

BOSS™ LPS Products

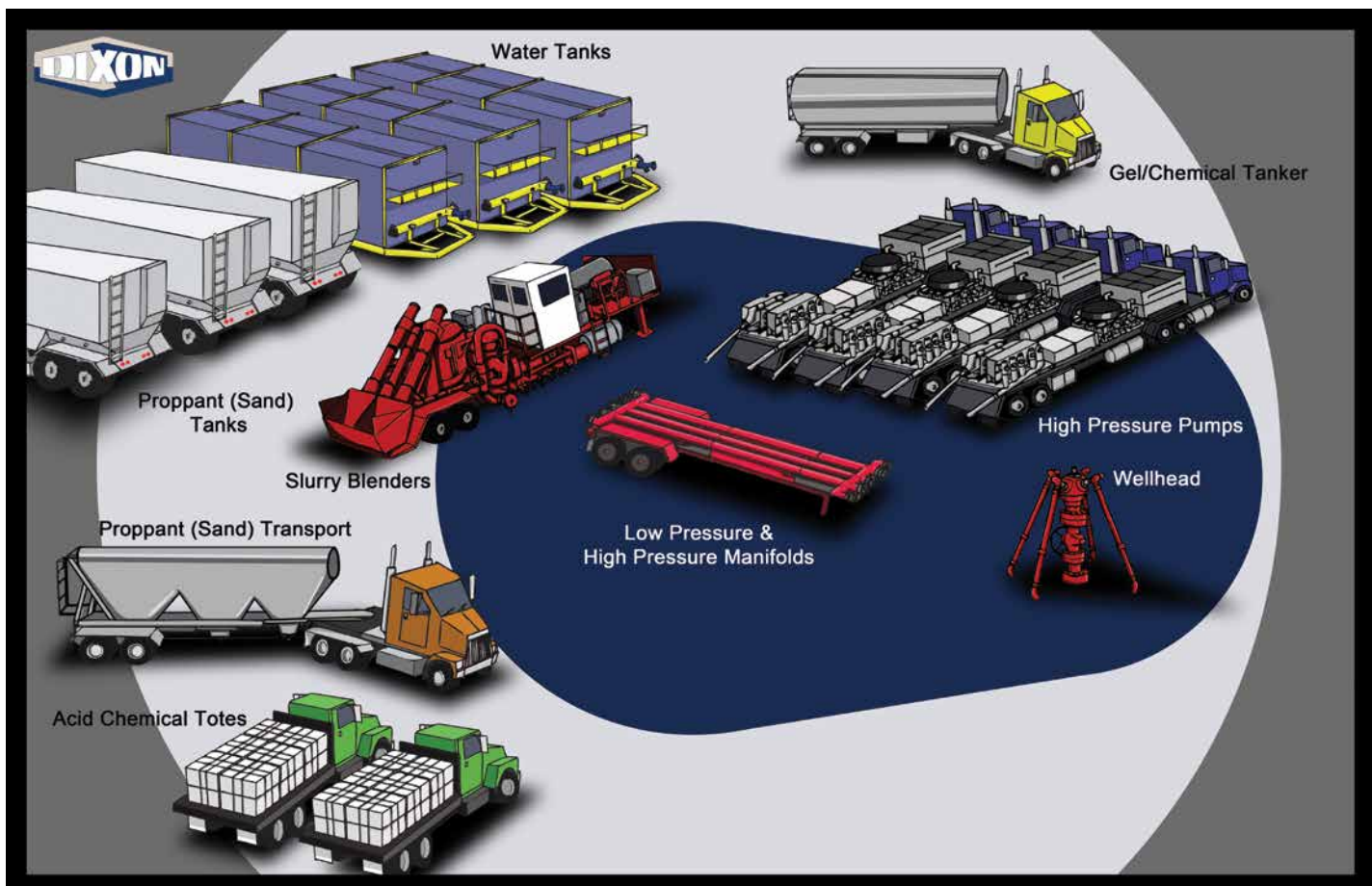
Low Pressure Systems

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

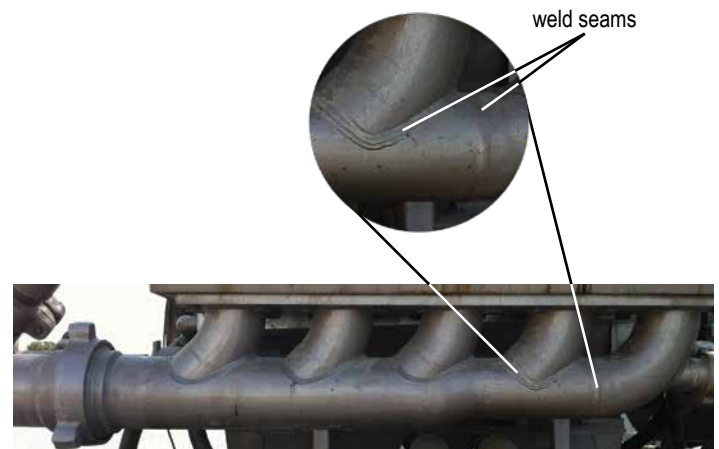
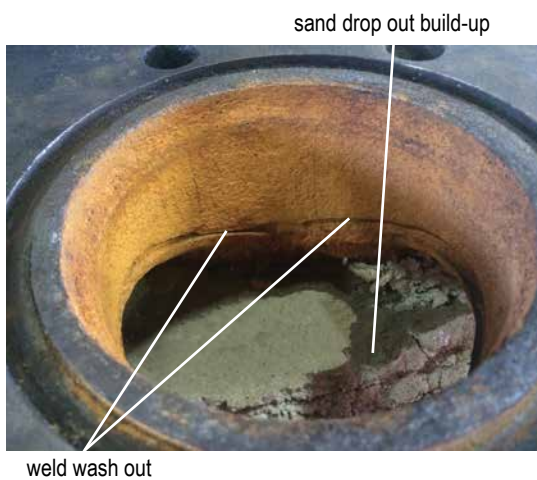
Dixon® developed its manifold design as a result of hydraulic fracturing companies experiencing pump cavitation due to proppant dropout and failing welds.

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

