/springs): 4-7 bar [60-100 psi]
 Cylinder Type: Double Acting, Double Acting Spring Assist, or Single Acting Spring Return
 Dynamic Seals: Internally Lubricated Buna-N
 Valve Required to Actuate: Double Acting: 4-way, 2-Position; Single Acting (-RL or -RA Option): 3-way, 2-Position

Temperature Operating Range

Buna-N-Seals (Standard): -25°~80° C [-10°~180° F]

Maintenance Specification

Expected Life: Normal Application: 5 Million Cycles
 With Preventative Maintenance: 6+ Million Cycles
 Field Repairable: Yes
 Seal Repair Kits Available: Yes

Air Quality Requirements

Air Filtration: 40 Microns or Better
 Air Lubrication: Not Necessary*
 Air Humidity: Low Moisture Content (Dry)
 (*)Addition of lubrication will greatly increase service life.

Features and Benefits

Flexibility of the tool:

Cylindrical Horizontal compliance devices are used for inserting components that may be misaligned with the tool. They allow a horizontal displacement that compensates for part placing inaccuracies.

For precision applications:

The use of high quality components allow to get centering repeatability from 0.02mm and angular repeatability from ±10°.

Harsh environments:

The enclosed design of this series allows them to be used in harsh environments.

Spring assist:

Due to the optional spring assist, compliance may be used in single acting mode.

ROBOTIC TOOLING SOLUTIONS

Tool Changer Sizing Guide

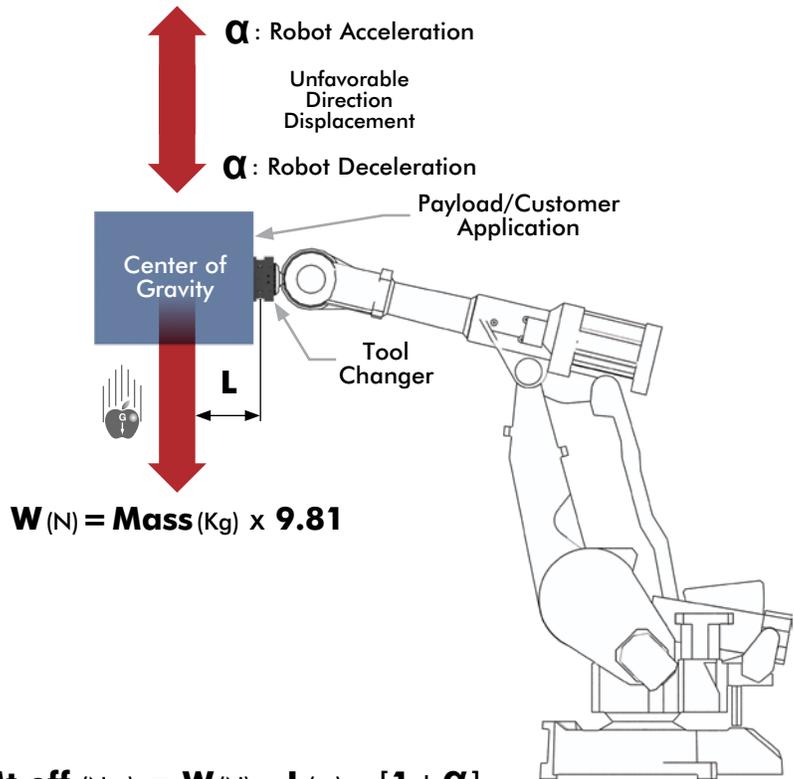
Tool Changer Sizing

For tool changer sizing, the maximum effective moment during displacement will be considered. The effective moment will be calculate in the worst case of the application, and must consider:

- The weight of the tool
- The position of the center of gravity
- The dynamic effect due to the maximum acceleration or deceleration. (Emergency stop for example)

See below the simplified calculation formula to estimate the effective moment of your application.

Required Information		
M	Mass of the tool attached on the tool changer	Kg
L	Distance from the payload center of gravity to the tool changer	m
α	Maximum acceleration or deceleration of the robot	g



Effective Moment → **Mt eff (Nm) = W(N) x L(m) x [1 + α]**

CAUTION: Applications with high and wide loads: in case of heavy application, we strongly recommend to strengthen the cylindrical and diamond indexing pins, between tool changer and tool plate, by adding larger diameter pins, the farthest to the center of changer tool, incorporated into the design of the tooling.

Application Example

Application Data	
Mass of tool	90 kg
Center of gravity / Tool Changer	0.5 m
Acceleration (or deceleration) of displacement	2 g

$$Mt \text{ eff} = (90 \times 9.81) \times 0.5 \times (1 + 2)$$

$$Mt \text{ eff} = 883 \times 0.5 \times 3$$

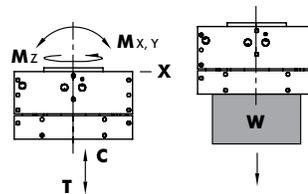
$$Mt \text{ eff} = 1324.5 \text{ Nm}$$

Loading Capacity:

Max. Tensile **T**: 2670 N [600 lb]

Max. Compressive **C**: 3560 N [800 lb]

Max. Moment (**Mx/My/Mz**) **1580 Nm [14000 in-lb]**



The obtained value 1324.5 Nm should be compared to the technical data of our products in this catalog in the "loading capacity information" section. For this application, the choice will be a RQC-400M tool changer that has a qualifying capacity, in terms of torque, of 1580Nm, over than the 1325Nm of the application.

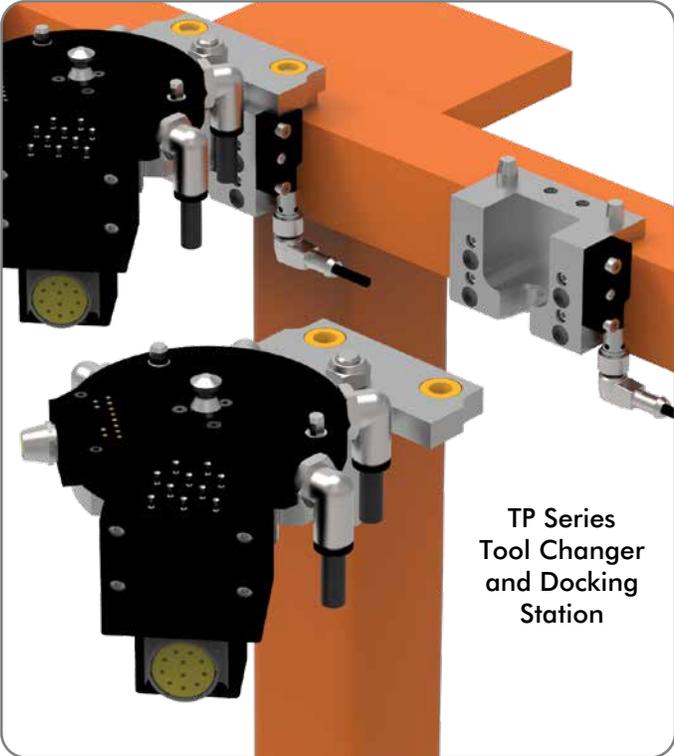
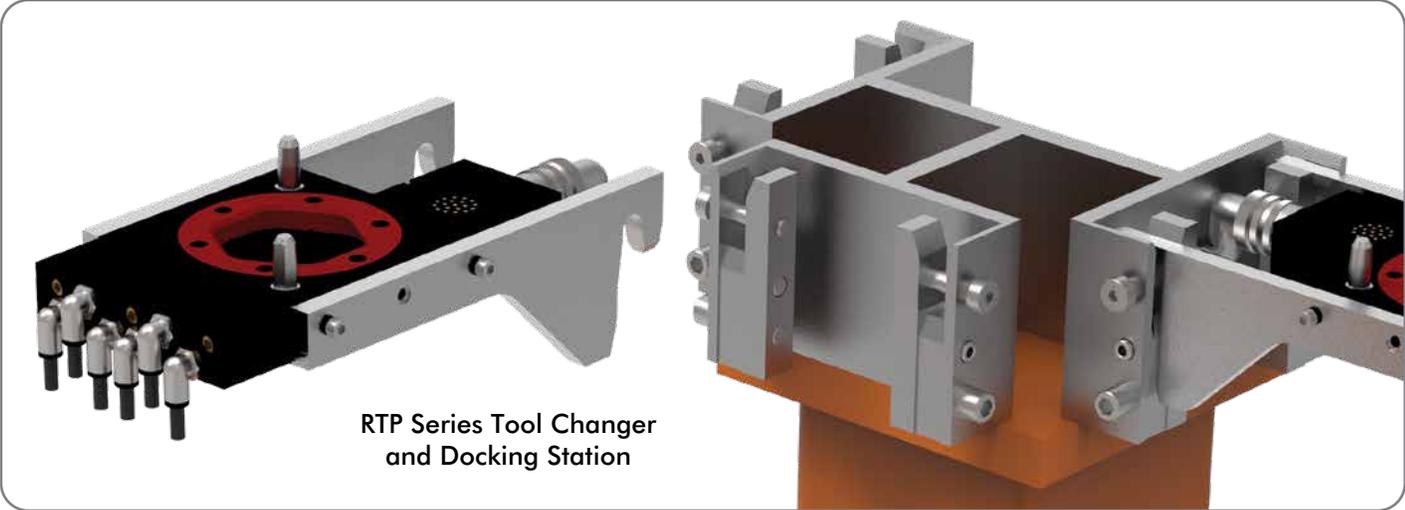
ROBOTIC TOOLING SOLUTIONS

Tool Changer Docking Station

Destaco offers custom and standard Docking Stations to fit customers needs. Please contact Destaco Sales for more information.

Key Features:

- Allows for quick changing of tooling
- Reducing machine down-time
- Safely stores tooling when not in use
- Standard or custom stations



RQC/RTP SERIES

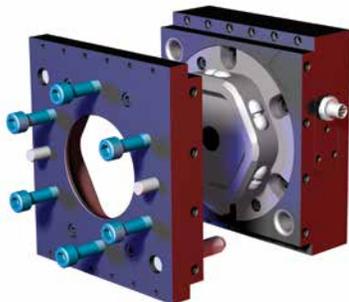
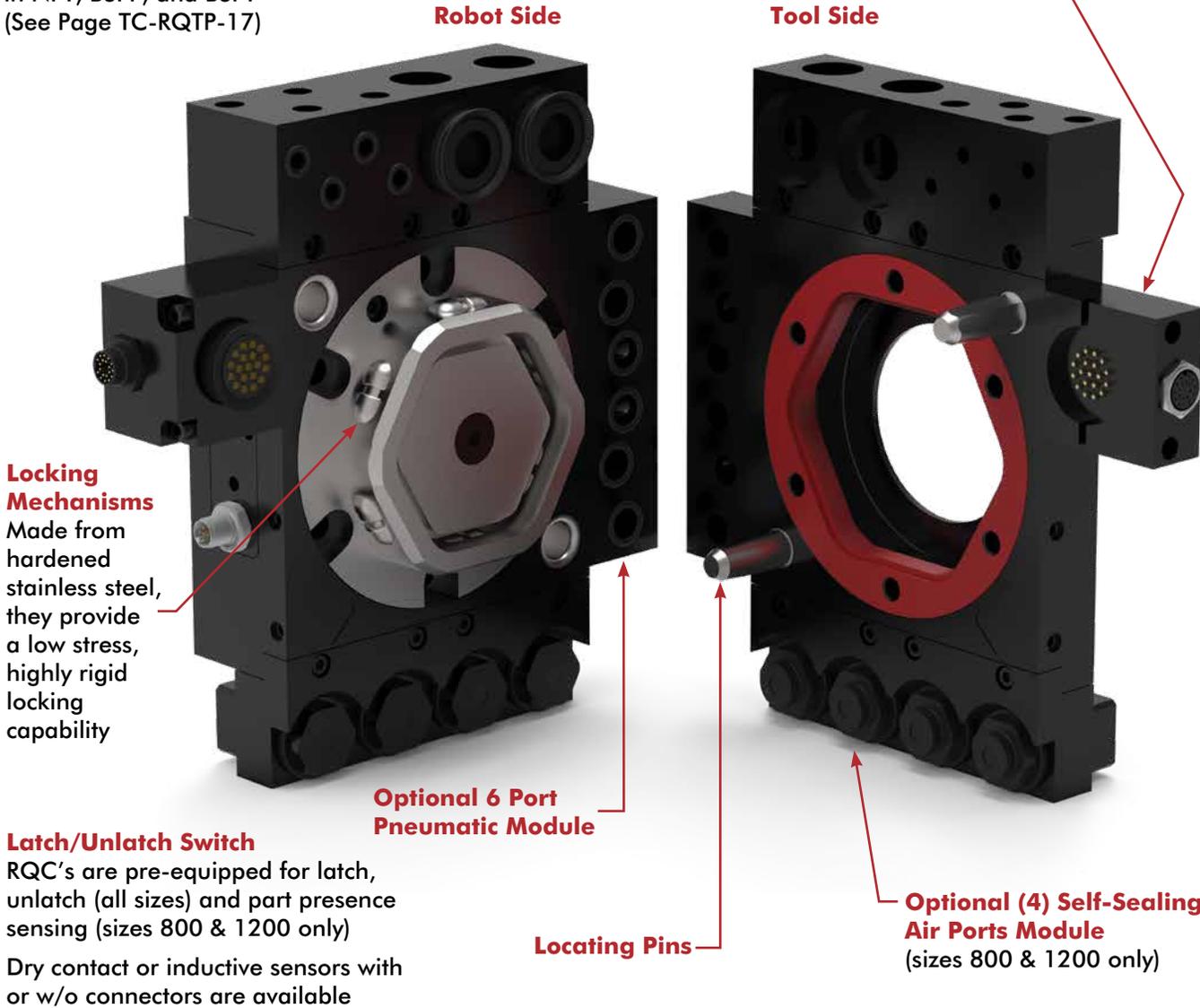
Automatic Tool Changers | Features and Benefits

Additional Optional Air, Fluid, Electrical Modules are Available.

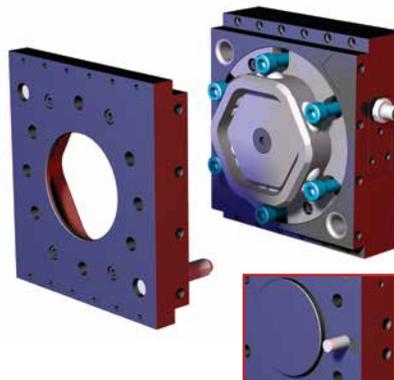
Air and fluid ports modules are available in NPT, BSPP, and BSPT (See Page TC-RQTP-17)

Optional 19 Pin I/O Module

Spring loaded contacts are recessed for a better protection
V-Seal provides moisture resistance



Tool Half Adaptor has tapped holes, two dowel pin holes for accurate location of payload, and features a ISO9409-1 mounting pattern



Robot Half Adaptor has counterbored holes for mounting with a dowel pin hole, a raised boss for location, and features a ISO9409-1 mounting pattern

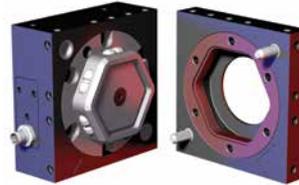
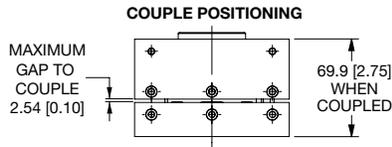
Back Side of Robot Half Adaptor

RQC/RTP SERIES

Automatic Tool Changers | Technical Information

RQC-200/RTP-200

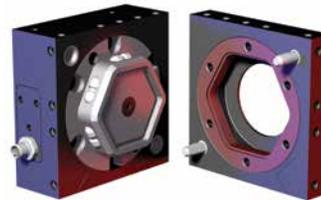
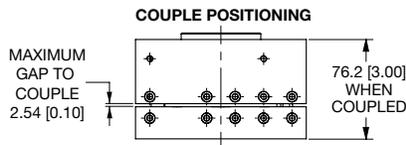
Combined Weight: 3 Kg [6.7 lb]
 Max. Payload: 90 Kg [200 lb]
 Max. Moment: 810 Nm [7200 in-lb]



RQC-200 Robot Adaptor Module **RTP-200** Tool Adaptor Module

RQC-400/RTP-400

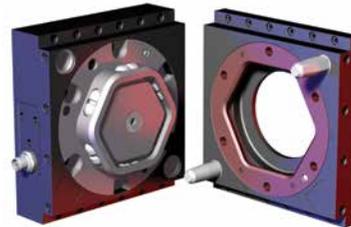
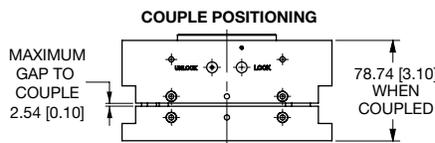
Combined Weight: 4.7 Kg [10.4 lb]
 Max. Payload: 180 Kg [400 lb]
 Max. Moment: 1580 Nm [14000 in-lb]



RQC-400 Robot Adaptor Module **RTP-400** Tool Adaptor Module

RQC-800/RTP-800

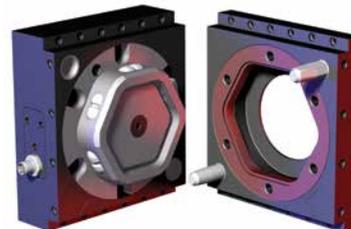
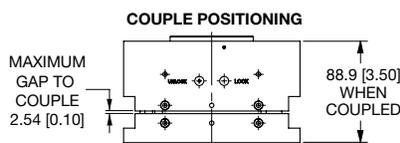
Combined Weight: 7.1 Kg [15.8 lb]
 Max. Payload: 360 Kg [800 lb]
 Max. Moment: 2490 Nm [22000 in-lb]



RQC-800 Robot Adaptor Module **RTP-800** Tool Adaptor Module

RQC-1200/RTP-1200

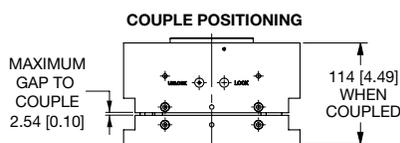
Combined Weight: 8.3 Kg [18.4 lb]
 Max. Payload: 550 Kg [1200 lb]
 Max. Moment: 3390 Nm [30000 in-lb]



RQC-1200 Robot Adaptor Module **RTP-1200** Tool Adaptor Module

RQC-2400/RTP-2400

Combined Weight: 30 Kg [66.1 lb]
 Max. Payload: 1089 Kg [2400 lb]
 Max. Moment: 7000 Nm [61955 in-lb]



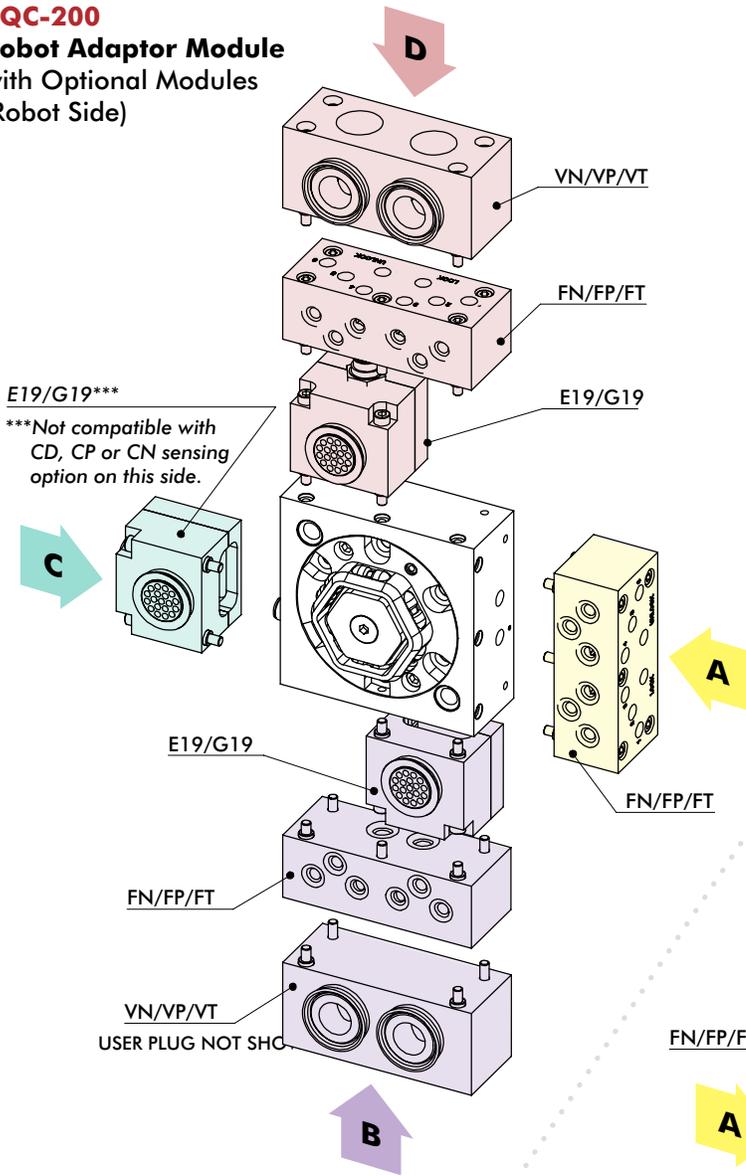
RQC-2400 Robot Adaptor Module **RTP-2400** Tool Adaptor Module

RQC-200/RTP-200

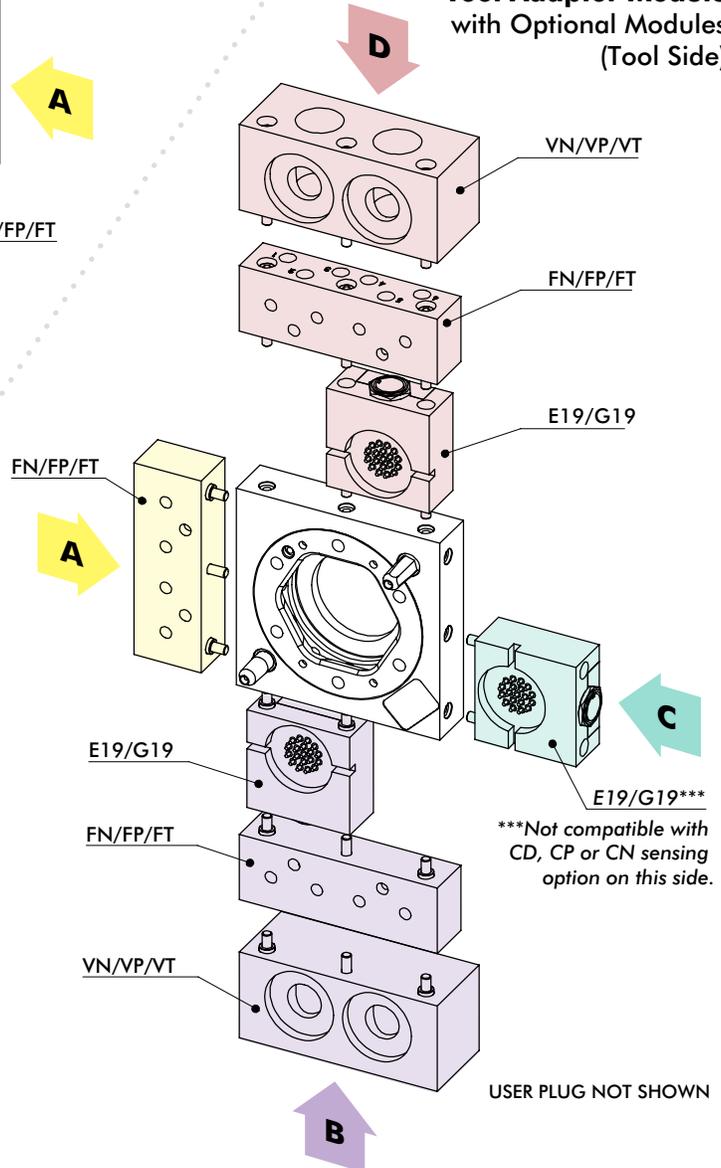
Automatic Tool Changers | Module Usage Illustrations

RQC-200

Robot Adaptor Module with Optional Modules (Robot Side)

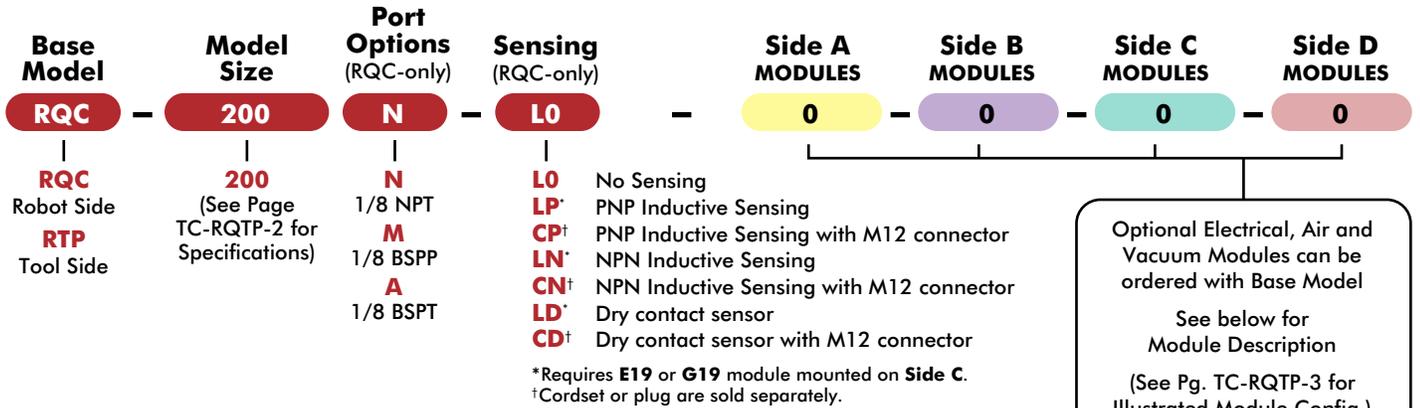


RTP-200 Tool Adaptor Module with Optional Modules (Tool Side)



RQC-200/RTP-200

Automatic Tool Changers | Ordering Information



Side A	Side B	Side C	Side D	Order Code	Optional Modules
●	●	●	●	0	No Module
	●	●***	●	E19 †***	19 pin, 3 Amp, 48 VDC Module w/Turck M16 Conn, w/o Cordset
	●	●***	●	G19 †***	19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
●	●		●	FN	6X 1/8" NPT Air Ports Module, Face Seal, 10 Bar
●	●		●	FP	6X 1/8" BSPP Air Ports Module, Face Seal, 10 Bar
●	●		●	FT	6X 1/8" BSPT Air Ports Module, Face Seal, 10 Bar
	●		●	VN	2X 3/4" Vacuum + 4 X 1/4" Air NPT Ports Module, Face Sealing
	●		●	VP	2X 3/4" Vacuum + 4 X 1/4" Air BSPP Ports Module, Face Sealing
	●		●	VT	2X 3/4" Vacuum + 4 X 1/4" Air BSPT Ports Module, Face Sealing

†Cordset or plug are sold separately. ***Not compatible with **CD**, **CP** or **CN** sensing option on **Side C**.

NOTE: Only (1) module can be mounted per side. Modules usage is based on the size of the Base Model and which side the module can be mounted.

RQC-200 (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions



Specification:

Max. Payload **W**: 90 Kg [200 lb]

Weight: 2 Kg [4.41 lb]

Cylinder Bore: $\varnothing 53\text{mm}$ [2.09in]

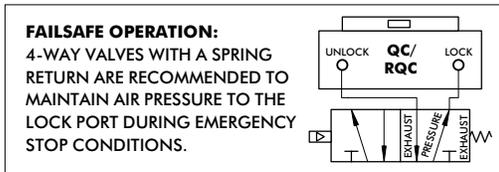
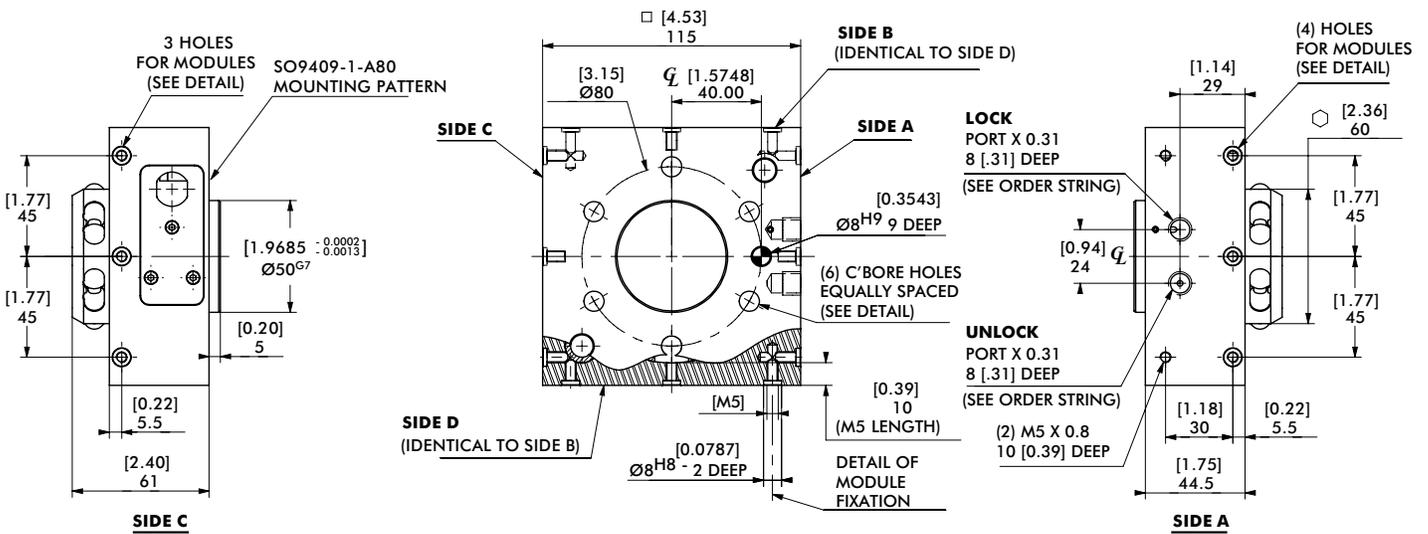
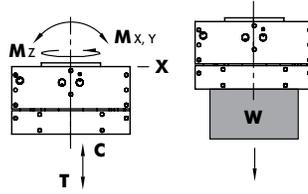
Displacement: 41.3 cm³ [2.52in³]

Loading Capacity:

Max. Tensile **T**: 1330 N [300 lb]

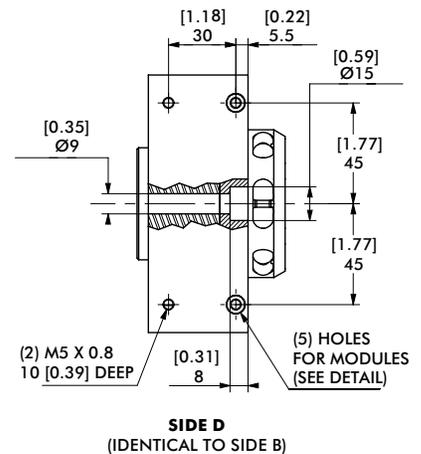
Max. Compressive **C**: 1780 N [400 lb]

Max. Moment (**M_x/M_y/M_z**): 810 Nm [7200 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

				IMPERIAL ([IN.])	METRIC (MM)
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE ± 0.005 " OR $\pm 0.13\text{MM}$	METRIC THREADS COURSE PITCH	0.00 = ± 0.01 0.000 = ± 0.005 0.0000 = ± 0.0005	[0] = ± 0.25 [0.0] = ± 0.13 [0.00] = ± 0.013



RTP-200 (TOOLING SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

Specification:

Max. Payload **W**: 180 Kg [400 lb]

