FAST FILL SYSTEMS



Technical Catalog 2016



2525 S East Ave Fresno, CA 93706 USA

559 233-4222

info@deanindustrial.com

www.deanindustrial.com



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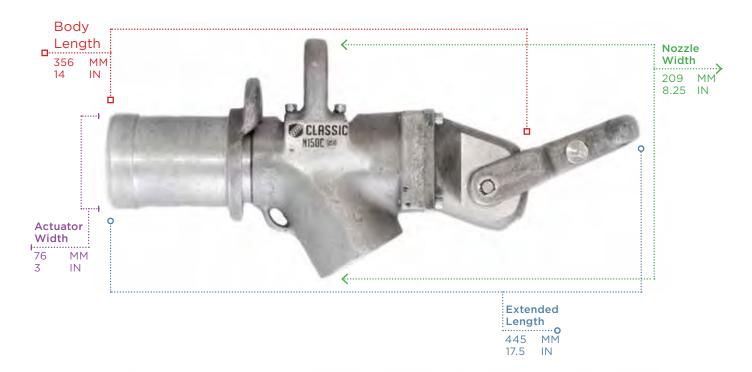
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N150Cp

Classic Diesel Fuel Nozzle

The Classic nozzle contains traditional components that have been in use for decades. This all-metal nozzle provides the operator with a familiar, proven piece of quality equipment that has a long history of being the standard nozzle of the heavy equipment industry.





Max Operating Pressure		Max Flow Rate		Min Flow Rate		Fuel Inlet Port		Weight		Latching Mechanism	
5.17	BAR	567	LPM	94.5	LPM	38.1	MM	3.515	KG	Metal Latching	
75	PSI	150	GPM	25	GPM	1-1/2	IN	7.75	LBS	Dogs	



N150PBp

Pitboss Diesel Fuel Nozzle

The PitBoss diesel fuel nozzle (N150PB) is perfect for users looking for a durable and forgiving diesel fueling solution.

The Elastodog latching mechanism improves latching under harsh conditions and the piston-driven shutoff engagement improves longevity.

- Powder coated non-slip finish for better grip.
- All-metal construction and fewer internal components.
- Plugs are available and strongly recommended.

Variations

Standard with plug Underground mining Brine Resistant

N150PBp N150PBU N150PB-BR

Extended Length 0		O
Actuator Width 76 MM 3 IN	O PITROSS IISAN (a)	Nozzle Width 209 MM 8.25 IN
	Body Length 356 MM 14 IN	
		-

Max C Pressi	perating ure	Max Flow Rate		Min Flow Rate		Fuel Inlet Port		Weight		Latching Mechanism	
5.17	BAR	567	LPM	94.5	LPM	38.1	ММ	2.948	KG	Elastodog	
75	PSI	150	GPM	25	GPM	1-1/2	IN	6.5	LBS	Clips	

6 Diesel Fuel Nozzles



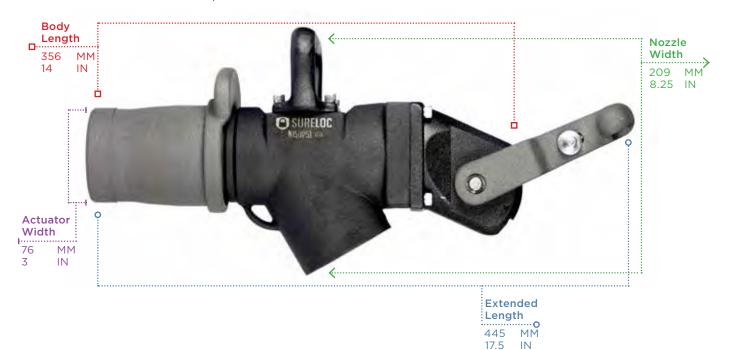
N150PSLp

Piston Sureloc Diesel Fuel Nozzle The SureLoc diesel fuel nozzle has proven reliable even in the harshest environments and is customizable to meet specific needs. Its durable, all-metal construction and thick wall main housing makes it optimal for heavy duty operations. The latching mechanism consists of twelve stainless steel ball bearings for a secure latch. Available with either piston or diaphragm control shut-off and two flow rate and inlet options, it is our most versatile nozzle.

