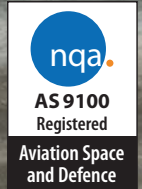


Wiggins

SERVICE SYSTEMS

The Leader in Fueling Systems Since 1967

WORK FASTER, CLEANER, SAFER



Volume 09-24

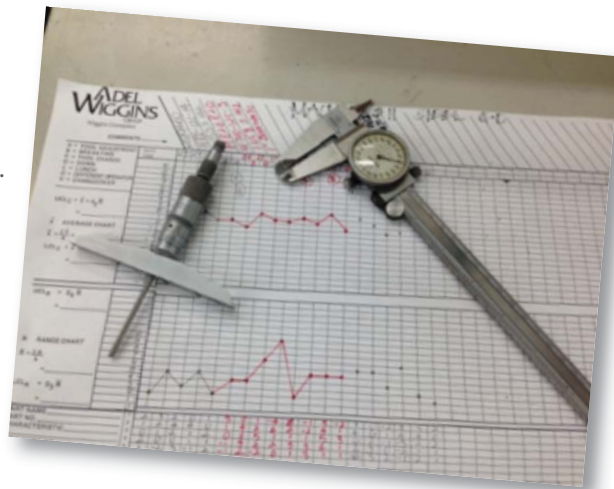


Wiggins

SERVICE SYSTEMS

History & Innovation

By 1967, when we entered the off highway market, Wiggins connectors was already recognized throughout the aerospace industry as an innovator in fueling systems. With over 45 years of experience in high quality refueling systems, AdelWiggins Group has the connectors, nozzles, receivers and vents to make your fleet as efficient and safe as possible.



As a leader in the field of highly engineered aerospace components, we have leveraged our knowledge to successfully develop high quality parts to support the mining and construction industry. Leading the way with new products, in 1972 we introduced the ZZ9A nozzle, part of the fast, clean and efficient refueling which has become virtually an industry standard today. Following up on that success, we made a more reliable, lighter and faster fueling nozzle, the ZZ9A1. In recent years, Wiggins introduced the JNX fast fueling system with Jet Sensor technology, the industry's safest and most reliable refueling system. Now we have further evolved the JNX family by designing the new JNXPH fast fueling system with protected signal hoses. Contact us today to learn more about our many fast fueling options, as well as our range of complementary oil service couplings.

Contact Us

Wiggins Service Systems

5000 Triggs Street, Los Angeles, CA 90022

www.adelwiggins.com

323.269.9181



JNXPH Compact Refueling System

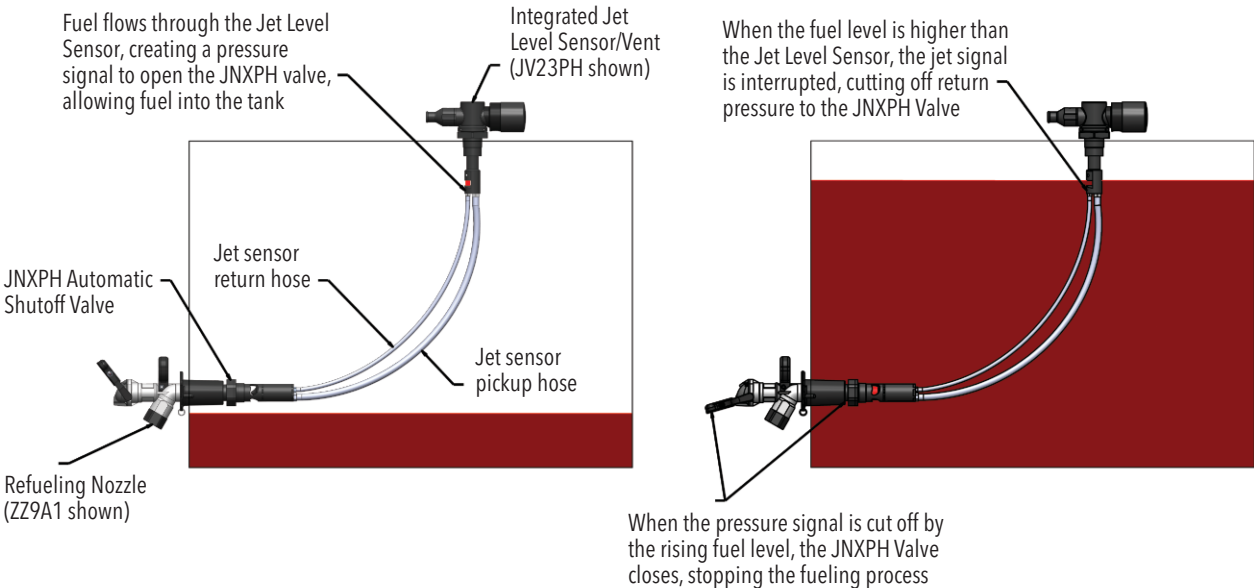
Introducing the JNXPH compact, non-pressurized fast fueling system with INTERNAL hoses!



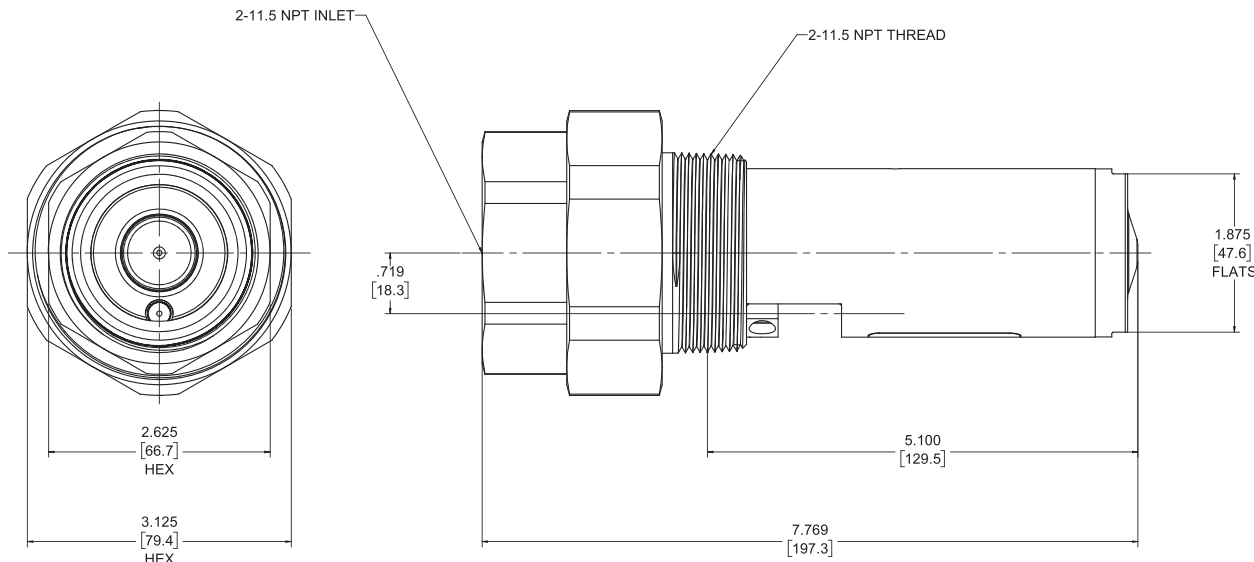
- Compact and efficient: based on the proven Wiggins JNX fast fueling system, but now with INTERNAL routing for maximum protection of signal hoses
- Non-pressurized: uses the patented and ultra-reliable Wiggins jet sensor technology to control shutoff – does not pressurize tank and does not rely on floats
- Achieve flow rates of over 150 gallons per minute (570+ lpm)
- Compatible with industry-standard Wiggins ZZ9A1 and ZZ9A2 nozzles
- 2" male NPT connection to tank (other options available such as flange mount and remote mount)
- Fits flush inside ZNC3 and ZNC4 flush mount cans

JNXPH Compact Refueling System

How the JNXPH System Works



JNXPH Dimensions and Interface



The Patented JNX-Series Non-Pressurizing Fast Fueling System

Fast, Clean, and ULTRA-SAFE

Introduction

The Wiggins JNX non-pressurizing system allows for automatic diesel refueling at up to 211 gpm (800 lpm) with existing Wiggins nozzles and does not pressurize the fuel tank. Shutoff is automatic, fully self-contained, and **cannot be overridden**. JNX offers top-line quality, performance, and reliability at a competitive price.