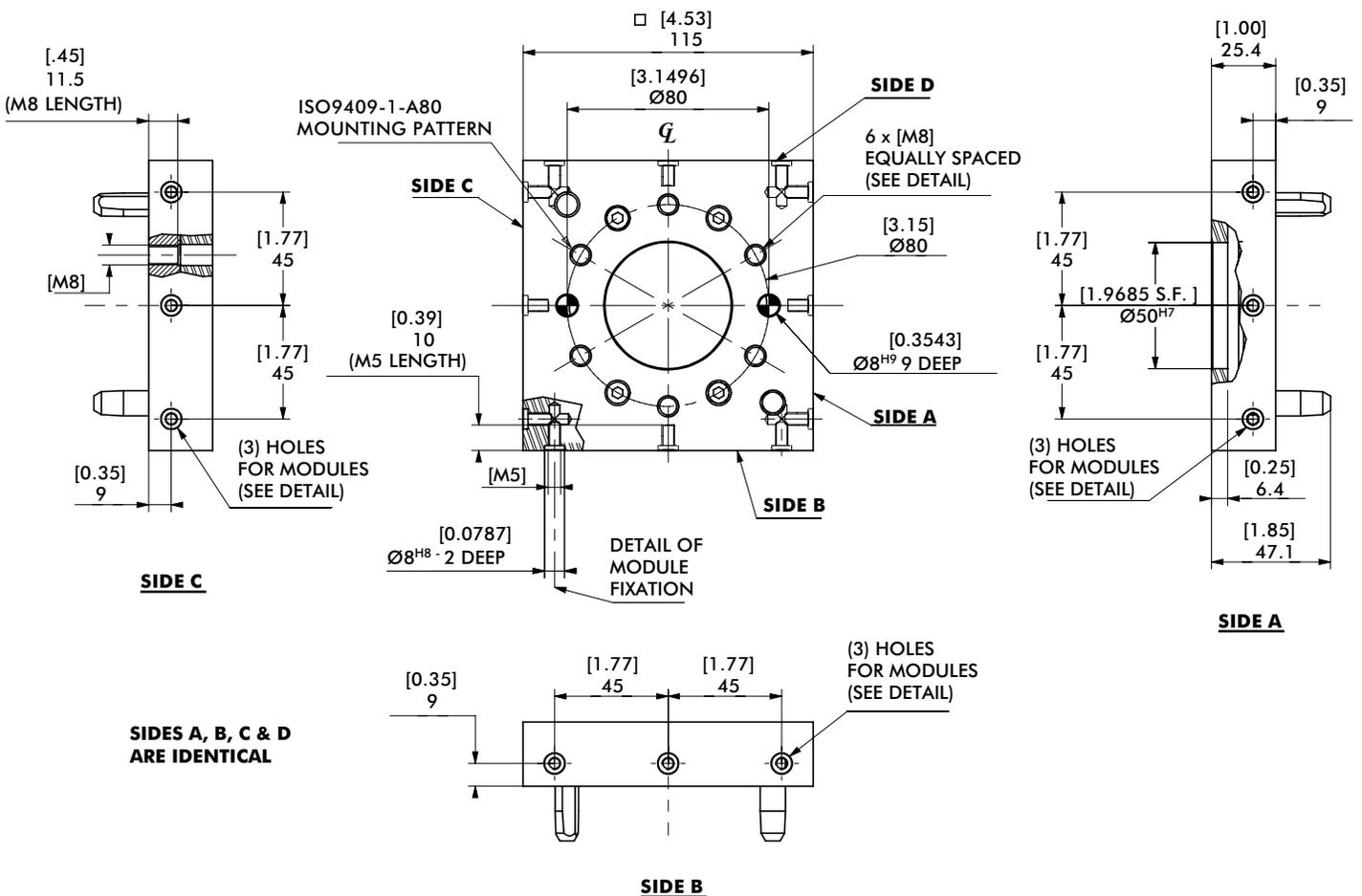
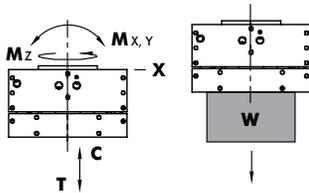
Weight: 1 Kg [2.2 lb]

Loading Capacity:

Max. Tensile **T**: 1330 N [300 lb]

Max. Compressive **C**: 1780 N [400 lb]

Max. Moment (**M_x/M_y/M_z**): 810 Nm [7200 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

\varnothing
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

\triangle
THIRD ANGLE PROJECTION

\oplus
ALL DOWEL HOLES ARE SF (SLIP FIT).
LOCATIONAL TOLERANCE
 $\pm .0005^{\circ}$ OR $\pm .013\text{MM}$

M
METRIC THREADS
COURSE PITCH

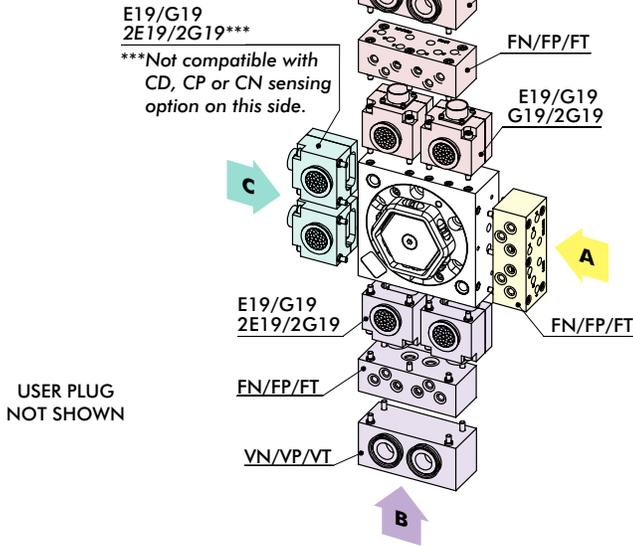
IMPERIAL ([IN.])
0.00 = $\pm .01$
0.000 = $\pm .005$
0.0000 = $\pm .0005$

METRIC (MM)
[0] = $\pm .25$
[0.0] = $\pm .13$
[0.00] = $\pm .013$

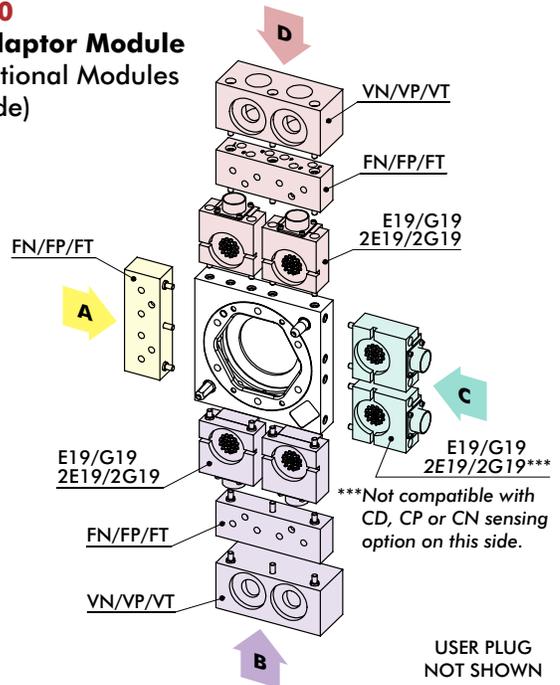
RQC-400, 800, 1200/RTP-400, 800, 1200

Automatic Tool Changers | Module Usage Illustrations

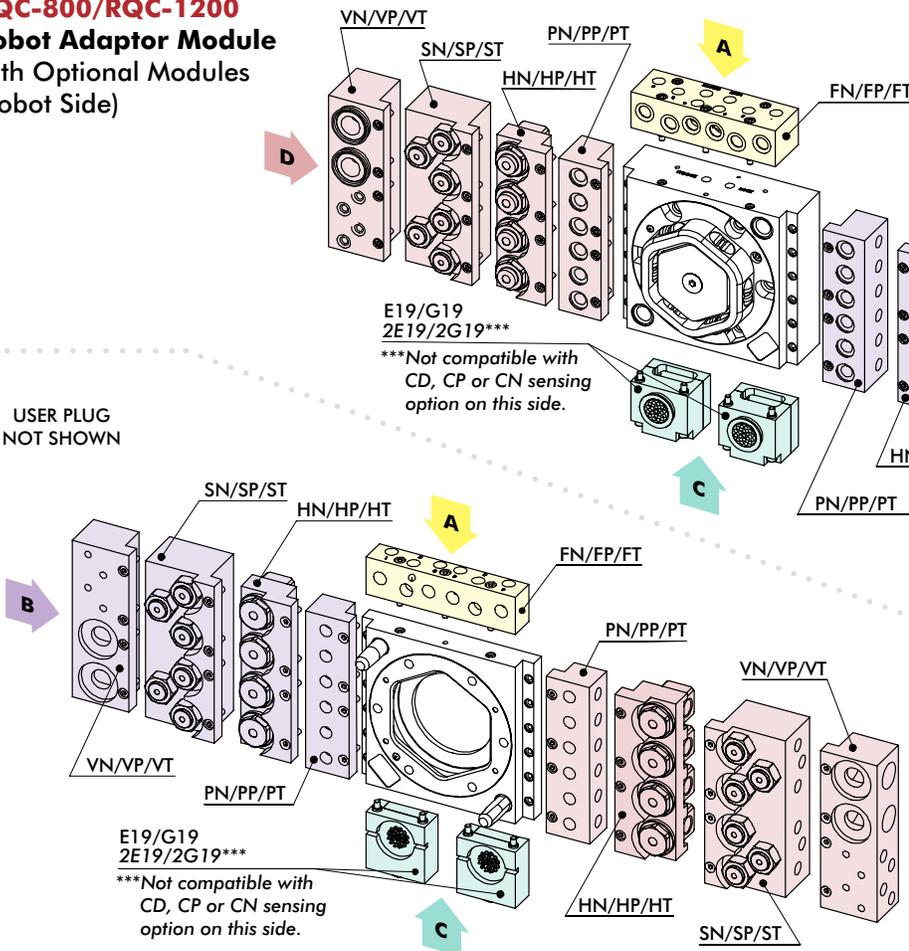
RQC-400 Robot Adaptor Module with Optional Modules (Robot Side)



RTP-400 Tool Adaptor Module with Optional Modules (Tool Side)

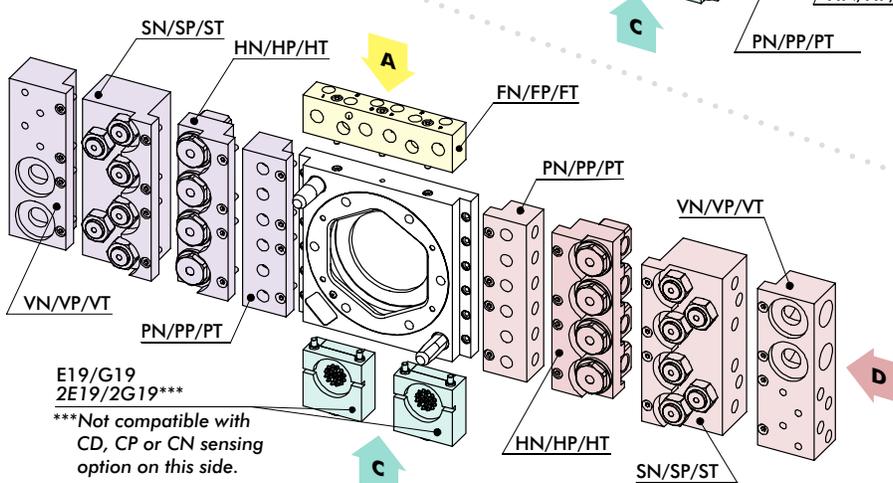


RQC-800/RQC-1200 Robot Adaptor Module with Optional Modules (Robot Side)



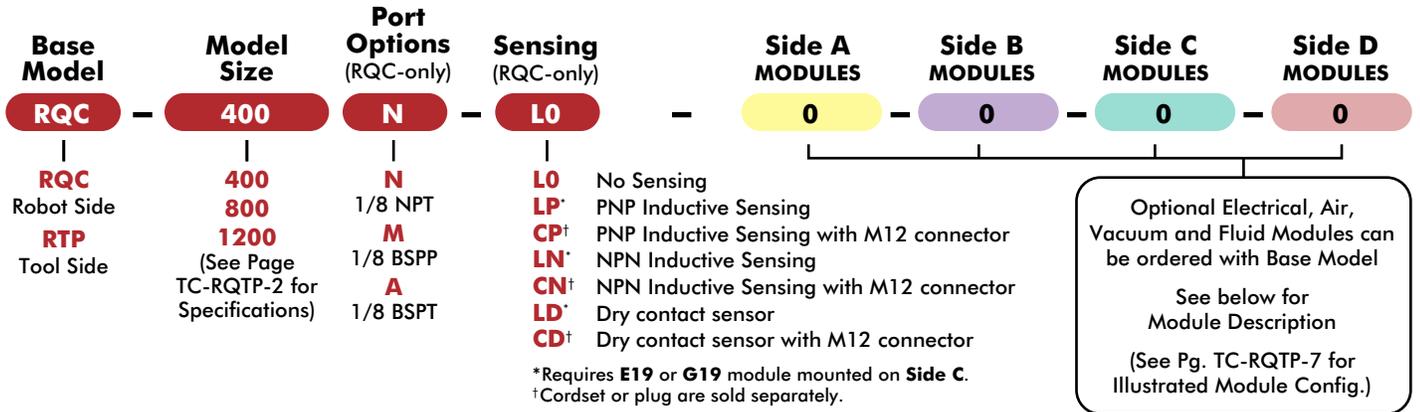
NOTE: Only (1) module can be mounted per side (except 2E19, 2G19 which are composed of (2) modules)

RTP-800/RTP-1200 Tool Adaptor Module with Optional Modules (Tool Side)



RQC-400, 800, 1200/RTP-400, 800, 1200

Automatic Tool Changers | Ordering Information



400	800/1200	Side A	Side B	Side C	Side D	Order Code	Optional Modules
•	•	•	•	•	•	0	No Module
	•			•		E19†	19 pin, 3 Amp, 48 VDC Module w/Turck M16 Conn, w/o Cordset
	•			•***		2E19***	2X 19 pin, 3 Amp, 48 VDC Module w/Turck M16 Conn, w/o Cordset
	•			•		G19	19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
	•			•***		2G19***	2X 19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
•			•	•	•	E19†	19 pin, 3 Amp, 48 VDC Module w/Turck M16 Conn, w/o Cordset
•			•	•***	•	2E19***	2X 19 pin, 3 Amp, 48 VDC Module w/Turck M16 Conn, w/o Cordset
•			•	•	•	G19	19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
•			•	•***	•	2G19***	2X 19 pin, 5 Amp, 120 VDC Module w/Industrial User Conn., w/o Cable
•		•	•		•	FN	6X 1/8" NPT Air Ports Module, Face Seal, 10 Bar
•		•	•		•	FP	6X 1/8" BSPP Air Ports Module, Face Seal, 10 Bar
•		•	•		•	FT	6X 1/8" BSPT Air Ports Module, Face Seal, 10 Bar
	•	•			•	FN	6X 1/4" NPT Air Ports Module, Face Seal, 10 Bar
	•	•			•	FP	6X 1/4" BSPP Air Ports Module, Face Seal, 10 Bar
	•	•			•	FT	6X 1/4" BSPT Air Ports Module, Face Seal, 10 Bar
	•		•		•	PN	6X 1/4" NPT Air Ports Module, Face Seal, 10 Bar
	•		•		•	PP	6X 1/4" BSPP Air Ports Module, Face Seal, 10 Bar
	•		•		•	PT	6X 1/4" BSPT Air Ports Module, Face Seal, 10 Bar
	•		•		•	SN	6X 1/4" NPT Air Ports Module, Self Sealing, 10 Bar
	•		•		•	SP	6X 1/4" BSPP Air Ports Module, Self Sealing, 10 Bar
	•		•		•	ST	6X 1/4" BSPT Air Ports Module, Self Sealing, 10 Bar
•			•		•	VN	2X 3/4" Vacuum + 4 X 1/4" Air NPT Ports Module, Face Sealing
•			•		•	VP	2X 3/4" Vacuum + 4 X 1/4" Air BSPP Ports Module, Face Sealing
•			•		•	VT	2X 3/4" Vacuum + 4 X 1/4" Air BSPT Ports Module, Face Sealing
	•		•		•	HN	4X 3/8" NPT Fluid Ports Module, 100 Bar
	•		•		•	HP	4X 3/8" BSPP Fluid Ports Module, 100 Bar
	•		•		•	HT	4X 3/8" BSPT Fluid Ports Module, 100 Bar

†Cordset or plug are sold separately. ***Not compatible with CD, CP or CN sensing option on Side C.

NOTE: Only (1) module can be mounted per side. (Except 2E19 and 2G19, which are composed of (2) modules).
Modules usage is based on the size of the Base Model and which side the module can be mounted.

Electrical and pneumatic accessories are ordered separately.

Please note some electrical accessories can only be used with certain modules for either RQC or RTP "Base Models".

For pneumatic accessories, size of "Base Model" is considered.

ELECTRICAL ACCESSORIES

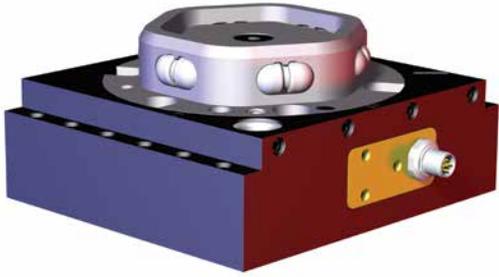
- ELCT-048** 90° Female Plug, w/o Cable, Solder Type, Cable Clamp for G19 (RQC Only)
- ELCT-049** 90° male Plug, w/o Cable, Solder Type, Cable Clamp for G19 (RTP Only)
- CABL-028** 90° Female M12 Cordset with 2M Cable for CP, CN, and CD (RQC Only)
- CABL-029** 90° Female Cordset with 4M Cable for E19 (RQC Only)
- CABL-031** 90° male Cordset with 2M Cable for E19 (RTP Only)
- OSRK-004** PNP Inductive Sensor Repair Kit (RQC Only)
- OSRK-005** NPN Inductive Sensor Repair Kit (RQC Only)
- OSRK-006** Dry Contact Sensor Repair Kit (RQC Only)

PNEUMATIC ACCESSORIES

- SLKT-402** RQC-400 Standard Seal Repair Kit
- SLKT-403** RQC-800 Standard Seal Repair Kit
- SLKT-404** RQC-1200 Standard Seal Repair Kit

RQC-400 (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions



Specification:

Max. Payload **W**: 180 Kg [400 lb]

Weight: 3.6 Kg [7.94 lb]

Cylinder Bore: $\varnothing 73\text{mm}$ [2.87in]

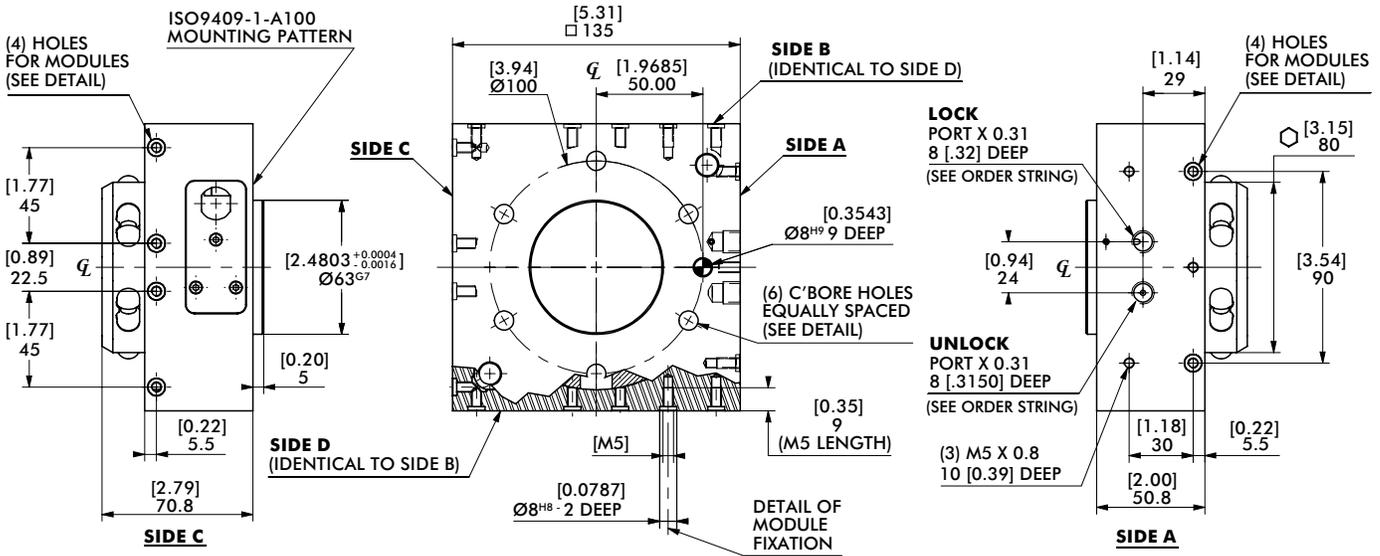
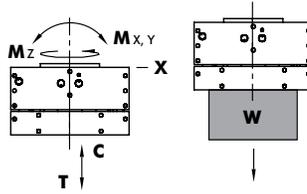
Displacement: 80.9 cm³ [4.93in³]

Loading Capacity:

Max. Tensile **T**: 2670 N [600 lb]

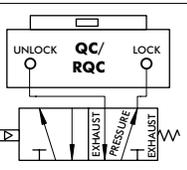
Max. Compressive **C**: 3560 N [800 lb]

Max. Moment (**M_x/M_y/M_z**): 1580 Nm [14000 in-lb]



FAILSAFE OPERATION:

4-WAY VALVES WITH A SPRING RETURN ARE RECOMMENDED TO MAINTAIN AIR PRESSURE TO THE LOCK PORT DURING EMERGENCY STOP CONDITIONS.



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

IMPERIAL ([IN.])	METRIC (MM)
0.00 = ±.01	[0] = [±.25]
0.000 = ±.005	[0.0] = [±.13]
0.0000 = ±.0005	[0.00] = [±.013]

\varnothing DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE
 THIRD ANGLE PROJECTION
 ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE ±.0005" OR [±.013MM]
 METRIC THREADS COURSE PITCH

RTP-400 (TOOLING SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

Specification:

Max. Payload **W**: 180 Kg [400 lb]

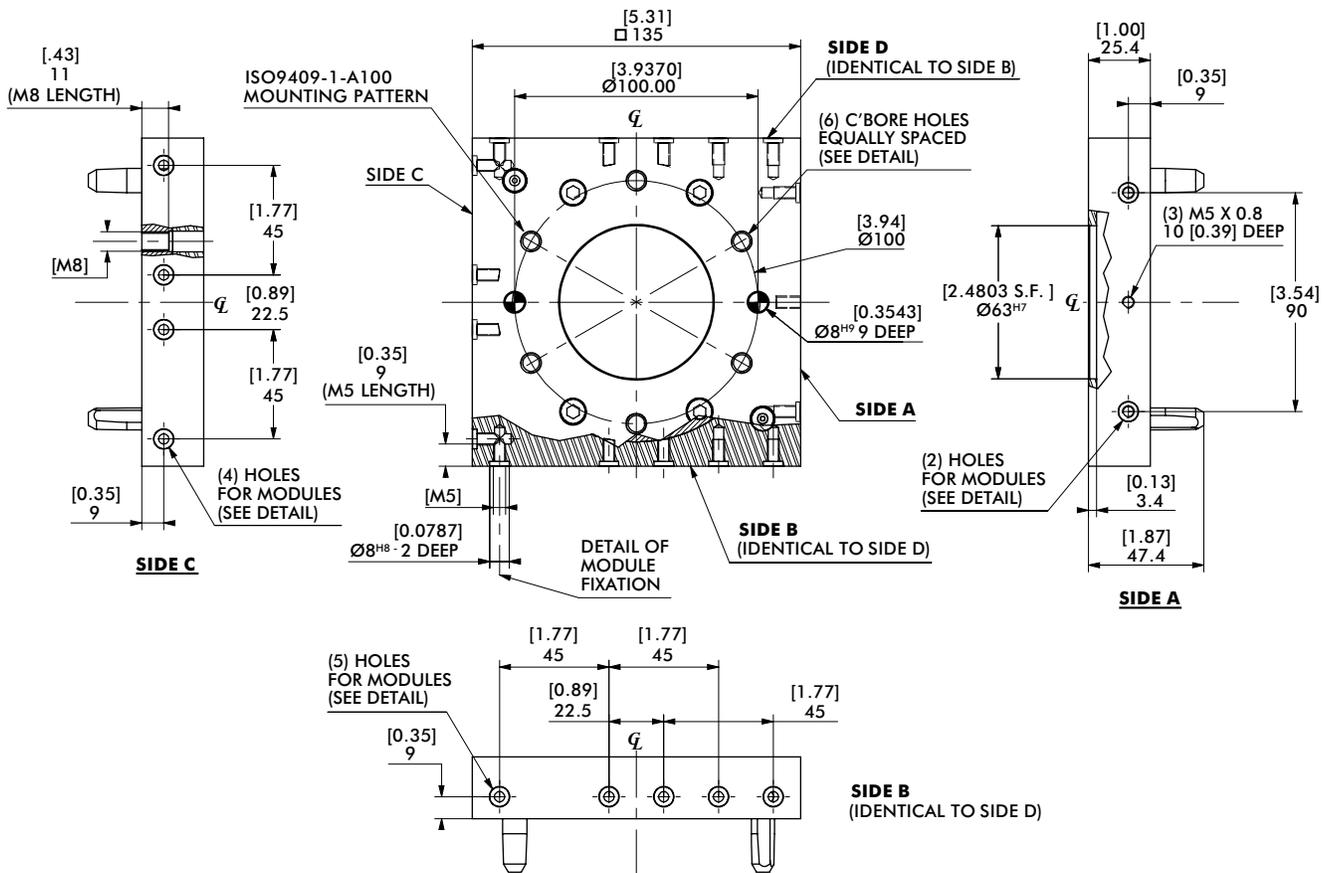
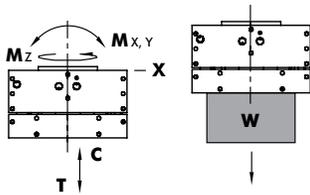
Weight: 1.1 Kg [2.43 lb]

Loading Capacity:

Max. Tensile **T**: 2670 N [600 lb]

Max. Compressive **C**: 3560 N [800 lb]

Max. Moment (**M_x/M_y/M_z**): 1580 Nm [14000 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

THIRD ANGLE PROJECTION

ALL DOWEL HOLES ARE SF (SLIP FIT).
LOCAL TOLERANCE ±.0005" OR [±.013MM]

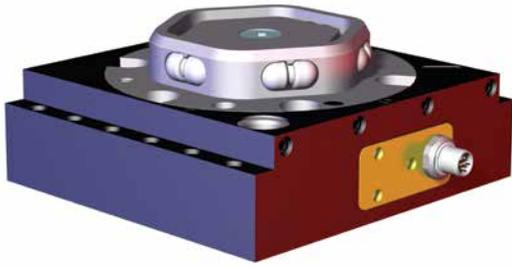
METRIC THREADS
COURSE PITCH

IMPERIAL ([IN.])
0.00 = ±.01
0.000 = ±.005
0.0000 = ±.0005

METRIC (MM)
[0] = [±.25]
[0.0] = [±.13]
[0.00] = [±.013]

RQC-800, RQC-1200 (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions



RQC-800 Specification:

Max. Payload **W**: 360 Kg [800 lb]
 Weight: 5.3 Kg [11.68 lb]
 Cyl. Bore: Ø80mm [3.15in]
 Displacement: 95.6 cm³ [5.83in³]

Loading Capacity:

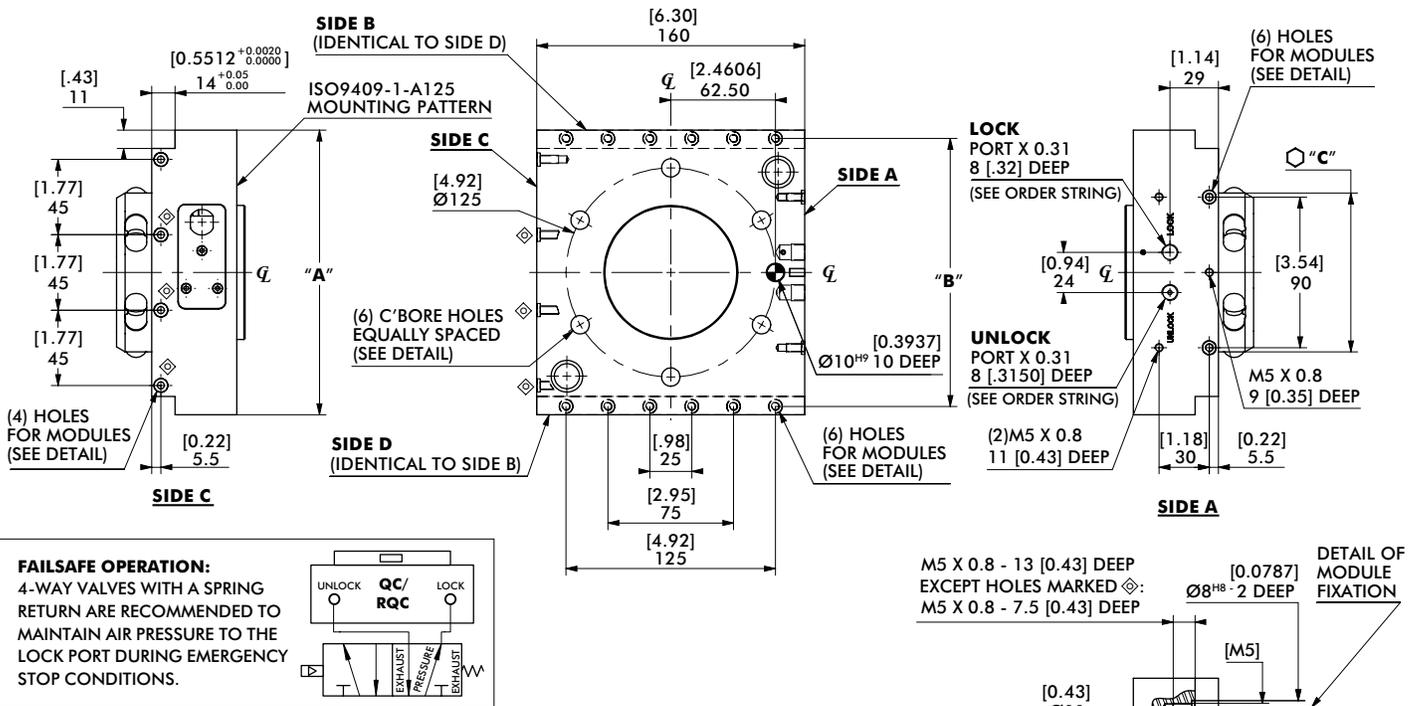
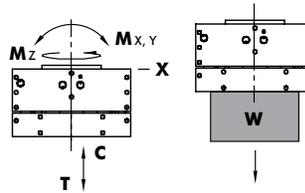
Max. Tensile **T**:
 5340 N [1200 lb]
 Max. Compressive **C**:
 7120 N [1600 lb]
 Max. Moment (**M_x/M_y/M_z**):
 2490 Nm [22000 in-lb]

RQC-1200 Specification:

Max. Payload **W**: 550 Kg [1200 lb]
 Weight: 6.4 Kg [14.11 lb]
 Cyl. Bore: Ø95mm [3.74in]
 Displacement: 153.7 cm³ [9.38in³]

Loading Capacity:

Max. Tensile **T**:
 8000 N [1800 lb]
 Max. Compressive **C**:
 10700 N [2400 lb]
 Max. Moment (**M_x/M_y/M_z**):
 3390 Nm [30000 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

⌀
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

THIRD ANGLE PROJECTION

⊙
ALL DOWEL HOLES ARE SF (SLIP FIT). LOCAL TOLERANCE ±.0005" OR [±.013MM]

⊕
METRIC THREADS COURSE PITCH

IMPERIAL ([IN.])
 0.00 = ±.01
 0.000 = ±.005
 0.0000 = ±.0005

METRIC (MM)
 [0] = [±.25]
 [0.0] = [±.13]
 [0.00] = [±.013]

