



FAST FILL SYSTEMS

Leader in Quality and Innovation



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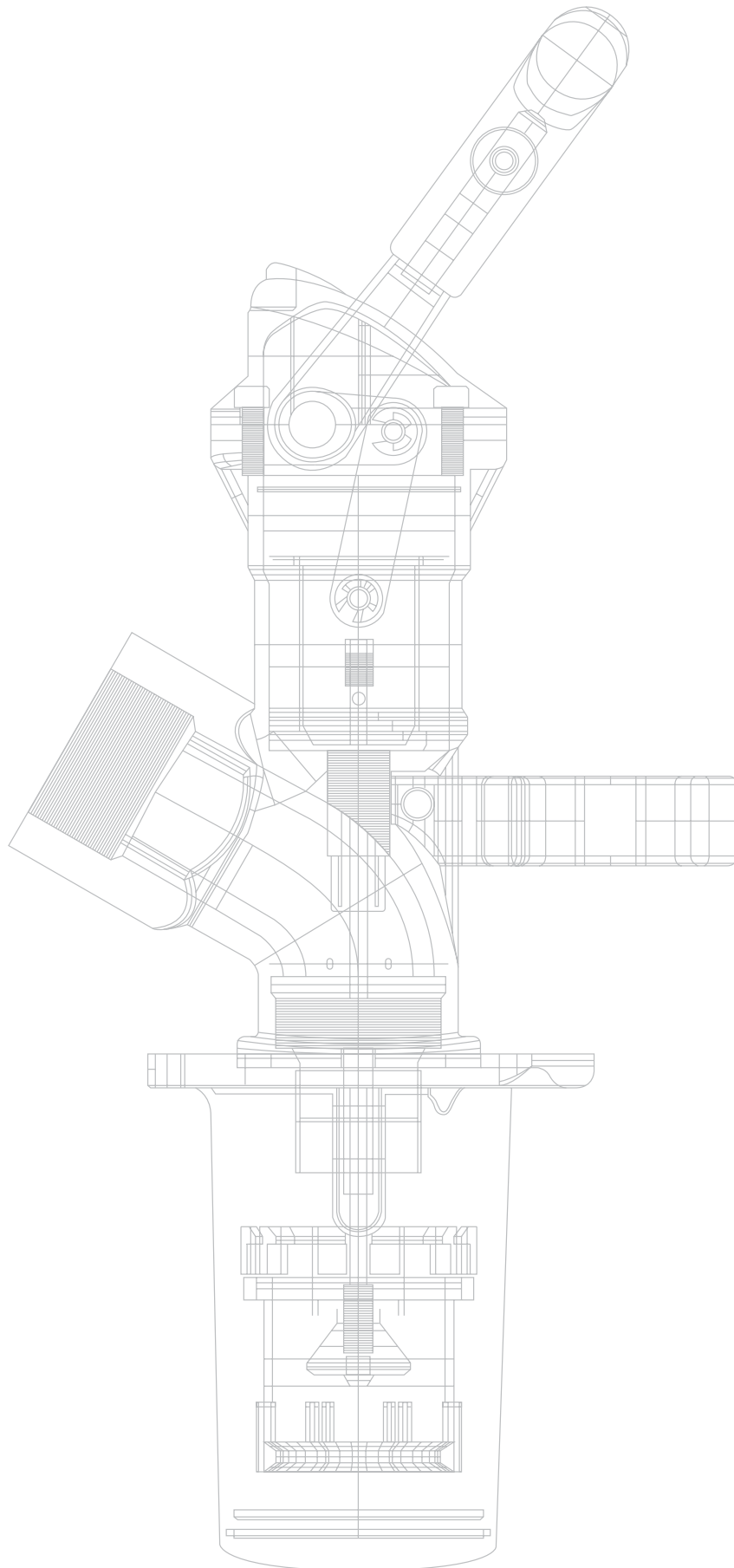
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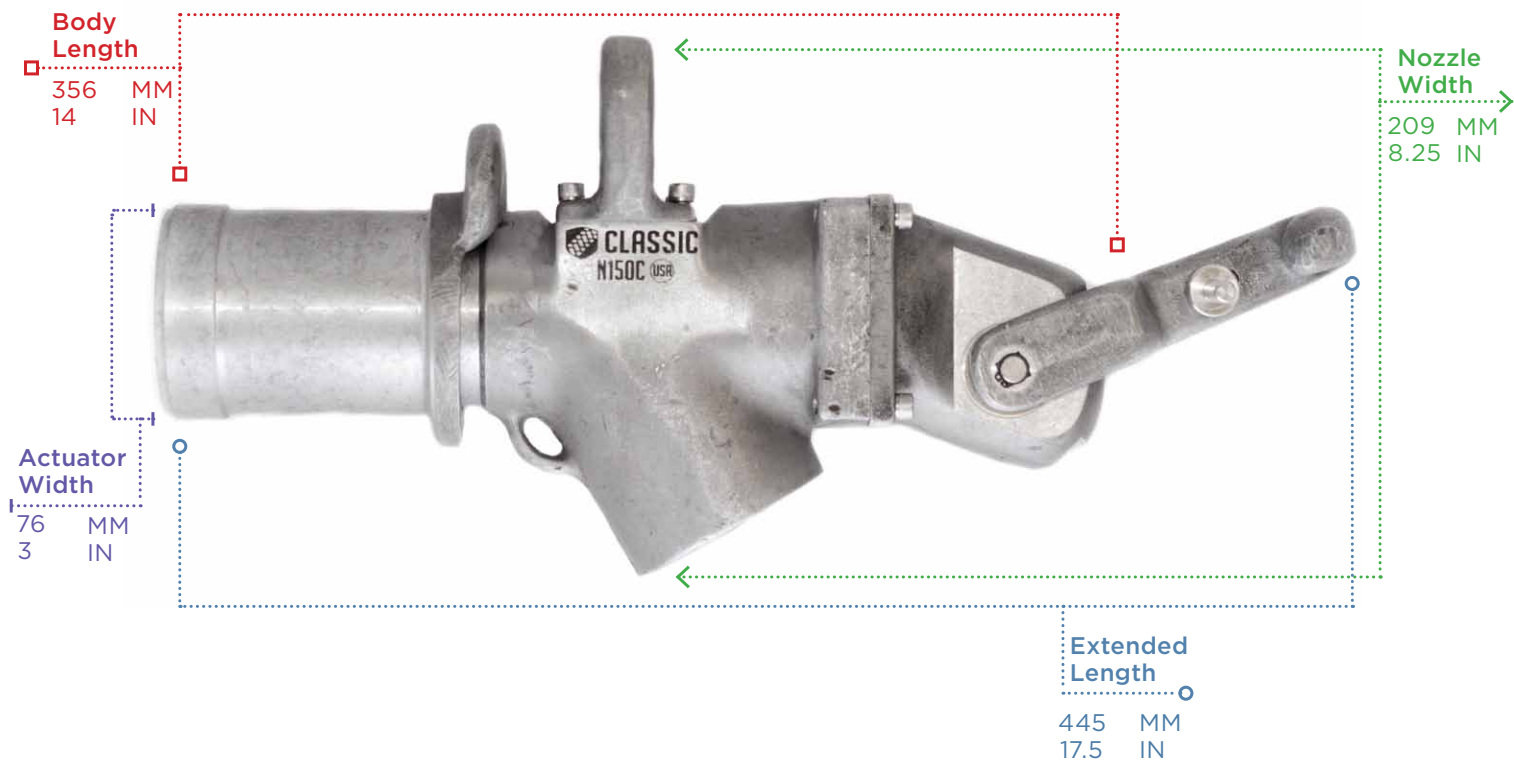
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N150Cp

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 Dogs
75	PSI	150	GPM	25	GPM	1-1/2	IN	7.75	LBS	

N150PBp

Variations

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.