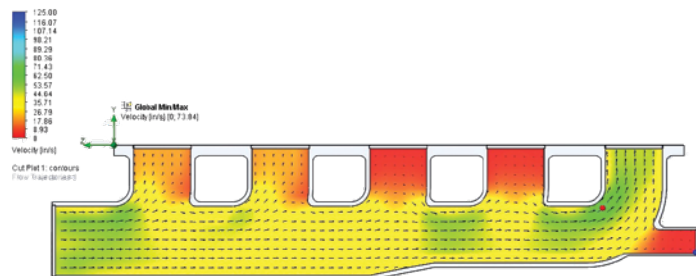
Intake Manifold Lab & Field Testing

Sand Drop Out and Weld Failure



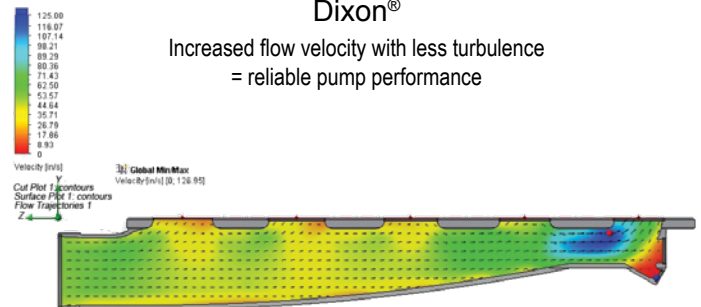
Fluid Velocity Simulation (inches per second)

Welded Pipe

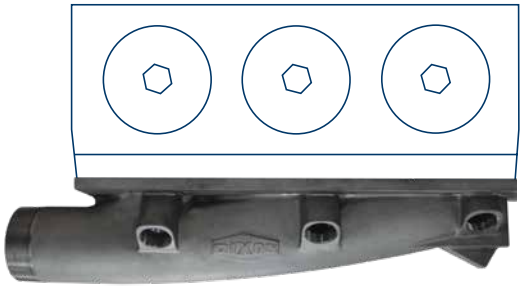


Dixon®

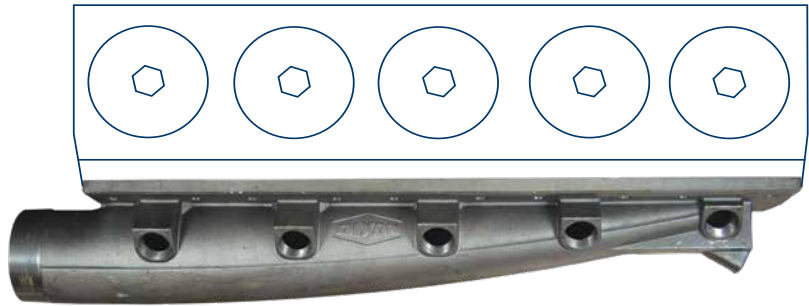
Increased flow velocity with less turbulence
= reliable pump performance



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)