Variations

Standard with plug Diaphragm Driven 2" Fuel Inlet 2" High Flow 800 LPM/ 211 GPM PSL Arctic Nozzle N150SLp N150SL* N150SL-2* N150SL800** N150PSL800 N150ARTCp

- Powder coated non-slip finish for better grip.
- Built tought to handle the harshest conditions.
- Ball bearing latching for a secure connection.
- Withstands extreme temperatures.







Pressu	perating re	Max Flow R	ate	Min Flow R	Flow Rate		Fuel Inlet Port		t	Latching Mechanism		
5.17 75	BAR PSI	567 150	LPM GPM	94.5 25	LPM GPM	38.1 1-1/2	MM IN	3.6 7.9	KG LBS	Ball Bearing		
			**800 Series		**800 Series		**800 Series		* The diaphragm driven models now only offered on rebuilt models			
		800 211	LPM GPM	567 150	LPM GPM	50.1 2	MM IN	MM They are no longe				

Diesel Fuel Nozzles 7



N150Tp

Titan The Diesel Fuel noz Nozzle dies

The Titan diesel fuel nozzle blends elements from our Pitboss fuel nozzle with a compact design to create the most compact, lightest diesel fuel nozzle in the industry. In addition to the Elastodog latching mechanism and piston-driven shutoff, the field replaceable piston

cartridge allows the end-user to bring a worn nozzle back to life.

In field repair cartridge

Length 394 M

15.5

MM

IN

Cartridge

N150TRC

- Powder coated non-slip finish for better grip.
- Sturdy build for greatly increased lifespan.
- Elastodog latching mechanism.
- Withstands extreme temperatures



Max Operating Pressure		Max Flow Rate		Min Flow Rate		Fuel Inlet Port		Weight		Latching Mechanism	
5.17	BAR	567	LPM	94.5	LPM	38.1	ММ	2.645	KG	Elastodog	
75	PSI	150	GPM	25	GPM	1-1/2	IN	5.65	LBS	Clips	

<u>8</u> Diesel Fuel Nozzles



N1000PSL

Piston Sureloc Diesel Fuel Nozzle Our latest, state of the art nozzle is rated for flow rates up to 1000 LPM (265 GPM), includes 2" NPT threads for an easy retrofit for exiting traditional fueling receivers and vents. Utilizing our robust Piston Sureloc design the N1000PSL uses a 12-ball stainless ball-bearing latching mechanism ensuring a secure latch to the receiver.

- Powder coated non-slip finish for better grip.
- Sturdy build for greatly increased lifespan.
- Ball bearing latching for secure connection.
- Withstands extreme temperatures







IN

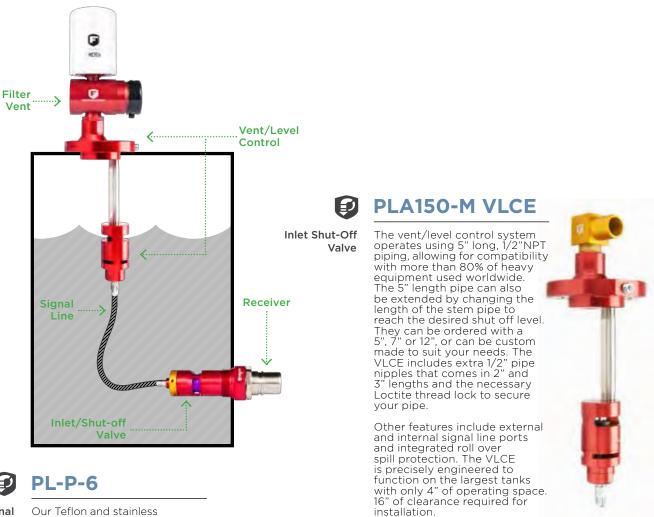
17.5

Max Operating Pressure		Max Flow Rate		Min Flow Rate		Fuel Inlet Port		Weight		Latching Mechanism	
5.17 75	BAR PSI	1000 263	LPM	94.5 25		38.1 1-1/2	MM	3.6 7.9	KG LBS	Ball Bearing	

Pressureless 9

Fast Fill Pressureless System Advantages

- Automatic shut-off without inducing pressure into the tank.
- Positive shut-off system senses the fulid level in the tank.
- Designed to work best with our SureLoc and PitBoss pressure sensitive nozzles.
- Can be fitted with a pressure switch and time-delay relay to operate with non-pressure sensitive nozzles.
- Pressure switch and time-delay relay act as a safeguard against dead-head conditions once the shut-off valve closes.