Competitors' Non-Pressurizing Systems

Competitors' non-pressurizing systems use float-valves and are FAIL-OPEN systems. They will overfill and pressurize the fuel tank if fueling is carried out with a faulty float valve or bleed hose. (Competitors' systems commonly make use of an internal bleed hose, which is vulnerable to fatigue due to fuel slosh.) In this situation, fuel continues to bleed through the faulty float valve or hose even when the fuel level has passed the required shutoff point, preventing pressure from equalizing across the shutoff piston. The pressure imbalance keeps the piston open, and fuel continues to flow into the tank unchecked. Consequently, the tank overfills and is pressurized in proportion to the flow rate – the higher the flow rate, the greater the spillage and pressure build-up – creating a potentially severe safety and environmental hazard.

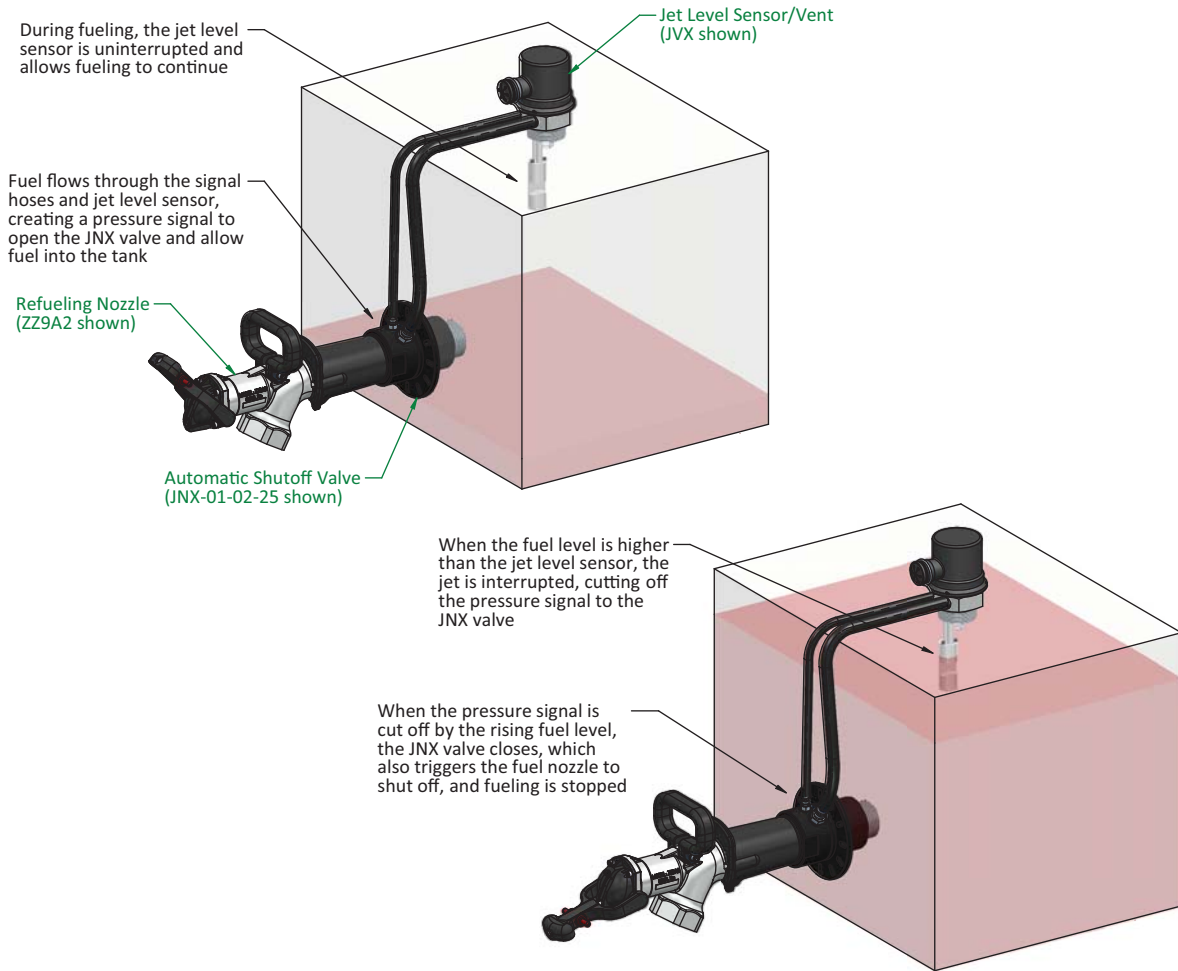
The Wiggins Patented ULTRA-SAFE JNX System

The Wiggins JNX system represents a technological leap forward in non-pressurizing automatic diesel refueling systems. The JNX system uses conventional pressure-sensitive fuel nozzles such as the Wiggins ZZ9A1 and ZZ9A2 while providing users with unique FAIL-SHUT and OVERFILL RESISTANT features not matched by the competition.

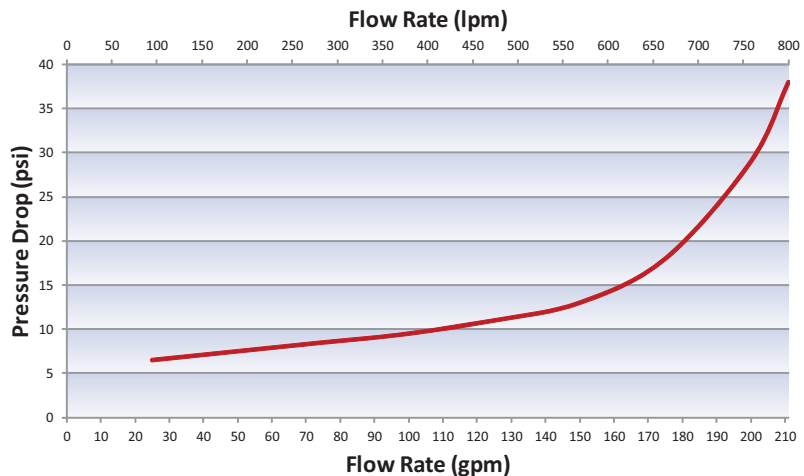
The Wiggins JNX shutoff valve is FAIL-SHUT: the spring-closed main valve can only be opened by a pressure signal from the jet level sensor – if for any reason the pressure signal is lost, the main valve will close, shutting off the flow of fuel into the tank. This ensures that overfilling the tank is not possible even if any part of the jet level sensor or signal hose were to fail.

The unique Wiggins jet level sensor does not have any moving parts to wear out and is thus extremely reliable. The Wiggins non-pressurizing system uses only external signal hoses, making JNX easy to install and maintain. The JNX system is available in both direct and remote fill configurations.