MODEL NUMBER	"A"	"B"	"C"	"D"	"E"	WEIGHT
RQC-800	[6.69] 170.0	[6.2992] 160.0	[3.73] 94.75	[2.00] 50.8	[2.82] 71.75	[11.8 lb] 6.3 kg
RQC-1200	[7.01] 178.0	[6.6142] 168.0	[4.08] 103.6	[2.25] 57.15	[3.31] 84.15	[14.1 lb] 6.4 kg

RTP-800, RTP-1200 (TOOLING SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

RTP-800 Specification:

Max. Payload **W**: 360 Kg [800 lb]
Weight: 1.8 Kg [3.97 lb]

Loading Capacity:

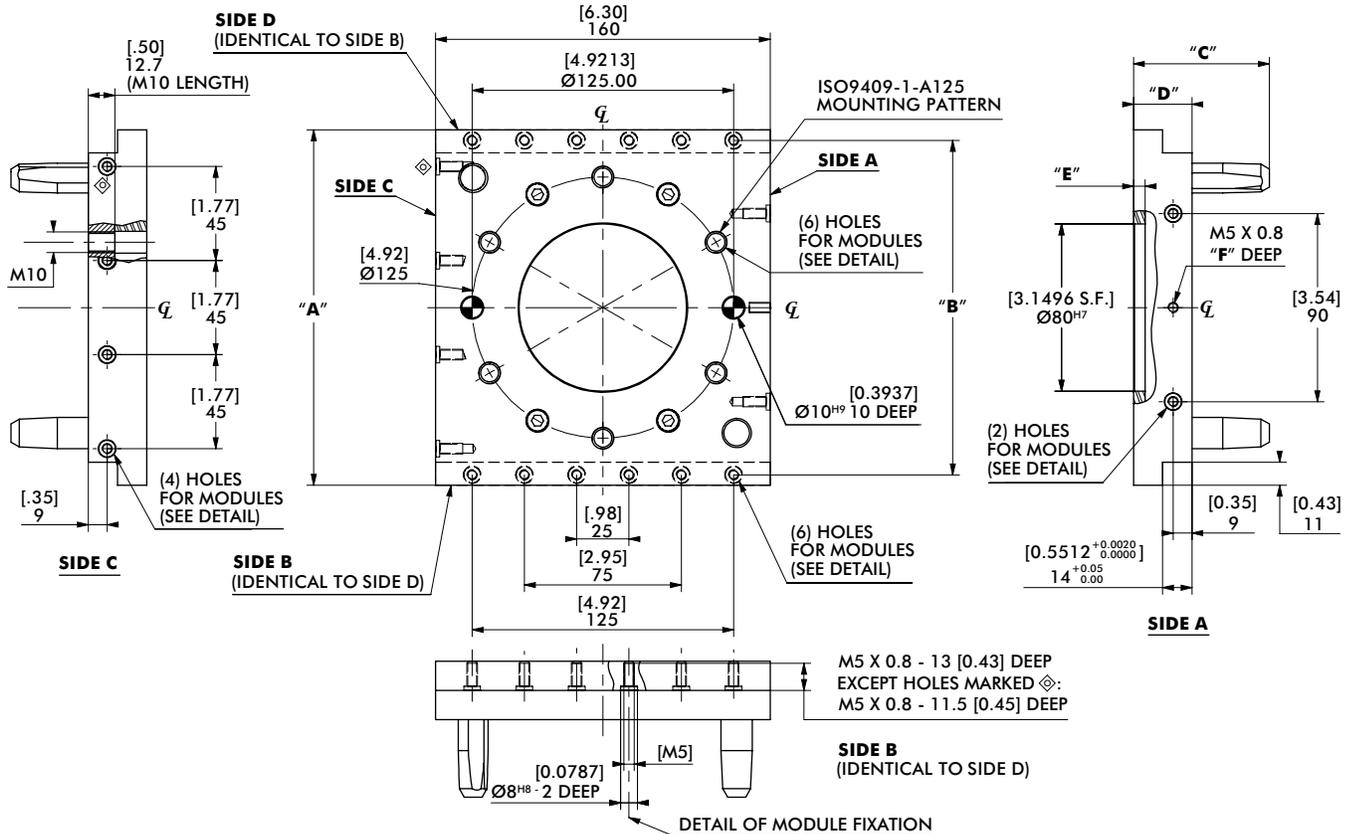
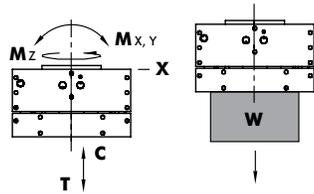
Max. Tensile **T**:
5340 N [1200 lb]
Max. Compressive **C**:
7120 N [1600 lb]
Max. Moment (**M_x/M_y/M_z**):
2490 Nm [22000 in-lb]

RTP-1200 Specification:

Max. Payload **W**: 550 Kg [1200 lb]
Weight: 1.9 Kg [4.19 lb]

Loading Capacity:

Max. Tensile **T**:
8000 N [1800 lb]
Max. Compressive **C**:
10700 N [2400 lb]
Max. Moment (**M_x/M_y/M_z**):
3390 Nm [30000 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

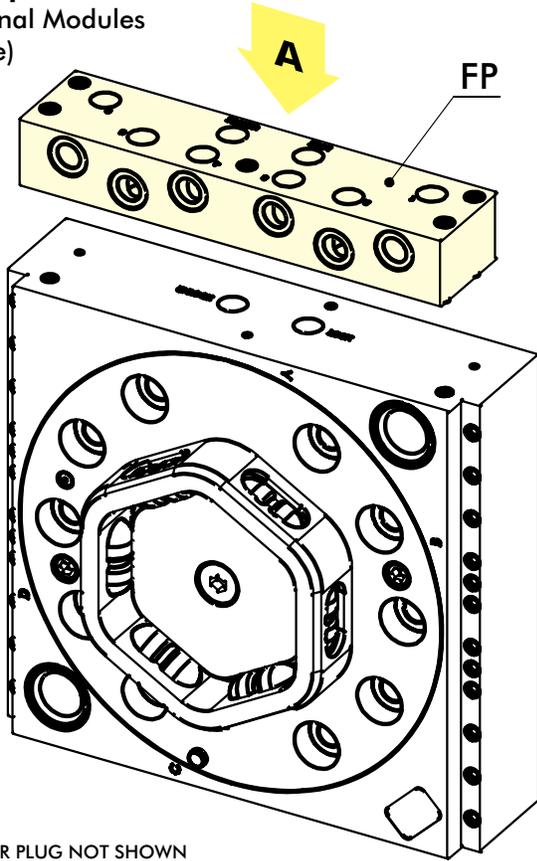
				IMPERIAL ([IN.])	METRIC (MM)
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE ±.0005" OR [±.013MM]	METRIC THREADS COURSE PITCH	0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	[0] = [±.25] [0.0] = [±.13] [0.00] = [±.013]

MODEL NUMBER	"A"	"B"	"C"	"D"	"E"	"F"	WEIGHT
RTP-800	[6.69] 170.0	[6.2992] 160.0	[2.56] 64.94	[1.10] 27.94	[0.22] 5.5	[0.39] 10.0	[4.00 lb] 1.8 kg
RTP-1200	[7.01] 178	[6.6142] 168.0	[2.71] 68.75	[1.25] 31.75	[0.13] 3.25	[0.30] 7.5	[2.90 lb] 1.32 kg

RQC-2400/RTP-2400

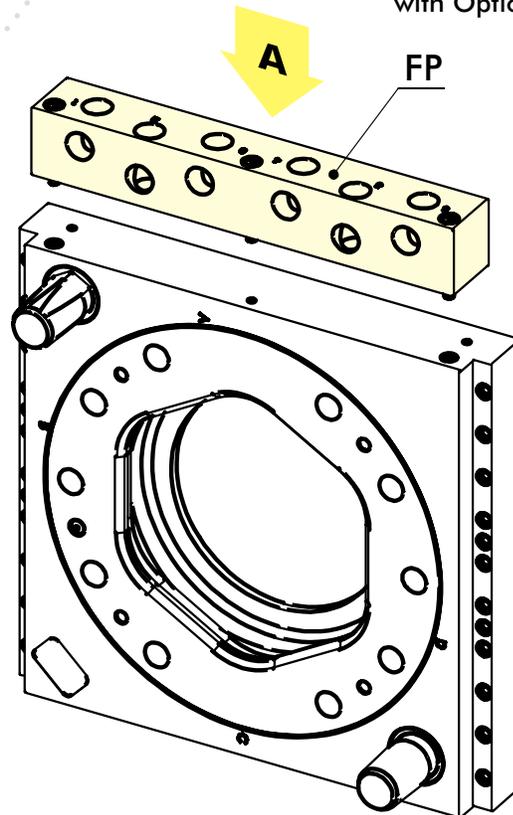
Automatic Tool Changers | Module Usage Illustrations

RQC-2400
Robot Adaptor Module
with Optional Modules
(Robot Side)



USER PLUG NOT SHOWN

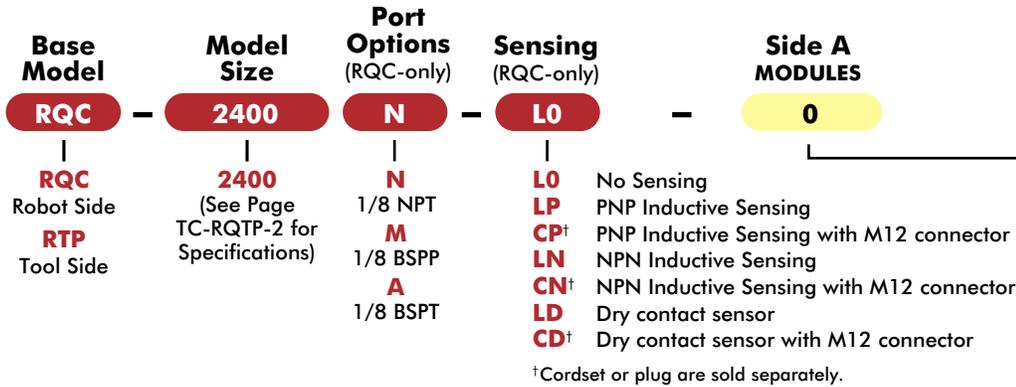
RTP-2400
Tool Adaptor Module
with Optional Modules
(Tool Side)



USER PLUG NOT SHOWN

RQC-2400/RTP-2400

Automatic Tool Changers | Ordering Information



†Cordset or plug are sold separately.

Side A	Order Code	Optional Modules
●	0	No Module
●	FP	6X 1/8" BSPP Air Ports Module, Face Seal, 10 Bar

Electrical and pneumatic accessories are ordered separately.

Please note some electrical accessories can only be used with certain modules for either **RQC** or **RTP** "Base Models".

For pneumatic accessories, size of "Base Model" is considered.

ELECTRICAL ACCESSORIES

- ELCT-048** 90° Female Plug, w/o Cable, Solder Type, Cable Clamp for G19 (**RQC Only**)
- ELCT-049** 90° male Plug, w/o Cable, Solder Type, Cable Clamp for G19 (**RTP Only**)
- CABL-028** 90° Female M12 Cordset with 2M Cable for CP, CN, and CD (**RQC Only**)
- CABL-029** 90° Female Cordset with 4M Cable for E19 (**RQC Only**)
- CABL-031** 90° male Cordset with 2M Cable for E19 (**RTP Only**)
- OSRK-004** PNP Inductive Sensor Repair Kit (**RQC Only**)
- OSRK-005** NPN Inductive Sensor Repair Kit (**RQC Only**)
- OSRK-006** Dry Contact Sensor Repair Kit (**RQC Only**)

PNEUMATIC ACCESSORIES

- SLKT-XXX** RQC-2400 Standard Seal Repair Kit

RTP-2400 (TOOLING SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

RTP-2400 Specification:

Max. Payload **W**: 1089Kg [2400 lb]

Weight: 8 Kg [17.64 lb]

Loading Capacity:

Max. Tensile **T**:

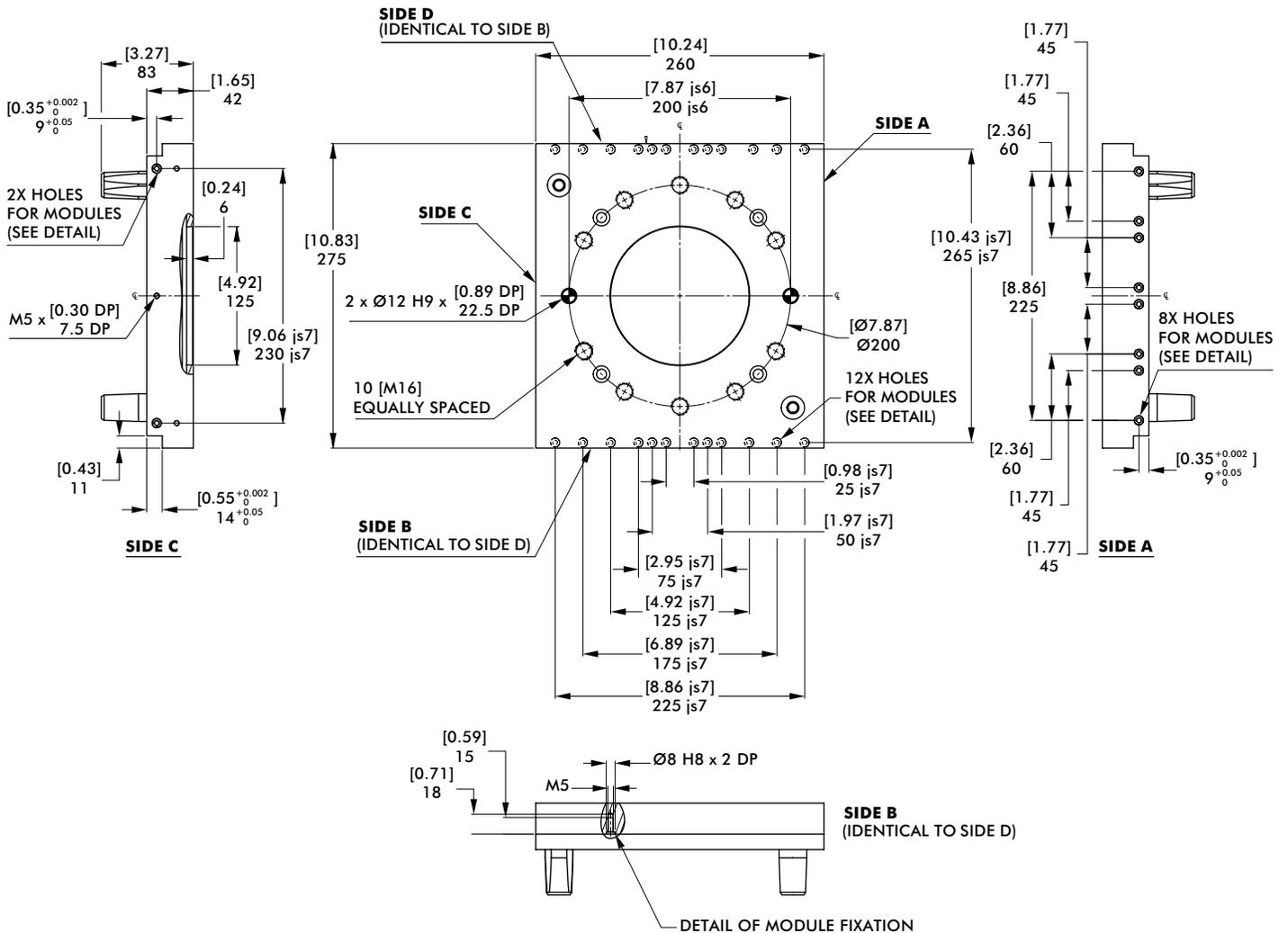
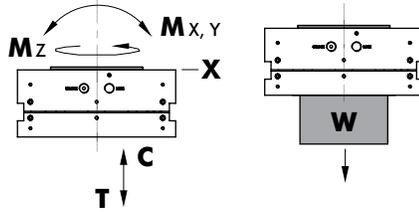
16000 N [3597 lb]

Max. Compressive **C**:

22000 N [4946 lb]

Max. Moment (**M_x/M_y/M_z**):

7000 Nm [91955 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

\varnothing
DIMENSIONS ARE
SYMMETRICAL ABOUT
CENTERLINE

\triangle
THIRD ANGLE
PROJECTION

\oplus
ALL DOWEL HOLES ARE SF (SLIP FIT).
LOCAL TOLERANCE
 $\pm .0005"$ OR $\pm .013$ MM

M
METRIC THREADS
COURSE PITCH

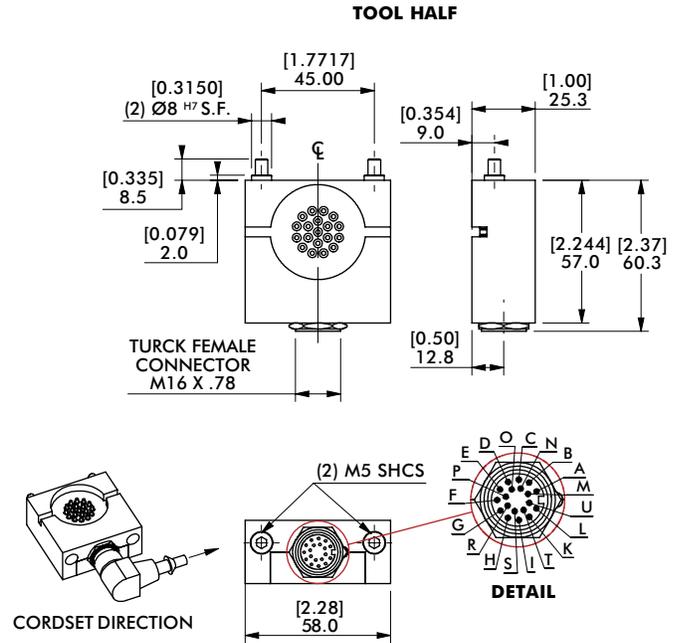
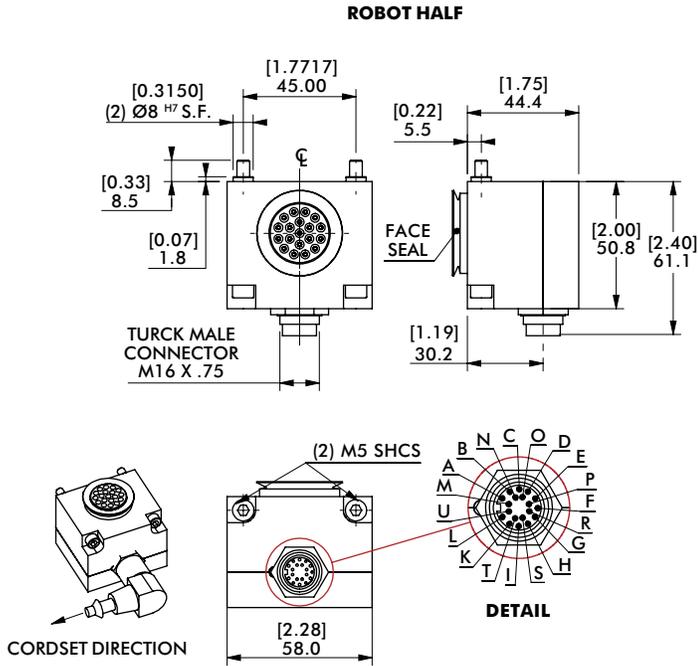
IMPERIAL ([IN.])
0.00 = $\pm .01$
0.000 = $\pm .005$
0.0000 = $\pm .0005$

METRIC (MM)
[0] = $\pm .25$
[0.0] = $\pm .13$
[0.00] = $\pm .013$

RQC/RTP SERIES

Automatic Tool Changers | Technical Specifications | Dimensions

19 Pin Module 3 Amp - 48 VDC

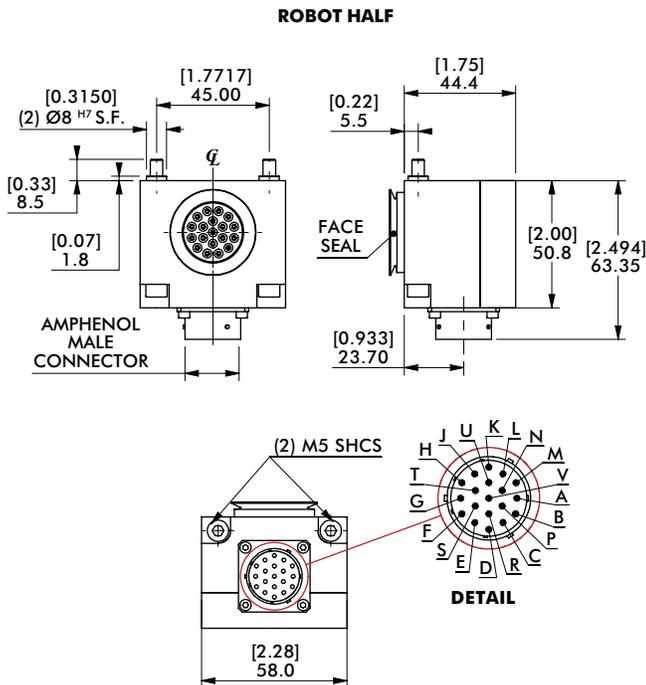


MODULE REPLACEMENT **ROBOT SIDE**
E19 **KE19-RQC**

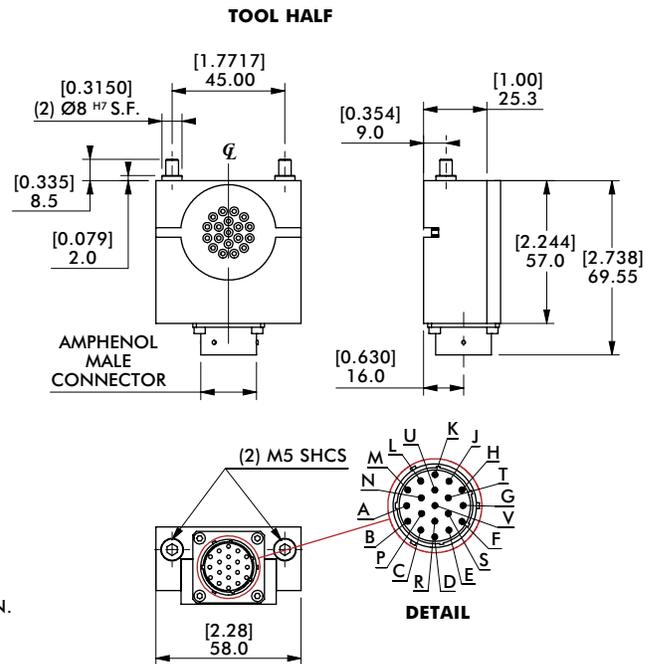
Module kits above include:
90° Plug Support (without cable),
indexing sleeves and hardware.

MODULE REPLACEMENT **TOOL SIDE**
E19 **KE19-RTP**

19 Pin Module 5 Amp - 120 VDC



USER
90°
PLUG
NOT
SHOWN.



MODULE REPLACEMENT **ROBOT SIDE**
G19 **KG19-RQC**

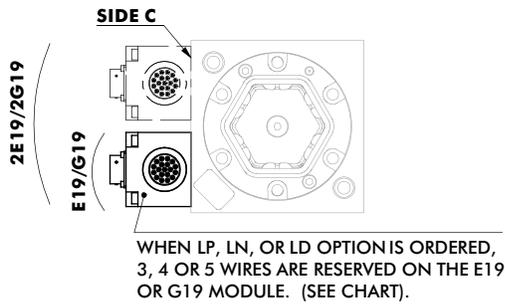
Module kits above include:
90° Plug support (without cable),
indexing sleeves and hardware.

MODULE REPLACEMENT **TOOL SIDE**
G19 **KG19-RTP**

RQC/RTP SERIES

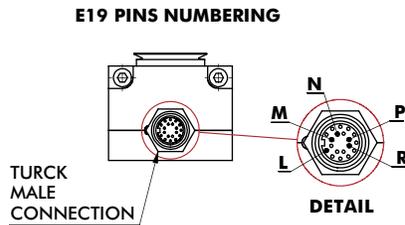
Automatic Tool Changers | Technical Specifications | Dimensions

Modules Connecting with Latch/Unlatch Sensors

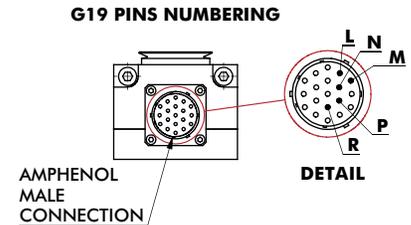


Reserved Pin Numbers on E19/G19		
Sensor/Switch	RQC 200 & 400	RQC 800 & 1200
LP or LN (Inductive)	R: + 10 - 30 VDC	R: + 10 - 30 VDC
	L: Common	L: Common
	M: Lock	M: Lock
	N: Unlock	N: Unlock
LD (Dry Contact)	R: + 10 - 30 VDC	R: + 10 - 30 VDC
	L: Common	L: Common
	M: Lock	M: Lock
	N: Unlock	N: Unlock
		P: Ready to Couple

Pin Numbering

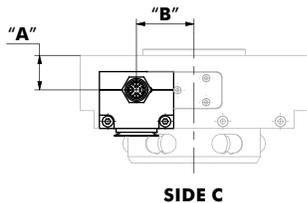


Wire Color on CABL-029 Cordset	
Contact	Wire Color
R	Red
L	Brown
M	Orange
N	Grey/Brown
P	White



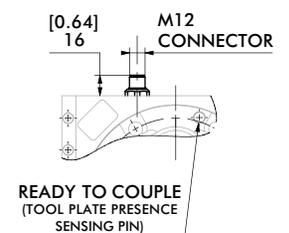
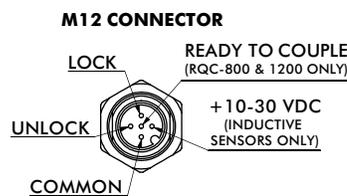
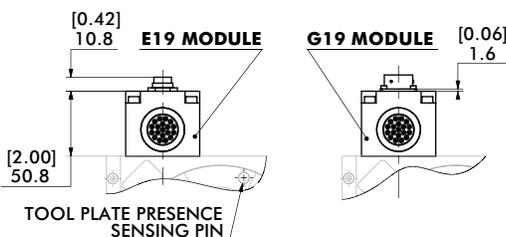
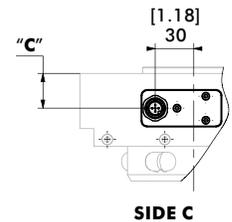
Lock/Unlock Tool Plate Presence Sensing Options (with inductive Sensors and Dry Contact Switches)

SENSING ACCESSORIES LP, LN, OR LD USING 19 PINS MODULES E19 OR G19 (REQUIRES 3, 4, OR 5 OF THE 19 PINS) (AS SHOWN ABOVE)



MODEL	"A"	"B"	"C"
RQC-200	[0.563] 14.3	[0.886] 22.5	[0.652] 16.55
RQC-400	[0.811] 20.6	[1.329] 33.7	[0.685] 17.4
RQC-800	[0.811] 20.6	[1.772] 45.0	[0.821] 20.8
RQC-1200	[1.061] 26.9	[1.772] 45.0	[1.071] 27.2

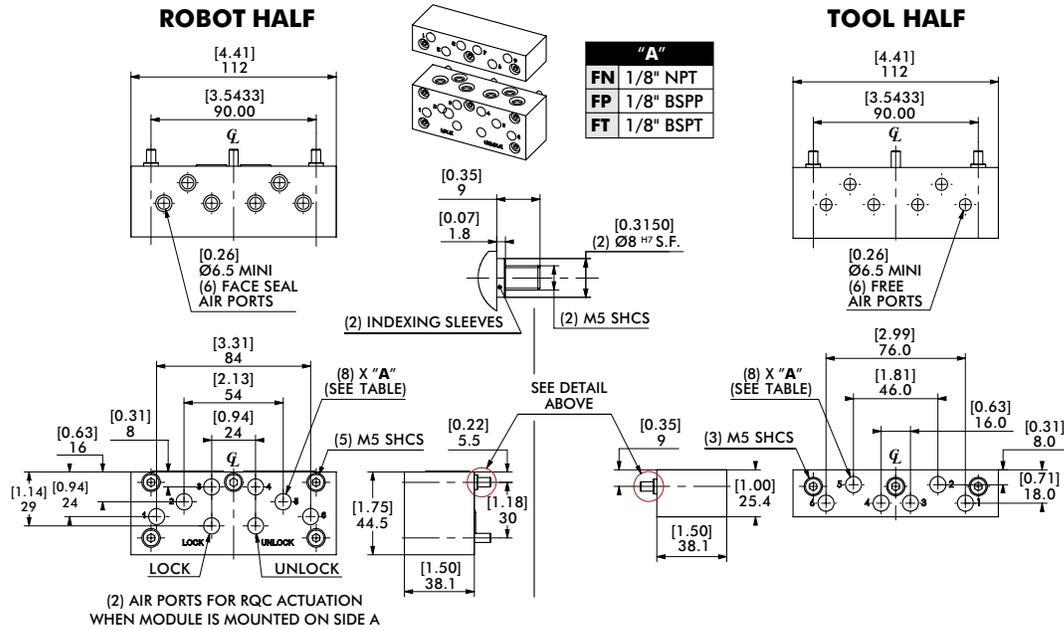
SENSING ACCESSORIES CP, CN, OR CD BY M12 CONNECTOR (3, 4, OR 5 PINS) (SEE BELOW)



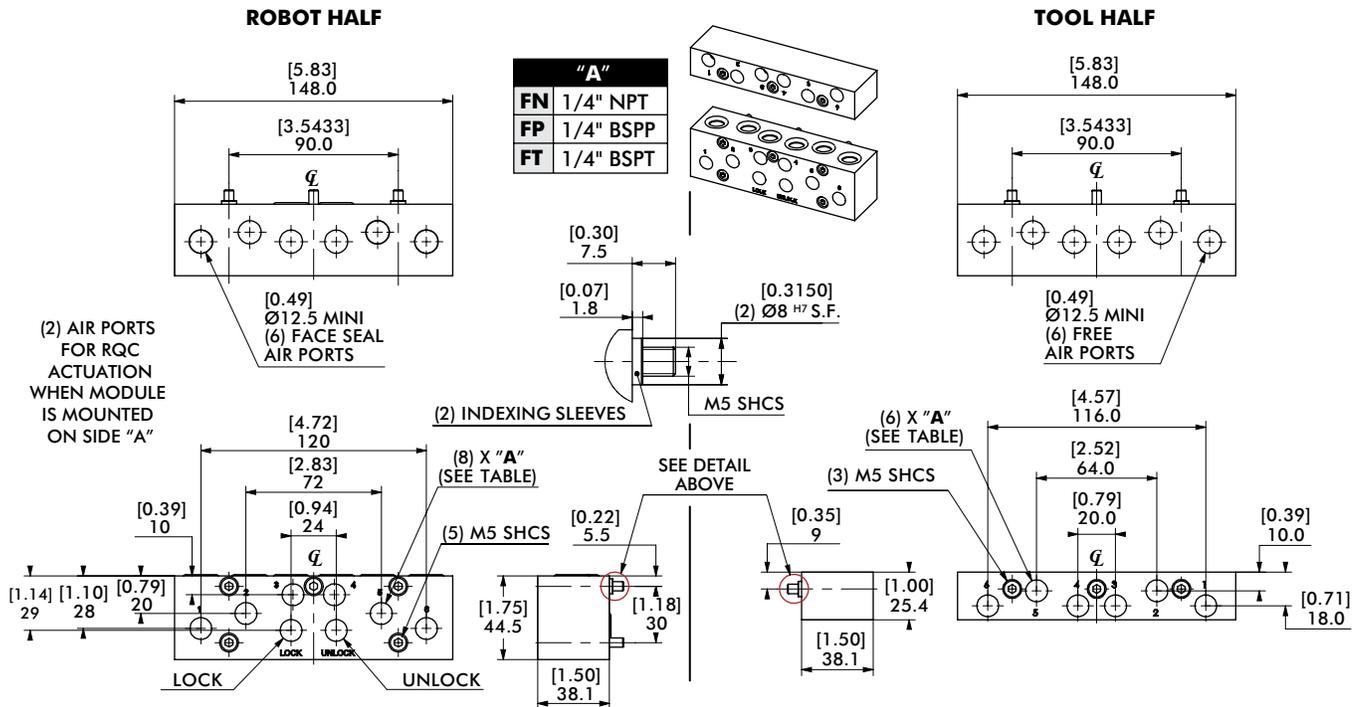
RQC/RTP SERIES

Automatic Tool Changers | Technical Specifications | Dimensions

6 x 1/8" Air Ports Module | Face Seal (for RQC/RTP-200 & RQC/RTP-400)