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

Standard with plug
Underground mining
Brine Resistant

N150PBp
N150PBU
N150PB-BR



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	2.948	KG	Elastodog
75	PSI	150	GPM	25	GPM	1-1/2	IN	6.5	LBS	Clips

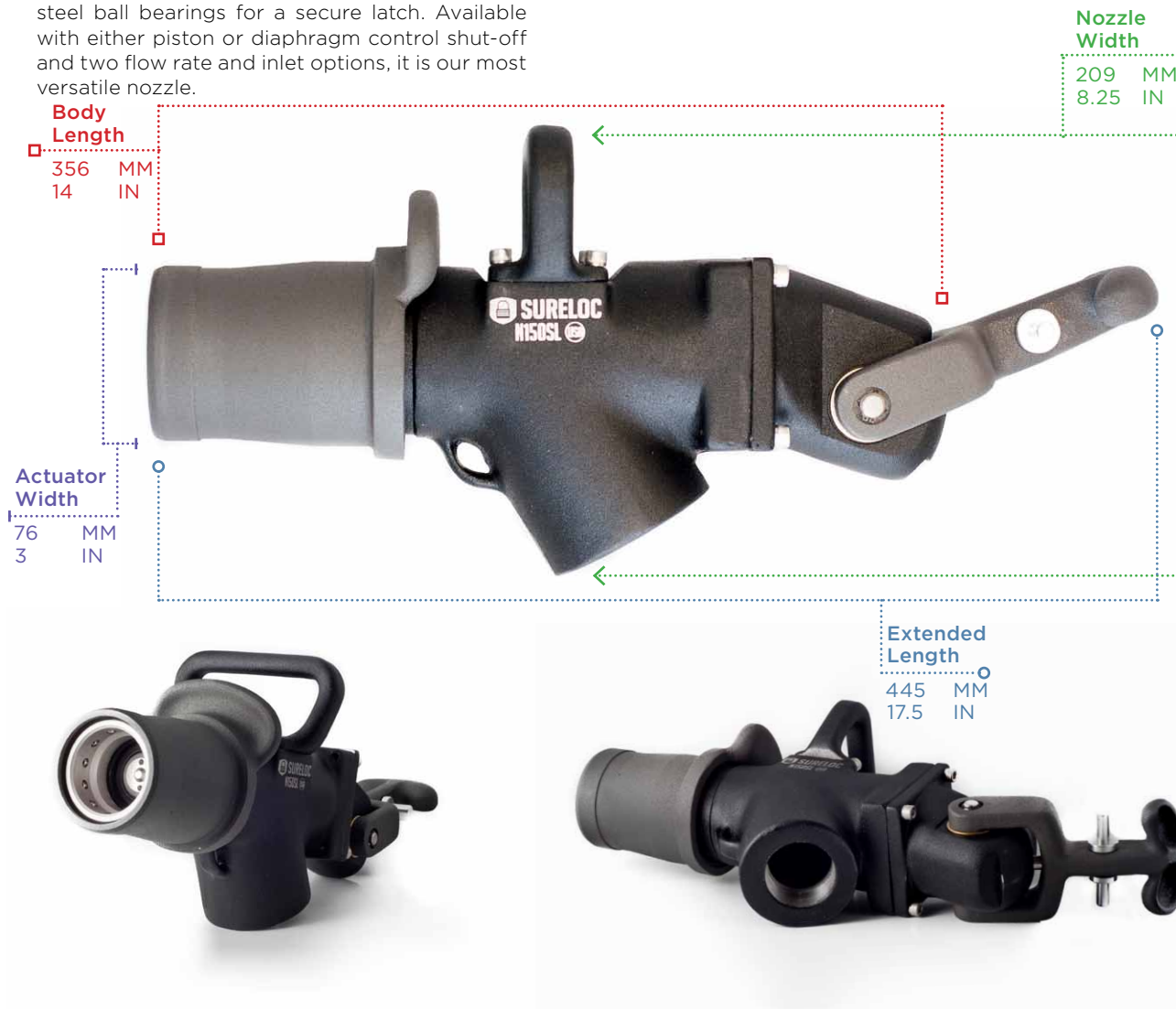
N150PSLp

The SureLoc diesel fuel nozzle has proven reliable even in the harshest environments. It 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.

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

Variations

Standard with plug	N150SLp
Diaphragm Driven	N150SL
2" Fuel Inlet	N150SL-2
2" High Flow 800 LPM/ 211 GPM	N150SL800
	PSL800



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	3.6	KG	Ball Bearing
75	PSI	150	GPM	25	GPM	1-1/2	IN	7.9	LBS	
800 Series		800 Series		800 Series						
800	LPM	567	LPM	50.1	MM					
211	GPM	150	GPM	2	IN					

* Also available in 2" inlet



Fuel Adaptor

A150A, A150B, A150C

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



Straight Hose Swivel

S150, S200, S215

Straight hose swivels with all aluminum construction.