How It Works



JNX System Pressure Drop vs. Flow Rate
(ZZ9A2 nozzle connected to JNX-01-02)



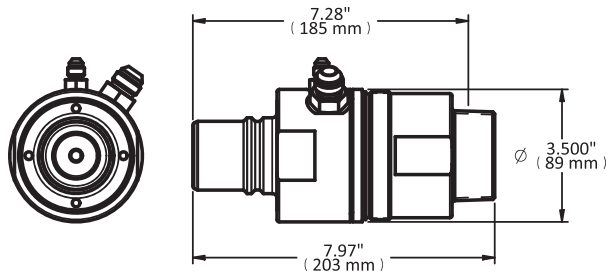
*Note: actual pressure drop will vary based on fluid density and viscosity.

Automatic Shutoff Valves

JNX-01-02



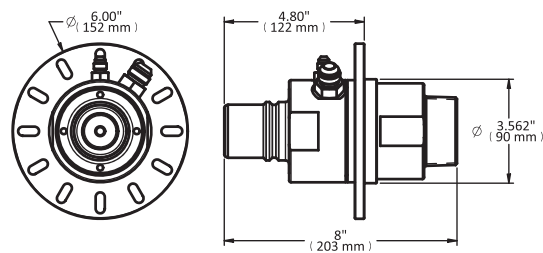
- Standard automatic shutoff valve
- ZN2-style receiver interface to mate with ZZ9A1 or ZZ9A2 nozzle
- 2" NPT male thread for mounting to tank
- Works with JVX (short) or JVXL (long) jet level sensor/vent
- 211 gpm (800 lpm) maximum flow rate



JNX-01-02-25



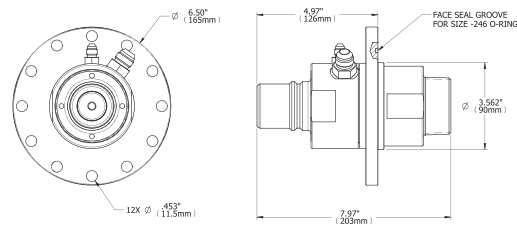
- Standard automatic shutoff valve
- ZN2-style receiver interface to mate with ZZ9A1 or ZZ9A2 nozzle
- Bolt-on mounting flange
- Works with JVX (short) or JVXL (long) jet level sensor/vent
- 211 gpm (800 lpm) maximum flow rate



JNX-01-02C-25S



- Standard automatic shutoff valve
- Stainless steel ZN2-style receiver interface to mate with ZZ9A1 or ZZ9A2 nozzle
- 12-bolt mounting flange (as used on certain CAT® machines)
- Bolt-on mounting flange
- Works with JVX (short) or JVXL (long) jet level sensor/vent
- 211 gpm (800 lpm) maximum flow rate



JNX-01-61



- Remote automatic shutoff valve
- Code 61 inlet adapter
- 2" NPT male thread for mounting to tank
- Works with JVX (short) or JVXL (long) jet level sensor/vent
- 211 gpm (800 lpm) maximum flow rate

Automatic Shutoff Valves

JNX-01-61-25S

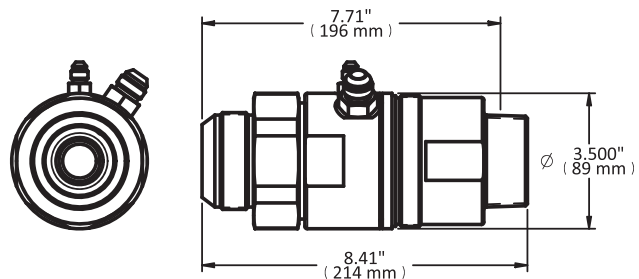


- Remote automatic shutoff valve
- Code 61 inlet adapter
- 12-bolt mounting flange (as used on certain CAT® machines)
- Works with JVX (short) or JVXL (long) jet level sensor/vent
- 211 gpm (800 lpm) maximum flow rate

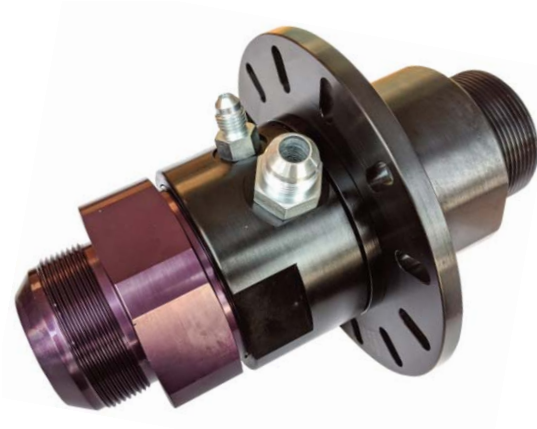
JNX-01-64



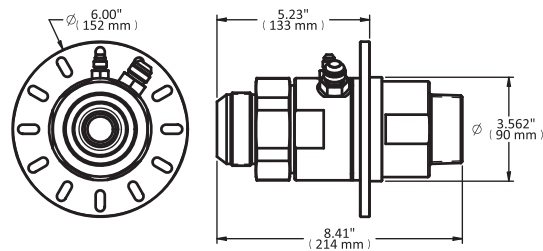
- Standard automatic shutoff valve
- 2" JIC Adapter for fuel transfer hose
- 2" NPT male thread for mounting to tank
- Works with JVX (short) or JVXL (long) jet level sensor/vent
- 211 gpm (800 lpm) maximum flow rate



JNX-01-64-25



- Standard automatic shutoff valve
- 2" JIC Adapter for fuel transfer hose
- Bolt-on mounting flange
- Works with JVX (short) or JVXL (long) jet level sensor/vent
- 211 gpm (800 lpm) maximum flow rate



JNX-01-86



- Automatic shutoff valve
- 2" NPT adapter for ZN2-type receiver
- 2" NPT male thread for mounting to tank
- Works with JVX (short) or JVXL (long) jet level sensor/vent
- 211 gpm (800 lpm) maximum flow rate

JNX-01-86-25



- Automatic shutoff valve
- 2" NPT adapter for ZN2-type receiver
- Bolt-on mounting flange
- Works with JVX (short) or JVXL (long) jet level sensor/vent
- 211 gpm (800 lpm) maximum flow rate

Super-High Flow JNX System

JNX-M2 Super-High Flow Upgrade for JNX



JNX-01-M2

- Standard JNX valve is limited to just over 200 gpm (800 lpm) by inlet connection
- New JNX-M2 system has larger inlet connection, allowing flow rates of at least 300 gpm (1140 lpm)
- JNX-M2 system works with the new ZZ9A3 nozzle
- All other components remain unchanged - uses the exact same JNX shutoff valve subassembly
- Existing 800 lpm JNX systems can easily be upgraded in the field by changing the nipple adapter to the JNX-M2 configuration

- New ZZ9A3 Nozzle works with JNX-M2 Series
- Achieve flow rates of 300+ gpm
- Same style of operation as industry-standard Wiggins ZZ9A1 Nozzle