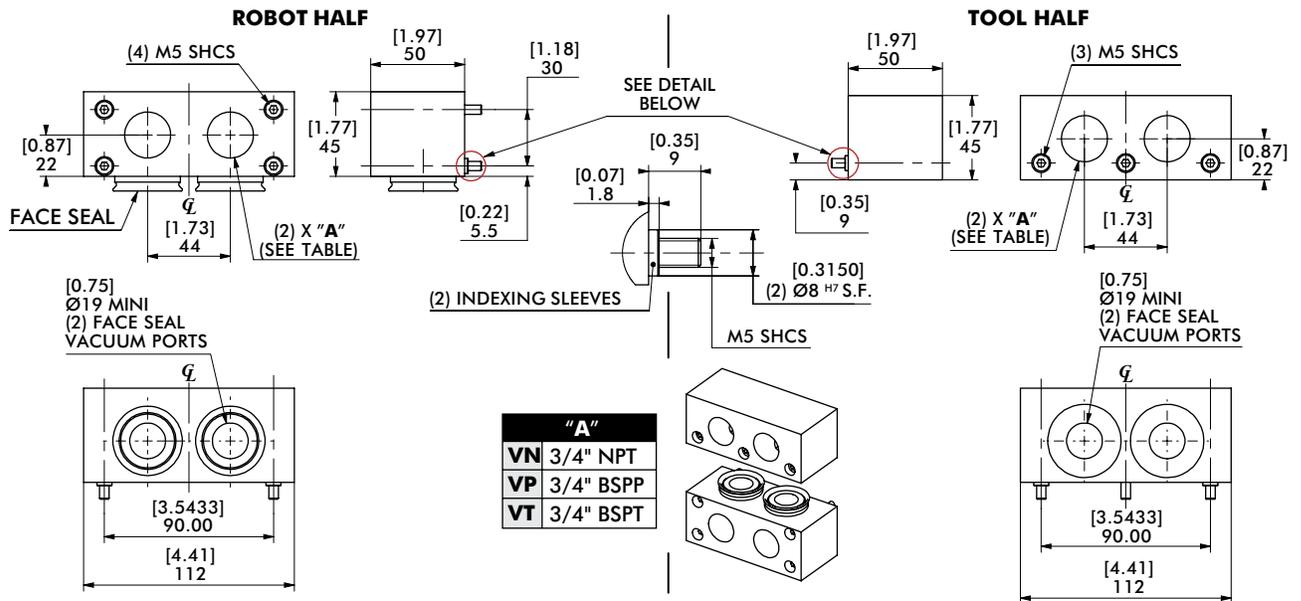
6 x 1/4" Air Ports Module | Face Seal (for RQC/RTP-800 & RQC/RTP-1200)



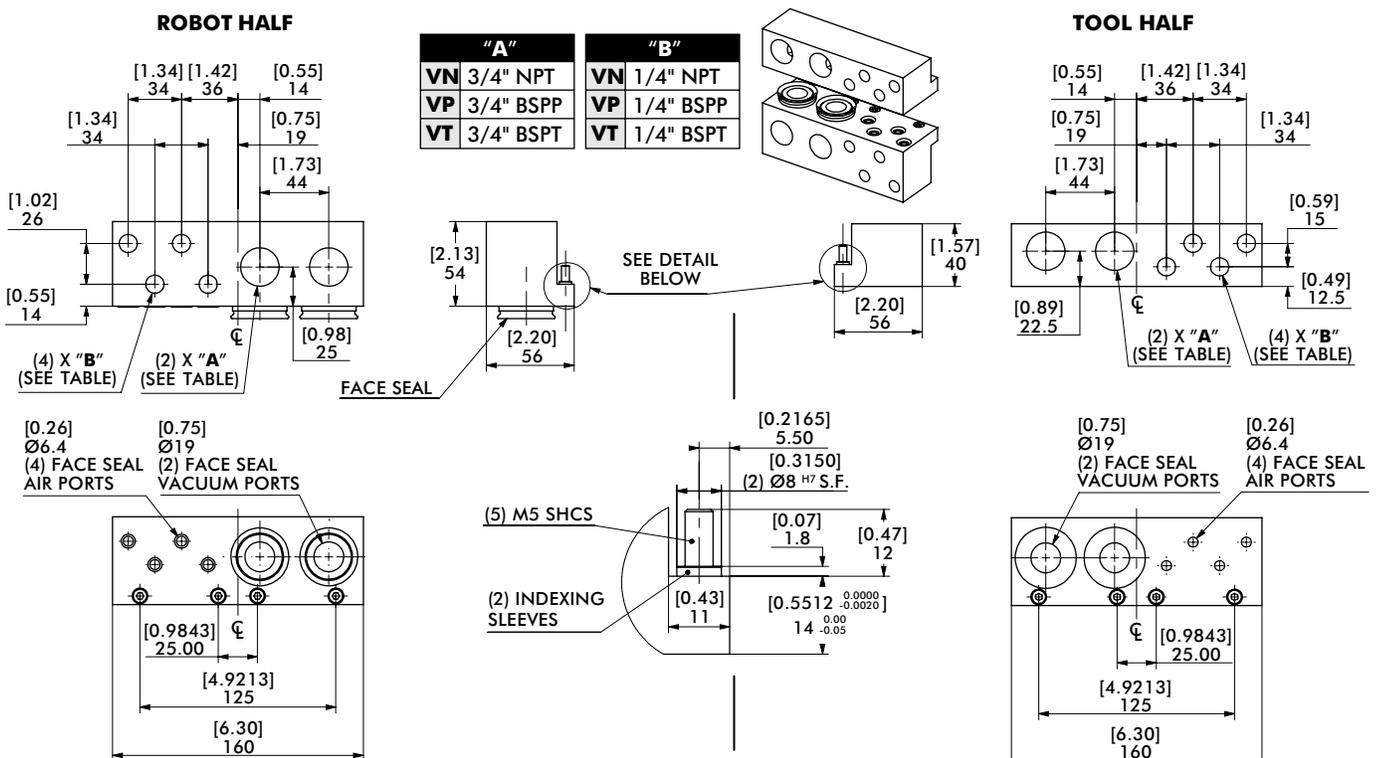
MODULE REPLACEMENT	FOR RQC-200/400	FOR RQC 800/1200	MODULE REPLACEMENT	FOR RTP-200/400	FOR RTP 800/1200
FN	KFN-RQC200	KFN-RQC800	FN	KFN-RTP200	KFN-RTP800
FP	KFP-RQC200	KFP-RQC800	FP	KFP-RTP200	KFP-RTP800
FT	KFT-RQC200	KFT-RQC800	FT	KFT-RTP200	KFT-RTP800

Module kits also include: Couplings, indexing sleeves and hardware.

2 x 3/4" Vacuum Ports Module | Face Seal (for RQC/RTP-200 & RQC/RTP-400)



2 x 3/4" Vacuum Ports Module | Face Seal (for RQC/RTP-800 & RQC/RTP-1200)



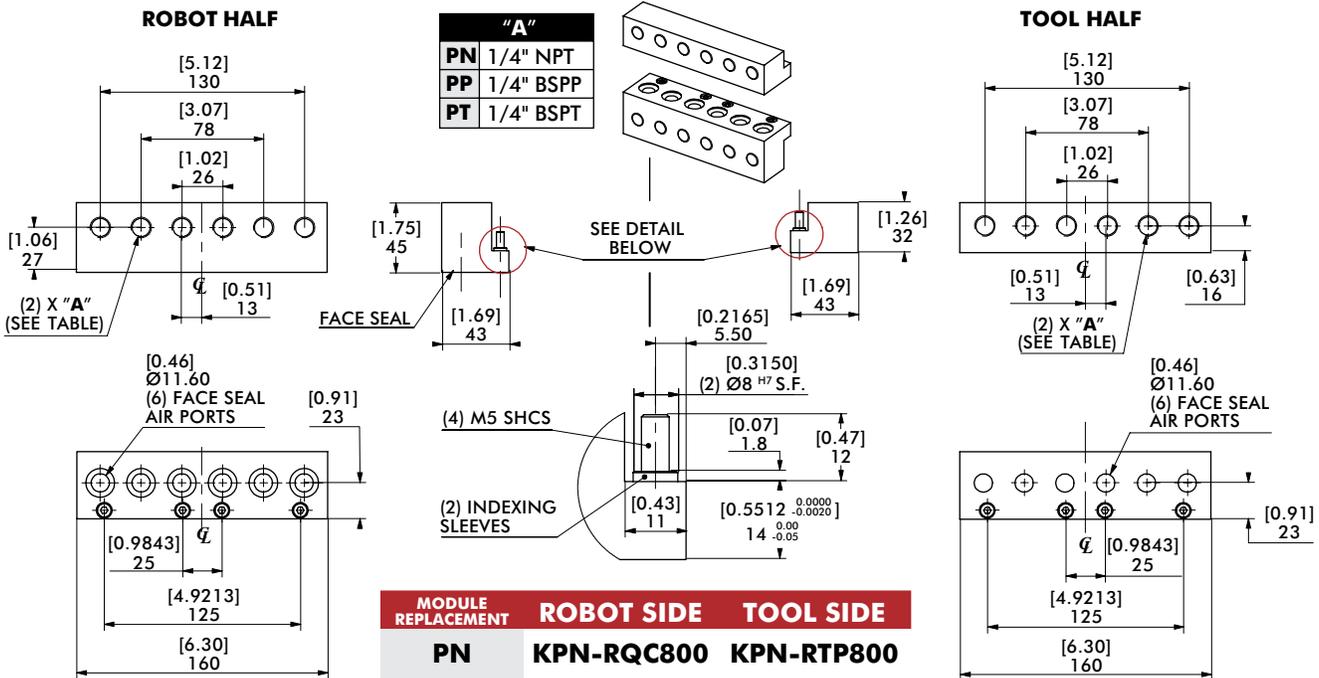
MODULE REPLACEMENT	FOR RQC-200/400	FOR RQC 800/1200	MODULE REPLACEMENT	FOR RTP-200/400	FOR RTP 800/1200
VN	KVN-RQC200	KVN-RQC800	VN	KVN-RTP200	KVN-RTP800
VP	KVP-RQC200	KVP-RQC800	VP	KVP-RTP200	KVP-RTP800
VT	KVT-RQC200	KVT-RQC800	VT	KVT-RTP200	KVT-RTP800

Module kits above include: Couplings, indexing sleeves and hardware.

RQC/RTP SERIES

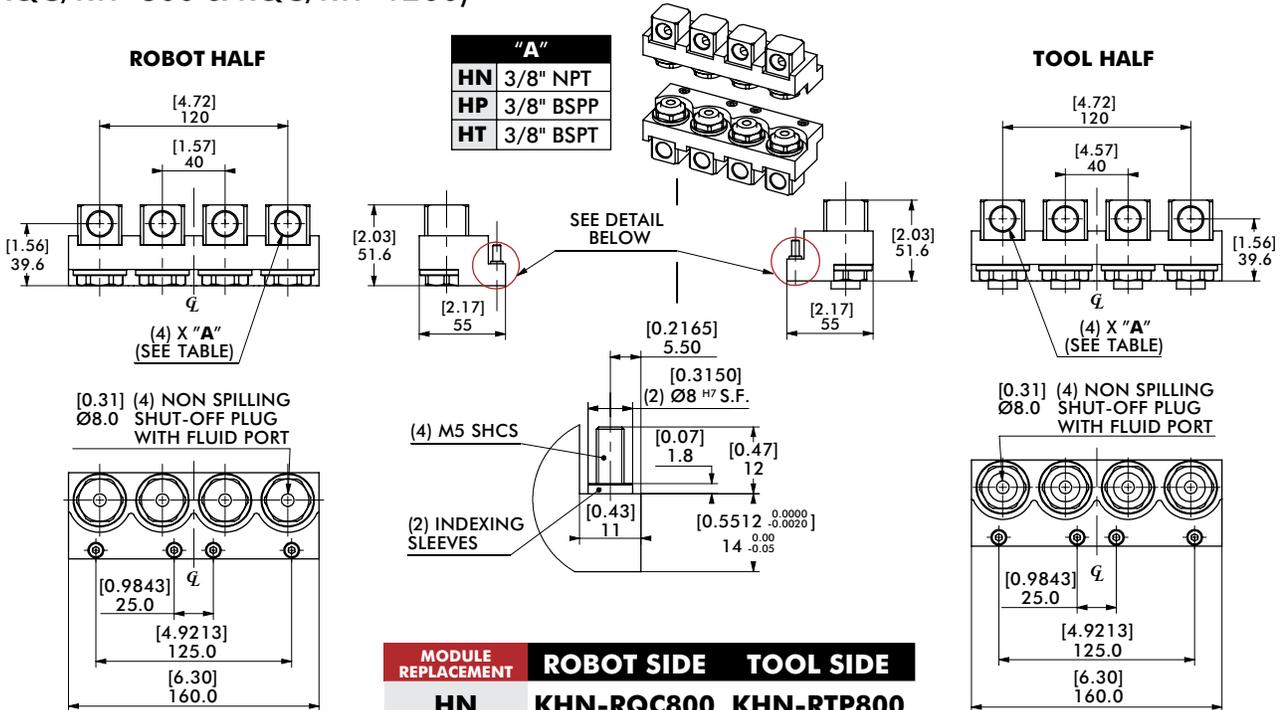
Automatic Tool Changers | Technical Specifications | Dimensions

6 x 1/4" Air Ports Module | Face Seal (for RQC/RTP-800 & RQC/RTP-1200)



Module kits above include:
Couplings, indexing sleeves
and hardware.

4 x 3/8" Fluid Ports Module | Non Spilling | Double Shut-Off (for RQC/RTP-800 & RQC/RTP-1200)



Module kits above include:
Couplings, indexing sleeves
and hardware.

QC/TP SERIES

Automatic Tool Changers | Features and Benefits

Failsafe Operation

Failsafe locking spring keeps units coupled in the event of pressure loss

Durable Components

Locking components are made from hardened bearing & tool steels

Self Lubricating Seals

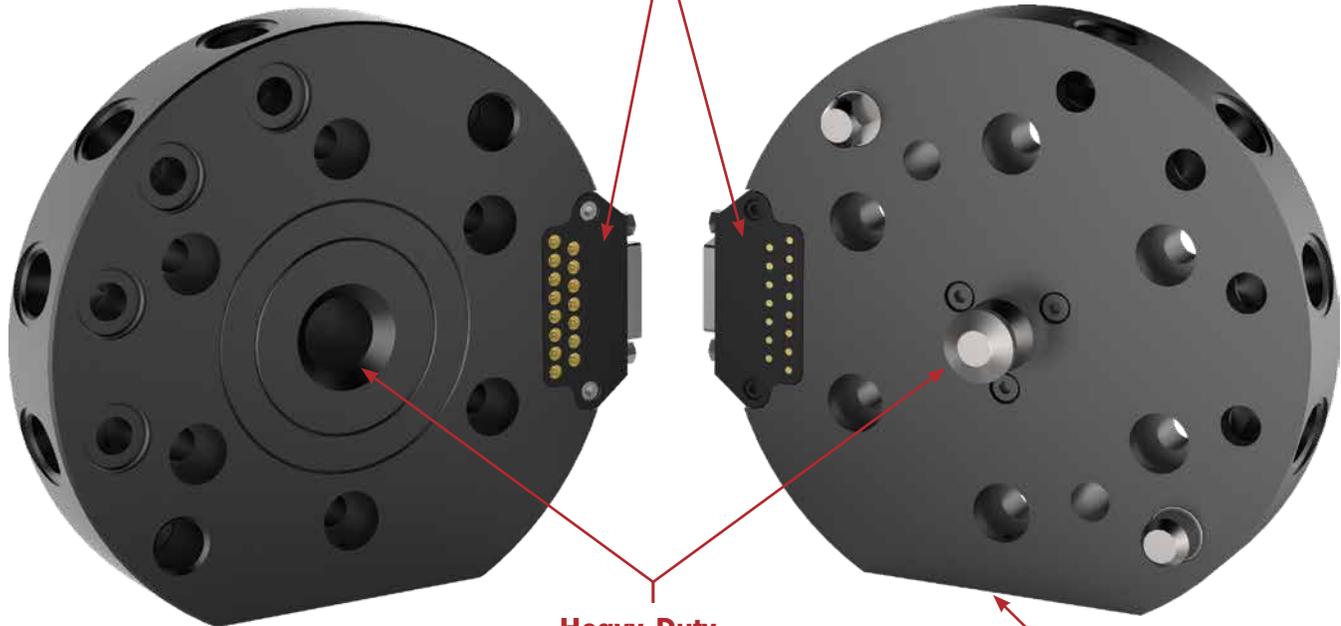
Self lubricating dynamic seals

Offboard I/O Block

with heavy-duty pins offer reliable contact points

Robot Side

Tool Side



Switches for Couple/Uncouple/Ready-to-Couple
Switch for latch (size 150 only)

Heavy-Duty Locking Mechanism

Improved rigidity for heavy-duty and in-process changing

Module Mounting Surface

Flat for optional pneumatic, fluid or electric module (See Page TC-QCTP-13)

Mounting Information



Robot Half Adaptor
has counterbored holes for mounting and two dowel pins for hole location (size 30 has pilot boss)

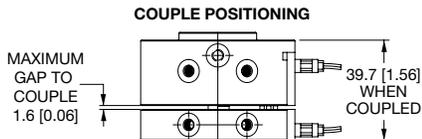


Tool Half Adaptor
has counterbored holes for mounting and two dowel pins for hole location (size 30 has pilot boss)

QC/TP SERIES

Automatic Tool Changers | Technical Information

Combined Weight: 0.34 Kg [0.75 lbs]
Max. Payload: 13.6 Kg [30 lbs]
Max. Moment: 22.6 Nm [200 in-lbs]

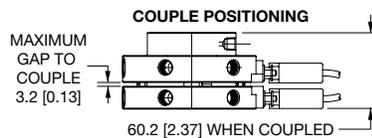


QC-30/TP-30



QC-30 **TP-30**
Robot Adaptor Module **Tool Adaptor Module**

Combined Weight: 1.27 Kg [2.8 lbs]
Max. Payload: 27 Kg [60 lbs]
Max. Moment: 88.1 Nm [780 in-lbs]

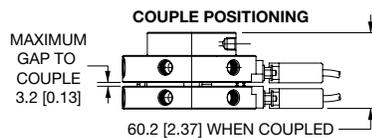


QC-60/TP-60



QC-60 **TP-60**
Robot Adaptor Module **Tool Adaptor Module**

Combined Weight: 1.27 Kg [2.8 lbs]
Max. Payload: 27 Kg [60 lbs]
Max. Moment: 88.1 Nm [780 in-lbs]

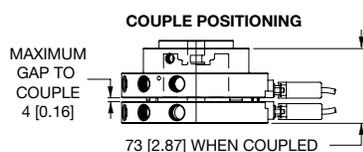


QC-60-10P/TP-60-10P



QC-60-10P **TP-60-10P**
Robot Adaptor Module **Tool Adaptor Module**

Combined Weight: 3.2 Kg [7.1 lbs]
Max. Payload: 68 Kg [150 lbs]
Max. Moment: 215 Nm [1900 in-lbs]



QC-150/TP-150

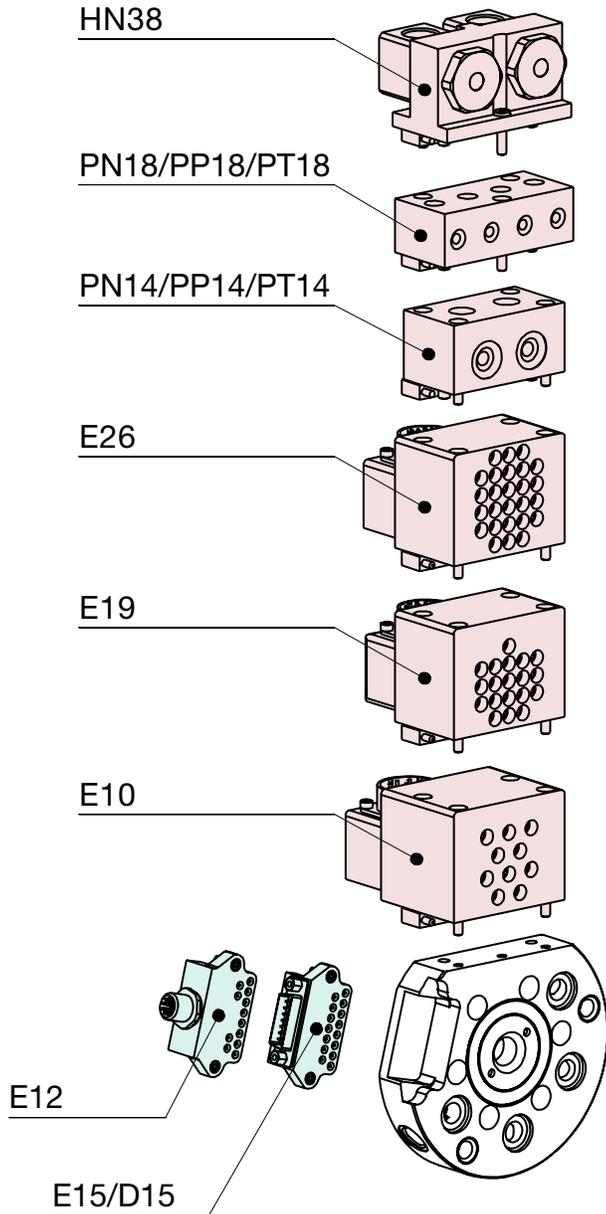


QC-150 **TP-150P**
Robot Adaptor Module **Tool Adaptor Module**

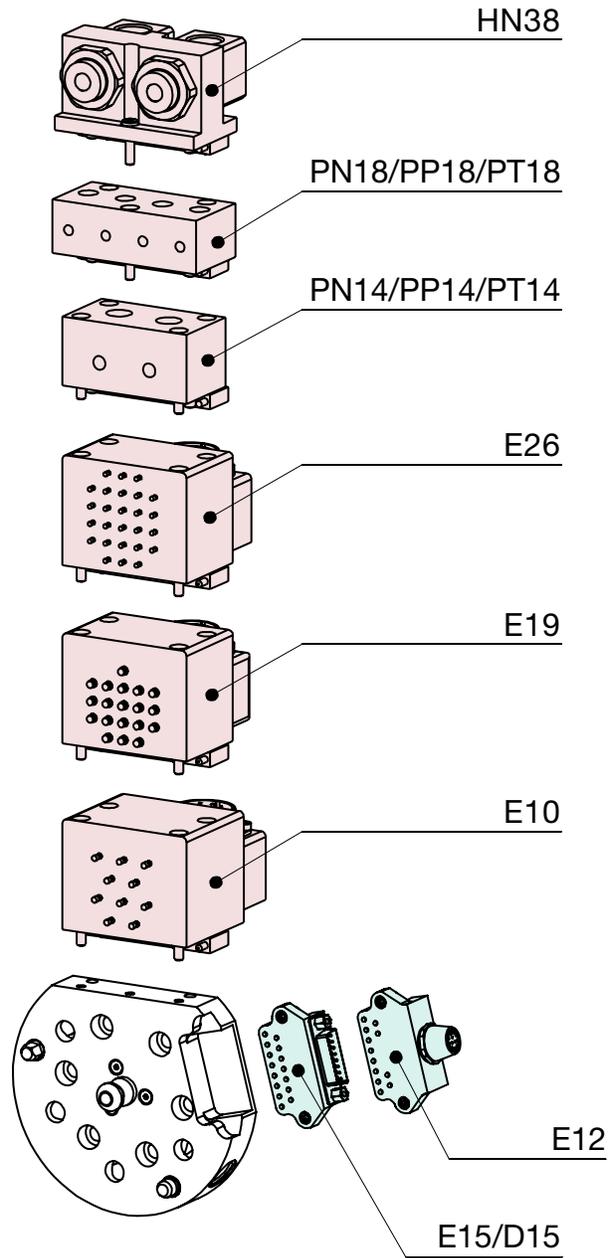
QC/TP SERIES

Automatic Tool Changers | Module Usage Illustrations

QC Series Robot Adaptor Module with Optional Modules (Robot Side)



TP Series Tool Adaptor Module with Optional Modules (Tool Side)



QC/TP SERIES

Automatic Tool Changers | How to Order



Robot Side
QC-30

Tool Side
TP-30

Robot Side
QC-60

Tool Side
TP-60

Robot Side
QC-60-10P

Tool Side
TP-60-10P

Robot Side
QC-150

Tool Side
TP-150

Base Model	Model Size	Port Options (QC-only)	I/O Block	Optional Modules*	10-Port (QC/TP-60 only)
QC	60	M	E15	PN18	10P
QC Robot Side	30 60 150 (See Page TC-QCTP-2 for Specifications)	Blank 1/8 NPT M 1/8 BSPP A 1/8 BSPT	0 No I/O Block E15 15-pin, Sub-D D15 (2) X E15 (QC/TP-30 only) E12 12-pin, Turck		
TP Tool Side					

Order Code	Optional Modules
E26	26-PIN 5A Module
E19'	19-PIN 5A Module
E10	10-PIN 13A Module
PN18	4X 1/8 NPT Pneumatic Port
PP18	4X 1/8 BSPP Pneumatic Port
PT18	4X 1/8 BSPT Pneumatic Port
PN14	2X 1/4 NPT Pneumatic Port
PP14	2X 1/4 BSPP Pneumatic Port
PT14	2X 1/4 BSPT Pneumatic Port
HN38	2X 3/8 NPT Fluid Port

***QC/TP-30 and QC/TP-60-10P cannot be ordered with optional modules**

Electric and Pneumatic Accessories (Ordered Separately)

Electrical Accessories

- ELCT-047** Straight Female 12-pin D-Sub User Plug, w/o Cable, Solder Type for E15 (QC/TP-60/150)
- CABL-021** 90° Female Cordset 4M for E12 (QC-30/60/150)
- CABL-023** 90° Male Cordset 2M for E12 (TP-30/60/150)
- CABL-024** Straight Male Cordset 1.2M for E15 (QC/TP-30)
- OSRK-009** NPN Inductive Sensor Repair Kit (QC-150 Only)
- OSRK-010** PNP Inductive Sensor Repair Kit (QC-150 Only)

Pneumatic Accessories

- SLKT-387** Seal Repair Kit (QC-30)
- SLKT-388** Face Seal Repair Kit (QC-30)
- SLKT-389** Seal Repair Kit (QC-60)
- SLKT-390** Face Seal Repair Kit (QC-60/150)
- SLKT-392** Face Seal Repair Kit (QC-60-10P)
- SLKT-393** Seal Repair Kit (QC-150)

QC-30 (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions



QC-30 Specification:

Max. Payload: 13.6 Kg [30 lbs]

Weight: 0.23 Kg [0.50 lbs]

Bore Ø: 25.4 mm [1.00 in]

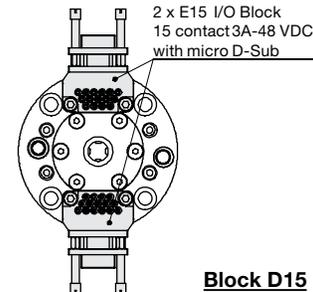
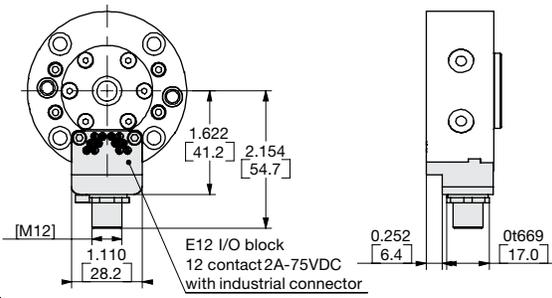
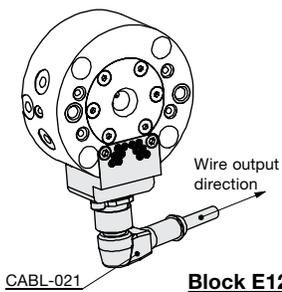
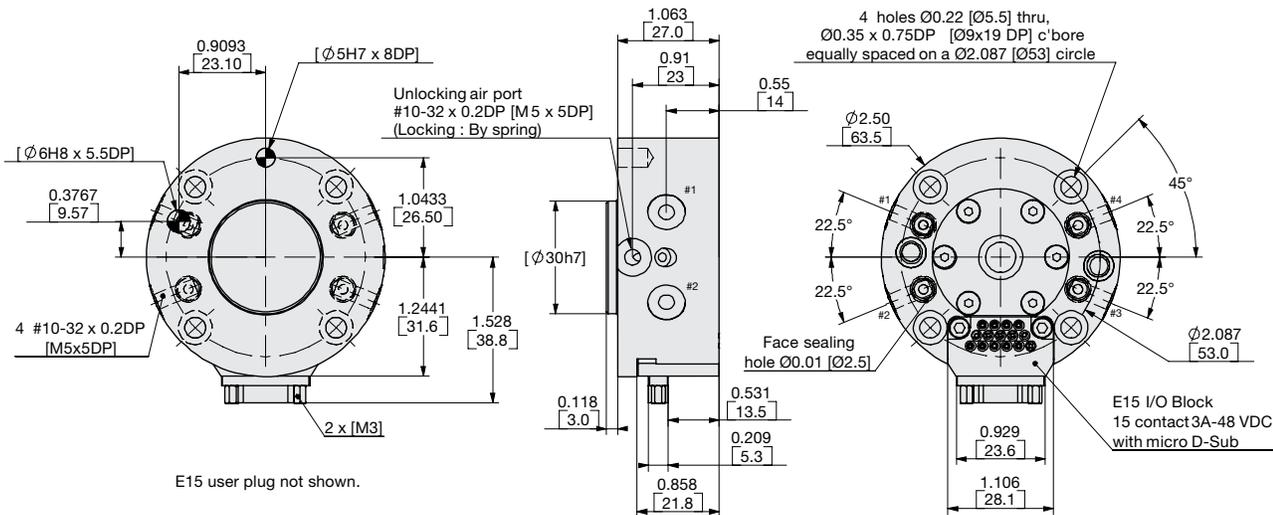
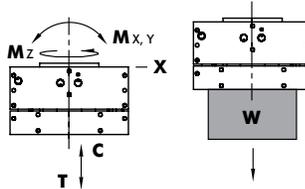
Displacement: 3.9 cm³ [0.24 in³]

Loading Capacity

Max. Tensile **T**: 311 N [70 lb]

Max. Compressive **C**: 445 N [100 lb]

Max. Moment (**M_x/M_y/M_z**): 22.6 Nm [200 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

⌀ DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

THIRD ANGLE PROJECTION

ALL DOWEL HOLES ARE SF (SLIP FIT). LOCAL TOLERANCE ±.0005" OR ±.013MM

METRIC THREADS COURSE PITCH

IMPERIAL ([IN.])
0.00 = ±.01
0.000 = ±.005
0.0000 = ±.0005

METRIC (MM)
[0] = [±.25]
[0.0] = [±.13]
[0.00] = [±.013]

TP-30 (TOOLING SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

TP-30 Specification:

Max. Payload: 13.6 Kg [30 lbs]