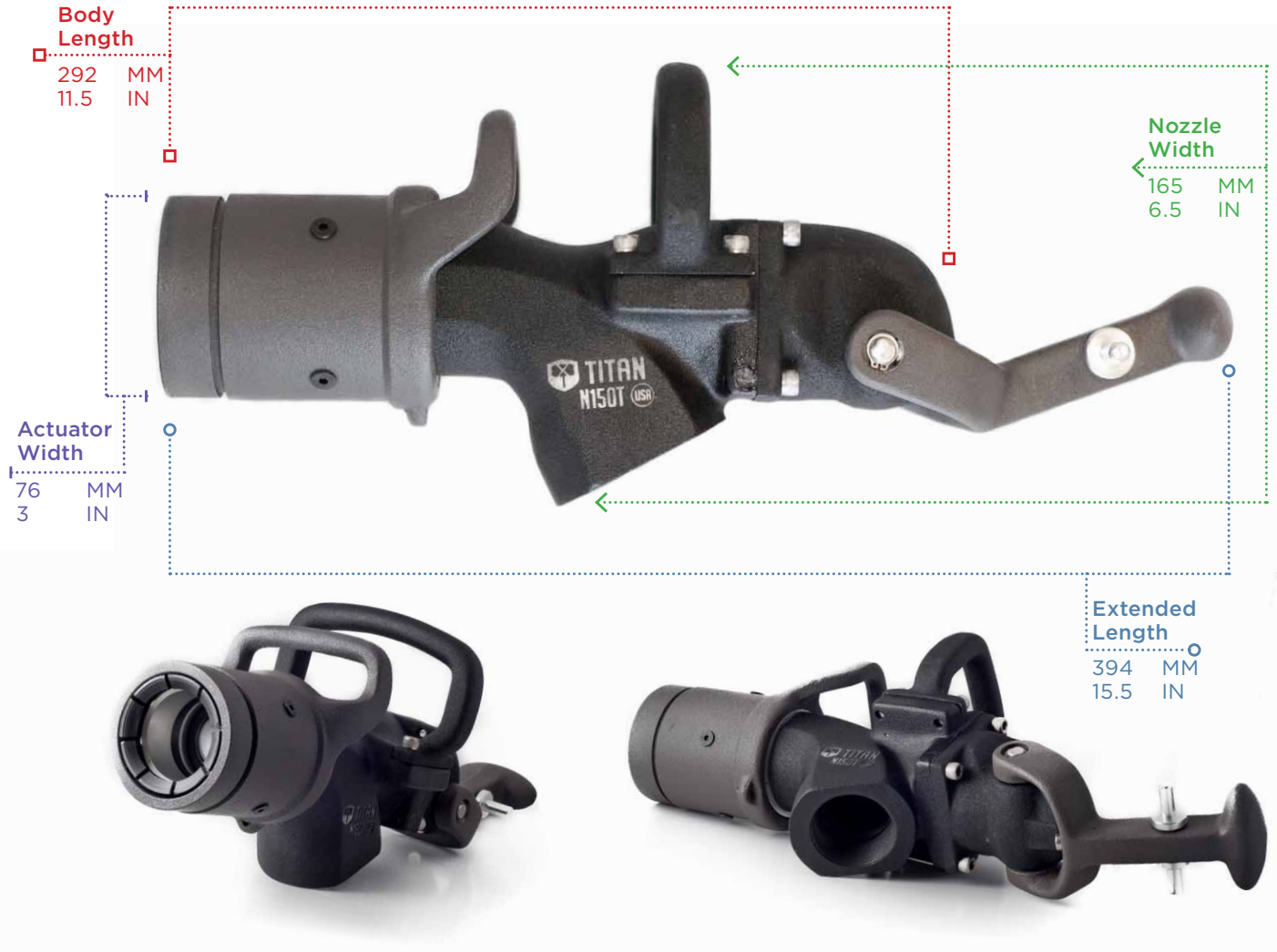
N150Tp

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.

- Powder coated non-slip finish for better grip.
- Compact, light weight design.
- Elastodog latching.
- All metal construction.

Cartridge

In field repair cartridge N150TRC



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	2.645	KG	Elastodog
75	PSI	150	GPM	25	GPM	1-1/2	IN	6.625	LBS	Clips



R150SW

Deep Socket Tool

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



AB2

Breakaway Coupler

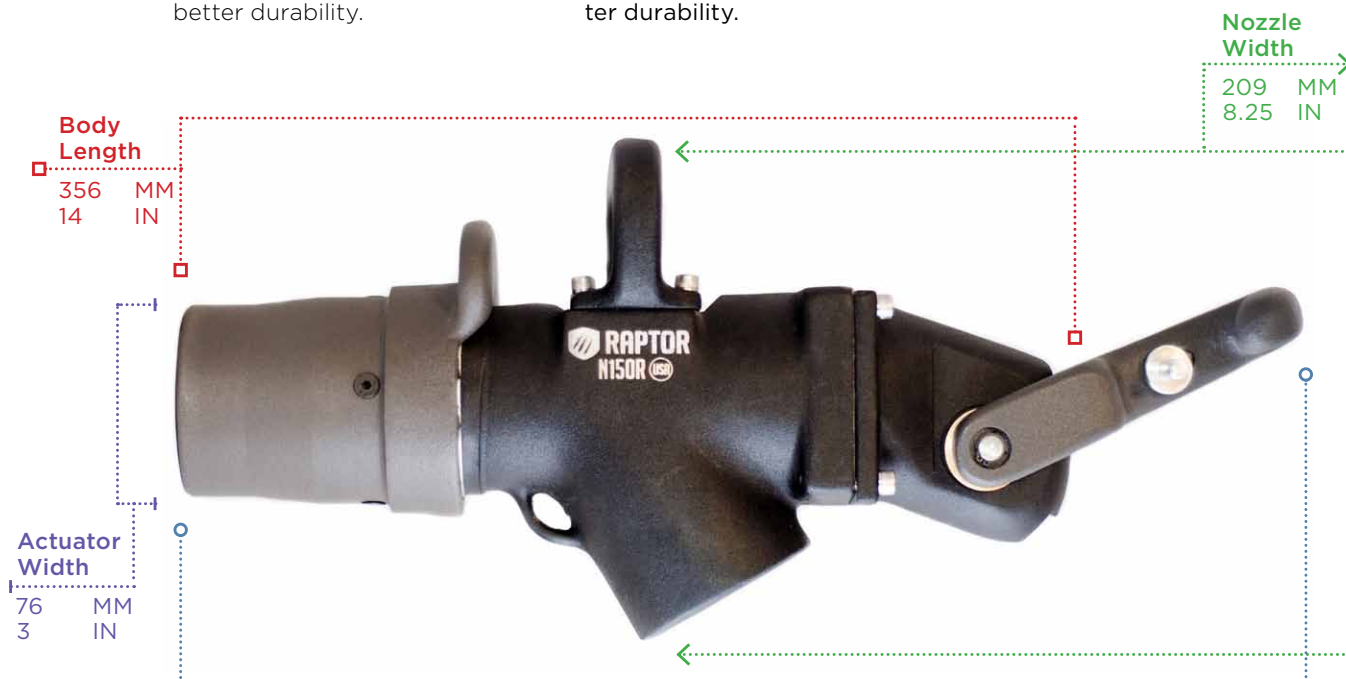
Hose safety breakaway coupler with female NPT threads. Available in following sizes: 1", 1.25", 1.5", 2", 3", and 3.25".



N150Rp

The Raptor combines the best features of our nozzles. It has an elastodog latch for dirty conditions. It has a sturdy build for better durability.

- PitBoss's latching for easier coupling, even in dirty conditions.
- Sureloc's sturdy build for better durability.



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	3.629	KG	Elastodog Clips
75	PSI	150	GPM	25	GPM	1-1/2	IN	8	LBS	
800 Series		800 Series		800 Series		800 Series				
800	LPM	567	LPM	50.1	MM					
211	GPM	150	GPM	2	IN					



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.



R150CVc

A 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. 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 BAR
75 PSI

Safety

Eliminates potential fuel spray.

Construction

Nickel plated steel. Anodized aluminum.

Engineering

Replace receiver without draining tank.

Engineering

Prevents fuel theft.

Thread Size

2" NPT

Replacement Receiver



R150CVRc

R150Sc

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 BAR
75 PSI

Compatibility

Compatible with all major fuel nozzle manufacturers.

Construction

Nickel plated steel. Anodized aluminum.

Engineering

Aluminum poppets instead of plastic.

Engineering

Custom shut off pressures available.

Thread Size

2" NPT

Available in Aluminum



R150SAc 8

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" stem, available with 7" (V150L7) and 12" (V150L12) stems as well.



V150SR

Safety Relief Fuel Vent

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



V150A

Half Coupling

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



V150B

Bolt-on Flange

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



V150D

Anti Vandalism Flange

Reduces fuel theft and tank vandalism. Under-side is threaded with bolt pattern on top. This locks the vent in place. Bolts not included. Not compatible with V150W.



V150W

Whistle Adaptor

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



V150C

NPT Adaptor

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



V150H

High Flow Vent

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



Filter 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

Remote Mount Filter Vent

Universal mounting bracket for easy installation. Used for remote mounting.



