

BOSS™ LPS Products

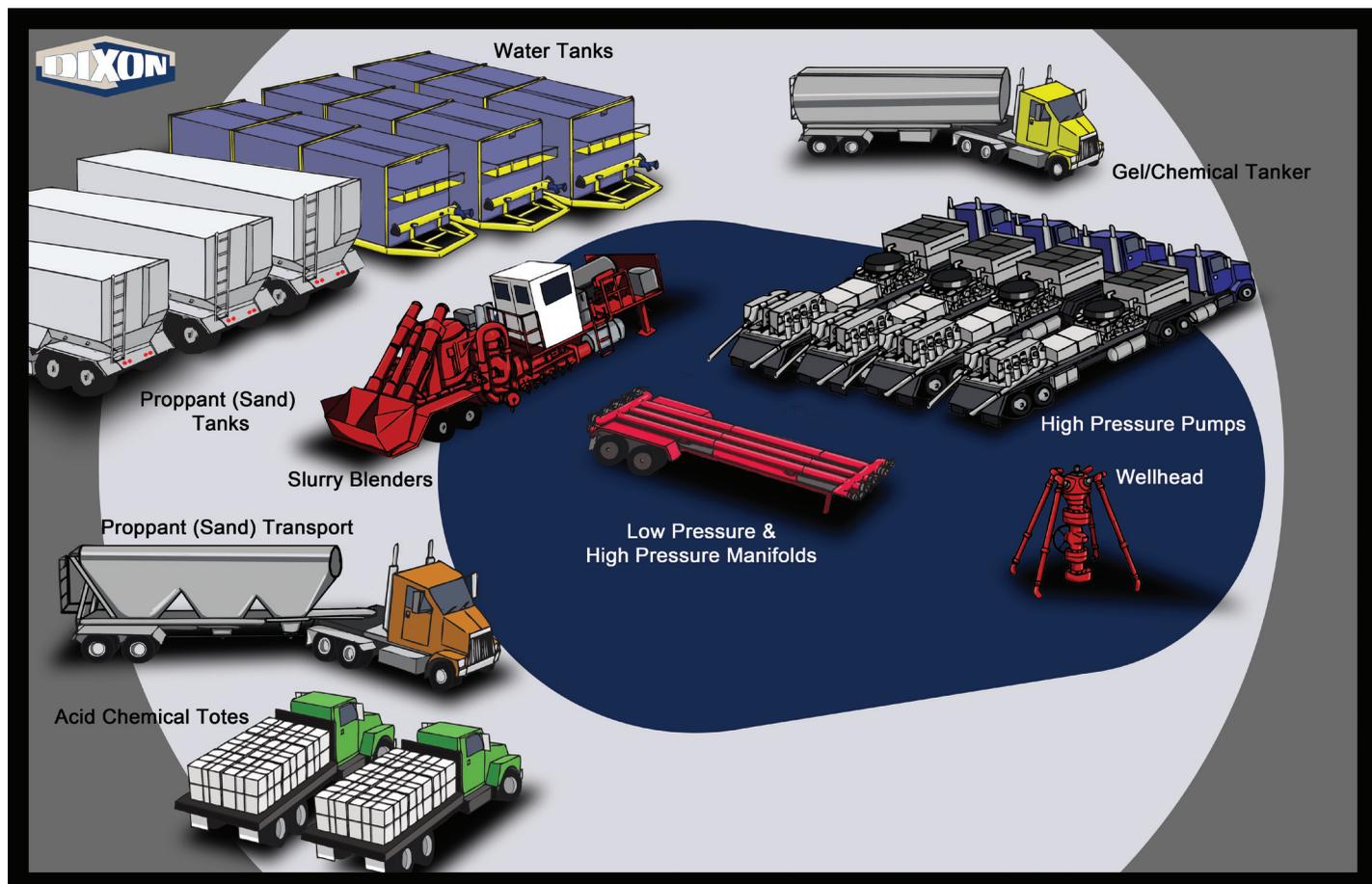
Low Pressure Systems

Dixon® has been building a credible reputation for over 100 years, demonstrating that it is a responsible manufacturer producing safe, reliable and long lasting products! Open communication with customers and following through with solutions, strengthens trust as a supplier of both current and future products.



Hydraulic Fracturing Site

Boss™ LPS (Low Pressure System) products are used in many of the applications found at hydraulic fracturing sites from the water source up to high pressure pumps.