ZZ9A3



JNX-M2R

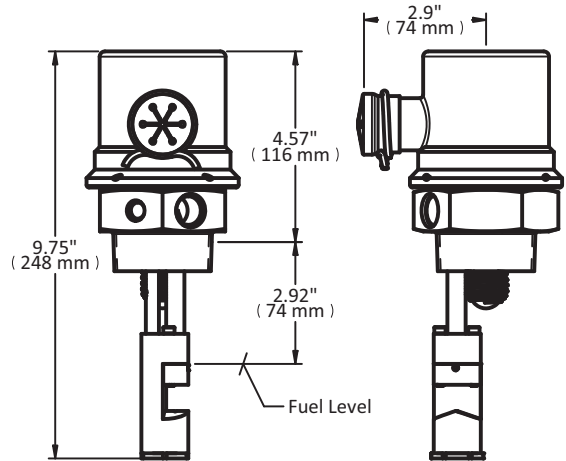
- New JNX-M2R receiver for use with remote installations: mates with ZZ9A3 nozzle
- Extra-light spring to minimize risk of premature shutoff
- Comes with protective dust cap

Integrated Jet Level Sensor/Vent

JVX



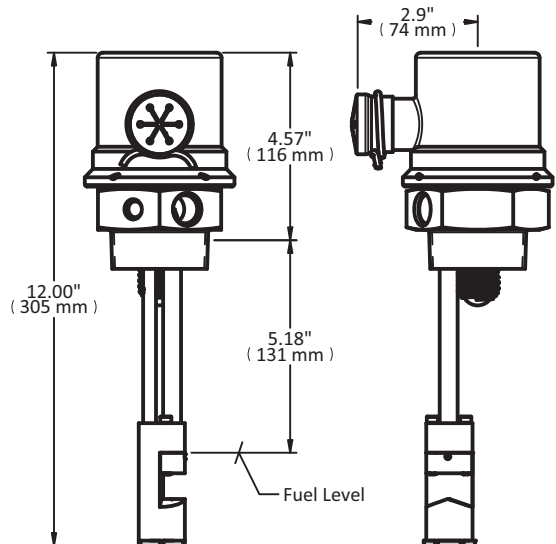
- Vent assembly with integrated jet level sensor,
- 3 psig relief valve, and spill protection
- Jet level sensor does not have moving parts: it is extremely reliable
- 2" NPT male thread for mounting to tank
- Short sensor length



JVXL



- Vent assembly with integrated jet level sensor,
- 3 psig relief valve, and spill protection
- Jet level sensor does not have moving parts: it is extremely reliable
- 2" NPT male thread for mounting to tank
- Long sensor length

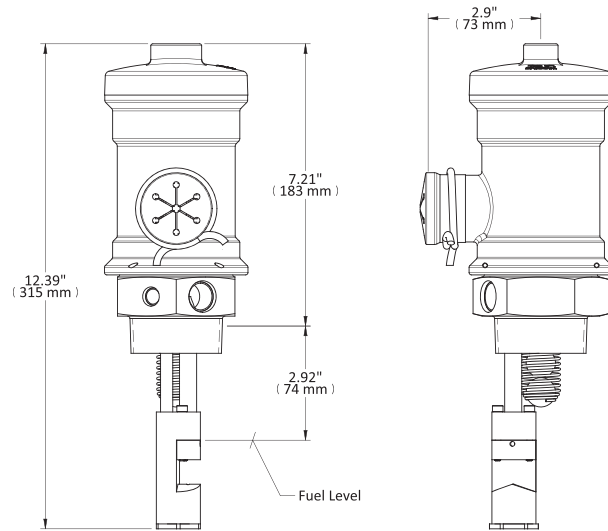


Integrated Jet Level Sensor/Vent

JVXF



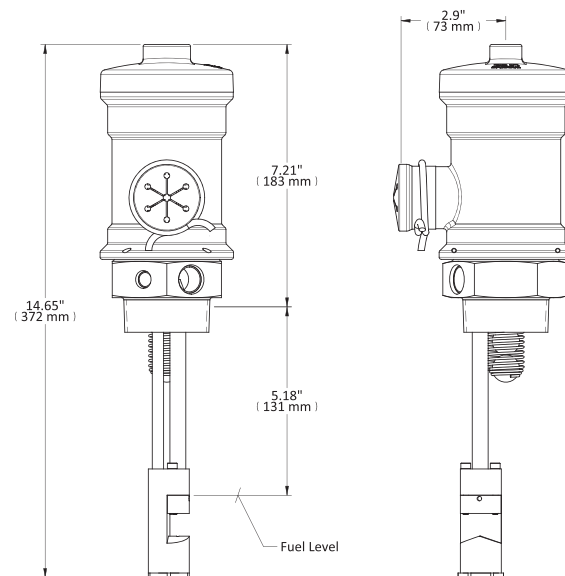
- Vent assembly with integrated jet level sensor and 10 micron filter
- Short sensor length



JVXFL

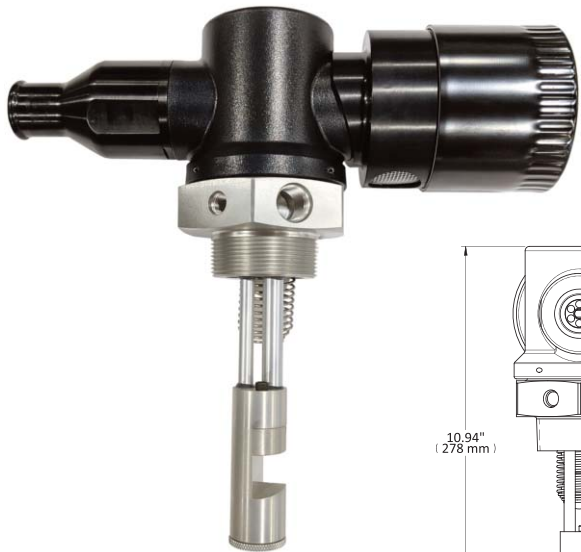


- Vent assembly with integrated jet level sensor and 10 micron filter
- Long sensor length