FFV150-LP

Direct Mount Filter Vent

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



FFV150-HV VB

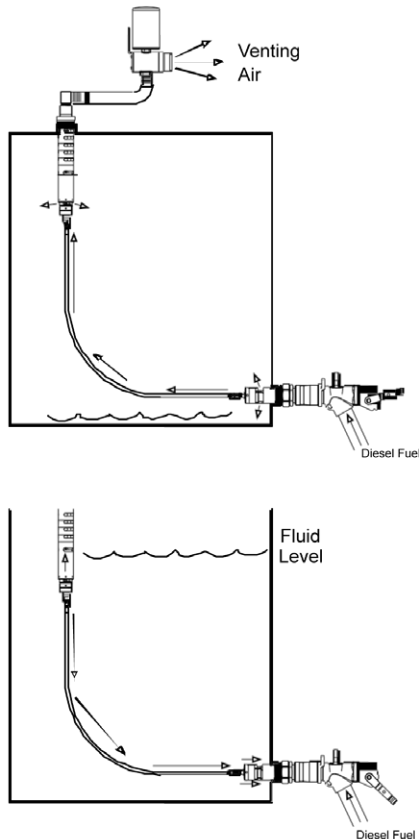
High Volume Vacuum Break

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.



Pressureless Application

The Fast Fill Systems Pressureless Diesel Fueling System allows automatic shutoff without introducing pressure to the tank. This is a positive shut-off system, which closes the shutoff valve by sensing the fluid level in the tank.



This system was designed to be used with pressure sensitive nozzles such as the Fast Fill Systems Pitboss and Sureloc. For use with non-pressure sensitive nozzles such as our N150SB bulk transfer nozzle, a pressure switch and time-delay relay on the pump system is recommended. The pressure switch and time-delay relay act as a safeguard against dead-head conditions when the shutoff valve closes.



PLP-6

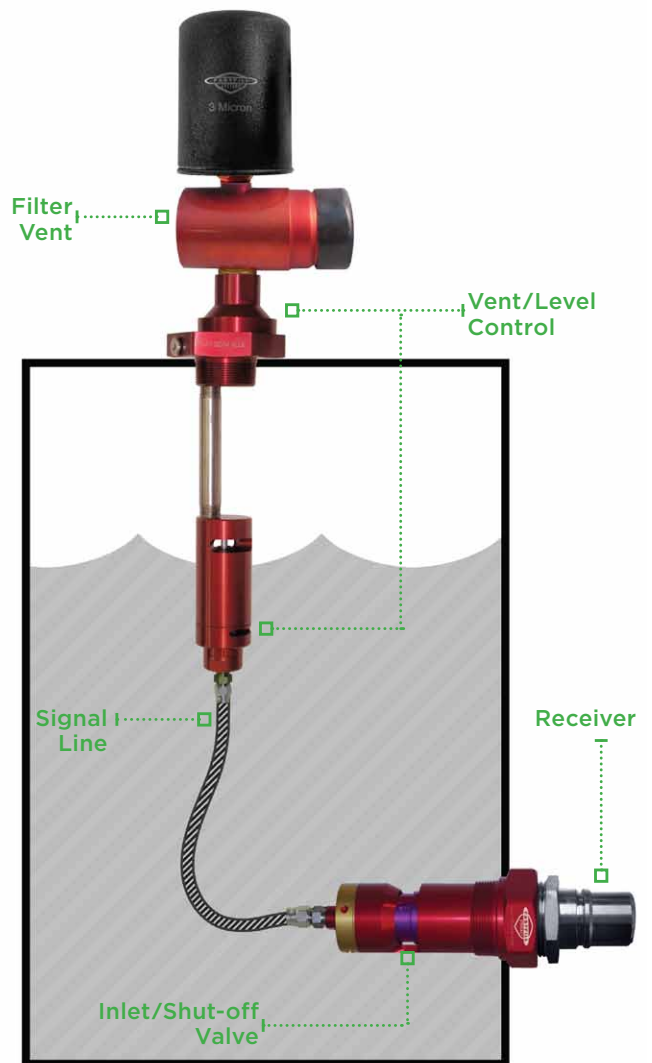
Signal Line

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 Operating Pressure		Min Flow Rate		Max Flow Rate		Diesel Fuel Nozzle Shut-Off Pressure	
517	kPa	35	kPa*	95	LPM	568	LPM	48	kPa
75	PSI	5	PSI	25	GPM	150	GPM	7	PSI

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



Vent/Level Control

PLA150-M VLCE

The vent/level control system operates using 5" long, 1/2" NPT piping, allowing for compatibility with more than 80% of heavy equipment used worldwide. 5" length pipe can be extended by cutting and threading a 1/2" pipe to reach the desired shut off level. The VLCE includes extra 1/2" pipe nipples that comes in 2" and 3" lengths and the necessary Loctite thread lock to secure your pipe.

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 space. 16" of clearance required for installation.



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



PLA150-M SV

**Inlet
Shut-Off
w/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. A receiver may be mounted directly or remotely to the valve (see AD150 and AD150J).



AD150J

**2" JIC
Adaptor**

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



AD150

**2" NPT
Adaptor**

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



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**

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



PLA150-M SV FE

**Inlet
Shut-Off
Valve**

Flange mounted shutoff valve with 6 bolt 5-3/4" pattern. Includes 2-Piece direct mount receiver and external #6 JIC signal line connection.



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 VF

**Receiver
Flange**

CAT 120mm 6-bolt vent flange.



N150SB

**Bulk
Nozzle**

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



R150-TL70-J

**Twist
Lock
Receiver**

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



PLA150-M PTF

**Plastic
Tank
Adaptor**

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



PLA150-M PTSF

**Plastic
Tank
Adaptor**

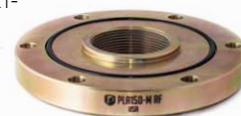
2" NPT adaptor for plastic fuel tanks. Works well with CAT plastic tanks and fits most CAT splash fill caps.