One-Piece Suction Manifolds

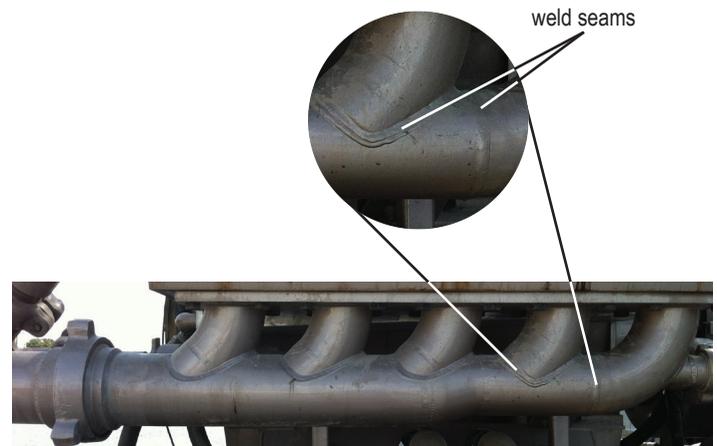
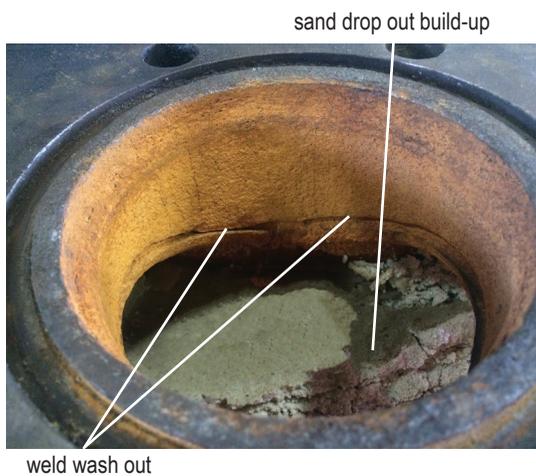
Dixon® developed its manifold design as a result of hydraulic fracturing companies experiencing pump cavitation due to proppant dropout and failing welds.

Customer feedback on traditional fabricated manifold designs:

- sand dropout causes flow restrictions and pump cavitation
- welded pipe manifolds create turbulence, causing excessive abrasion on interior walls
- leaks along the weld seams
- acidizing well treatments attack weld seams causing leaks
- regular repairs consisting of re-welding and/or using rubber washers with screws
- CO₂ transfers at -30°F (-34°C) temperatures causes performance issues

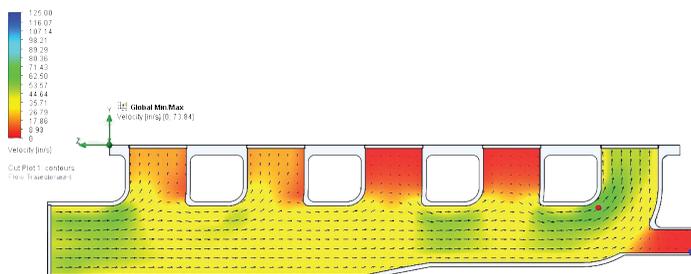
Intake Manifold Lab & Field Testing

Sand Drop Out and Weld Failure



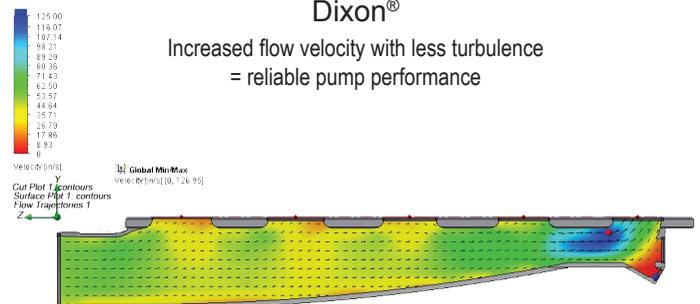
Fluid Velocity Simulation (inches per second)

Welded Pipe



Dixon®

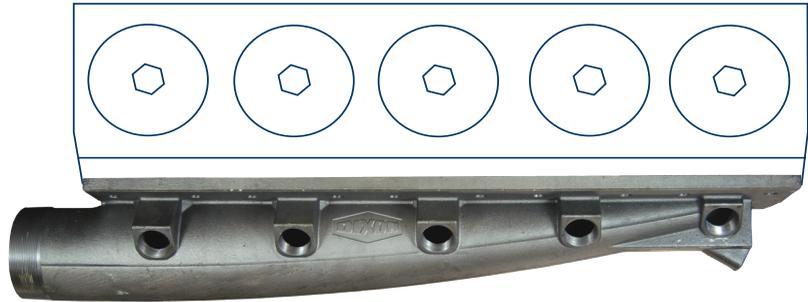
Increased flow velocity with less turbulence
= reliable pump performance



3 Port and 5 Port Intake Manifolds (non-dressed)



3PORTM-6T



5PORTM-6T

Application:

- used at hydraulic fracturing sites for transfer of water, brine, water-based chemicals, water-based acids, CO₂, and gelatinous proppant (sand) slurry into pump fluid ends (FE)

Size:

- 6" intake

Materials:

- manifold: iron
- O-rings: Buna-N

Features:

- manifold designed for efficient fluid flows and reduction of pump cavitation caused by sand fallout (see photo on page 3)
- single cast unit - no premature leakage/failure from deteriorating welds (see photo on page 3)
- cold pressure and impacted testing completed at **-62° F (-52° C)** with no leaks, cracks or damage
- side ports designed for easy pump cylinder inspection
- reduced height for ease of installation
- O-rings and bolts included with all configurations
- dressed assembly components are available hand-tight or with two-part epoxy bond
- assembly serial number and fabrication date recorded on attached identification plate

Specifications:

- 5 port base plate has slotted bolt pattern accommodating both Weir SPM and Gardner Denver stimulation frac pumps
- 3 port base plate bolt pattern accommodates Weir SPM stimulation frac pumps
- assemblies rated at **350 PSI** WP, pressure tested at **700 PSI**
- undressed weight: 3 port - 162 lbs.
5 port - 187 lbs.

Approval:

- iron meets ASTM standards

Intake Manifolds (non-dressed)

Inlet Size	Part #	Description
6"	3PORTM-6T	6" male NPT manifold with 2" female NPT ports (3 side and 1 end) and a 1" auxiliary port
	3PORTM-6V	6" grooved manifold with 2" female NPT ports (3 side and 1 end) and a 1" auxiliary port
---	O434BU	Buna-N O-ring (3 included with each manifold)
---	PMBT875X175	socket head cap steel screws (12 included with each 3 port manifold)
6"	5PORTM-6T	6" male NPT manifold with 2" female NPT ports (5 side and 1 end) and a 1" auxiliary port (base plate bolt hole pattern fits on both Weir SPM and Gardner Denver fluid ends)
	5PORTM-6V	6" grooved manifold with 2" female NPT ports (5 side and 1 end) and a 1" auxiliary port (base plate bolt hole pattern fits on both Weir SPM and Gardner Denver fluid ends)
---	O439BU	Buna-N O-rings (5 included with each manifold)
---	HHBT875X175	hex head steel screws (20 included with each 5 port manifold)

Intake Manifold Assemblies (dressed)

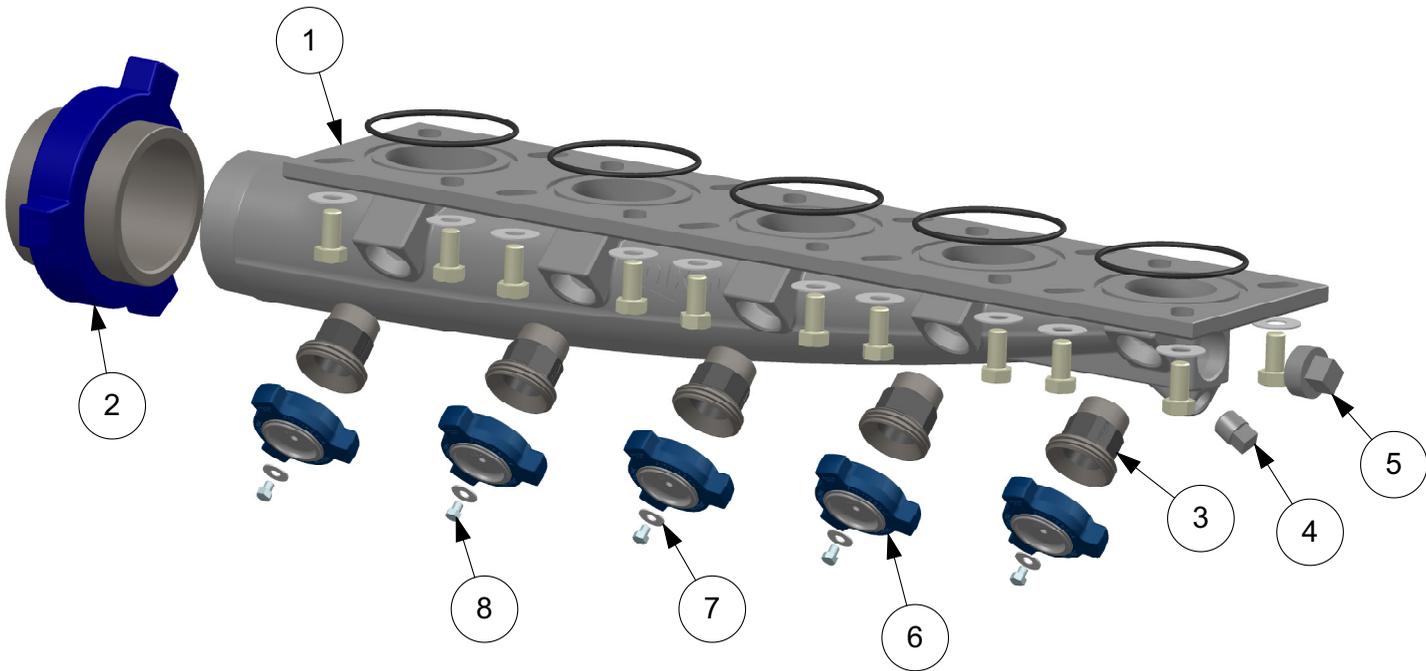
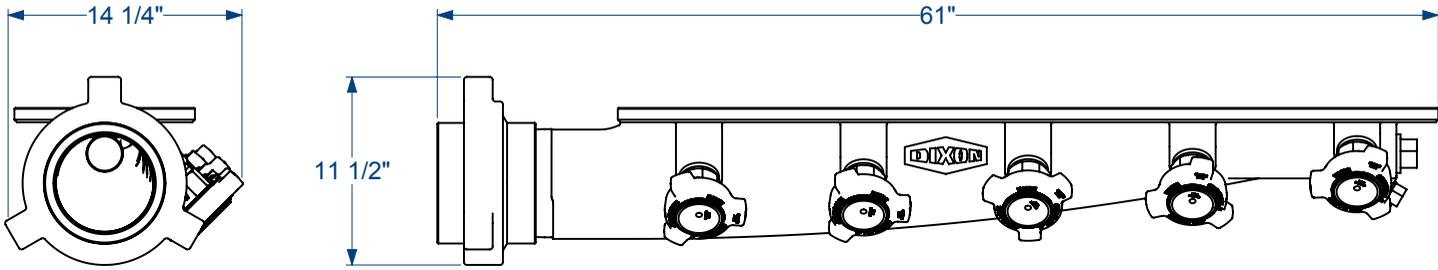
Features:

- 6" HU fig.206 sub (female union side bonded to manifold with two-part epoxy)
- 2" HU fig.206 x male NPT port adapters (bonded to manifold with two-part epoxy)

Fluid End Ports	6" Inlet Style	MNPT Tail Plugs	Base Plate Bolt-hole Pattern	Assembly Part #
3	NPT intake	hand tight, no tape/epoxy	Weir SPM	3PM6T-S3
		two-part, epoxy bonded	Weir SPM	3PM6T-S5
	grooved intake	hand tight, no tape/epoxy	Weir SPM	3PM6V-3
		two-part, epoxy bonded	Weir SPM	3PM6V-5
5	NPT intake	hand tight, no tape/epoxy	Weir SPM and Gardner Denver	5PM6T-5
		two-part, epoxy bonded	Weir SPM and Gardner Denver	5PM6T-S7¹
	grooved intake	hand tight, no tape/epoxy	Weir SPM and Gardner Denver	5PM6V-S5
		two-part, epoxy bonded	Weir SPM and Gardner Denver	5PM6V-S7

¹ Bill of materials (BOM) on page 6.

5PM6T-S7 Manifold BOM



Item	Description	Material	Qty	Part #
1 ¹	5 port zoomie manifold with 6" male NPT inlet includes (5) O-rings, and (20) bolts and washers	iron	1	5PORTM-6T
2	6" fig.206 female NPT sub	steel	1	HU206600
3	2" 206 Series male adapter	iron	5	HUF206200MT
4	1" square head plug	iron	1	SHP100
5	2" square head plug	iron	1	SHP200
6 ¹	2" fig.206 cap	iron/steel	5	HUC206200
7 ¹	1/4" OD flat washer	steel	5	HUWAS125OD
8 ¹	7/16" hex head bolt x 1/2" long	Grade 8 steel	5	HUBT716X050
9 ¹	King Cable™ (cap retention only, not shown above)	steel	5	WSR1

¹ 3 port zoomie manifold includes (3) O-rings, (12) socket head cap screws, and (3) caps, washers, bolts, and King Cables™.

Dixon®, founded in 1916, is a premier manufacturer and supplier of hose couplings, valves, dry-disconnects, swivels, and other fluid transfer and control products. The company's global reach includes a wide range of products for numerous industries including petroleum exploration, refining, transportation, chemical processing, food & beverage, steel, fire protection, construction, mining and manufacturing. Dixon®'s strategic objective is to create solutions that make products safer, leak-free, longer lasting, and always available.

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