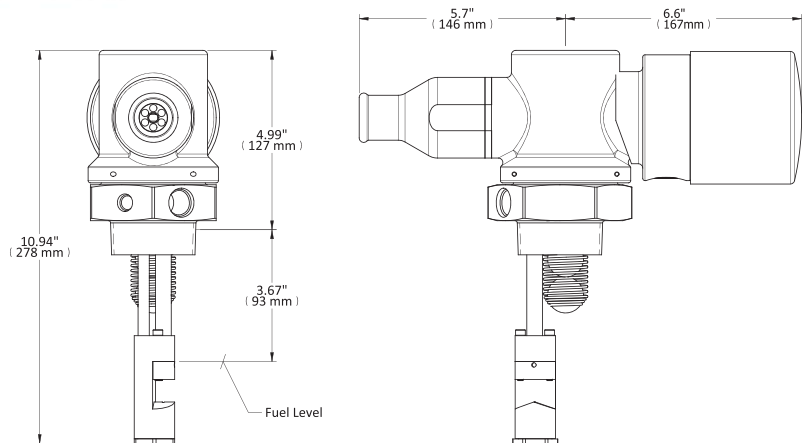


Integrated Jet Level Sensor/Vent

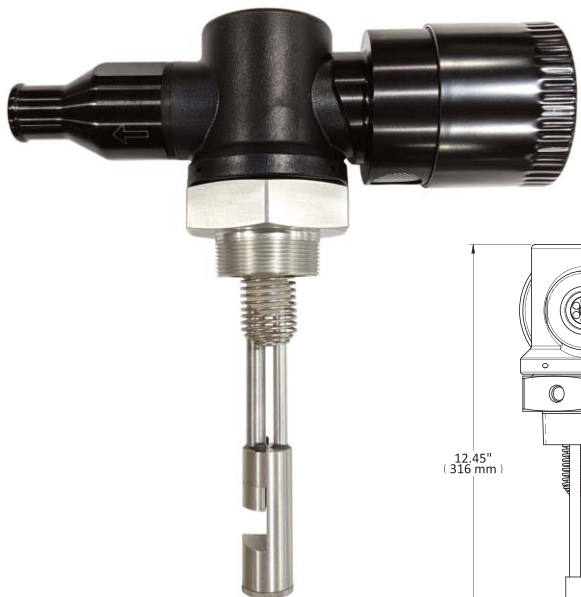
JV23



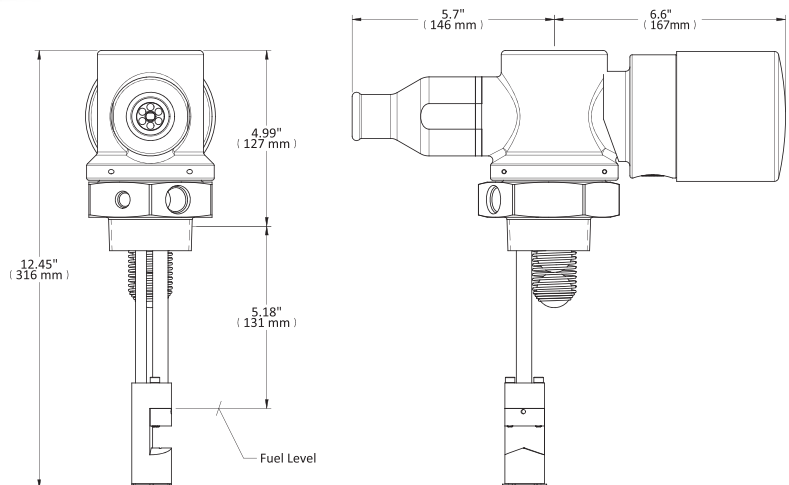
- Vent assembly with integrated jet level sensor and 3 micron filter
- Short sensor length



JV23L



- Vent assembly with integrated jet level sensor and 3 micron filter
- Long sensor length

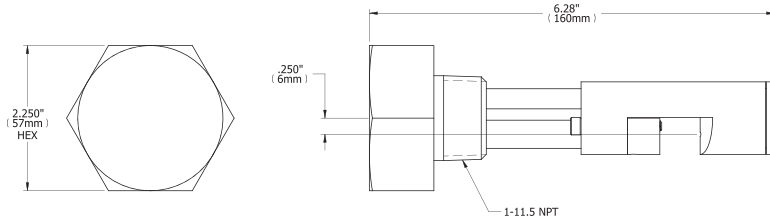


Integrated Jet Level Sensor/Vent

VR306X



- Jet Sensor Assembly
- 1" NPT mounting thread



JNX Accessories

Wiggins offers a variety of adapters, flanges, and hose kits that allow JNX to be customized to suit even the most challenging installations. Below are just a few examples:

JNC2A



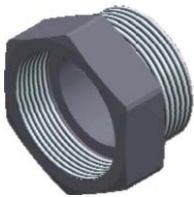
- Receiver for use with remote JNX: mates with ZZ9A1 or ZZ9A2 nozzle
- Extra-light spring to minimize risk of premature shutoff
- Comes with protective dust cap

VR310-11



- Weld-on flange for mounting JNX-01-02-25 or JNX-01-64-25

JNX-75



- 2' NPT Extension for mounting JNX receiver inside ZNC3, ZNC3L, ZNC4 and ZNC4L

CSPF-C007

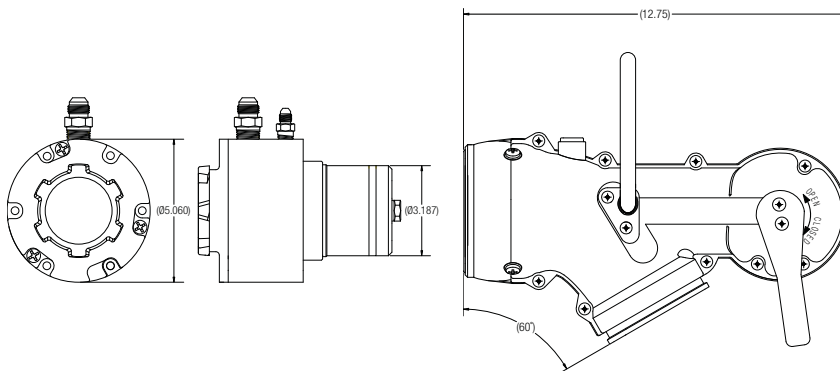


- Weld-on 2" NPT half-coupling for mounting automatic shutoff valve or jet level sensor/vent

Ultra-High Flow Rate VR300 System

The VR300 – Fuel at 300 GPM

The VR300 system is also non-pressurized and has a flow capacity of over 300 gallons per minute. Non-pressurized systems allow operators to use Wiggins high flow fueling systems on vehicles with lightweight or composite fuel tanks.



Jet Sensor Assembly

Can be mounted on the top or the side of the tank.



Easy to Install

- Can be mounted directly on fuel tank, or in remote location
- Several manufacturers have equipped their vehicles to accept the VR300 mounting

Fast

- Designed for vehicles with large fuel tanks
- 300+ GPM flow rate
- Spend less time fueling and more time working

Clean

- Interlock feature prevents spills from disconnecting nozzle during fueling
- Positive shutoff - cannot be overfilled, shutoff cannot be overridden
- Unique cam-lock nozzle attachment assures a leak - proof seal between nozzle and receiver

Safe

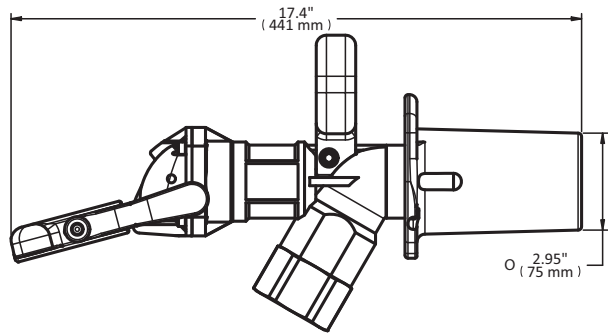
- Uses same jet sensor technology as JNX
- Nozzle includes full tank indicator display
- Proven reliability - hundreds of units in use world wide

Refueling Nozzles

ZZ9A1



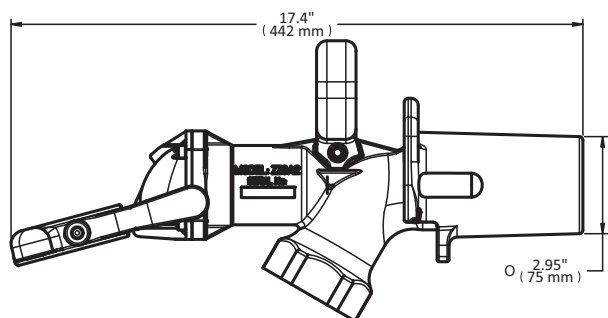
- Industry-standard diesel refueling nozzle
- 150 gpm (570 lpm) maximum flow rate
- Automatic shutoff; works with pressurizing and non-pressurizing systems
- 1.5" NPT female inlet thread
- Durable, dependable Elast-O-Dog latching
- Field-replaceable components



ZZ9A2



- High-flow rate diesel refueling nozzle
- 211 gpm (800 lpm) maximum flow rate
- Automatic shutoff; works with pressurizing and non-pressurizing systems
- 2" NPT female inlet thread
- Durable, dependable Elast-O-Dog latching
- Field-replaceable components



Splash Fill Adapters for the ZZ9A1 & ZZ9A2



**Straight ZN6A
Adapter Tube**



**90° ZN6B
Adapter Tube**

Bulk Fuel Coupling

ZS5 Nozzle (Mates with ZN2A)

The ZS5 Bulk Transfer Nozzle is designed to mate with the ZN2 receiver. It can be used to drain a fuel tank for servicing, or to transfer fuel from one tank to another. The end fitting is the same 1.5-inch NPT female fitting as the ZZ9A1.