PLA150-M RF

**Receiver
Flange**

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





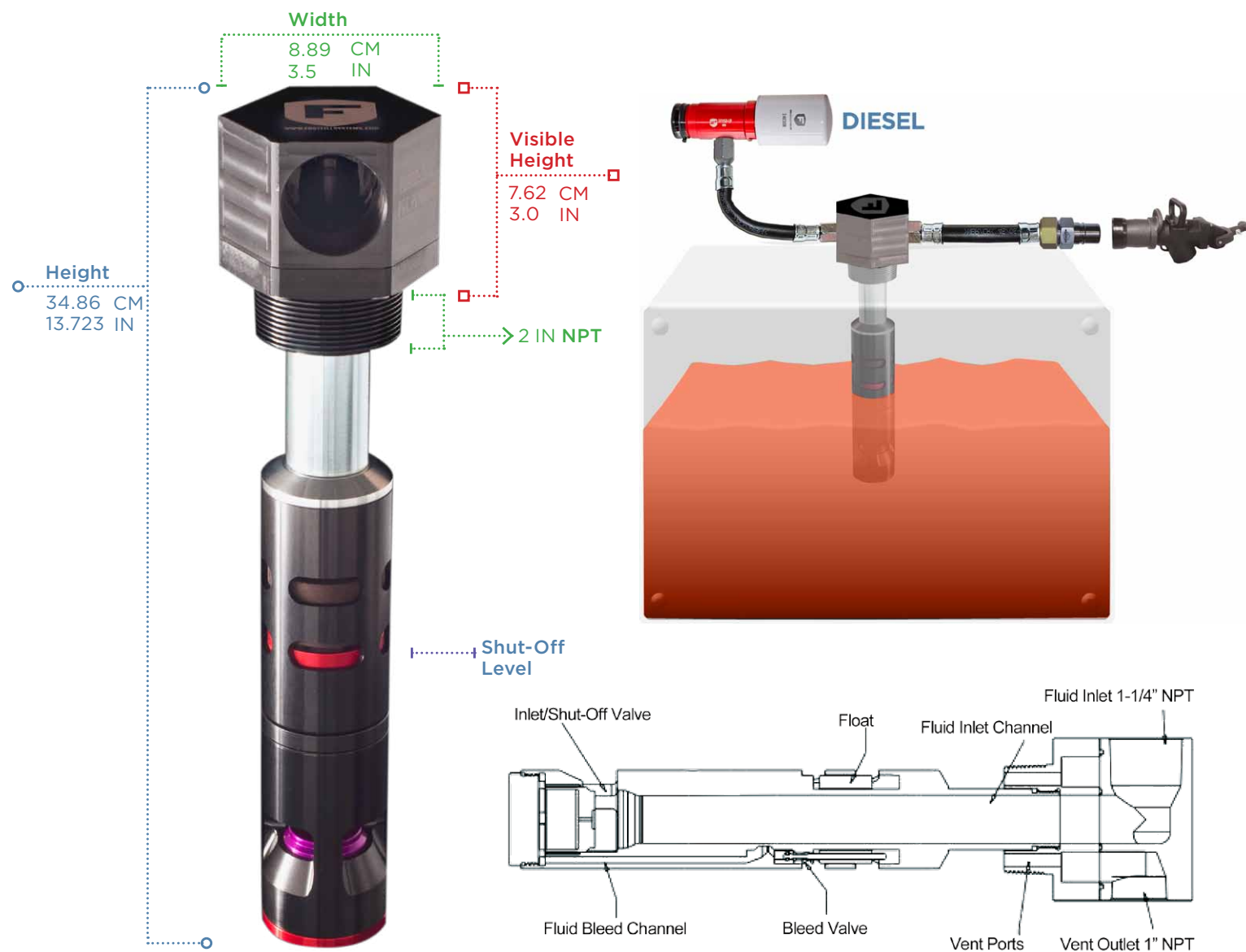
PLA80-SVLC

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

- System easily monitored
- 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



Max High Flow Rate		Max Standard Flow Rate		Min Flow Rate*		Max Operating Temperature		Min Operating Temperature	
302	LPM	151	LPM	19	LPM	150°	F	-30°	F
80	GPM	40	GPM	5	GPM	65.6°	C	-34.4°	C

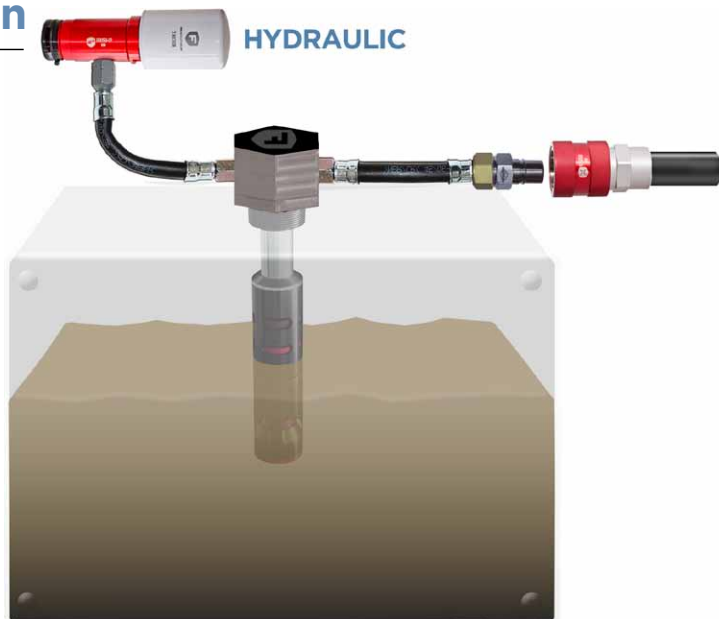
* Check Minimum flow rate for nozzle.



PLA80 Hydraulic Application

Hydraulic Pressureless

The same PLA80 that we developed for small tank diesel applications has been tested and configured for use with hydraulic fluid and diaphragm pumps. Using the R150Sc and SB150, hydraulic tanks can be reliably filled with pressureless shutoff up to 125 psi pump pressure. Flow rate will vary depending on the viscosity of the fluid.