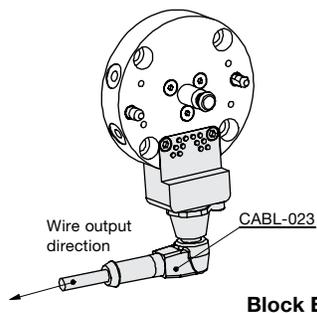
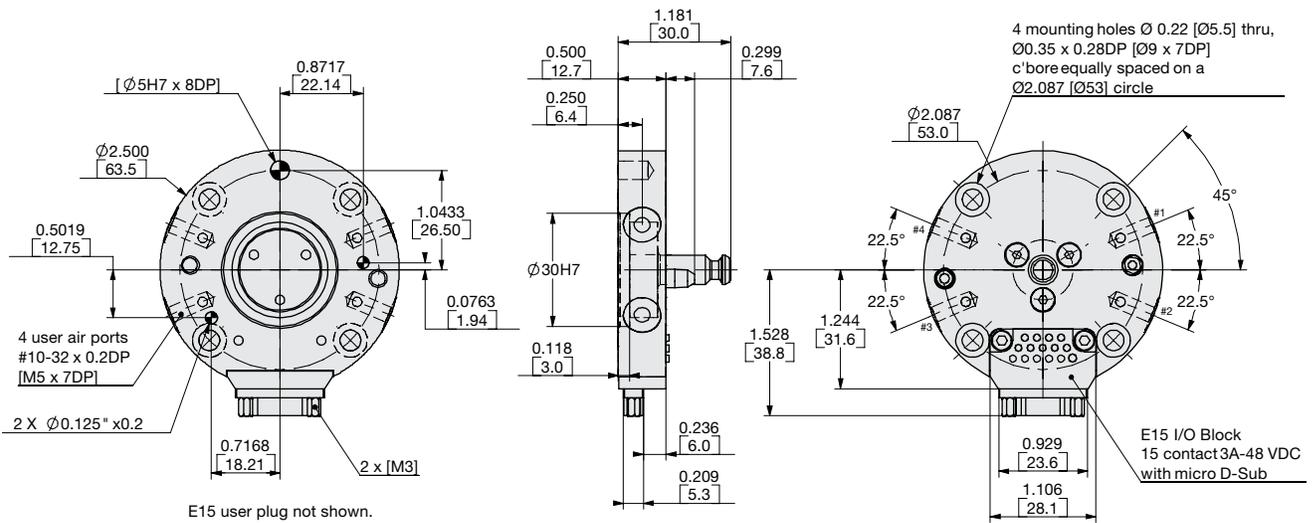
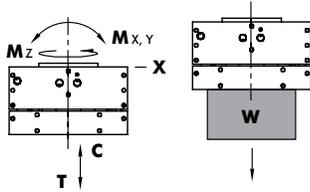
Weight: 0.11 Kg [0.25 lbs]

Loading Capacity

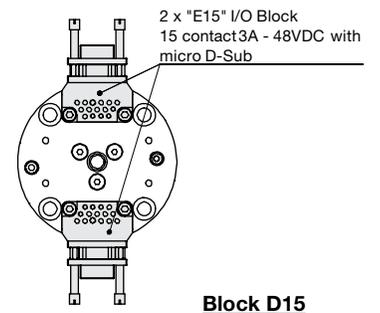
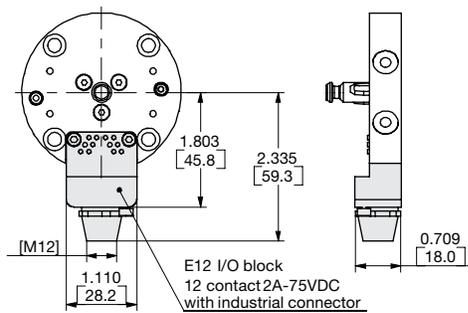
Max. Tensile **T**: 311 N [70 lb]

Max. Compressive **C**: 445 N [100 lb]

Max. Moment (**M_x/M_y/M_z**): 22.6 Nm [200 in-lb]



Block E12



Block D15

UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

THIRD ANGLE PROJECTION

ALL DOWEL HOLES ARE SF (SLIP FIT).
LOCATIONAL TOLERANCE ±.0005" OR [±.013MM]

METRIC THREADS
COURSE PITCH

IMPERIAL ([IN.])
0.00 = ±.01
0.000 = ±.005
0.0000 = ±.0005

METRIC (MM)
[0] = [±.25]
[0.0] = [±.13]
[0.00] = [±.013]

QC-60 (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions



QC-60 Specification:

Max. Payload: 27 Kg [60 lbs]

Weight: 0.86 Kg [1.9 lbs]

Bore Ø: 44.5 mm [1.75 in]

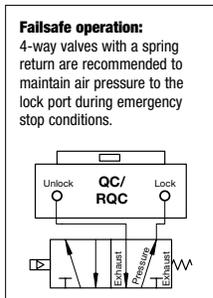
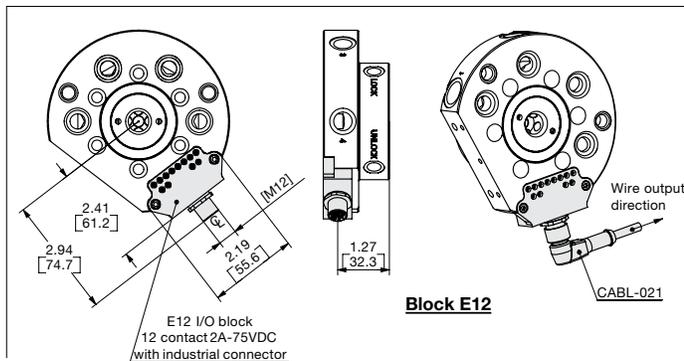
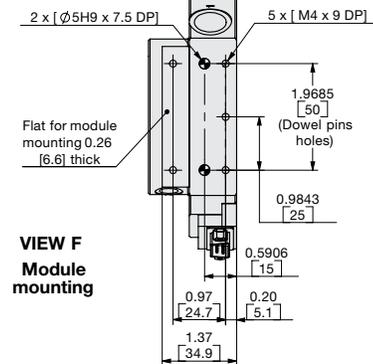
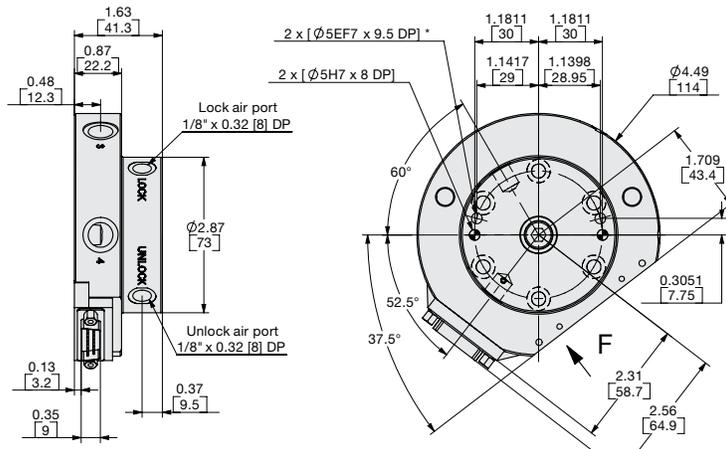
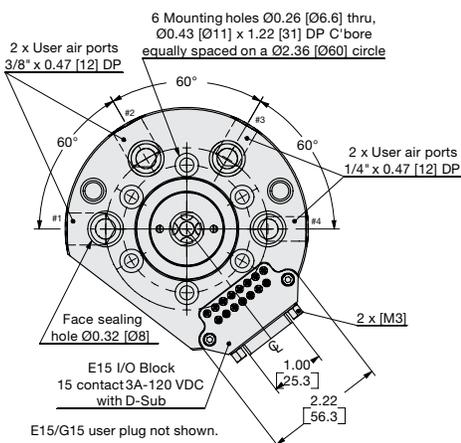
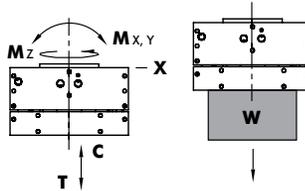
Displacement: 9.2 cm³ [0.56 in³]

Loading Capacity

Max. Tensile **T**: 445 N [100 lb]

Max. Compressive **C**: 534 N [120 lb]

Max. Moment (**M_x/M_y/M_z**): 88.1 Nm [780 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

⌀ DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

THIRD ANGLE PROJECTION

ALL DOWEL HOLES ARE SF (SLIP FIT). LOCAL TOLERANCE ±.0005" OR ±.013MM

METRIC THREADS COURSE PITCH

IMPERIAL ([IN.])
0.00 = ± .01
0.000 = ± .005
0.0000 = ± .0005

METRIC (MM)
[0] = [± .25]
[0.0] = [± .13]
[0.00] = [± .013]

TP-60 (TOOLING SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

TP-60 Specification:

Max. Payload: 27 Kg [60 lbs]

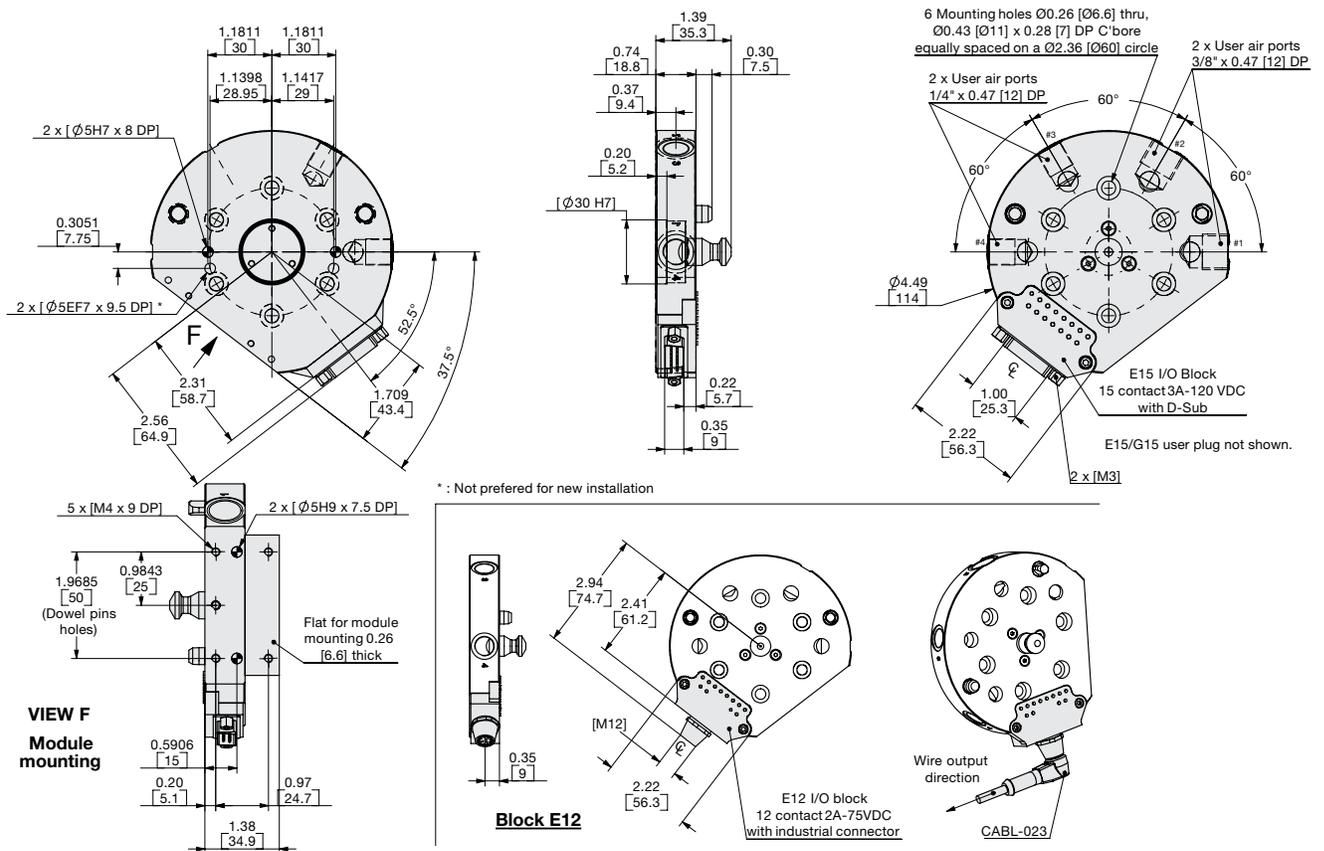
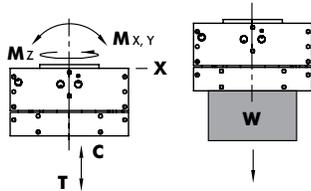
Weight: 0.41 Kg [0.90 lbs]

Loading Capacity

Max. Tensile **T**: 445 N [100 lb]

Max. Compressive **C**: 534 N [120 lb]

Max. Moment (**M_x/M_y/M_z**): 88.1 Nm [780 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

THIRD ANGLE PROJECTION

ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE ±.0005" OR [±.013MM]

METRIC THREADS COURSE PITCH

IMPERIAL ([IN.])
0.00 = ±.01
0.000 = ±.005
0.0000 = ±.0005

METRIC (MM)
[0] = [±.25]
[0.0] = [±.13]
[0.00] = [±.013]

QC-60-10P (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions



QC-60-10P Specification:

Max. Payload: 27 Kg [60 lbs]

Weight: 0.86 Kg [1.9 lbs]

Bore Ø: 44.5 mm [1.75 in]

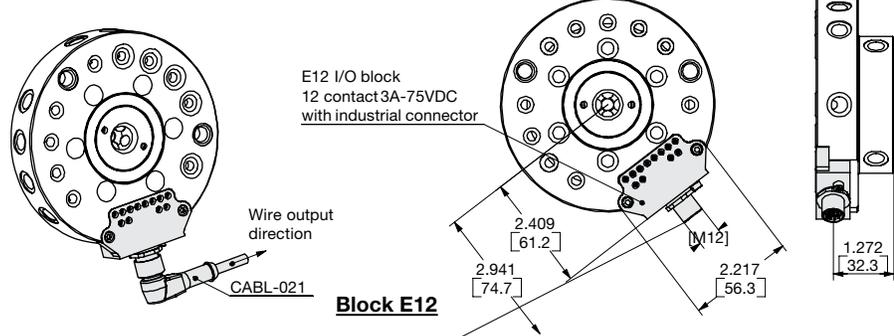
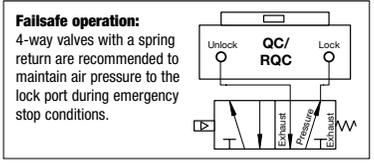
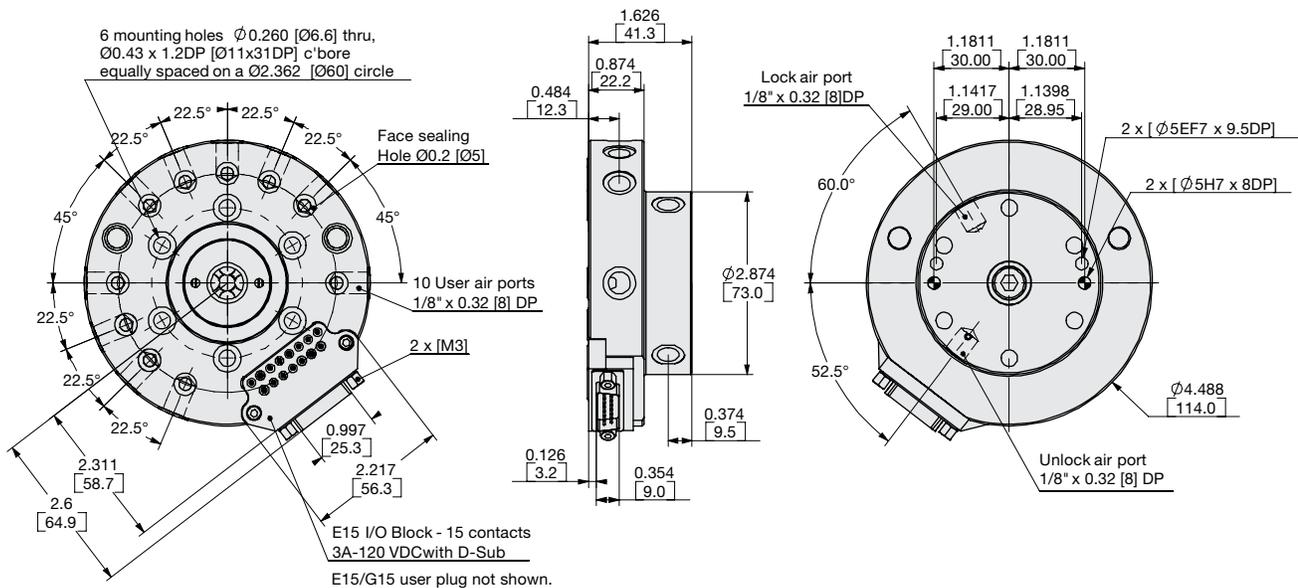
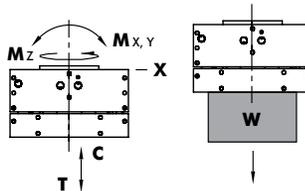
Displacement: 9.2 cm³ [0.56 in³]

Loading Capacity

Max. Tensile **T**: 445 N [100 lb]

Max. Compressive **C**: 534 N [120 lb]

Max. Moment (**M_x/M_y/M_z**): 88.1 Nm [780 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

⌀	⊕	⊖	⊕	IMPERIAL ([IN.])	METRIC (MM)
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCAL TOLERANCE ±.0005" OR ±.013MM	METRIC THREADS COURSE PITCH	0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	[0] = ±.25 [0.0] = ±.13 [0.00] = ±.013

TP-60-10P (TOOLING SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

TP-60-10P Specification:

Max. Payload: 27 Kg [60 lbs]

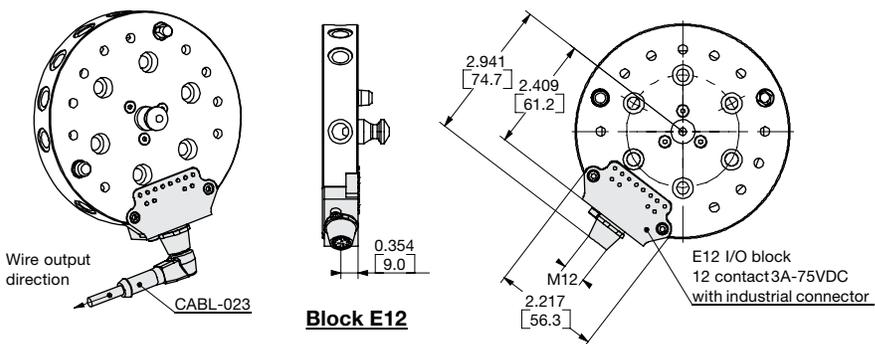
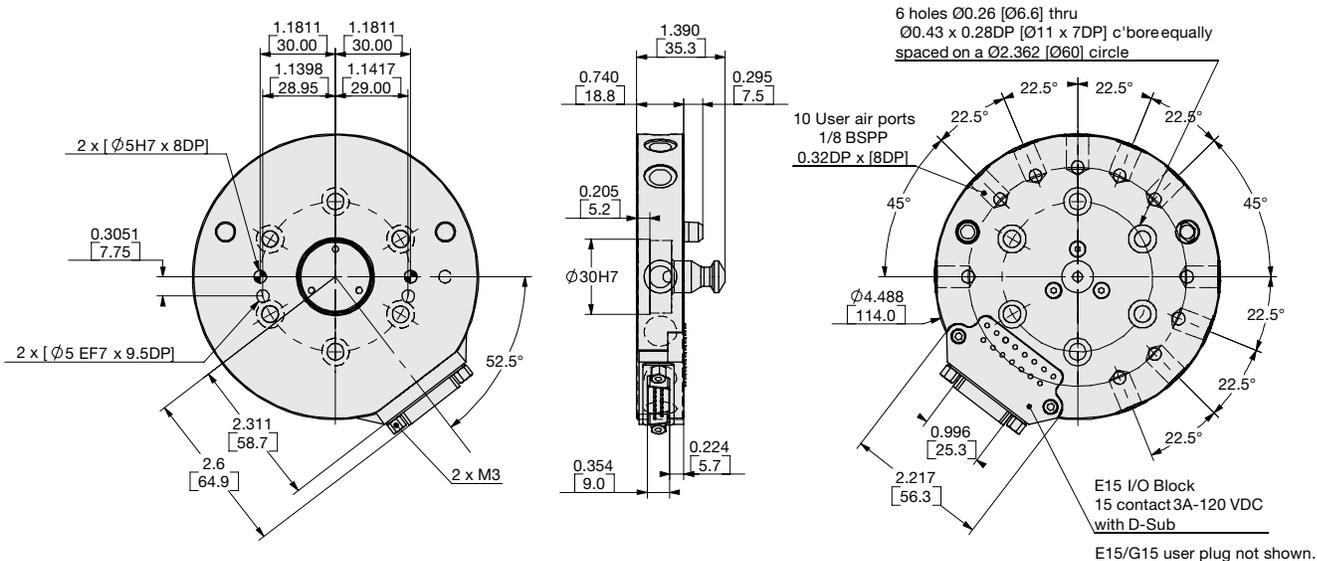
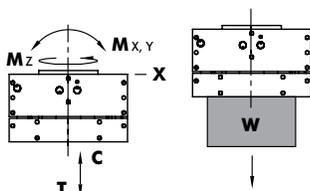
Weight: 0.41 Kg [0.90 lbs]

Loading Capacity

Max. Tensile **T**: 445 N [100 lb]

Max. Compressive **C**: 534 N [120 lb]

Max. Moment (**M_x/M_y/M_z**): 88.1 Nm [780 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

THIRD ANGLE PROJECTION

ALL DOWEL HOLES ARE SF (SLIP FIT).
LOCATIONAL TOLERANCE
±.0005" OR [±.013MM]

METRIC THREADS
COURSE PITCH

IMPERIAL ([IN.])
0.00 = ±.01
0.000 = ±.005
0.0000 = ±.0005

METRIC (MM)
[0] = [±.25]
[0.0] = [±.13]
[0.00] = [±.013]

QC-150 (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions



QC-150 Specification:

Max. Payload: 68 Kg [150 lbs]

Weight: 2.2 Kg [4.8 lbs]

Bore Ø: 66.8 mm [2.63 in]

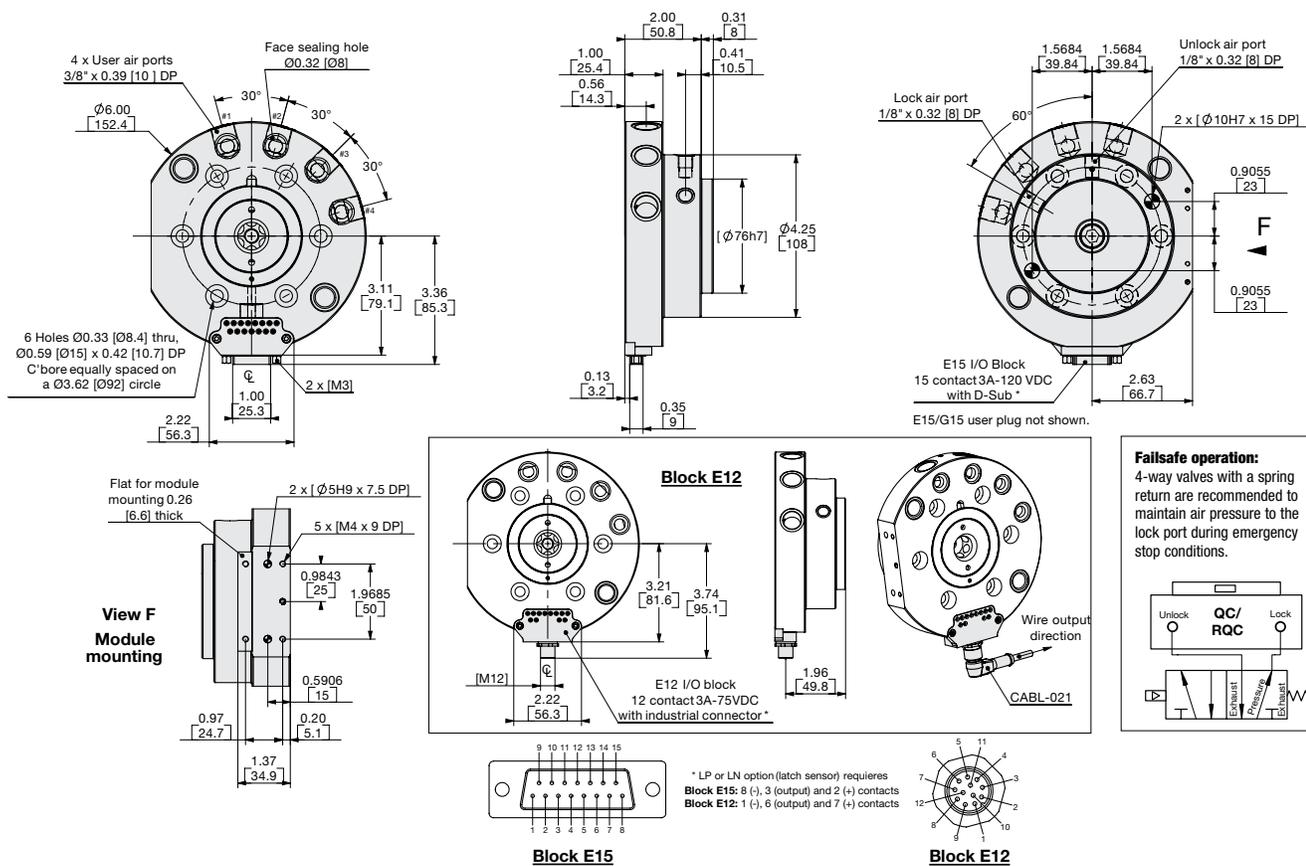
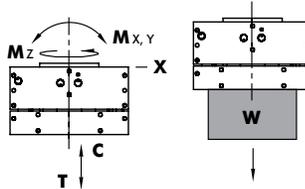
Displacement: 25.4 cm³ [1.55 in³]

Loading Capacity

Max. Tensile **T**: 890 N [200 lb]

Max. Compressive **C**: 1334 N [300 lb]

Max. Moment (**M_x/M_y/M_z**): 215 Nm [1900 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

☉
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

☉
THIRD ANGLE PROJECTION

☉
ALL DOWEL HOLES ARE SF (SLIP FIT).
LOCATIONAL TOLERANCE
±.0005" OR ±.013MM

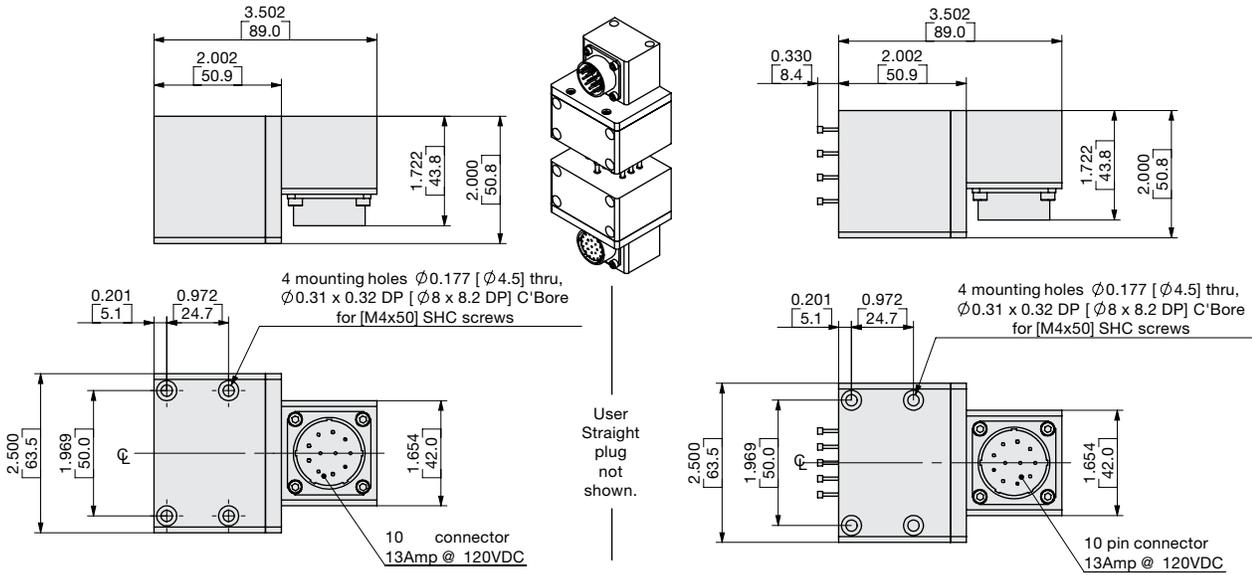
☉
METRIC THREADS
COURSE PITCH

IMPERIAL ([IN.])
0.00 = ± .01
0.000 = ± .005
0.0000 = ± .0005

METRIC (MM)
[0] = [± .25]
[0.0] = [± .13]
[0.00] = [± .013]

QC/TP SERIES

Automatic Tool Changers | Dimensions | 10-Pin Module 5Amp @ 120VDC Electric Module



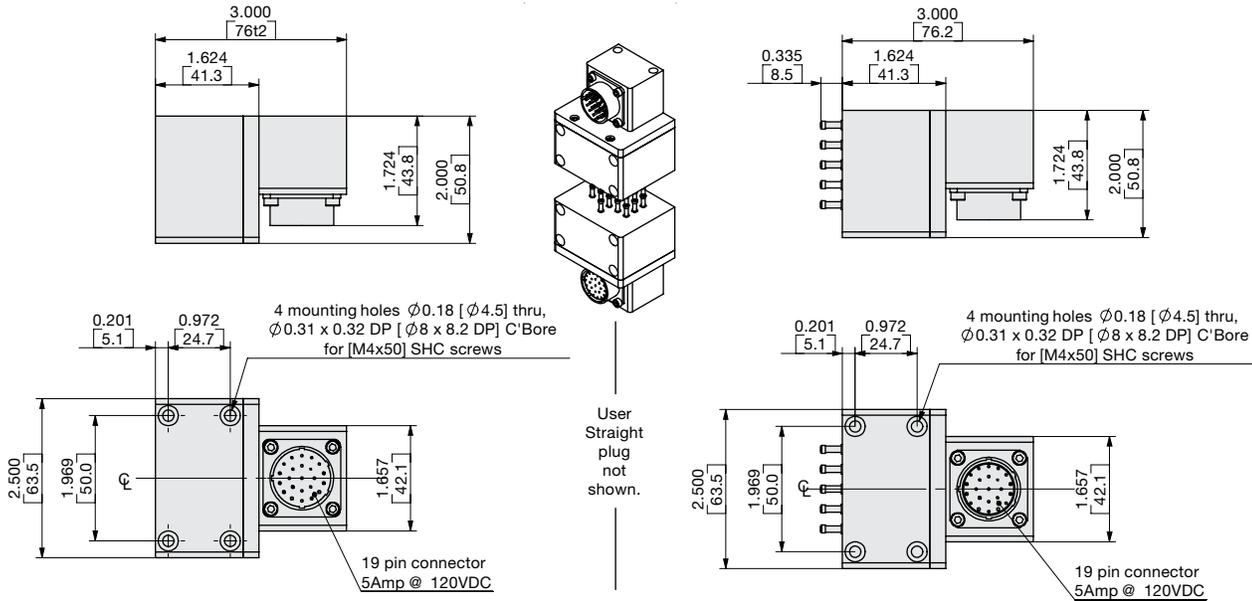
Flat for module mounting not shown: See QC or TP drawings.

Model	Module	Robot Side	Tool Side	*Accessory
QC/TP60	E10	KE10-QC60	KE10-TP60	ELCT-041 (Female)
QC/TP150	E10	KE10-QC150	KE10-TP150	ELCT-042 (Male)

*Straight Plug, (w/o Cable), Solder Type, Cable Clamp

Module kits above include: Flat for module mounting, straight plug (without cable), locating pins and hardware.