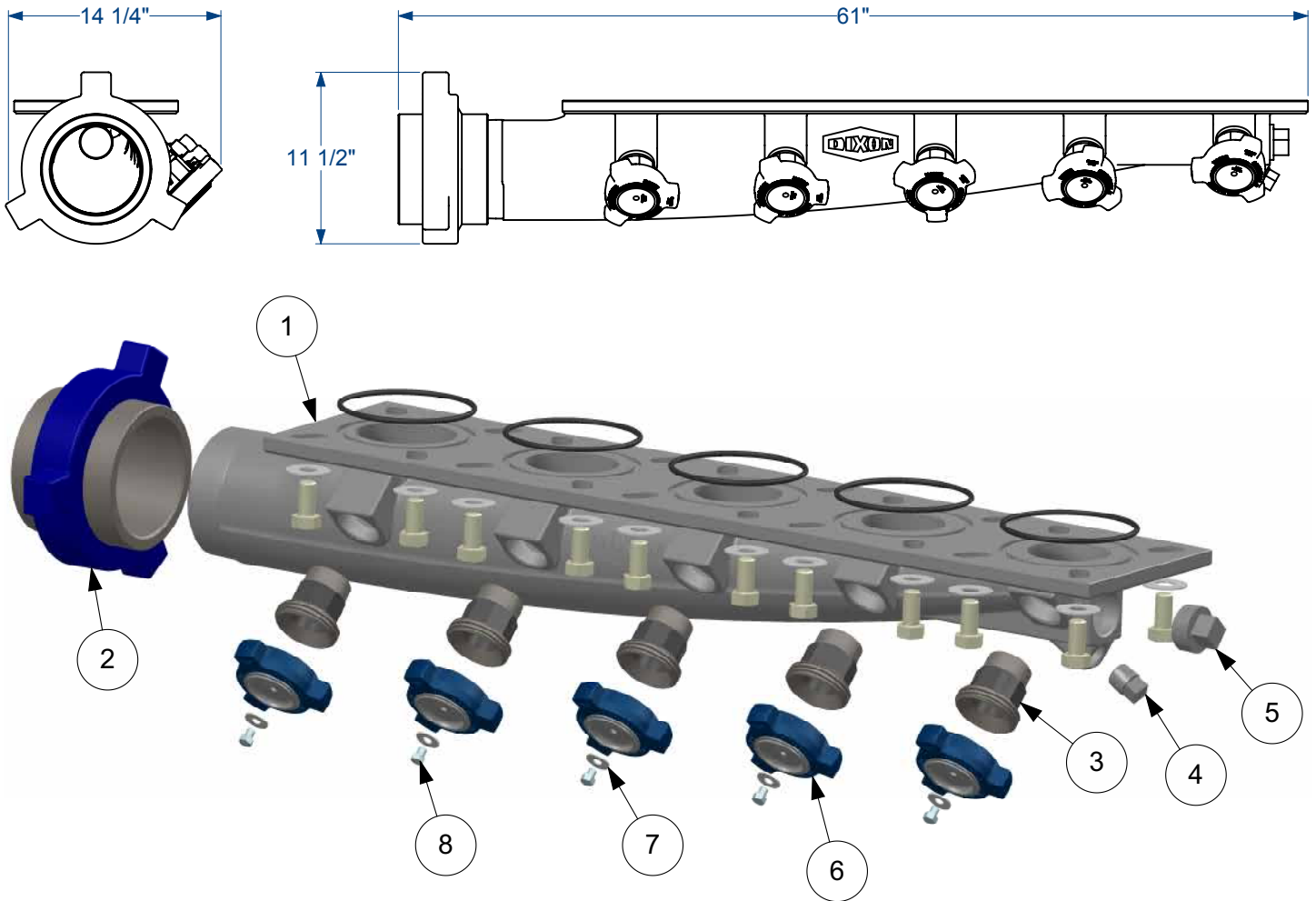
Features:

- 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-S7 ¹
	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 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™.

Additional Boss™ LPS Products



Contact sales@dixonvalve.com or visit dixonvalve.com/bosslps for additional information.

Safety

Dixon® products are designed to work safely for their intended use. The selection of a product for the proper application is of utmost importance.

Users must consider the size, temperature, application, media, pressure, and manufacturer's recommendations when selecting the proper components. Dixon® recommends that all hose assemblies be tested in accordance with the Association for Rubber Products Manufacturer's (ARPM) recommendations and be inspected regularly (before each use) to ensure that they are not damaged or have become loose. Visit ARPMINC.com for more information.

Where safety devices are integral to the coupling, they must be working and utilized. The use of supplementary safety devices such as safety clips or safety cables are recommended.

If any problem is detected, products must be removed from service immediately.

Dixon® is available to consult, train and recommend the proper selection and application of all products we sell. We strongly recommend that distributors and end users make use of Dixon® Testing and Recommendation Services. Call 877.963.4966 or click canada.dixonvalve.com to learn more.

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.

canada.dixonvalve.com • *Customer Service:* **877.963.4966**



The Right Connection®

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