Max Operating Temperature

150° F
65.6° C

Min Operating Temperature

-30° F
-34.4° C

Max Hydraulic Operating Pressure

125 PSI

Standard Couplers

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

OS100

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



Crankcase



N100p



R100c



R100Jc

#12 JIC

Operating Pressure

34.5 BAR
500 PSI

Burst Pressure

103.4 BAR
1500 PSI

Flow Area

.3051 SQ IN

Nozzle Thread

3/4" MNPT

Receiver Thread

3/4" MNPT

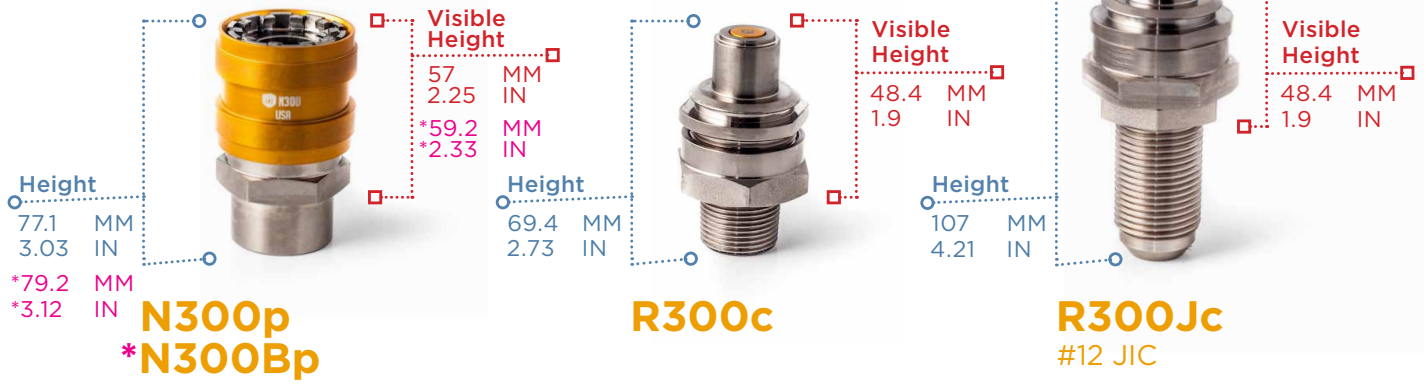
Latching Mechanism

Pin latching





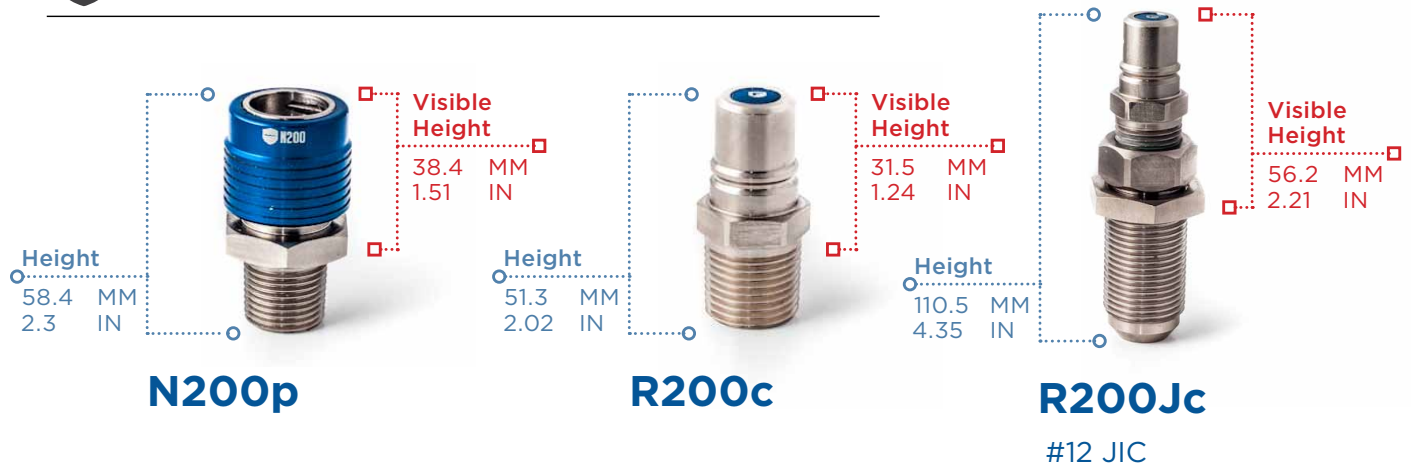
Hydraulic



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



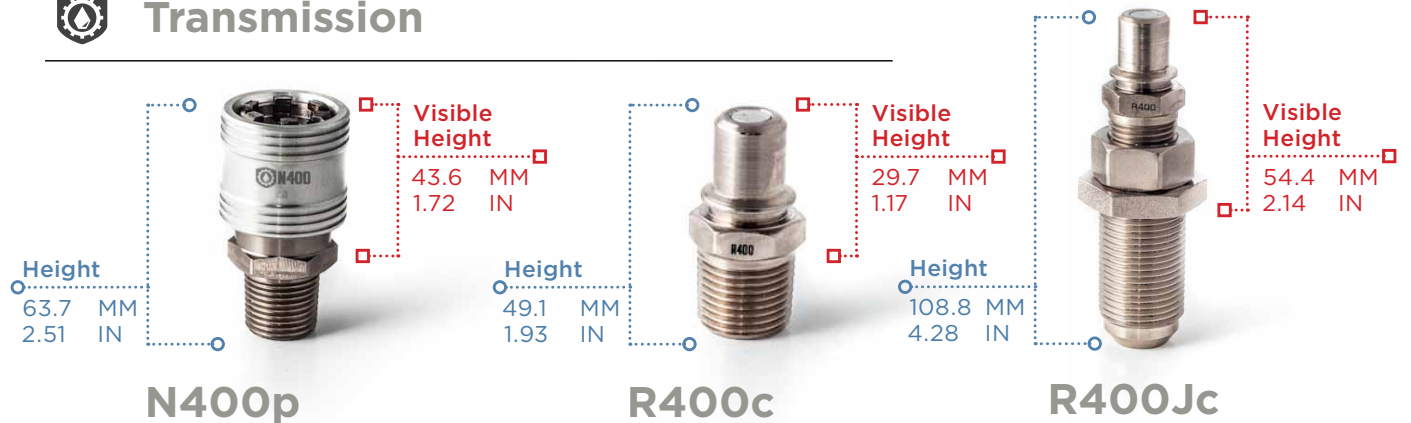
Coolant



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



Transmission



Max Operating Pressure		Burst Pressure		Flow Area		Nozzle Thread		Receiver Thread		Latching Mechanism
34.5	BAR	103.4	BAR	.1136	SQ IN	1/2"	MNPT	1/2"	MNPT	Dog Teeth
500	PSI	1500	PSI							

R Series Couplers

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.

Universal Couplers

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



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	OD 1-5/8" 12 TPI	ID 1-5/16" 12 TPI	Ball Latching
500	PSI	1500	PSI						



Hydraulic



Operating Pressure		Burst Pressure		Flow Area	Nozzle Thread		Receiver Thread		Latching Mechanism
34.5	BAR	103.4	BAR	.4207 SQ IN	1"	FNPT	OD 1-7/8" 12 TPI	ID 1-5/8" 12 TPI	Ball Latching
500	PSI	1500	PSI						





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.



Coolant



Max Operating Pressure		Burst Pressure		Flow Area		Nozzle Thread		Receiver Thread		Latching Mechanism
34.5	BAR	103.4	BAR	.1361	SQ IN	1/2"	FNPT	OD 1-3/16" 12 TPI	ID 7/8" 14 TPI	Ball Latching
500	PSI	1500	PSI							



Transmission



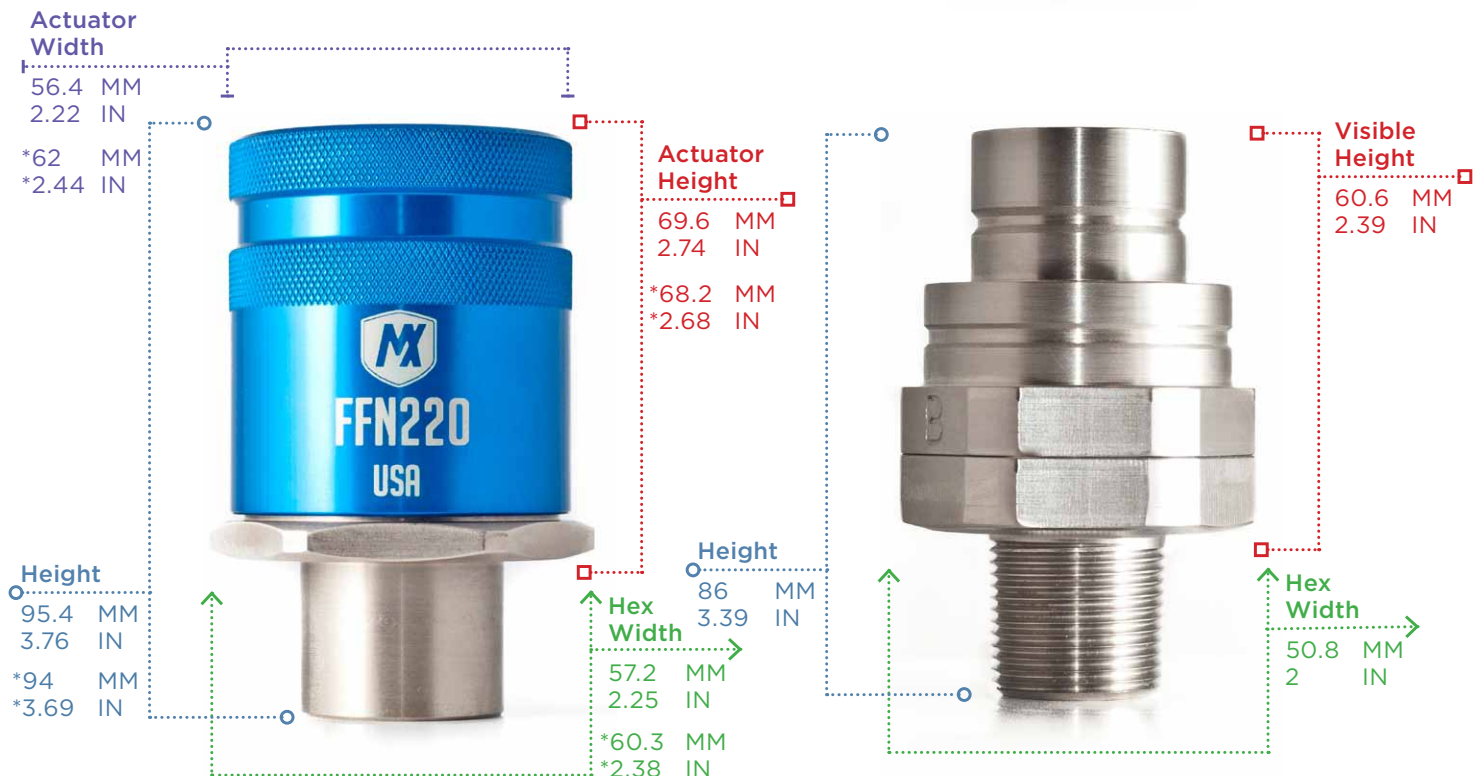
Max Operating Pressure		Burst Pressure		Flow Area		Nozzle Thread		Receiver Thread		Latching Mechanism
34.5	BAR	103.4	BAR	.2285	SQ IN	3/4"	FNPT	OD 1-5/16" 12 TPI	ID 1-1/16" 12 TPI	Ball Latching
500	PSI	1500	PSI							

Flat Face Matrix 200 Series

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.