19-Pin Module 5Amp @ 120VDC Electric Module



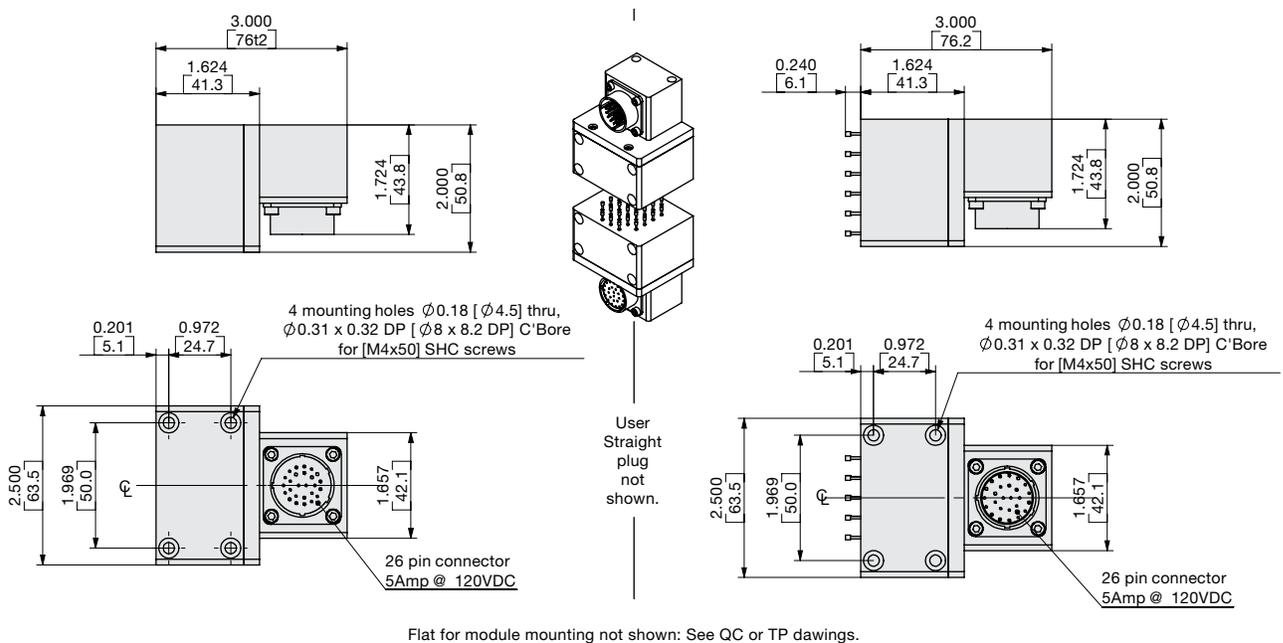
Flat for module mounting not shown: See QC or TP drawings.

Model	Module	Robot Side	Tool Side	*Accessory
QC/TP60	E19	KE19-QC60	KE19-TP60	ELCT-043 (Female)
QC/TP150	E19	KE19-QC150	KE19-TP150	ELCT-044 (Male)

*Straight Plug, (w/o Cable), Solder Type, Cable Clamp

Module kits above include: Flat for module mounting, straight plug (without cable), locating pins and hardware.

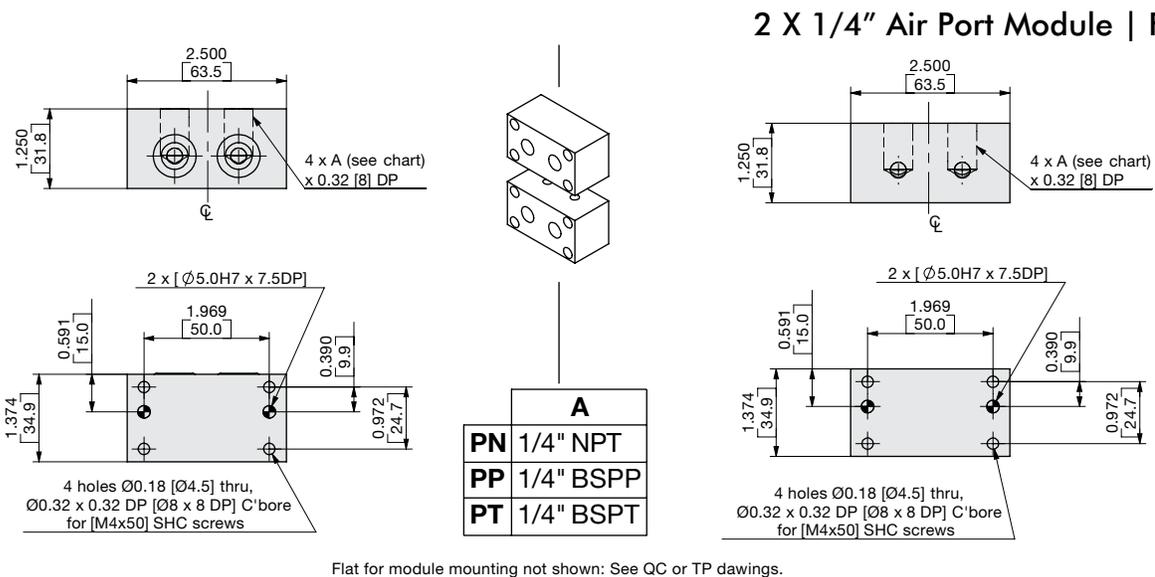
Automatic Tool Changers | Dimensions | 26-Pin Module 5Amp @ 120VDC Electric Module



Model	Module	Robot Side	Tool Side	*Accessory
QC/TP60	E26	KE26-QC60	KE26-TP60	ELCT-045 (Female)
QC/TP150	E26	KE26-QC150	KE26-TP150	ELCT-046 (Male)

*Straight Plug, (w/o Cable), Solder Type, Cable Clamp

Module kits above include: Flat for module mounting, straight plug (without cable), locating pins and hardware.



For **QC/TP-60**

Module	Robot Side	Tool Side
PN14	KPN14-QC60	KPN14-TP60
PP14	KPP14-QC60	KPP14-TP60
PT14	KPT14-QC60	KPT14-TP60
Seal Kit	SLKT-395	---

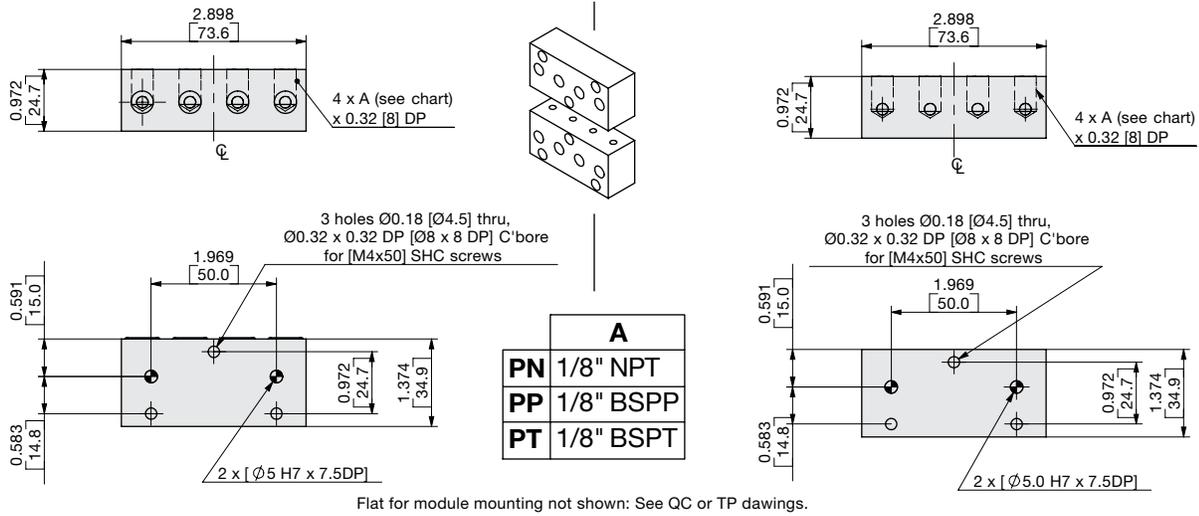
For **QC/TP-150**

Module	Robot Side	Tool Side
PN14	KPN14-QC150	KPN14-TP150
PP14	KPP14-QC150	KPP14-TP150
PT14	KPT14-QC150	KPT14-TP150
Seal Kit	SLKT-395	---

Module kits include: Flat for module mounting, seals, locating pins and hardware.

QC/TP SERIES

Automatic Tool Changers | Dimensions | 4 X 1/8" Air Port Module | Face Seal



Maximum Working Pressure: 10 bar

For **QC/TP-60**

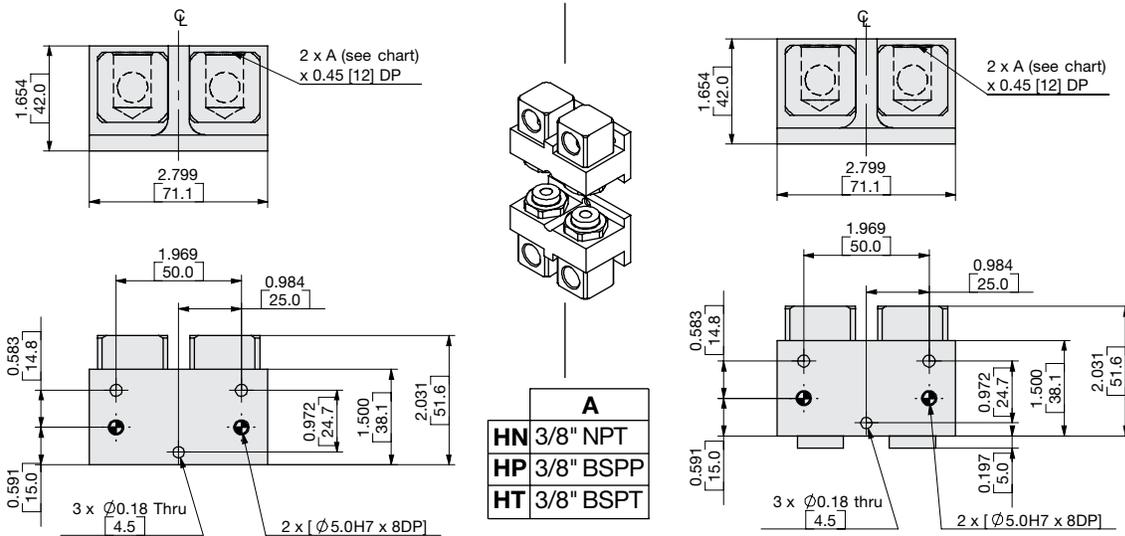
For **QC/TP-150**

Module	Robot Side	Tool Side
PN18	KPN18-QC60	KPN18-TP60
PP18	KPP18-QC60	KPP18-TP60
PT18	KPT18-QC60	KPT18-TP60
Seal Kit	SLKT-391	---

Module	Robot Side	Tool Side
PN18	KPN18-QC150	KPN18-TP150
PP18	KPP18-QC150	KPP18-TP150
PT18	KPT18-QC150	KPT18-TP150
Seal Kit	SLKT-391	---

Module kits include: Flat for module mounting, seals, locating pins and hardware.

2 X 3/8" Fluid Ports Module | Non-Spilling Double Shut-off



Maximum Working Pressure: 100 bar

For **QC/TP-60**

For **QC/TP-150**

Module	Robot Side	Tool Side
HN38	KHN38-QC60	KHN38-TP60

Module	Robot Side	Tool Side
HN38	KHN38-QC150	KHN38-TP150

Module kits include: Flat for module mounting couplings, locating pins and hardware.

QC/TP SERIES

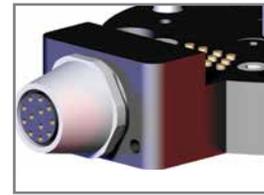
Automatic Tool Changers | Dimensions | Sub-D Conn and User Plug IO Block



15 Pin w/Sub-D Conn and User Plug w/o cable

Model	Module	Robot Side	Tool Side
QC/TP30	E15	KE15-QC30	KE15-TP30
QC/TP60	E15	KE15-QC60	KE15-TP60
QC/TP150	E15	KE15-QC150	KE15-TP60

See individual datasheets for dimensions.



12 Pin w/Turck M12 Conn w/o Cordset

Model	Module	Robot Side	Tool Side
QC/TP30	E12	KE12-QC30	KE12-TP30
QC/TP60	E12	KE12-QC60	KE12-TP60
QC/TP150	E12	KE12-QC150	KE12-TP60

See individual datasheets for dimensions.

RHC SERIES

Automatic Tool Changers | Features and Benefits

Durable Components

Locking components are made from hardened bearing & tool steels

Self Lubricating Seals

Self lubricating dynamic seals

Quality Materials

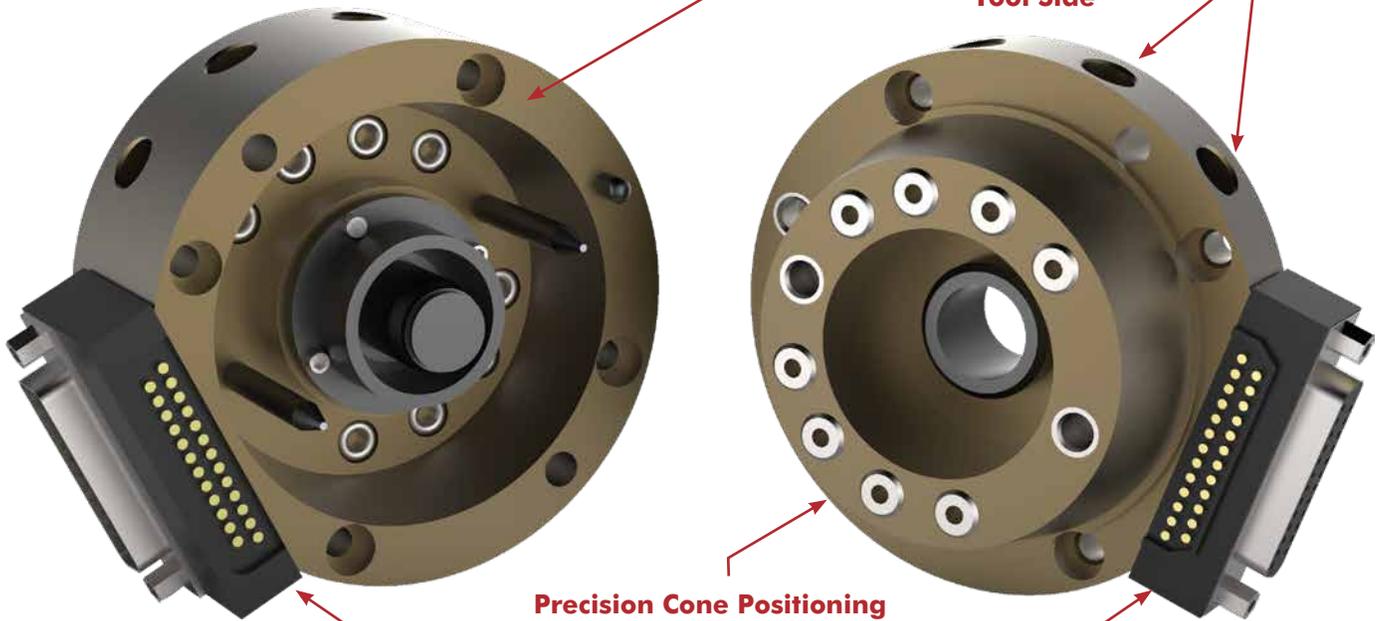
Each body is made of lightweight 7075-T6 aircraft quality aluminum

Pneumatic Ports

User pneumatic ports

Robot Side

Tool Side



Precision Cone Positioning

Machine tool proven mating conical coupling

Durable Finish

Bodies have hard-coat anodize 60RC with Teflon® impregnation

Electrical Contacts

(Sold Separately- See "How to Order" Section for more info)

Failsafe Operation

Failsafe locking spring keeps units coupled in the event of pressure loss

Mounting Information



Robot Half Adaptor mounts with screws from behind or through the front and locates with dowel pins for accuracy.



Tool Half Adaptor mounts payload with screws from behind or through the front and locates with dowel pins for accuracy. Protect cone surfaces from debris to insure proper positioning.

RHC SERIES

Automatic Tool Changers | Ordering Information



Robot Side
RHC-1-R



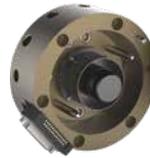
Tool Side
RHC-1-T



Robot Side
RHC-2-R



Tool Side
RHC-2-T



Robot Side
RHC-3-R



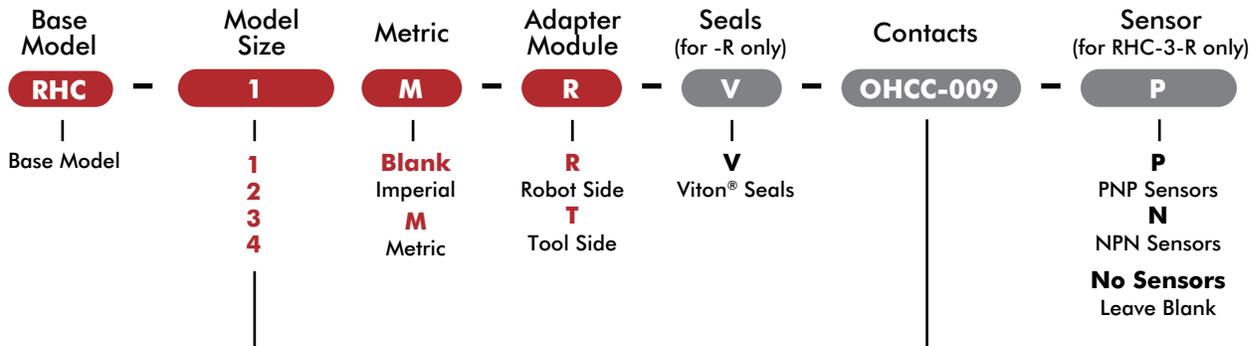
Tool Side
RHC-3-T



Robot Side
RHC-4-R



Tool Side
RHC-4-T



Size	Max. Moment Nm [in-lb]	Max. Payload Kg [lbs]
RHC-1	28 [250]	9 [20]
RHC-2	136 [1200]	59 [130]
RHC-3	1017 [9000]	136 Kg [300]
RHC-4	2825 [25000]	454 Kg [1000]

Robot Side	Optional Contacts
OHCC-009	15 Pin D-Sub Contacts (RHC-1)
OHCC-001	26 Pin D-Sub Contacts (RHC-1)
OHCC-011	15 Pin D-Sub Contacts (RHC-2, -3)
OHCC-003	25 Pin D-Sub Contacts (RHC-2, -3)
OHCC-005	19 Pin Mil. Spec. Contacts (RHC-3)
OHCC-007	38 Pin Mil. Spec. Contacts (RHC-3)
OHCC-021	24 Pin Mil. Spec. Contacts (RHC-4)
Tool Side	Optional Contacts
OHCC-010	15 Pin D-Sub Contacts (RHC-1)
OHCC-002	26 Pin D-Sub Contacts (RHC-1)
OHCC-012	15 Pin D-Sub Contacts (RHC-2, -3)
OHCC-004	25 Pin D-Sub Contacts (RHC-2, -3)
OHCC-006	19 Pin Mil. Spec. Contacts (RHC-3)
OHCC-027	24 Pin Mil. Spec. Contacts (RHC-4)
OHCC-023	24 Wire Single Pigtail Connector (RHC-4)
OHCC-022	24 Wire Double Pigtail Connector (RHC-4)

Sensor and Pneumatic Accessories (Ordered Separately)

Sensor Accessories

- OSMK-064** Replacement Sensor Mounting Kit (**RHC-3-R**)
- OISP-009** Replacement Locked Position NPN Inductive Sensor with Hard Wired Cable (**RHC-3-R**)
- OISP-009** Replacement Locked Position NPN Inductive Sensor with Hard Wired Cable (**RHC-3-R**)
- OSMK-063** Replacement Sensor Mounting Kit (**RHC-4-R**)
- OISN-008** Replacement Locked Position NPN Inductive Sensor with Hard Wired Cable (**RHC-4-R**)
- OISP-008** Replacement Locked Position PNP Inductive Sensor with Hard Wired Cable (**RHC-4-R**)

Pneumatic Accessories

- SLKT-028** Standard Seal Repair Kit (**RHC-1-R**)
- SLKT-028V** Viton Seal Repair Kit (**RHC-1-R**)
- SLKT-029** Standard Seal Repair Kit (**RHC-2-R**)
- SLKT-029V** Viton Seal Repair Kit (**RHC-2-R**)
- SLKT-030** Standard Seal Repair Kit (**RHC-3-R**)
- SLKT-030V** Viton Seal Repair Kit (**RHC-3-R**)
- SLKT-031** Standard Seal Repair Kit (**RHC-4-R**)
- SLKT-031V** Viton Seal Repair Kit (**RHC-4-R**)

RHC-1-R (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

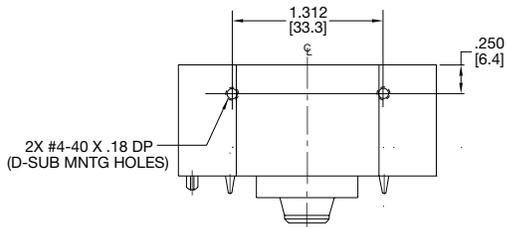
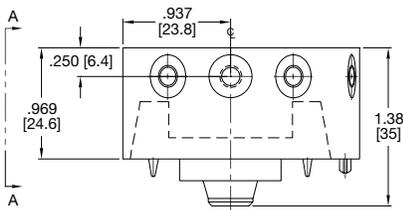
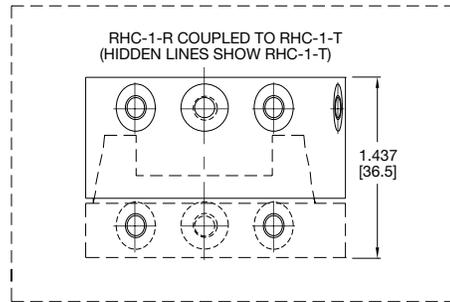
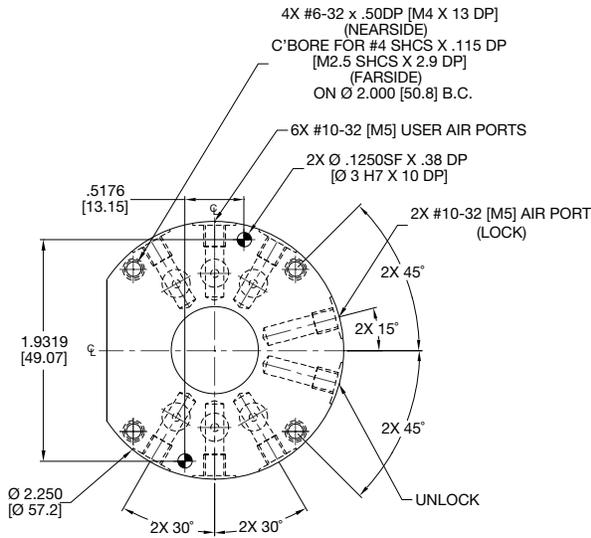
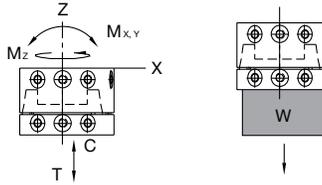


RHC-1-R Specification:

- Max. Payload (**W**): 9 Kg [20 lbs]
- Weight: 0.18 Kg [0.41 lbs]
- Bore Ø: 19 mm [0.75 in]
- Displacement: 4.18 cm³ [0.255 in³]

Loading Capacity

- Max. Tensile **T**: 890 N [200 lb]
- Max. Compressive **C**: 2224 N [500 lb]
- Max. Moment (**M_x/M_y**): 14 Nm [125 in-lb]
- Max. Moment (**M_z**): 28 Nm [250 in-lb]



VIEW AA

UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

☉
 DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

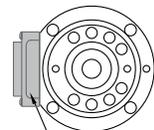
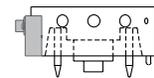
⊕
 THIRD ANGLE PROJECTION

⊙
 ALL DOWEL HOLES ARE SF (SLIP FIT).
 LOCATIONAL TOLERANCE
 ±.0005" OR [±.013MM]

⊘
 METRIC THREADS
 COURSE PITCH

IMPERIAL ([IN.])
 0.00 = ±.01
 0.000 = ±.005
 0.0000 = ±.0005

METRIC (MM)
 [0] = [±.25]
 [0.0] = [±.13]
 [0.00] = [±.013]



26 PIN OR 15 PIN D-SUB ELECTRICAL CONTACTS

Model	Robot Side	Description	Specification
RHC-1	OHCC-009	15 Pin D-Sub Contacts	15 Pin @ 3 AMPS
	OHCC-001	26 Pin D-Sub Contacts	26 Pin @ 3 AMPS

RHC-1-T (TOOLING SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

RHC-1-T Specification:

Max. Payload (**W**): 9 Kg [20 lbs]

Weight: 0.09 Kg [0.22 lbs]

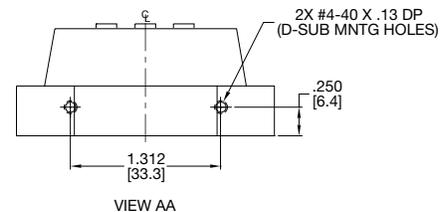
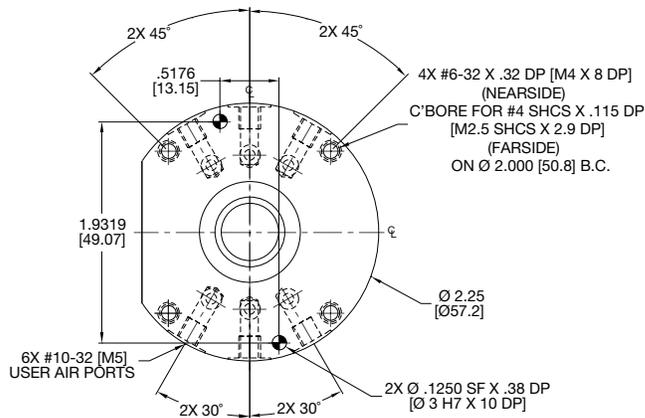
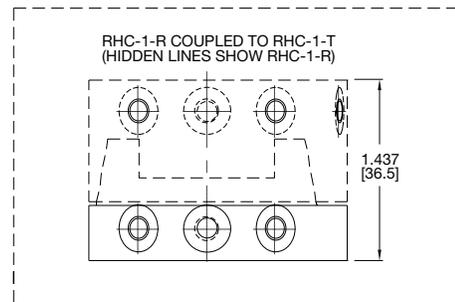
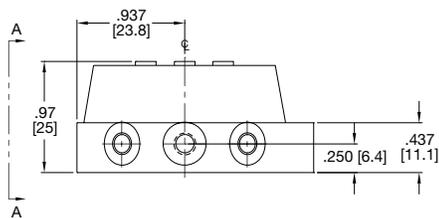
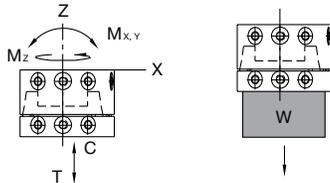
Loading Capacity

Max. Tensile **T**: 890 N [200 lb]

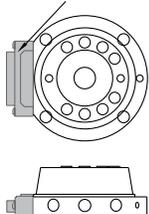
Max. Compressive **C**: 2224 N [500 lb]

Max. Moment (**M_x/M_y**): 14 Nm [125 in-lb]

Max. Moment (**M_z**): 28 Nm [250 in-lb]



26 PIN OR 15 PIN D-SUB ELECTRICAL CONTACTS



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

ϕ
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

\triangle
THIRD ANGLE PROJECTION

\oplus
ALL DOWEL HOLES ARE SF (SLIP FIT). LOCAL TOLERANCE $\pm .0005$ " OR $\pm .013$ MM]

\oplus
METRIC THREADS COURSE PITCH

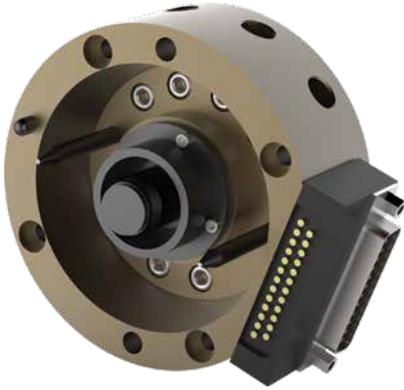
IMPERIAL ([IN.])
0.00 = $\pm .01$
0.000 = $\pm .005$
0.0000 = $\pm .0005$

METRIC (MM)
[0] = $\pm .25$
[0.0] = $\pm .13$
[0.00] = $\pm .013$

Model	Tool Side	Description	Specification
RHC-1	OHCC-010	15 Pin D-Sub Contacts	15 Pin @ 3 AMPS
	OHCC-002	26 Pin D-Sub Contacts	26 Pin @ 3 AMPS

RHC-2-R (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

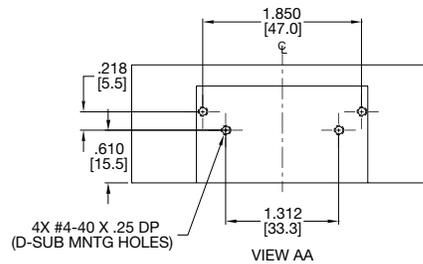
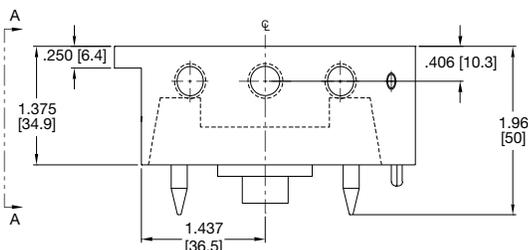
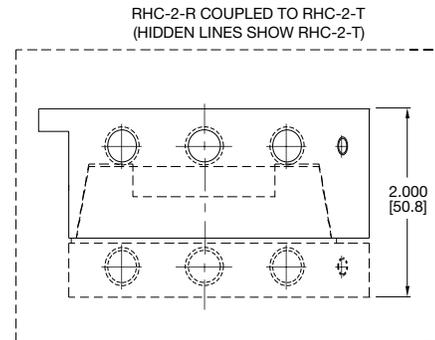
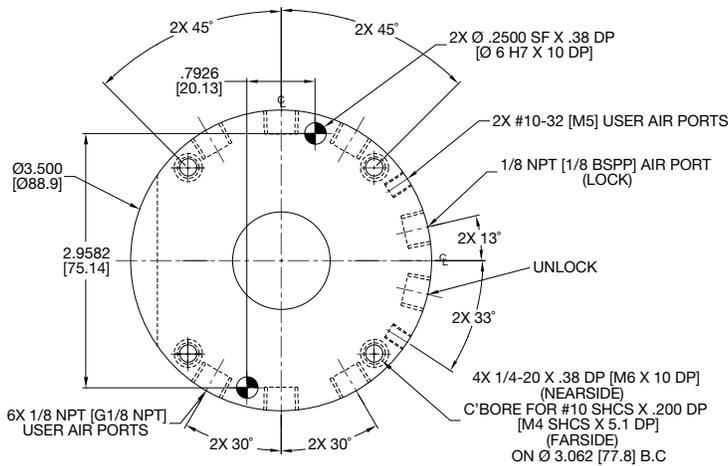
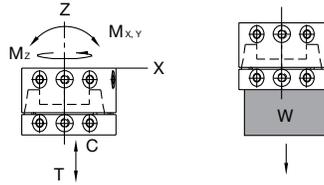


RHC-2-R Specification:

Max. Payload (W): 59 Kg [130 lbs]
Weight: 0.44 Kg [0.99 lbs]
Bore Ø: 28.57 mm [1.125 in]
Displacement: 12.22 cm³ [0.746 in³]

Loading Capacity

Max. Tensile T: 3336 N [750 lb]
Max. Compressive C: 6672 N [1500 lb]
Max. Moment (M_x/M_y): 90 Nm [800 in-lb]
Max. Moment (M_z): 136 Nm [1200 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

☺
 DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

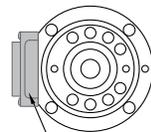
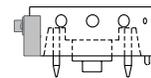
⊕
 THIRD ANGLE PROJECTION

⊙
 ALL DOWEL HOLES ARE SF (SLIP FIT).
 LOCATIONAL TOLERANCE
 ±.0005" OR [±.013MM]