Signal Line Our Teflon and stainless steel braided signal line can be used both internally and externally. Standard length of 10'. Custom sizes available.



Max Operating Pressure		Min Oper Pressure	ating	Min Flow Rate		
517	kPa	35	kPa*	95	LPM	
75	PSI	5	PSI	25	GPM	

^{*} Requirement at the nozzle. Additional plumbing between the pump and the diesel fuel nozzle will add additional pressure drop to the system.

Max Flo	w Rate		uel Nozzle f Pressure
568 150 800 200	LPM GPM LPM* GMP*	48 7	kPa PSI

^{*}Flow rates of 200 GPM/ 800 LPM possible when used with diesel fuel nozzles rated for such, e.g. N150SL800

10 Pressureless



PLA1000-M VLCE

When combined with the N1000PSLP nozzle, and our PLA1000-M SV, flow rates of up to 1000 LPM are achievable. With pressureless operation, this system provides your operators a clean & safe way to refuel high volume applications. With increased flow around the closed-cell encapsulated foam float, our system mantains reliability at higher flow rates. Other features include external and internal signal line ports and integrated roll over spill protection. The VLCE is precisely engineered to function on the largest tanks with only 4" of operating head space. (16" of clearance required for installation.)

Features

- Automatic shut-off without inducing pressure into the tank.
- Positive shut-off system senses the fluid level in the tank.
- · Diesel-resistant closed-cell foam float for shut-off.
- 2" NPT easily fits most tank applications.

PLA1000-M SV

Pressureless

This high flow reciever can handle the most demanding high volume applications. When paired with an N100PSLP nozzle and our PLA1000-M VLCE. Made of extremely durable nickel-plated steel, this receiver will last in the harshest evironments. The new enclosed spring design smooths fluid flow to prevent vibrations caused by high flow rates.



Max Operat	ing
Pressure	

5.17 BAR PSI 75

Safety

#6 JIC Signal Line Fitting

Eliminates potential fuel spray.

Construction

Nickel plated steel. Anodized aluminum.

Time Saving

Replace receiver without draining tank.

Economic

Prevents fuel theft

Pressureless 11



PLA80-SVLC

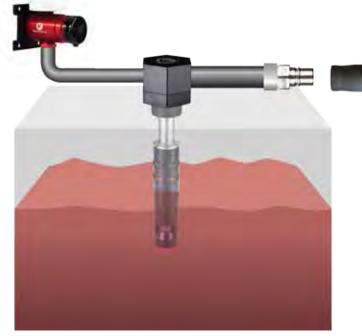
Small Tank Pressureless The PLA80 brings Pressureless fueling to applications where it was once unavailable. This all-in-one drop-in system fits standard 2" NPT inlets and enables individual tank fill and shutoff for single or multi tank configurations. Once the fuel level reaches 90-95% capacity, each tank will automatically shut off, eliminating under/over filling. The auto shut-off feature works with all standard fuel nozzles (up to 80 GPM). With filtered venting and a dry break fill point, contamination is dramatically decreased. This product is ideal for agriculture, small construction, oil extraction and mass transit equipment because of its compact design and ease of installation.

Features

- Fills and vents through the same unit
- Completely pressureless operation
- Automatic independent tank shutoff
- Remote receiver mounting
- Remote or direct filter vent mounting
- 1-1/4" FNPT fuel inlet threads
- 1" FNPT vent port threads
- Standard weight: 3.92 lbs | 1.78 kg



Width



This system has also been adapted to work with hydraulic fluid. The specifications below are for the PLA80 Hydraulic Application.