FFN210	FFN220	FFN230	FFN240	FFN245	FFN250	*FFN255	FFN260	FFN265	FFN270	*FFN275	*FFN280	*FFN285
FFR210	FFR220	FFR230	FFR240	FFR245	FFR250	FFR255	FFR260	FFR265	FFR270	FFR275	FFR280	FFR285
GREEN	BLUE	PURPLE	GRAY	TEAL	ORANGE	CLEAR	YELLOW	BROWN	RED	PINK	GOLD	GUNMETAL BLUE

Operating Pressure

103 BAR
1500 PSI

3/4" Thread

Nozzle FNPT
Receiver MNPT

Construction

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

JIC

All receivers are capable of a JIC fitting.

Caps Recommended

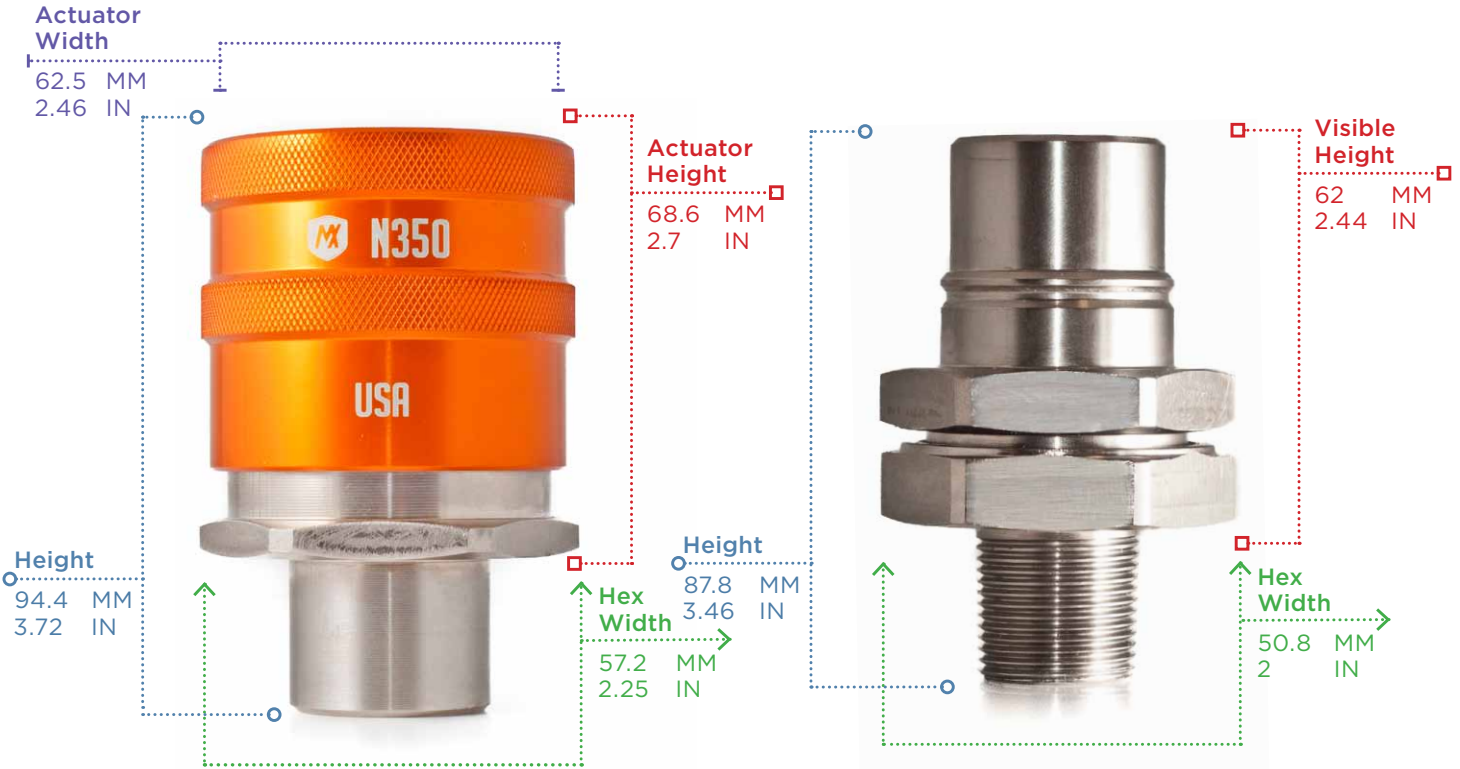


Matrix 300 Series

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 300 series receivers.



Operating Pressure		3/4: Thread		Construction	JIC	Caps & Plugs Recommended
103	BAR	Nozzle	FNPT	Anodized aluminum. Nickel plated steel. Color coded and keyed to prevent cross contamination.	All receivers are capable of a JIC fitting.	
1500	PSI	Receiver	MNPT			