⊘
 METRIC THREADS
 COURSE PITCH

IMPERIAL ([IN.])
 0.00 = ±.01
 0.000 = ±.005
 0.0000 = ±.0005

METRIC (MM)
 [0] = [±.25]
 [0.0] = [±.13]
 [0.00] = [±.013]



25 PIN OR 15 PIN D-SUB ELECTRICAL CONTACTS

Model	Robot Side	Description	Specification
RHC-2	OHCC-011	15 Pin D-Sub Contacts	15 Pin @ 3 AMPS
	OHCC-003	25 Pin D-Sub Contacts	25 Pin @ 3 AMPS

RHC-2-T (TOOLING SIDE)

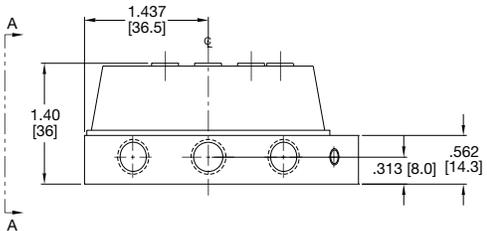
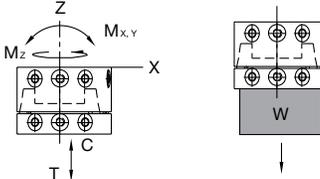
Automatic Tool Changers | Technical Specifications | Dimensions

RHC-2-T Specification:

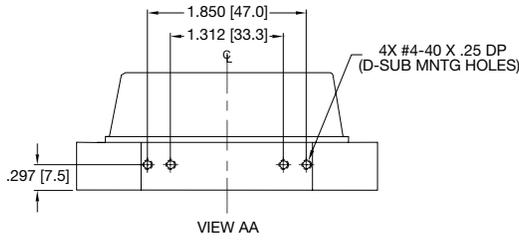
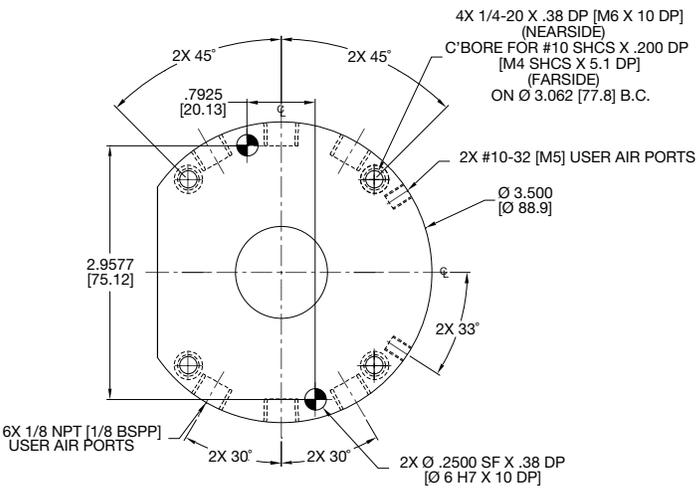
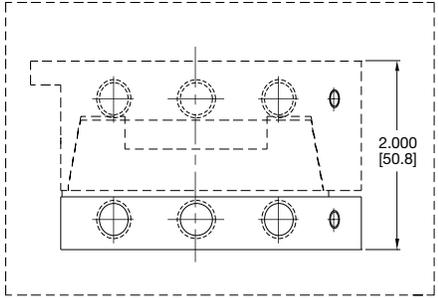
Max. Payload (**W**): 59 Kg [130 lbs]
 Weight: 0.37 Kg [0.82 lbs]

Loading Capacity

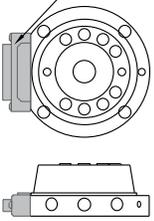
Max. Tensile **T**: 3336 N [750 lb]
 Max. Compressive **C**: 6672 N [1500 lb]
 Max. Moment (**M_x/M_y**): 90 Nm [800 in-lb]
 Max. Moment (**M_z**): 136 Nm [1200 in-lb]



RHC-2-R COUPLED TO RHC-2-T
(HIDDEN LINES SHOW RHC-2-R)



25 PIN OR 15 PIN D-SUB ELECTRICAL CONTACTS



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

⌀	▶	⊕	⊕	IMPERIAL ([IN.])	METRIC (MM)
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE ±.0005" OR [±.013MM]	METRIC THREADS COURSE PITCH	0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	[0] = [±.25] [0.0] = [±.13] [0.00] = [±.013]

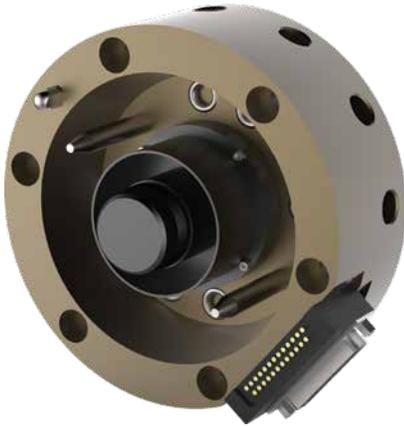
Model	Tool Side	Description	Specification
RHC-2	OHCC-012	15 Pin D-Sub Contacts	15 Pin @ 3 AMPS
	OHCC-004	25 Pin D-Sub Contacts	25 Pin @ 3 AMPS

Dimensions and technical information are subject to change without notice



RHC-3-R (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions



RHC-3-R Specification:

Max. Payload (**W**): 136 Kg [300 lbs]

Weight: 1.79 Kg [3.95 lbs]

Bore Ø: 44.45 mm [1.750 in]

Displacement: 44.34 cm³ [2.706 in³]

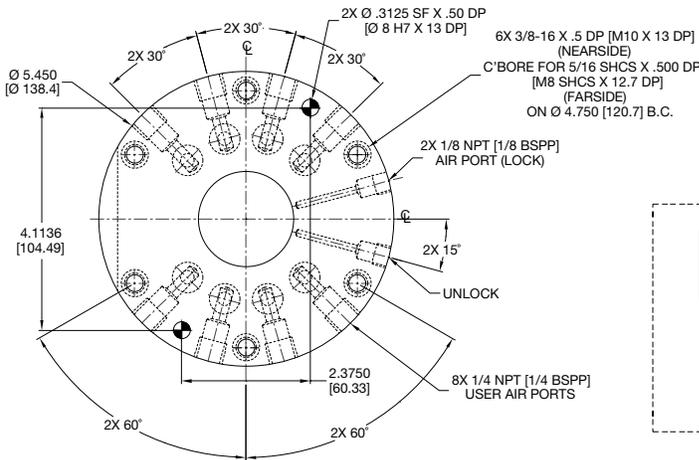
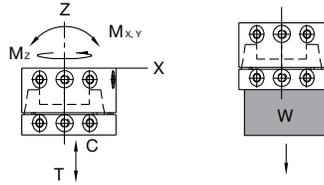
Loading Capacity

Max. Tensile **T**: 8896 N [2000 lb]

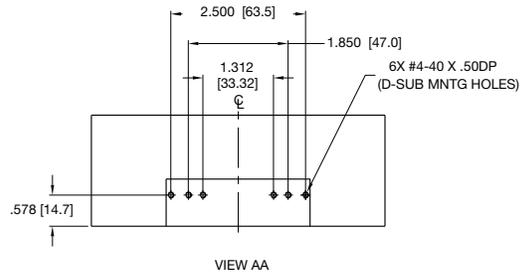
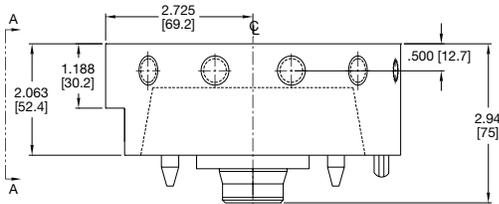
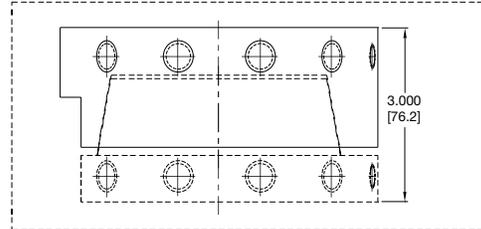
Max. Compressive **C**: 17793 N [4000 lb]

Max. Moment (**M_x/M_y**): 678 Nm [6000 in-lb]

Max. Moment (**M_z**): 1017 Nm [9000 in-lb]



RHC-3-R COUPLED TO RHC-3-T
(HIDDEN LINES SHOW RHC-3-T)



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

☉
 DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

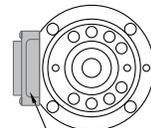
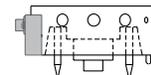
▢
 THIRD ANGLE PROJECTION

⊙
 ALL DOWEL HOLES ARE SF (SLIP FIT).
 LOCATIONAL TOLERANCE
 ±.0005" OR [±.013MM]

⊕
 METRIC THREADS
 COURSE PITCH

IMPERIAL ([IN.])
 0.00 = ±.01
 0.000 = ±.005
 0.0000 = ±.0005

METRIC (MM)
 [0] = [±.25]
 [0.0] = [±.13]
 [0.00] = [±.013]



25 OR 15 PIN D-SUB or
 19 OR 38 PIN MIL SPEC
 ELECTRICAL CONTACTS

Model	Robot Side	Description	Specification
RHC-3	OHCC-011	15 Pin D-Sub Contacts	15 Pin @ 3 AMPS
	OHCC-003	25 Pin D-Sub Contacts	25 Pin @ 3 AMPS
	OHCC-005	19 Pin Mil. Spec. Contacts	19 Pin @ 3 AMPS
	OHCC-007	38 Pin Mil. Spec. Contacts	38 Pin @ 3 AMPS

RHC-3-T (TOOLING SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions

RHC-3-T Specification:

Max. Payload (**W**): 136 Kg [300 lbs]

Weight: 1.29 Kg [2.85 lbs]

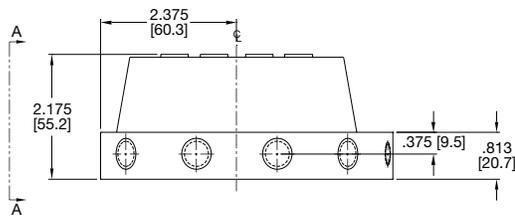
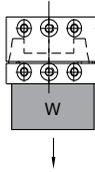
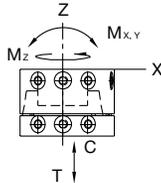
Loading Capacity

Max. Tensile **T**: 8896 N [2000 lb]

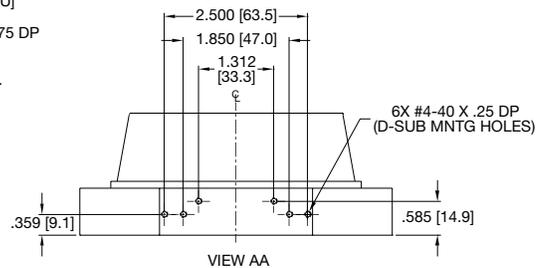
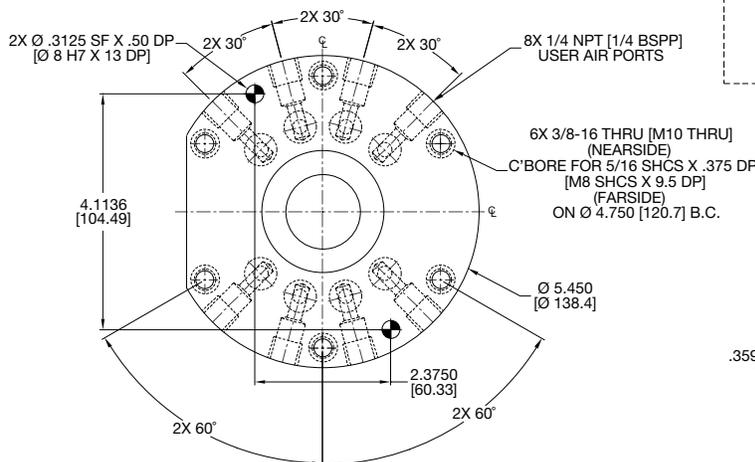
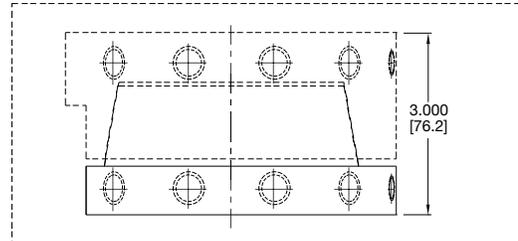
Max. Compressive **C**: 17793 N [4000 lb]

Max. Moment (**M_x/M_y**): 678 Nm [6000 in-lb]

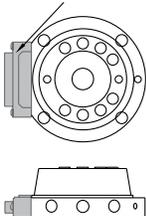
Max. Moment (**M_z**): 1017 Nm [9000 in-lb]



RHC-3-R COUPLED TO RHC-3-T
(HIDDEN LINES SHOW RHC-3-R)



25 OR 15 PIN D-SUB or
19 OR 38 PIN MIL SPEC
ELECTRICAL CONTACTS



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

⌀
DIMENSIONS ARE
SYMMETRICAL ABOUT
CENTERLINE

⊲
THIRD ANGLE
PROJECTION

⊕
ALL DOWEL HOLES ARE SF (SLIP FIT).
LOCATIONAL TOLERANCE
±.0005" OR [±.013MM]

⊕
METRIC THREADS
COURSE PITCH

IMPERIAL ([IN.])
0.00 = ± .01
0.000 = ± .005
0.0000 = ± .0005

METRIC (MM)
[0] = [± .25]
[0.0] = [± .13]
[0.00] = [± .013]

Model	Tool Side	Description	Specification
RHC-3	OHCC-010	15 Pin D-Sub Contacts	15 Pin @ 3 AMPS
	OHCC-002	25 Pin D-Sub Contacts	25 Pin @ 3 AMPS
	OHCC-006	19 Pin Mil. Spec. Contacts	19 Pin @ 3 AMPS

RHC-4-R (ROBOT SIDE)

Automatic Tool Changers | Technical Specifications | Dimensions



RHC-4-R Specification:

Max. Payload (**W**): 454 Kg [1000 lbs]

Weight: 6.52 Kg [12.39 lbs]

Bore Ø: 57.15 mm [2.250 in]

Displacement: 85.52 cm³ [85.52 in³]

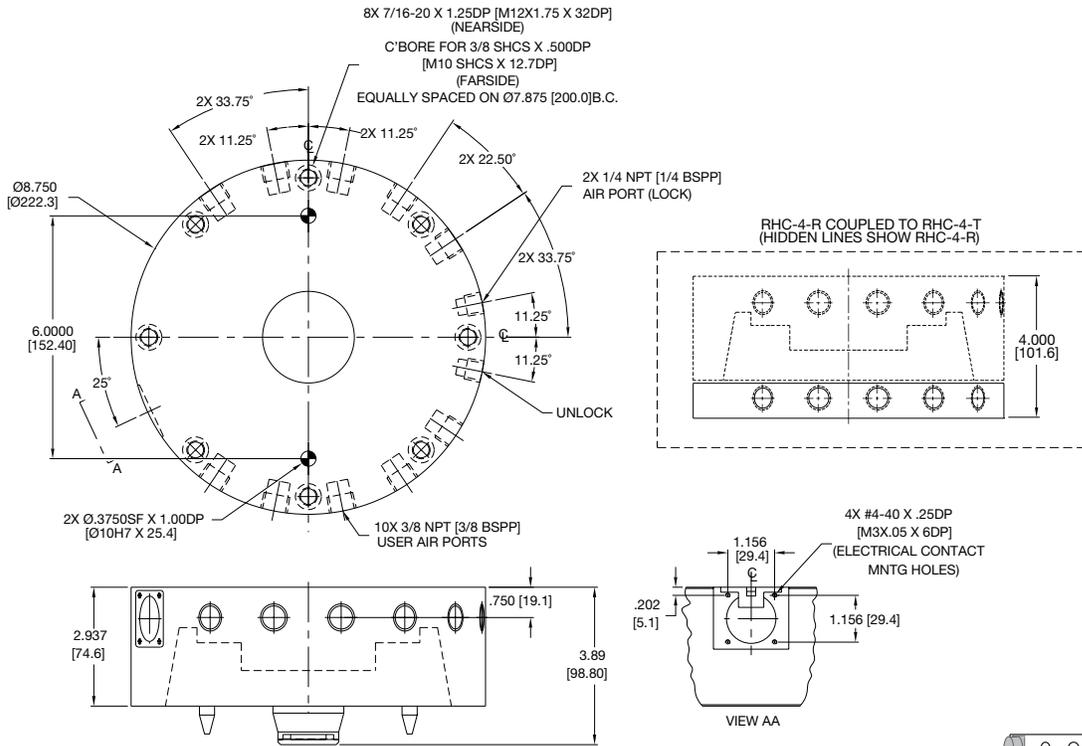
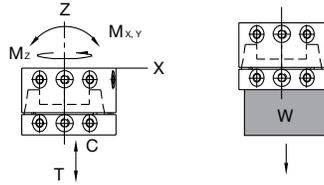
Loading Capacity

Max. Tensile **T**: 35586 N [8000 lb]

Max. Compressive **C**: 71171 N [16000 lb]

Max. Moment (**M_x/M_y**): 2825 Nm [25000 in-lb]

Max. Moment (**M_z**): 2825 Nm [25000 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

⌀
 DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE

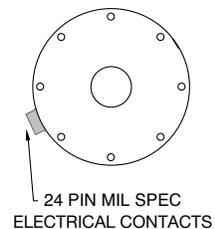
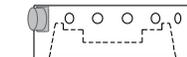
THIRD ANGLE PROJECTION

ALL DOWEL HOLES ARE SF (SLIP FIT).
 LOCATIONAL TOLERANCE ±.0005" OR [±.013MM]

METRIC THREADS COURSE PITCH

IMPERIAL ([IN.])
 0.00 = ±.01
 0.000 = ±.005
 0.0000 = ±.0005

METRIC (MM)
 [0] = [±.25]
 [0.0] = [±.13]
 [0.00] = [±.013]



Model	Robot Side	Description	Specification
RHC-4	OHCC-021	24 Pin Mil. Spec. Contacts	24 Pin @ 3 AMPS

RHC-4-T (TOOLING SIDE)

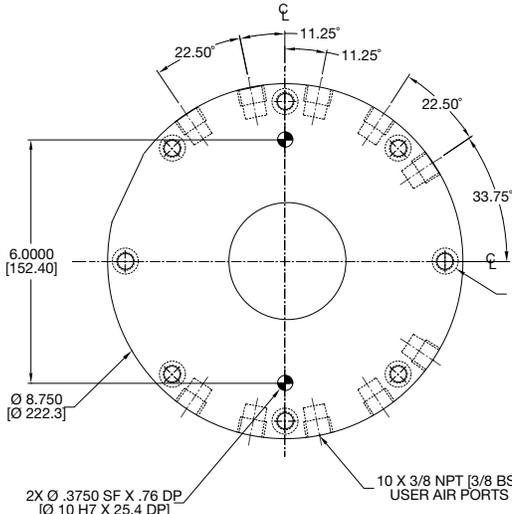
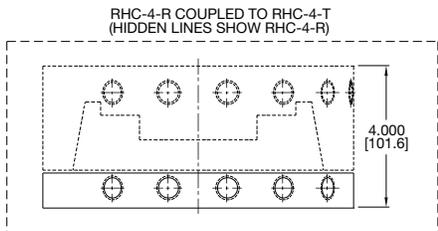
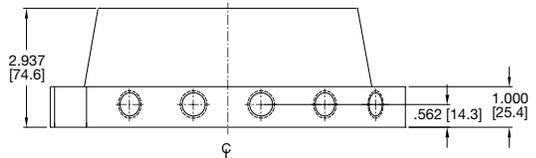
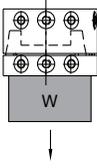
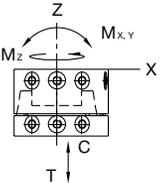
Automatic Tool Changers | Technical Specifications | Dimensions

RHC-4-T Specification:

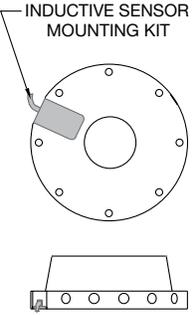
Max. Payload (**W**): 454 Kg [1000 lbs]
 Weight: 4.35 Kg [9.61 lbs]

Loading Capacity

Max. Tensile **T**: 35586 N [8000 lb]
 Max. Compressive **C**: 71171 N [16000 lb]
 Max. Moment (**M_x/M_y**): 2825 Nm [25000 in-lb]
 Max. Moment (**M_z**): 2825 Nm [25000 in-lb]



8X 7/16-20 X .75 DP [M12 X 19 DP] (NEARSIDE)
 C'BORE FOR 3/8 SHCS X .375 DP [M10 SHCS X 9.5 DP] (FARSIDE)
 EQUALLY SPACED ON Ø 7.875 [Ø 200.0] B.C.



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

\varnothing	\triangle	\oplus	\ominus	IMPERIAL ([IN.])	METRIC (MM)
DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCAL TOLERANCE ±.0005" OR [±.013MM]	METRIC THREADS COURSE PITCH	0.00 = ±.01 0.000 = ±.005 0.0000 = ±.0005	[0] = [±.25] [0.0] = [±.13] [0.00] = [±.013]

Model	Tool Side	Description	Specification
RHC-4	OHCC-027	24 Pin Mil. Spec. Contacts	24 Pin @ 3 AMPS
	OHCC-023	24 Wire Single Pigtail Connector	
	OHCC-022	24 Wire Double Pigtail Connector	

CH SERIES

Cylindrical Horizontal Compliance Device | Features and Benefits

Flexibility of the tool:

Cylindrical Horizontal compliance devices are used for inserting components that may be misaligned with the tool. They allow a horizontal displacement that compensates for part placing inaccuracies.

For precision applications:

The use of high quality components allow to get centering repeatability from 0.02mm and angular repeatability from $\pm 10^\circ$.

Harsh environments:

The enclosed design of this series allows them to be used in harsh environments.

Spring assist:

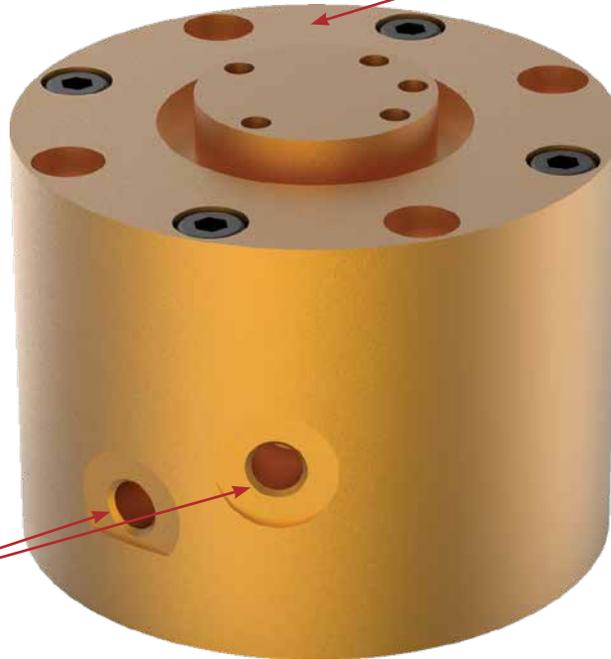
Due to the optional spring assist, compliance may be used in single acting mode.

Spring Assist

Spring assist option allows to center the tool (RA) or to release the tooling (RL). It also allows the use in single acting mode

Quality Components

Made from aluminum alloy hard coat anodization. Main components are made of hardened and precision ground steel



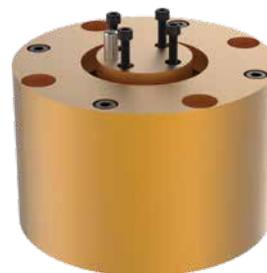
Air Ports

Side or top airports
(top ports require O-rings)

Mounting Information



The compliance is located using a pilot boss and a dowel pin and assembled using 4 or 6 through body screws



Tooling is located using a centering pin and a dowel pin and assembled using 4 screws

Cylindrical Horizontal Compliance Device | Technical Information | Dimensions

Pneumatic Specification

Pressure Range (w/o springs): 2-7 bar [30-100 psi]
 Pressure Range (w/springs CH-50): 3-7 bar [43-100 psi]
 Pressure Range (w/springs): 4-7 bar [60-100 psi]
 Cylinder Type: Double Acting, Double Acting Spring Assist, or Single Acting Spring Return
 Dynamic Seals: Internally Lubricated Buna-N
 Valve Required to Actuate: Double Acting: 4-way, 2-Position; Single Acting (-RL or -RA Option): 3-way, 2-Position

Temperature Operating Range

Buna-N-Seals (Standard): -25°~80° C [-10°~180° F]

Maintenance Specification

Expected Life: Normal Application: 5 Million Cycles
 With Preventative Maintenance: 6+ Million Cycles
 Field Repairable: Yes
 Seal Repair Kits Available: Yes

Air Quality Requirements

Air Filtration: 40 Microns or Better
 Air Lubrication: Not Necessary*
 Air Humidity: Low Moisture Content (Dry)
 (*)Addition of lubrication will greatly increase service life.

How to Order

Base Model
Spring Assist
Misalignment

CH-50
-
RA
-
XX

CH-50

CH-80

CH-110

CH-140

CH-165

RA

RL

—

XX

—

Special Misalignment x 10
(ie: 15 is for ± 1.5 mm)

Leave Blank. Standard Capability

Tool Recentering

Tool Release

Leave Blank. No Spring Option (Standard)

Size	Centering Force Nm [in-lb]	Max. Payload Kg [lbs]
CH-50	322 [74]	2 [4.4]
CH-80	1035 [232]	8 [17.6]
CH-110	1660 [373]	14 [30.8]
CH-140	3170 [712]	30 [66.1]
CH-165	4140 [931]	40 [88.2]

CH-50P

Cylindrical Horizontal Compliance Device | Technical Information | Dimensions

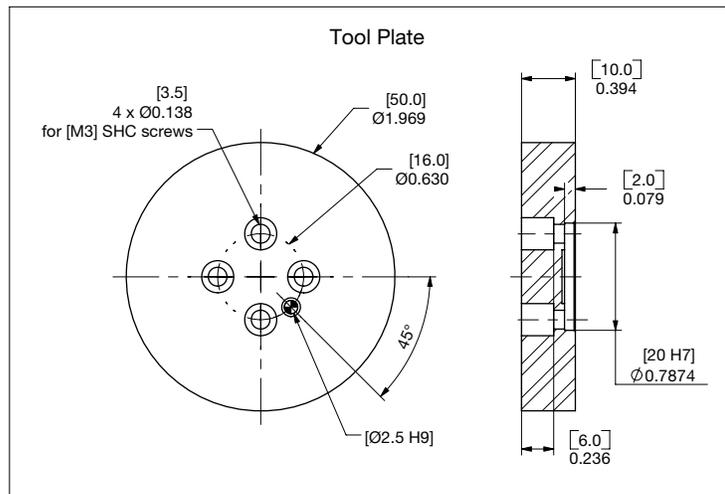
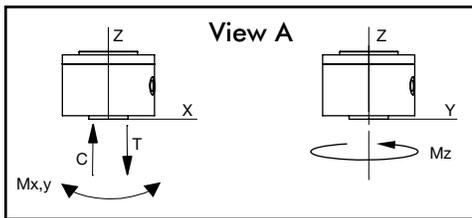
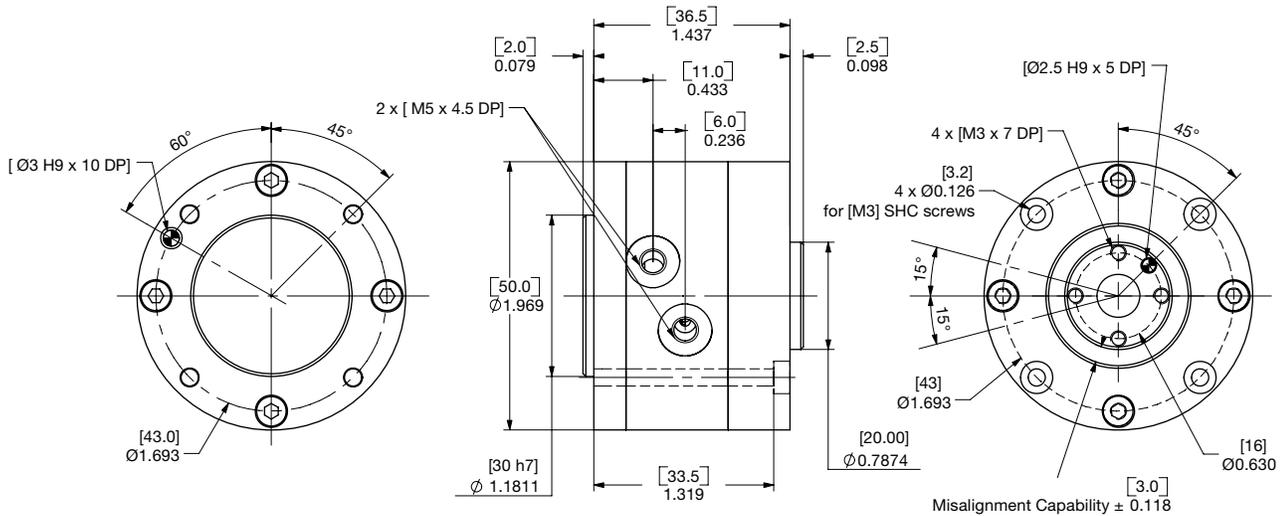


CH-50P Specification:

Centering Force @ 7 bar [100 psi]: 322 N [74 lbs]
 Max. Payload: 2 Kg [4.4 lbs]
 Misalignment Capability: ± 3 mm [± 0.12 in]
 Weight: 0.195 Kg [0.43 lbs]
 Cylinder Bore: 34 mm [1.34 in]
 Displacement: 5.2 cm³ [0.32 in³ lbs]
 Actuation: 0.07 sec [0.07 sec]
 Repeatability: ± 0.02 mm [± 0.0008 in]
 Angular Repeatability: ± 10 mm

Loading Capacity (View A):

Max. Tensile **T**: 75 N [17 lb]
 Max. Compressive **C**: 75 N [17 lb]
 Max. Moment (**M_x/M_y**): 2 Nm [17.7 in-lb]
 Max. Moment (**M_z**): 1 Nm [8.8 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW



DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE



THIRD ANGLE PROJECTION



ALL DOWEL HOLES ARE SF (SLIP FIT).
 LOCATIONAL TOLERANCE
 $\pm 0.0005^\circ$ OR [± 0.13 MM]



METRIC THREADS
 COURSE PITCH

IMPERIAL ([IN.])
 0.00 = ± 0.01
 0.000 = ± 0.005
 0.0000 = ± 0.0005

METRIC (MM)
 [0] = [± 0.25]
 [0.0] = [± 0.13]
 [0.00] = [± 0.13]

CH-80P Specification:

Centering Force @ 7 bar [100 psi]: 1035 N [232 lbs]

Max. Payload: 8 Kg [17.6 lbs]

Misalignment Capability: ± 5 mm [± 0.20 in]

Weight: 0.750 Kg [1.65 lbs]

Cylinder Bore: 60 mm [2.37 in]

Displacement: 26.8 cm³ [1.64 in³ lbs]

Actuation: 0.08 sec [0.08 sec]

Repeatability: ± 0.02 mm [± 0.0008 in]