KR91

**Actuating Assembly
Replacement Kit**



KR92

**Latching Mechanism
Replacement Kit**



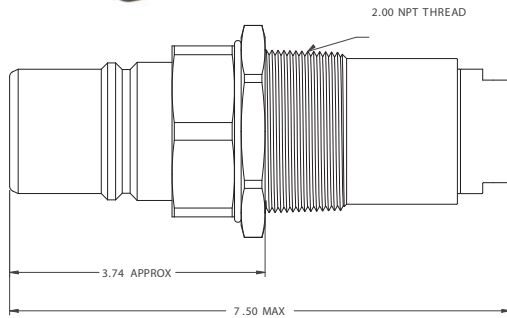
KR93

**Housing Handle
Replacement Kit**



ZN2CV

Fuel Receiver with Check Valve



ZN2CV-100

Rebuild Kit for ZN2CV



ZN2CV-1

Installation Kit
for ZN2CV



ZN2CVC

Stainless Steel Fuel
Receiver with Check
Valve



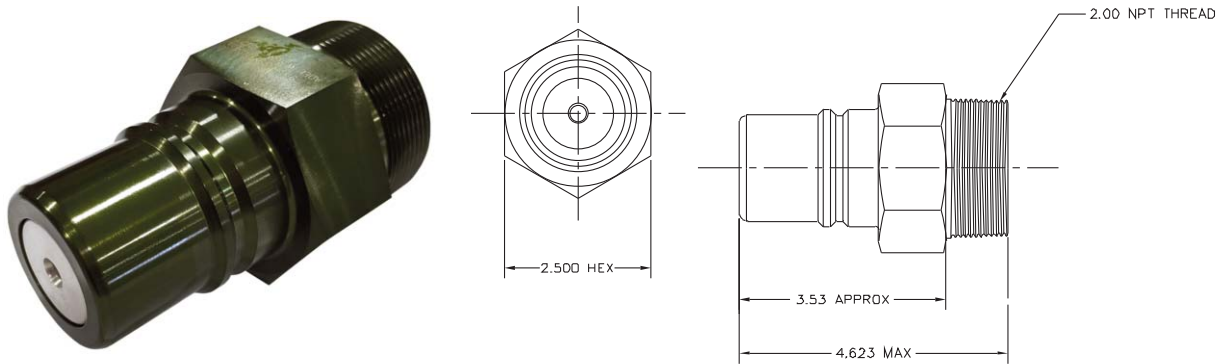
ZN2CVC-100

Rebuild Kit ZN2CVC



Fuel Receivers

ZN2A



► Data Table

Receiver	Application	Poppet Color
ZN2A	Standard for most applications and mountings	Clear
ZN2B	has a light spring to avoid premature shutoff when head pressure is higher than normal	Blue
ZN2D	has a heavy spring to avoid overfilling the tank when head pressure is lower than normal	Red
ZNC2A	Same as ZN2 with cap	

ZNC3L

Pressurized flush mount bolt-on receiver with full coupling



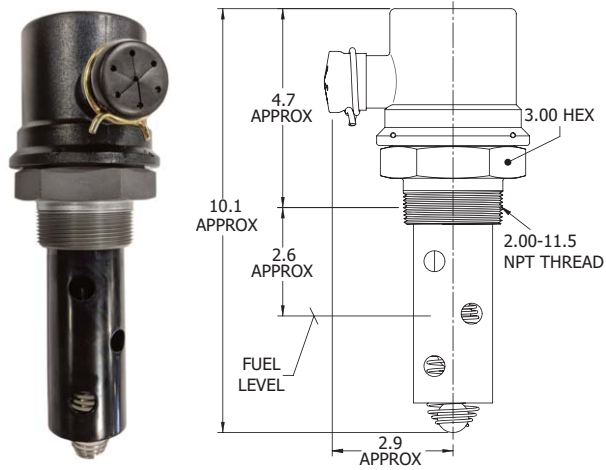
ZNC4L

Pressurized flush mount weld-on receiver with full coupling

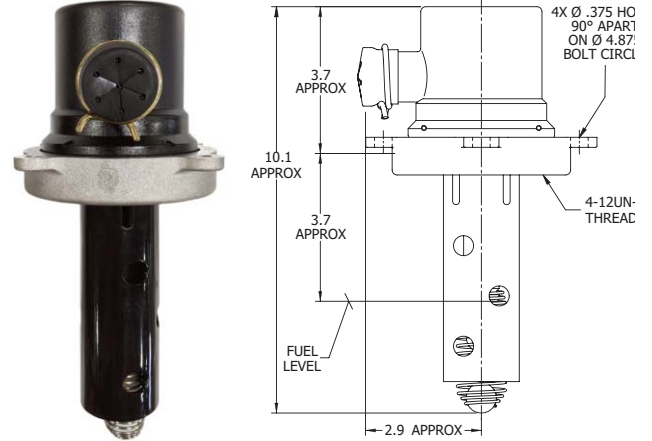


Fuel Tank Vents

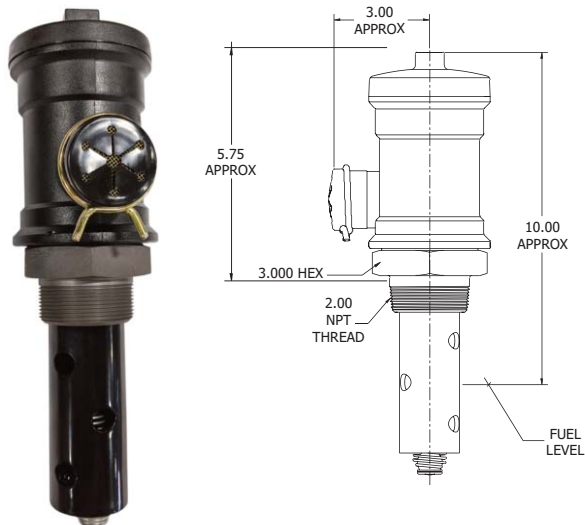
ZV10



ZV11



ZV13



ZV23



High Flow Flush Face Couplings

Patented design: 12 color-coded, identically-sized, non-interchangeable couplings with Master Evac Socket



DESIGN FEATURE

Flush face design allows easy cleaning by wiping with rag

Push to connect, without needing to pull back actuating ring

Color coded for visual identification and mechanically differentiated

Reduce vehicle service time by increasing fluid flow rates

1" NPT standard. Also available in smaller 3/4" size

Master socket to connect to all receivers for fluid evacuation

PURPOSE

Reduce fluid contamination during connection with flush face feature

Simple, quick connection

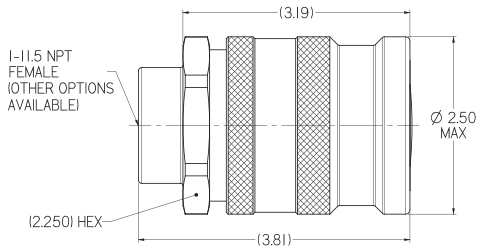
Eliminate possibility of customer cross mixing fluids