MX High Flow Series

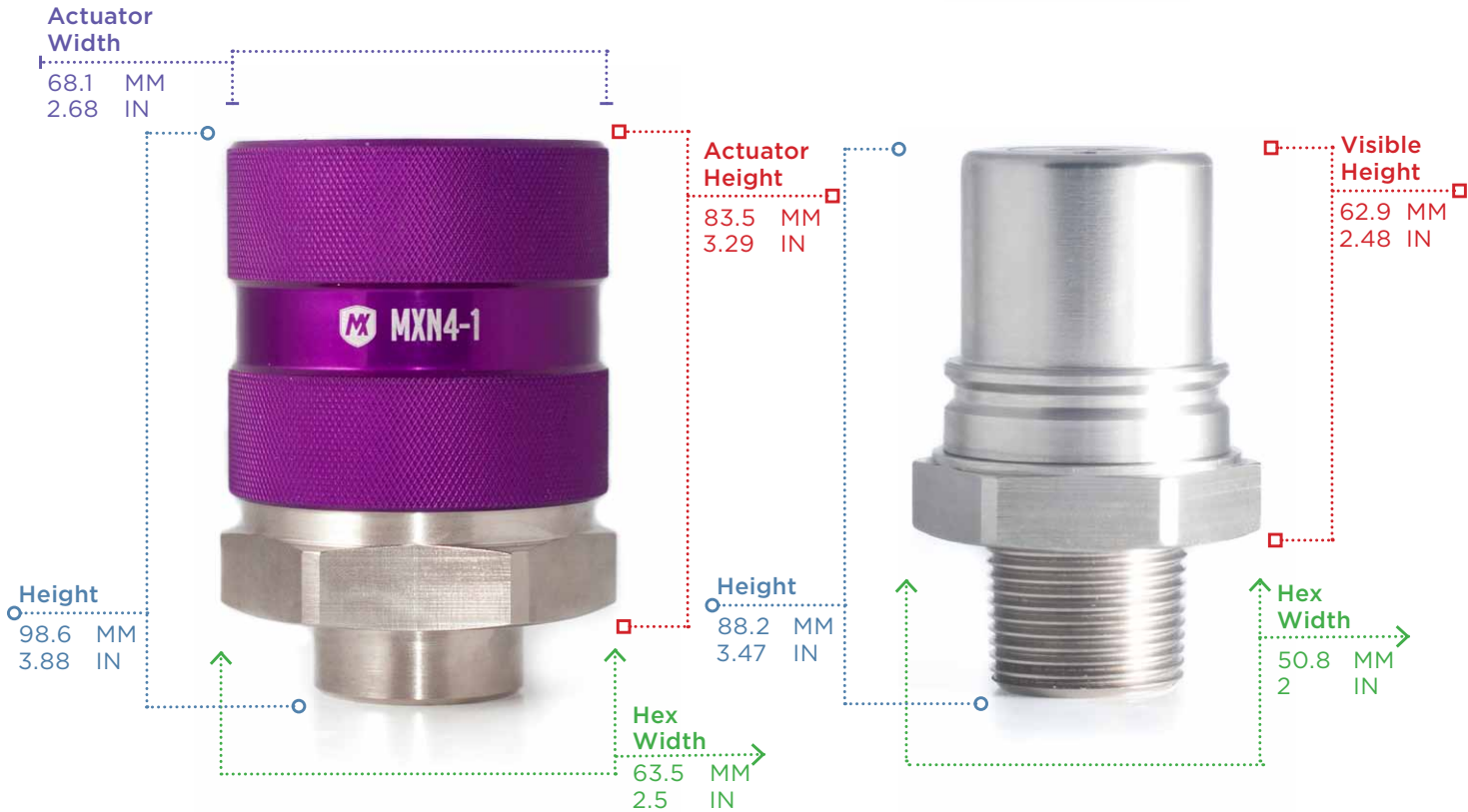
Fast Fill Systems now offers the next generation of High Flow Dry-Break Couplers. Constructed from steel for sure latching and durability, the MX-Series comes in 7 different Nozzle-Receiver pairs that can only be connected to their matching colors, eliminating any possibil-

ity 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.



- | | | | | | | |
|---------------------------------------|--|--|--|--|--|--|
| MXN1-1
MXR1-1
RED | MXN2-1
MXR2-1
YELLOW | MXN3-1
MXR3-1
TEAL | MXN4-1
MXR4-1
PURPLE | MXN5-1
MXR5-1
BLUE | MXN6-1
MXR6-1
COPPER | MXN7-1
MXR7-1
GREY |
|---------------------------------------|--|--|--|--|--|--|

Operating Pressure

34.5 BAR
500 PSI

1" Threads

Nozzle FNPT
Receiver MNPT

Construction

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

Caps & Plugs Recommended



GN210 | GR210

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

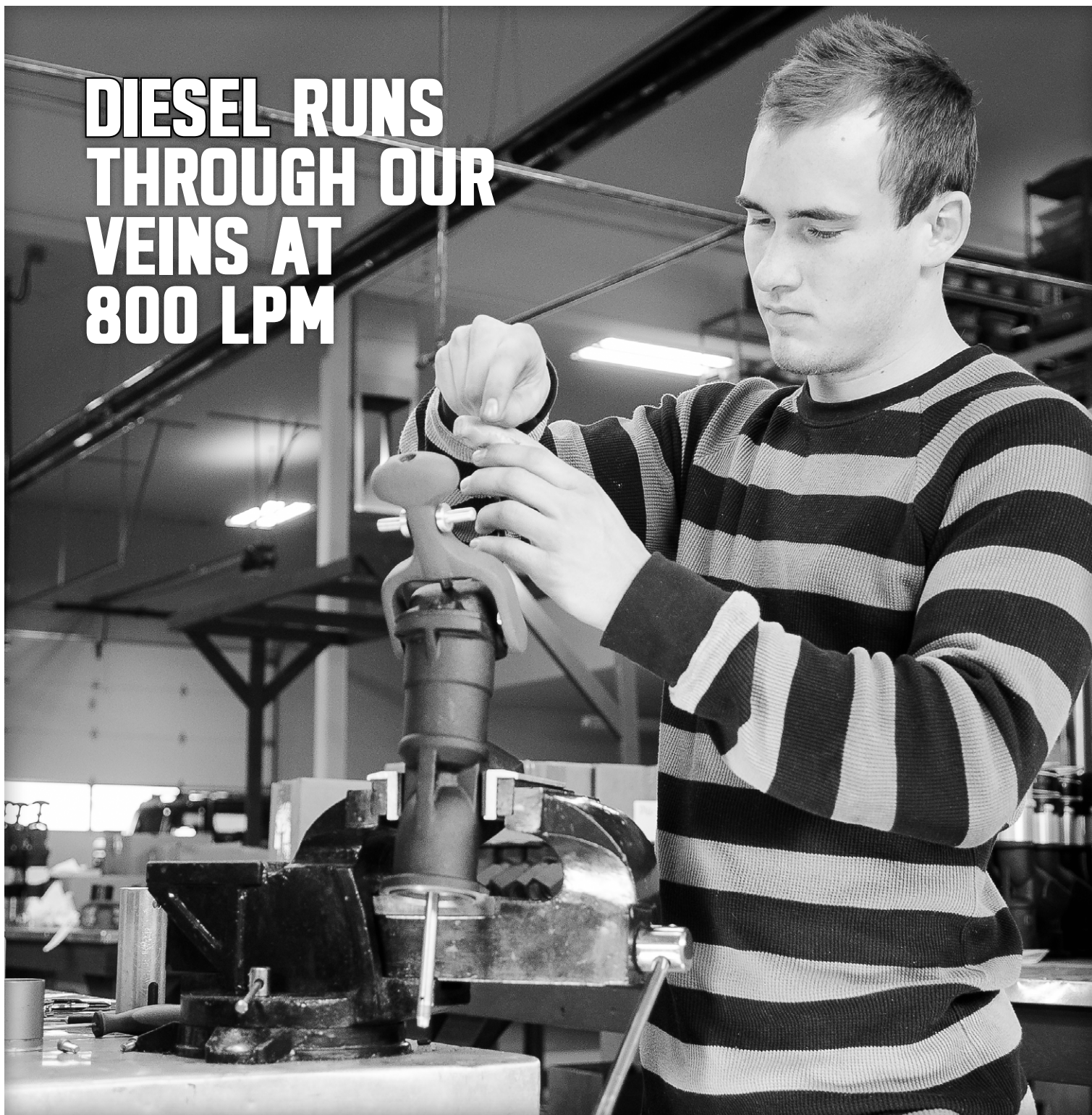
safety. The system will not allow grease transfer until the couplers are connected properly. This coupler is available in 3/4", with a maximum deadhead pressure of 5,000 PSI at the integrated ball valve.

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



Operating Pressure		3/4" Thread		Construction	Engineering	Engineering	Caps & Plugs Recommended
345	BAR	Nozzle	FNPT	Nickel plated steel. Anodized aluminum.	Dimple & groove guide system.	Connects and disconnects under line pressure.	
5000	PSI	Receiver	MNPT				

DIESEL RUNS THROUGH OUR VEINS AT 800 LPM



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 a refurbished nozzle works even better than a new one. Send us your used nozzles today.



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