Max Operation Temperature		Min Ope Tempera		Min Operating Pressure		
150°	F	-30°	F	125	PSI	
65.6°	С	-34.4°	С			

Max High Flow Rate		Min High Flow Rate		Max Standard Flow Rate		Min Standard Flow Rate		Max Operating Temperature		Min Operating Temperature	
302	LPM		LPM	151	LPM	0	LPM	150º 65.6º		-30°	F C
80	GPM	40	GPM	40	GPM	20	GPM	65.6°	C	-34.4º	C



PLA150-M SV

Inlet Shut-Off Valve

The typical inlet/shutoff valve for a Pressureless system. Designed to be mounted directly to the tank. Requires 2" NPT on the tank and 8-10" of space for installation, 211 GPM max flow rate. A receiver may be mounted directly or remotely to the valve (see AD150 and AD150J).



PLA150-M SVEBH

Inlet Shut-Off Valve

Flange mounted shutoff valve with 6 bolt pattern designed to replace the FFF5C bolt-on bellhousing. External #6 JIC signal line connection.





PLA150-M RRM2

Remote Mount Can

Designed to remotely mount the entire shutoff valve and receiver. Receiver (R150CVRc-J) is included. External #6 JIC signal line connection.



PLA150-M SV61-E

Inlet Shut-Off Valve

Inlet Shut-off

Flange mounted shutoff valve with 6 bolt 5-3/4" tank mounting pattern. and 2" Code 61 hose connection for remote mounted receiver. External #6 JIC signal line connection

PLA150-M SVFE

Flange mounted shutoff valve with 6 bolt 5-3/4" pattern. Includes

2-Piece direct mount receiver

and external #6 JIC signal line

connection.



Receiver



Twist Lock

Plastic

Tank Adaptor



2" NPT adaptor is designed for plastic fuel tanks. Provides the 2" NPT necessary for Pressureless systems.



Valve

PLA150-M EP

Evac Port

Receiver replacement evacuation port allows draining of the fuel tank from the standard fill point using a Fast Fill Systems diesel fuel nozzle or our N150SB bulk transfer nozzle.



PLA150-M PTSF

Plastic Tank Adaptor

2" NPT adaptor for plastic fuel tanks. Works well with CAT plastic tanks and fits most CAT splash fill caps.





PLA150-M VF

Receiver Flange

CAT 120mm 6-bolt vent flange





PLA150-M RF

Receiver Flange 2" NPT 6-bolt pattern receiver flange fits CAT 5 3/4" PT#221-5303





proprietary thread in our shutoff

and check valves to a 2" Male

AD150J

Used to adapt from the

Used to adapt from the proprietary thread in our shutoff and check valves to a 2" Female





JIC.

Bulk Nozzle

2" JIC

Adaptor

2" NPT

Adaptor

Provides a higher flow rate than conventional high-flow nozzles for bulk filling. Constructed from aluminum. 12 stainless steel latching balls, 2 wiper seals, and actuating ring with non-slip knurled surface.





2 Piece .70mm "Twist Lock" receiver for pressureless applications.









S150, S512, S200, S215

Straight Hose Swivel Straight hose swivels with all aluminum construction.





A150A, A150B, A150C

Fuel Adapter Used to splash fill a tank with any fast fill nozzle.





R150SW

Deep Socket Tool The R150SW, 2-1/2" deep socket tool is used to install new recievers and remove worn down or damaged receivers.





AB₂

Breakaway Coupler Hose safety breakaway coupler with female NPT threads. Available in following sizes: 1", 1.25", 1.5", 2", 3", and 3.25"





FFF4C

Weld-On Flange

Weld-on flange which provides a recessed, protected fill point. The flange has 2" female threads and accepts the R150S standard fuel receivers, R150CV, or PLA 150-M SV.





FFF5C

Bolt-On Flange Bolt-on flange which provides a recessed, protected fill point. The flange has 2" female threads and accepts the R150S standard fuel receivers, R150CV, or PLA 150-M SV. 5-5/16" x 7/16" bolt pattern.





SB100

Service Box Boxes can be configured to house any number or type of receivers. By consolidating the location of couplers, speed and safety are increased.







R150CVc

Check Valve Receiver

Our patented Check Valve Receiver allows fuel to flow in only one direction. Once installed, receivers can be replaced without draining the tank, spray back from poppet malfunction is eliminated, and fuel theft is minimized. The Check Valve Receiver is compatible with all major manufacturers' nozzles.