Reduce customer time and cost during fluid filling with higher flow rate

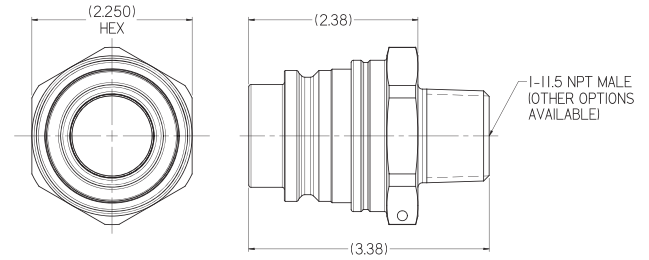
Standard sizing for entire range of couplings

Reduce customer time and cost during fluid evacuation using master socket

FF0-SERIES SOCKET



FF5-SERIES NIPPLE



Red
(Socket)
FF010B16



Red
(Nipple)
FF015A16



Gold
(Socket)
FF070B16



Gold
(Nipple)
FF075A16



Yellow
(Socket)
FF020B16



Yellow
(Nipple)
FF025A16



Teal
(Socket)
FF080B16



Teal
(Nipple)
FF085A16



Blue
(Socket)
FF030B16



Blue
(Nipple)
FF035A16



Pink
(Socket)
FF090B16



Pink
(Nipple)
FF095A16



Orange
(Socket)
FF040B16



Orange
(Nipple)
FF045A16



Gray
(Socket)
FF100B16



Gray
(Nipple)
FF105A16



Green
(Socket)
FF050B16



Green
(Nipple)
FF055A16



Brown
(Socket)
FF110B16



Brown
(Nipple)
FF115A16



Purple
(Socket)
FF060B16



Purple
(Nipple)
FF065A16



Black
(Socket)
FF120B16



Black
(Nipple)
FF125A16



Master Evacuation
Socket
FFEVACB16

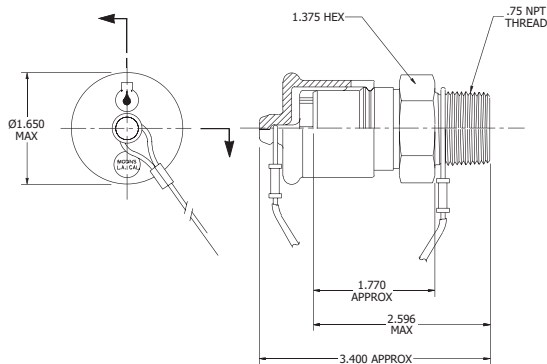
0N2

Crankcase Receiver and Cap



0N2

To order receiver with cap, specify 0NC2A



P-1804 / P-1880

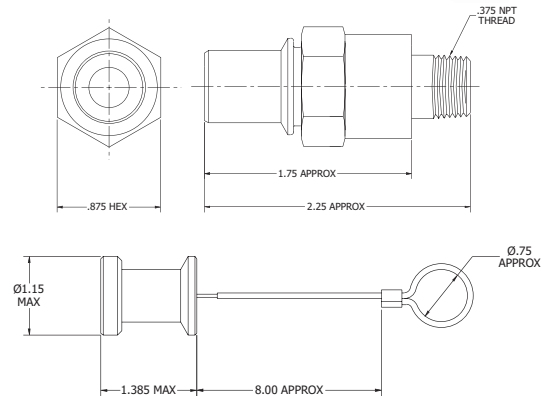
Transmission Receiver and Cap



P-1804



P-1880



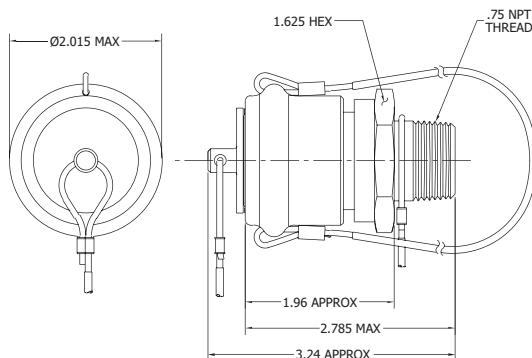
0S2

Crankcase Nozzle and Plug



To order nozzle with plug (0P12), specify OSP2

Mates with 0N2 and 0NC2A Receivers



C-1807 / P-1844

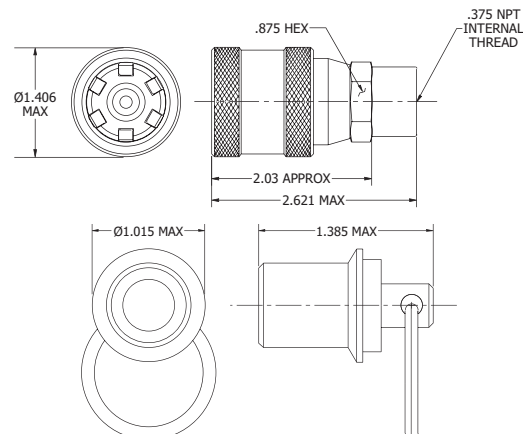
Transmission Nozzle and Plug



C-1807

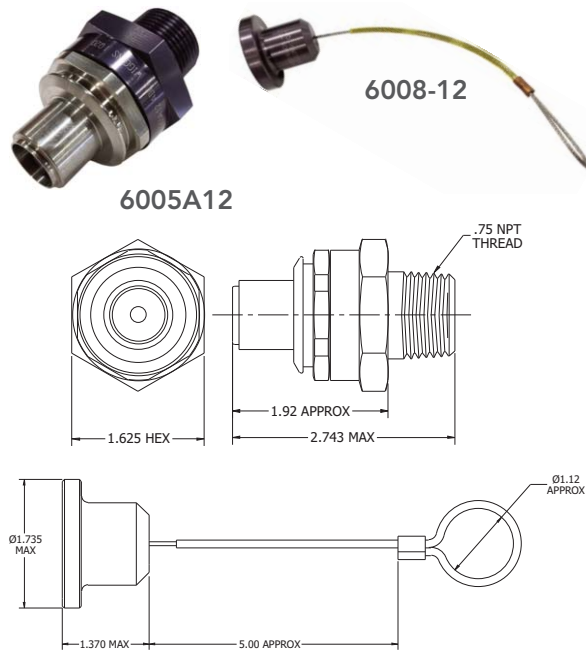


P-1844



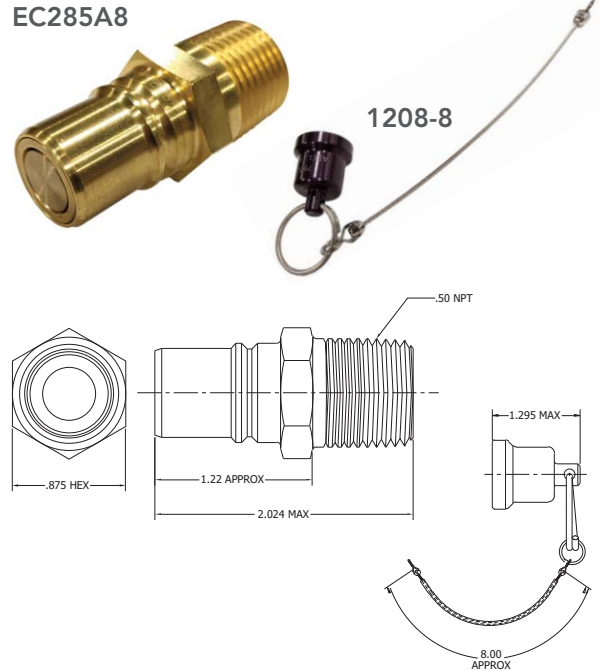
6005A12 / 6008-12

Hydraulic Receiver and Cap



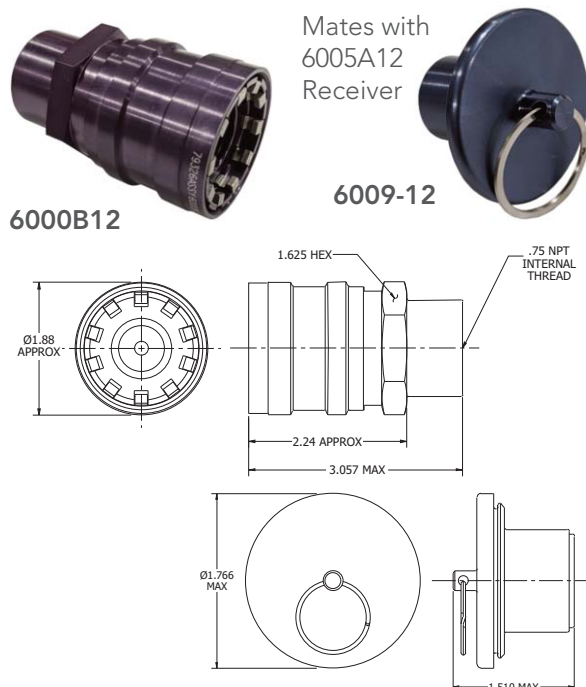