Angular Repeatability: ± 10 mm



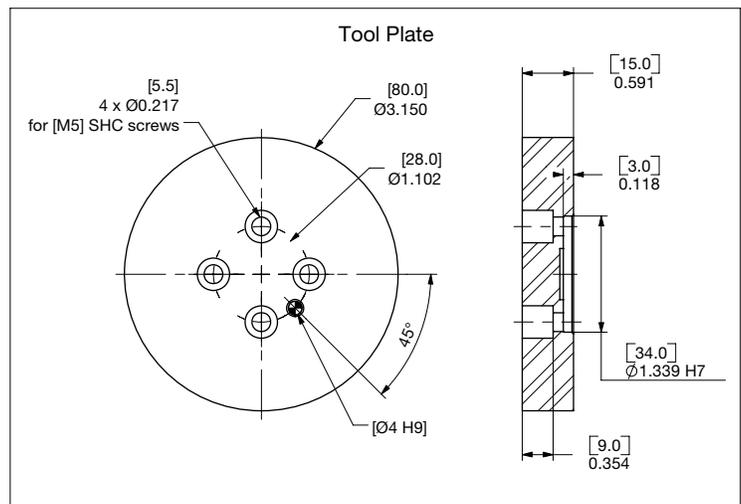
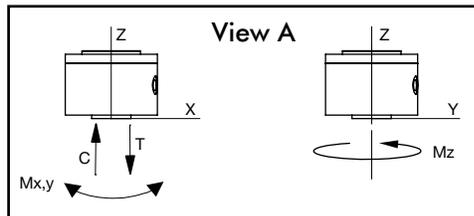
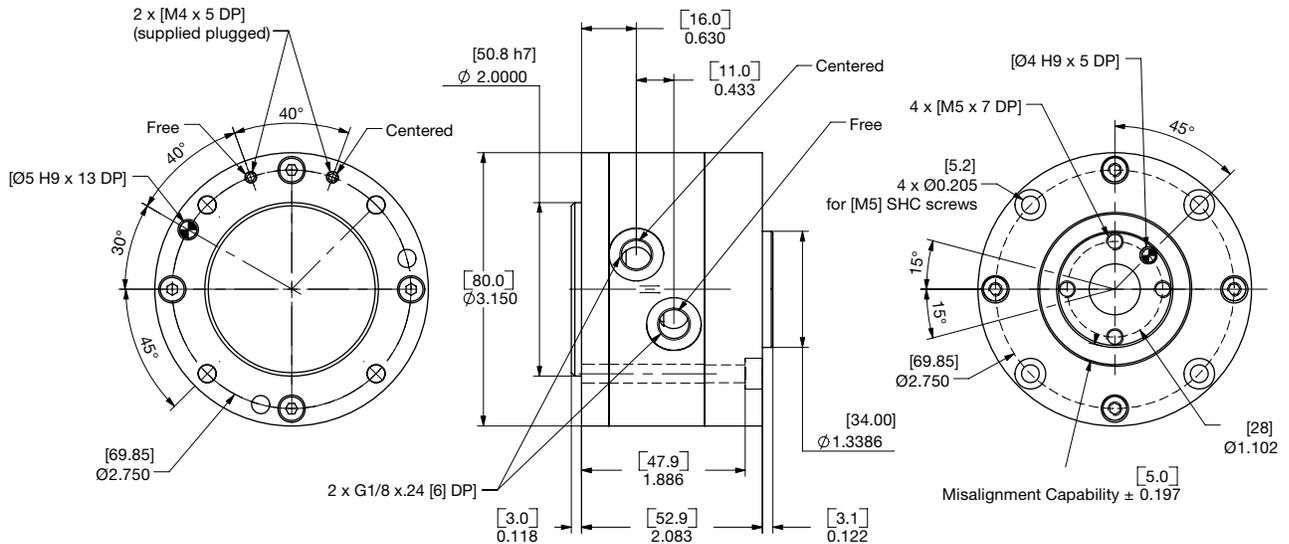
Loading Capacity (View A):

Max. Tensile **T**: 160 N [36 lb]

Max. Compressive **C**: 160 N [36 lb]

Max. Moment (**M_x/M_y**): 8 Nm [71 in-lb]

Max. Moment (**M_z**): 6 Nm [53 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCAL TOLERANCE $\pm .0005$ " OR [$\pm .013$ MM]
	IMPERIAL ([IN.])	METRIC (MM)
METRIC THREADS COURSE PITCH	0.00 = $\pm .01$ 0.000 = $\pm .005$ 0.0000 = $\pm .0005$	[0] = [$\pm .25$] [0.0] = [$\pm .13$] [0.00] = [$\pm .013$]

CH-110P

Cylindrical Horizontal Compliance Device | Technical Information | Dimensions

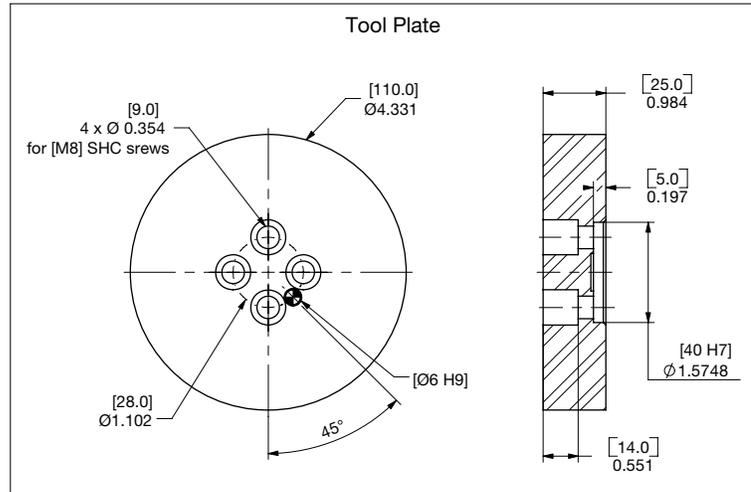
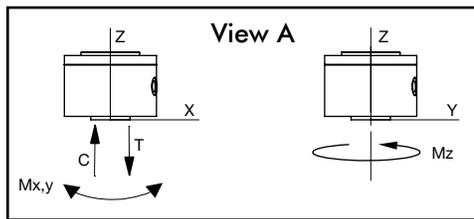
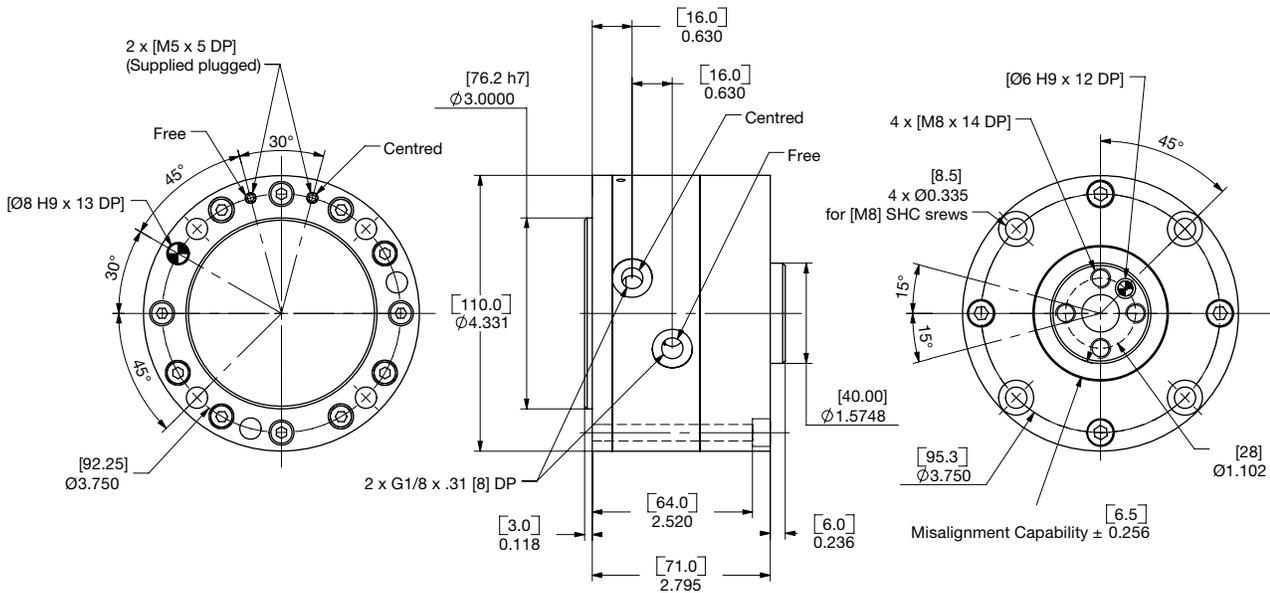


CH-110P Specification:

Centering Force @ 7 bar [100 psi]: 1660 N [373 lbs]
 Max. Payload: 14 Kg [30.8 lbs]
 Misalignment Capability: ± 6.5 mm [± 0.25 in]
 Weight: 2.10 Kg [4.6 lbs]
 Cylinder Bore: 76 mm [3.0 in]
 Displacement: 56 cm³ [3.42 in³ lbs]
 Actuation: 0.1 sec [0.1 sec]
 Repeatability: ± 0.04 mm [± 0.0016 in]
 Angular Repeatability: ± 15 mm

Loading Capacity (View A):

Max. Tensile **T**: 190 N [43 lb]
 Max. Compressive **C**: 190 N [43 lb]
 Max. Moment (**M_x/M_y**): 12 Nm [106 in-lb]
 Max. Moment (**M_z**): 18 Nm [159 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

<p>DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE</p>	<p>THIRD ANGLE PROJECTION</p>	<p>ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE $\pm 0.0005^\circ$ OR [± 0.013MM]</p>
<p>METRIC THREADS COURSE PITCH</p>	<p>IMPERIAL ([IN.])</p> <p>0.00 = ± 0.01 0.000 = ± 0.005 0.0000 = ± 0.0005</p>	<p>METRIC (MM)</p> <p>[0] = [± 0.25] [0.0] = [± 0.13] [0.00] = [± 0.13]</p>

CH-140P Specification:

Centering Force @ 7 bar [100 psi]: 3170 N [712 lbs]

Max. Payload: 30 Kg [66.1 lbs]

Misalignment Capability: ± 8 mm [± 0.31 in]

Weight: 4.31 Kg [9.5 lbs]

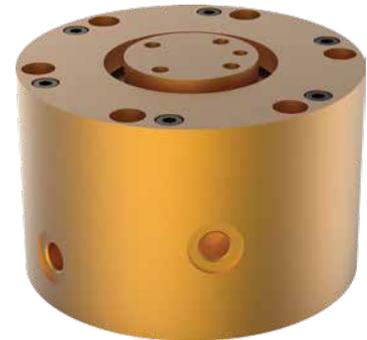
Cylinder Bore: 105 mm [4.13 in]

Displacement: 148 cm³ [9.03 in³ lbs]

Actuation: 0.02 sec [0.02 sec]

Repeatability: ± 0.06 mm [± 0.0024 in]

Angular Repeatability: ± 20 mm



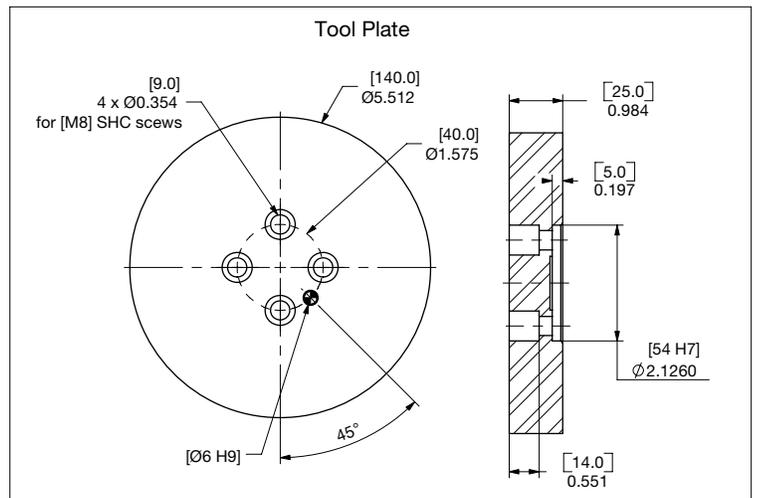
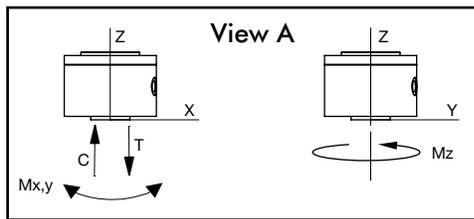
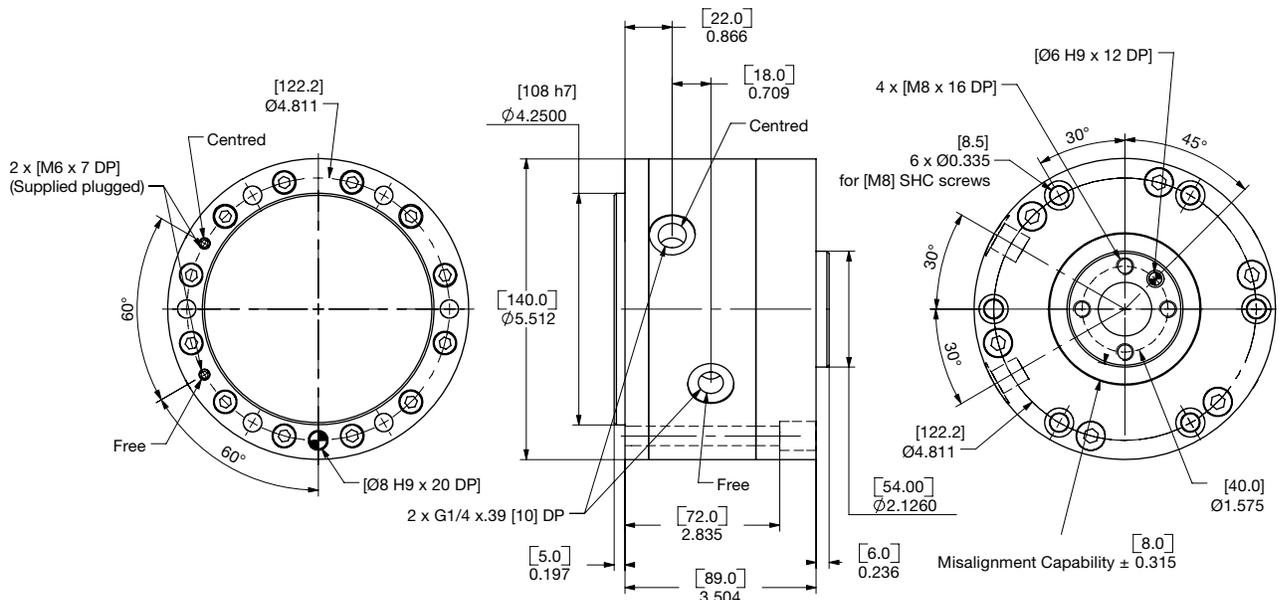
Loading Capacity (View A):

Max. Tensile **T**: 225 N [50 lb]

Max. Compressive **C**: 225 N [50 lb]

Max. Moment (**M_x/M_y**): 19 Nm [168 in-lb]

Max. Moment (**M_z**): 20 Nm [177 in-lb]

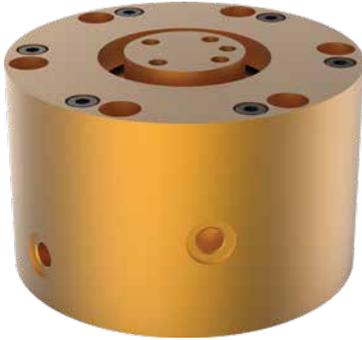


UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE $\pm .0005$ " OR [$\pm .013$ MM]
	IMPERIAL ([IN.])	METRIC (MM)
METRIC THREADS COURSE PITCH	0.00 = $\pm .01$ 0.000 = $\pm .005$ 0.0000 = $\pm .0005$	[0] = [$\pm .25$] [0.0] = [$\pm .13$] [0.00] = [$\pm .013$]

CH-165P

Cylindrical Horizontal Compliance Device | Technical Information | Dimensions



CH-165P Specification:

Centering Force @ 7 bar [100 psi]: 4140 N [931 lbs]

Max. Payload: 40 Kg [88.2 lbs]

Misalignment Capability: ± 12 mm [± 0.47 in]

Weight: 8.7 Kg [19.2 lbs]

Cylinder Bore: 120 mm [4.72 in]

Displacement: 236 cm³ [14.40 in³ lbs]

Actuation: 0.36 sec [0.36 sec]

Repeatability: ± 0.06 mm [± 0.0024 in]

Angular Repeatability: ± 20 mm

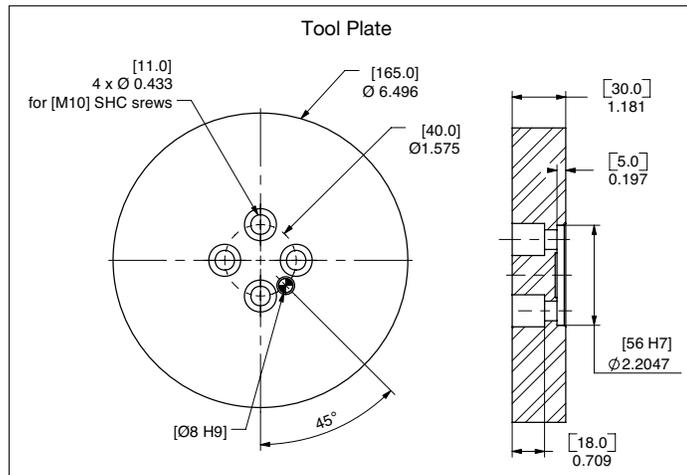
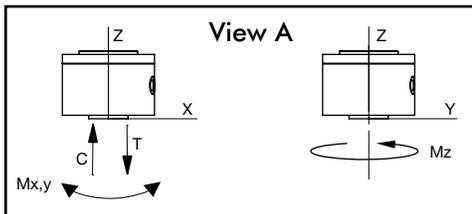
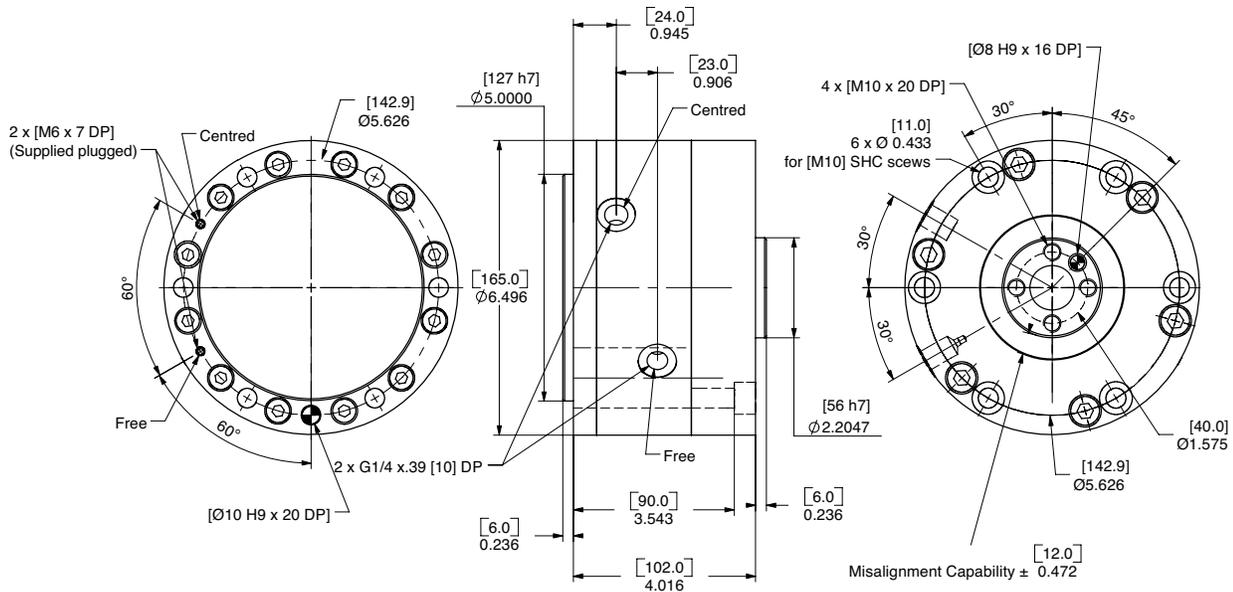
Loading Capacity (View A):

Max. Tensile **T**: 230 N [52 lb]

Max. Compressive **C**: 230 N [52 lb]

Max. Moment (**M_x/M_y**): 23Nm [203 in-lb]

Max. Moment (**M_z**): 28 Nm [248 in-lb]



UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS SHOWN BELOW

DIMENSIONS ARE SYMMETRICAL ABOUT CENTERLINE	THIRD ANGLE PROJECTION	ALL DOWEL HOLES ARE SF (SLIP FIT). LOCATIONAL TOLERANCE $\pm .0005^\circ$ OR [$\pm .013$ MM]
	IMPERIAL ([IN.])	METRIC (MM)
METRIC THREADS COURSE PITCH	0.00 = $\pm .01$ 0.000 = $\pm .005$ 0.0000 = $\pm .0005$	[0] = [$\pm .25$] [0.0] = [$\pm .13$] [0.00] = [$\pm .013$]

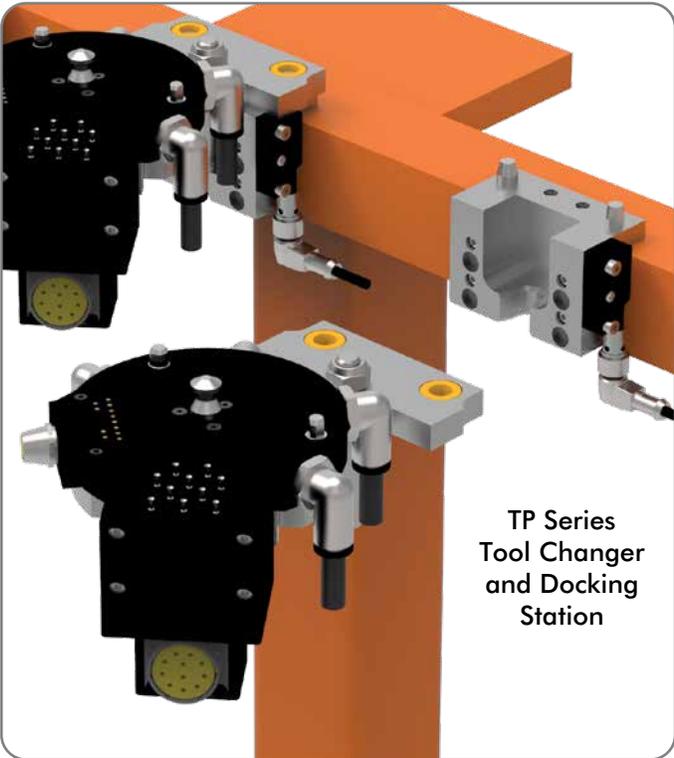
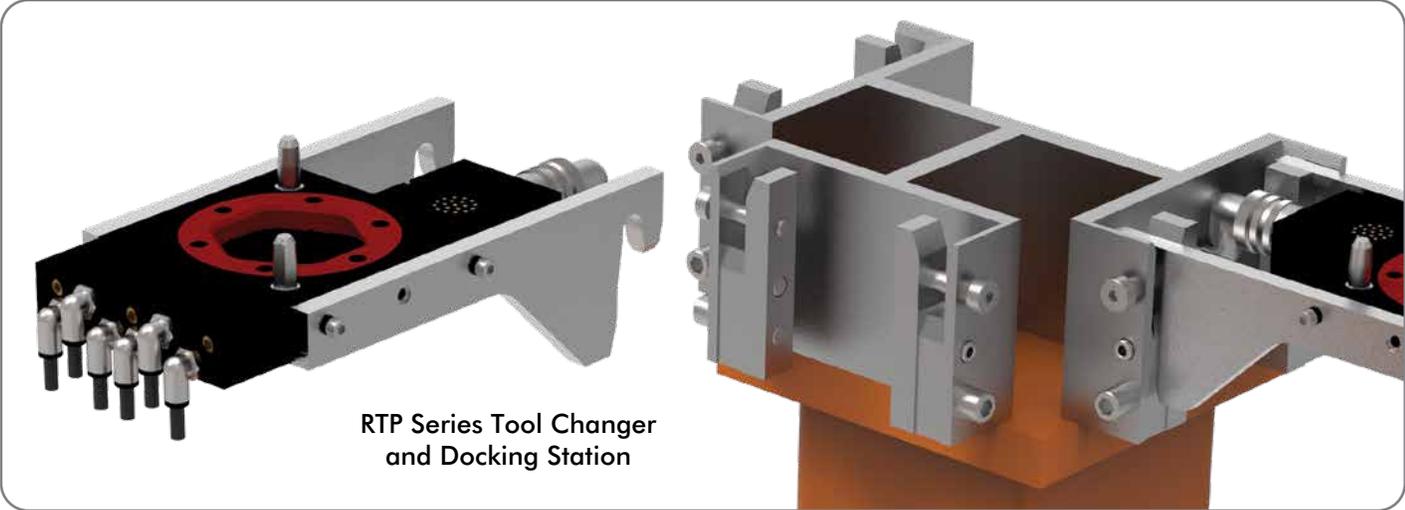
ROBOTIC TOOLING SOLUTIONS

Tool Changer Docking Station

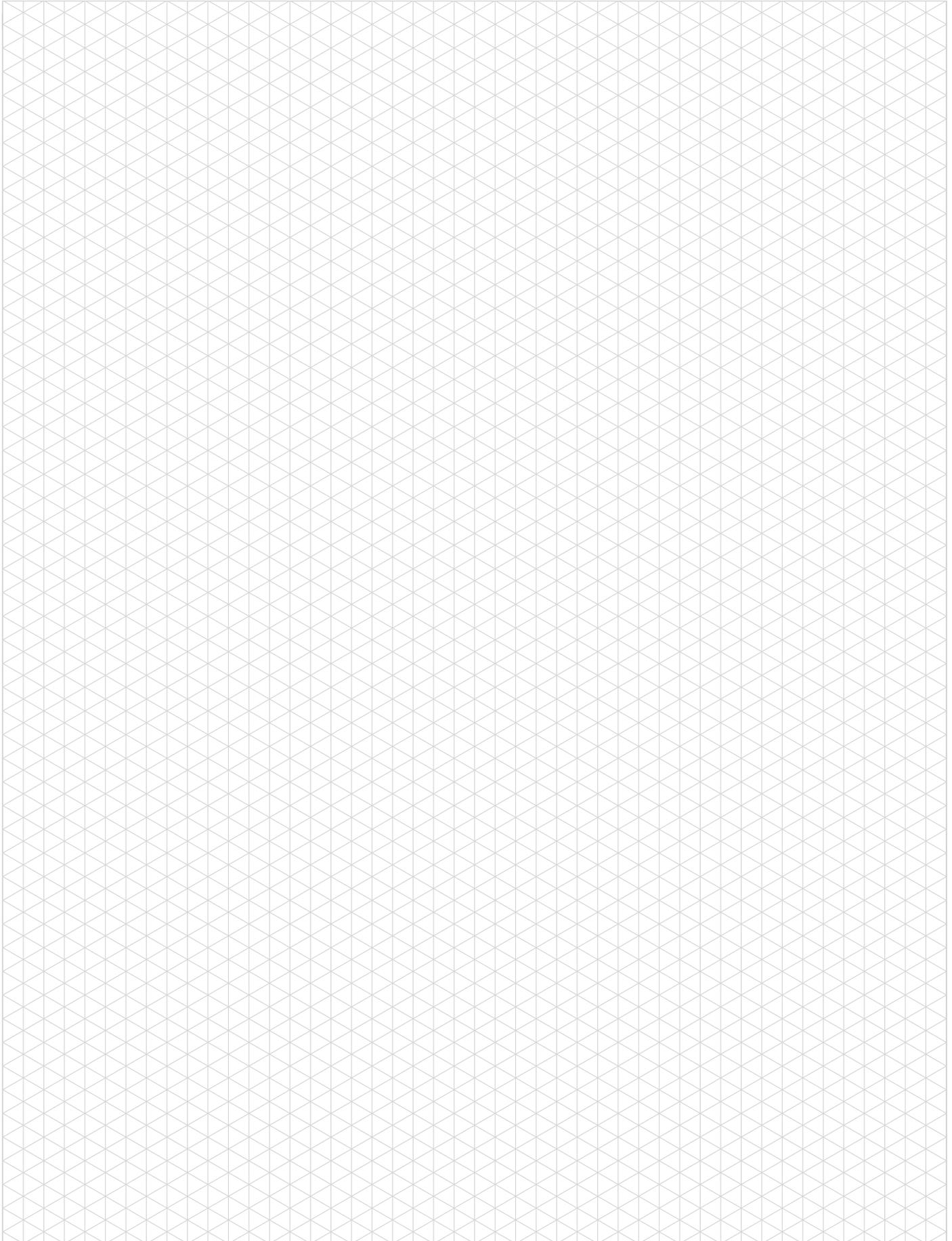
Destaco offers custom and standard Docking Stations to fit customers needs. Please contact Destaco Sales for more information.

Key Features:

- Allows for quick changing of tooling
- Reducing machine down-time
- Safely stores tooling when not in use
- Standard or custom stations



NOTES



OUR PORTFOLIO OF PRODUCTS



End Effectors (EE)

- Tool Changers
- End-of-Arm Tooling
- Vacuum Products
- Palletizing Solutions



Grippers (GR)

- Electric Grippers
- Pneumatic and Sheet Metal Grippers
- Rotates
- Slides



Indexers (IN)

- Precision Conveyors
- Dial Indexers
- Shaft and Flange Indexers
- Part Handlers



Power Clamps (PC)

- Power Clamps
- Pin Clamps and Packages
- Pivot Units
- Power Cylinders



Manual Clamps (MC)

- Hold Down
- Squeeze Action
- Plunger, Hook and Latch
- Pneumatic Toggle and Swing



Sheet Metal Grippers (SM)

- Accelerate® Press Room
- Cam Type
- Toggle Lock



GLOBAL LOCATIONS

NORTH AMERICA

Corporate Headquarters

Auburn Hills, Michigan
Toll Free: 1.888.DESTACO
Marketing: marketing@destaco.com

Global Technology Center

Auburn Hills, Michigan
Tel: 1.248.836.6700
Customer Service: customerservice@destaco.com

Mt. Juliet, Tennessee
Tel: 1.888.DESTACO
Customer Service: customerservice@destaco.com

Wheeling, Illinois
Tel: 1.800.645.5207
Customer Service: camco@destaco.com

Red Wing, Minnesota (Central Research Laboratories)
Tel: 651.385.2142
Customer Service: sales@centres.com

ASIA

Thailand
Tel: +66-2-326-0812
Customer Service: info@destaco.com

China
Tel: +86-21-6081-2888
Customer Service: china@destaco.com

India
Tel: +91-80-41123421-426
Customer Service: india@destaco.com

EUROPE

Germany
Tel: +49-6171-705-0
Customer Service: europe@destaco.com

France
Tel: +33-4-73545001
Customer Service: france@destaco.com

Great Britain
Tel: +44-1902-797980
Customer Service: uk@destaco.com

Spain
Tel: +34-936361680
Customer Service: spain@destaco.com

Netherlands
Tel: +31-297285332
Customer Service: benelux@destaco.com



GLOBAL LOCATIONS

NORTH AMERICA

Corporate Headquarters

Auburn Hills, Michigan
Toll Free: 1.888.DESTACO
Marketing: marketing@destaco.com

Global Technology Center

Auburn Hills, Michigan
Tel: 1.248.836.6700
Customer Service: customerservice@destaco.com

Mt. Juliet, Tennessee
Tel: 1.888.DESTACO
Customer Service: customerservice@destaco.com

Wheeling, Illinois
Tel: 1.800.645.5207
Customer Service: camco@destaco.com

Red Wing, Minnesota (Central Research Laboratories)
Tel: 651.385.2142
Customer Service: sales@centres.com

ASIA

Thailand
Tel: +66-2-326-0812
Customer Service: info@destaco.com

China
Tel: +86-21-6081-2888
Customer Service: china@destaco.com

India
Tel: +91-80-41123421-426
Customer Service: india@destaco.com

EUROPE

Germany
Tel: +49-6171-705-0
Customer Service: europa@destaco.com

France
Tel: +33-4-73545001
Customer Service: france@destaco.com

Great Britain
Tel: +44-1902-797980
Customer Service: uk@destaco.com

Spain
Tel: +34-936361680
Customer Service: spain@destaco.com

Netherlands
Tel: +31-297285332
Customer Service: benelux@destaco.com