R150CVSW

Check Valve Wrench This Check Valve Installation wrench facilitates installation or removal of the R150CV. The open back design also allows it to be used with R150SW to install or remove the R150CVR.









Max Operating Pressure

5.17 BAR75 PSI

Safety

Eliminates potential fuel spray.

Construction

Nickel plated steel. Anodized aluminum.

Time Saving

Replace receiver without draining tank.

Economic

Prevents fuel theft.

Replacement Receiver



R150CVRc



R150Sc

Standard Receiver

Our standard diesel fuel receiver is made from solid steel and is nickel-plated to ensure a long service life. Designed to accommodate flow rates up to 800 LPM (211 GPM), Fast Fill Systems fuel receivers are completely compatible with all major manufacturers' diesel fuel nozzles. Available shutoff options: 7, 9, 11, and 12 PSI.



Max Operating Pressure

5.17 BAR75 PSI

Compatibility

Compatible with all major fuel nozzle manufacturers.

Construction

Nickel plated steel. Anodized aluminum.

Durability

Aluminum poppets instead of plastic.

Customizable

Custom shut off pressures available.



Available in Aluminum



Fuel Vents

Standard diesel fuel vents are crucial to the performance of your fuel nozzle. A standard fuel system needs tank pressure to cause the nozzle to shutoff. Our all-metal construction fuel vents provide excellent durability and versatility with more than 100 different configurations available. A 2" NPT port on top of tank is required.



V150

Standard **Fuel Vent** The basic fuel vent available with a standard 5", 7 (V150L7), and 12"(V150L12) stems.





V150D

Anti Vandalism Flange Reduces fuel theft and tank vandalism. The under-side is threaded with bolt pattern on top which locks the vent in place. Bolts not included. Not compatible with V150W.





V150SR

Safety Relief Fuel Vent

Used with the V150 where additional over-fill relief is needed. A safety relief valve protects the tank from over filling if a nozzle fails. Opens tank when pressure hits over 13 PSI.





V150W

Whistle Adaptor

Whistles when tank reaches internal pressures of 5-7 PSI. This creates a clear signal to operator that nozzle should be shutting off.





V150A

Half Coupling

This vent is commonly used in retrofit applications where the required 2" NPT port did not exist (Requires welding). 2" FNPT steel half coupling included.





V150C

NPT Adaptor Allows for easy hose attachment with a 1" FNPT swivel adapter on the opening of the vent cap. This method is more durable and seals tighter than the hose barb attachment.



V150B

Bolt-on Flange Commonly used where 2" NPT ports are not available. Drill and tapping is required. Bolt on 2" NPT flange included. Nitrile seal included, bolts are not.





V150H

High Flow Vent Designed for fuel rates exceeding 150 GPM, capable of reaching 300 GPM. Compatible with all vent configurations.



Check Valve Filtered Fuel Vents

Protect your tank from atmospheric dust accumulation. The dual check valve system allows air to freely vent from the tank through the large vent check valve at rates up to 300 GPM, and directs all air entering the tank through the 3 micron filter media.



FFV150-PL

Direct Mount Filter Vent 1" NPT direct mount configuration of our filter vent.





FFV150-LP

Direct Mount Filter Vent

Low profile 1" NPT direct mount configuration of our filter vent.





FFV150

Remote Mount Filter Vent Universal mounting bracket for easy installation. Used for remote mounting.





FFV150-HV VB

High Volume Vacuum Break

Vacuum break check valve for implosion protection. Discharges air at over 300 GPM. 2" Female NPT Inlet port. Vacuum break crack pressure: 1.5 PSI. Exhaust and breather check valve crack pressure: 0.25 PSI.



Standard Couplers



OS100

Crankcase Coolant Hydraulic Transmission Four widely used couplers have been the industry standard for decades. They were designed for transferring the primary fluids used on heavy equipment: Crankcase, Coolant, Hydraulic and Transmission fluids. Nozzle and receiver pairs only connect with their corresponding size and color.

Oil Sampling Valve The oil sampling valve is used with an existing crankcase line to allow oil samples to be drawn.





Operating Pressure		Burst Pressure		Flow Area		Nozzle Thread		Receiver Thread		Latching Mechanism	
34.5 500	BAR	103.4	BAR	.3051	SQ IN	3/4"	MNPT	3/4"	MNPT	Pin latching	



Max Operating Pressure		Burst Pressure		Flow Area		Nozzle Thread		Receiver Thread		Latching Mechanism	_
34.5 500	BAR PSI	103.4 1500	BAR PSI	.1122	SQ IN	1/2"	MNPT	1/2"	MNPT	Pin latching	

#12 JIC Receivers

The bases on these receivers have extended JIC threads that can be fitted into a bulkhead. A female JIC hose can then be attached on the other side of the bulkhead.





Operating Pressure		Burst Pressure		Flow Area		Nozzle Thread		Receiver Thread		Latching Mechanism
34.5	BAR	103.4	BAR	.2212	SQ IN	3/4"	MNPT	3/4"	MNPT	Dog Teeth
500	PSI	1500	PSI	*.3051	SQ IN					*Ball Bearing



Max Op Pressure	9	Burst Pressur	е	Flow A	Area	Nozzle	e Thread	Receiv	er Thread	Latching Mechanism	
34.5 500	BAR PSI	103.4 1500	BAR PSI	.1136	SQ IN	1/2"	MNPT	1/2"	MNPT	Dog Teeth	

R Series Couplers

Crankcase Coolant Hydraulic Transmission

Used for remote bulk-head mounting for common fluids. The receiver's dual threads are designed to allow bulk-head mounting using the male thread and connection of a hose to the leak-free female ORB thread. R series couplers DO NOT connect with Standard couplers.

Crankcase





Operating Pressure		Burst Pressure		Flow Area		Nozzle Thread		Receiver Thread		Latching Mechanism	
34.5	BAR	103.4	BAR	.3640	SQ IN	3/4"	FNPT	3/4"	FNPT	Ball Latching	
500	PSI	1500	PSI								

~

Coolant





Max Ope Pressure	_	Burst Pressur	e	Flow A	rea	Nozzle	e Thread	Rece	eiver Threa	nd	Latching Mechanism
34.5 500	BAR PSI	103.4 1500	BAR PSI	.1361	SQ IN	1/2"	FNPT	OD ID	1-3/16" 7/8"	12 TPI 14 TPI	Ball Latching

Universal Couplers

Crankcase Coolant Hydraulic Transmission For both Crankcase and Coolant, these Universal Nozzles fit Standard and R-Series Crankcase and Coolant Receivers.





Hydraulic





Operating Latching **Burst** Pressure **Pressure** Flow Area **Nozzle Thread Receiver Thread** Mechanism 34.5 BAR 103.4 BAR .4207 SQ IN 3/4" **FNPT FNPT** Ball Latching 500 PSI 1500 PSI

0

Transmission





Max Op Pressur	erating e	Burst Pressur	e	Flow A	rea	Nozzle	Thread	Rece	eiver Thread	Latching Mechanism
34.5 500	BAR PSI	103.4	BAR	.2285	SQ IN	3/4"	FNPT		1-5/16" 12 TPI	Ball Latching



Flat Face Matrix 200 Series

Matrix Flat Face Couplers The Matrix Flat Face coupling line is the ultimate solution in no-hassle, contaminate-free filling. The "Flat Face" surface on the nozzle allows ease in wiping the dust and dirt from the front end of the nozzle, before coupling, to ensure contaminant-free fluid delivery. The "Flat Face" series includes 13 color-coded nozzles and receivers designed to physically interlock with only their respective matching color.



FFET 290

One way evac tool acts as a master key to drain all receivers in Flat Face series.





Pressure		3/4" Thre	ad	Construction			
103	BAR	Nozzle	FNPT	Anodized aluminum. Nickel plated			
1500	PSI	Receiver	MNPT	steel. Color coded and keyed to			
				prevent cross contamination.			

Operating

All receivers are capable of a JIC fitting.

JIC





Recommended

Caps

^{*} Items marked are slightly different in size. Please refer to the measurements above for their sizes.



Matrix 300 Series

Matrix 34 Standard Couplers Matrix 34 is a series of proprietary couplers designed to prevent cross-contamination of fluids. Matrix couplers work at a higher pressure and flow rate than standard couplers. Each of the 10 nozzles and receivers in the matrix line is color-coded and designed to physically interlock with only its matching color.



ET 290

One-way evac tool acts as a master key to drain all receivers in standard series.





Operating Pressure

103 Nozzle FNPT1500 Receiver MNPT

3/4: Thread

Construction

Anodized aluminum. Nickel plated steel. Color coded and keyed to prevent cross contamination.

JIC

All receivers are capable of a JIC fitting.









MX High Flow Series

Matrix MX **High Flow** Couplers

Fast Fill Systems now offers the next generation of High Flow Dry-Break Couplers. Constructed from steel for sure latching and durability, the MX-Series comes in 7 different Nozzle-Receiver pairs that can only be connected to their matching colors, eliminating any possibility of cross-contamination. With a robust, grip enhancing actuating ring and solid aluminum caps and plugs, these 1" Dry- Break connectors have been engineered for more than just high flow rates; they are engineered to last!



MXET-1

Evac tool acts as a master key to drain all receivers in MX series.





Operation	9
34.5	BAR

PSI

500

1" Threads **FNPT** Nozzle Receiver MNPT

Construction

Anodized aluminum. Nickel plated steel. Color coded and keyed to prevent cross contamination.

Compatibility

Compatible with competitor 1" high flow connectors.

Caps & Plugs Recommended



Po

GN210 | GR210

Grease Matrix Couplers

The Grease Matrix is a revolutionary patent pending product. This is the first flat-face dry break coupler that will connect and disconnect while maintaining supply pressure. This bulk filling grease coupler will perform with greater efficiency and safety. The system will not allow grease transfer until the couplers are connected properly. This coupler is available in 3/4", with a maximum deadhead pressure of 5,000 PSI at the integrated ball valve.

*Not for use with pressurized or auto-shutoff systems.











GREY



GR220 GREY

Operating
Pressure

345

5000

BAR	Nozzle	FNPT
PSI	Receiver	MNPT

3/4" Thread

Construction

Nickel plated steel. Anodized aluminum.

Engineering

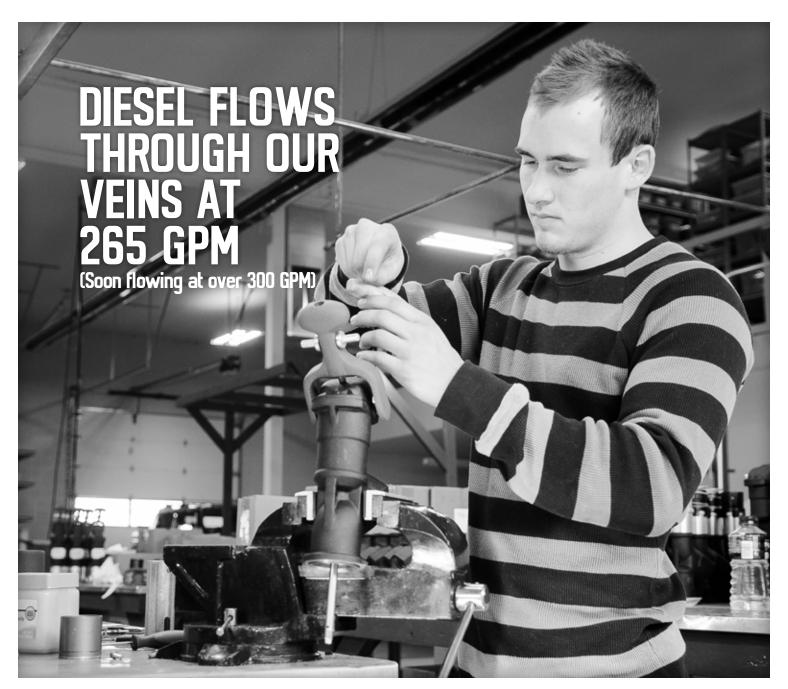
Dimple & groove guide system.

Engineering

Connects and disconnects under line pressure.

Caps & Plugs Recommended





Nozzle Rebuilds

Nozzle Tech's rebuild service is more than cleaning parts and lubing seals. Our trained technicians inspect nozzles inside and out. After troubleshooting, the nozzle is rebuilt with new parts, polished, and powder coated. Some say our refurbished nozzles work better than new ones. **Send us your used nozzles today.**