EC285A8 / 1208-8

Coolant Receiver and Cap



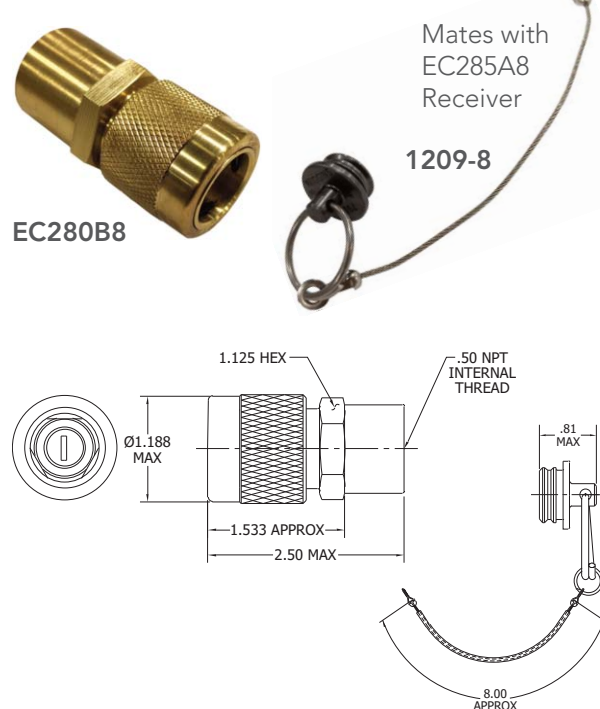
6000B12 / 6009-12

Hydraulic Nozzle and Plug



EC280B8 / 1209-8

Coolant Nozzle and Plug



R11

Coolant Nozzle



R12

Coolant Receiver



R13

Transmission Nozzle



R14

Transmission Receiver



R15

Oil Nozzle



R16

Oil Receiver



R17

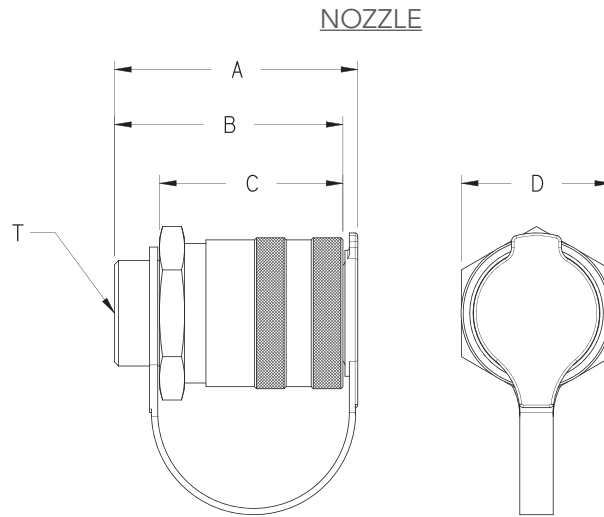
Hydraulic Nozzle



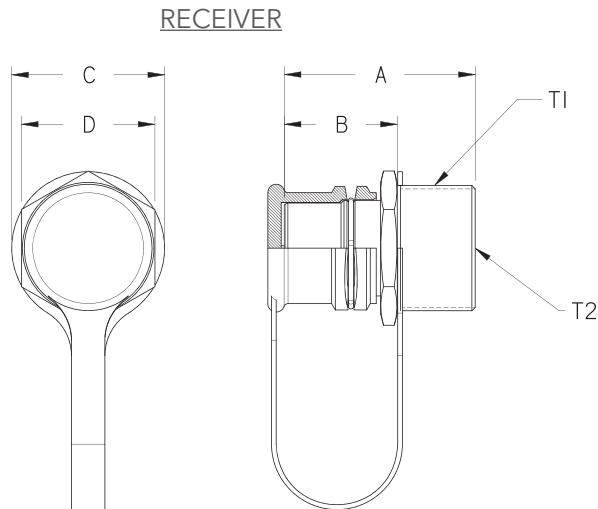
R18

Hydraulic Receiver





NOZZLE			Dimension				
Application	Part #	Cap	A	B	C	D	T
Coolant	R11	R1107	2.70" Max	2.53" Approx	1.92" Approx	1.500" Hex	.50" NPT Int. Thread
Transmission	R13	R1307	3.100" Max	2.85" Approx	2.20" Approx	1.750" Hex	.75" NPT Int. Thread
Oil	R15	R1507	3.300" Max	3.04" Approx	2.25" Approx	2.00" Hex	.75" NPT Int. Thread
Hydraulic	R17	R1707	3.700" Max	3.42" Approx	2.75" Approx	2.250" Hex	1.00" NPT Int. Thread



RECEIVER			Dimension					
Application	Part #	Cap	A	B	C	D	T1	T2
Coolant	R12	R1205	2.23" Max	1.17" Approx	1.410" Max	1.250" Hex	1.187"-12UN-2A Thread	.875"-14UNF-2B Int. Thread with SAE J1926/1-10 Boss Seal Surface
Transmission	R14	R1405	2.49" Max	1.39" Approx	1.610" Max	1.437" Hex	1.312"-12UN-2A Thread	1.062"-12UN-28 Int. Thread with SAE J1926/1-12 Boss Seal Surface
Oil	R16	R1605	2.50" Max	1.50" Approx	1.990" Max	1.750" Hex	1.625"-12UN-2A Thread	1.312"-12UN-2B Int. Thread with SAE J1926/1-16 Boss Seal Surface
Hydraulic	R18	R1805	2.89" Max	1.70" Approx	2.300" Max	2.000" Hex	1.875"-12UN-2A Thread	1.625"-12UN-2B Int. Thread with SAE J1926/1-20 Boss Seal Surface

Tier 4 Emission Solutions

Heated DEF Fast Filling System

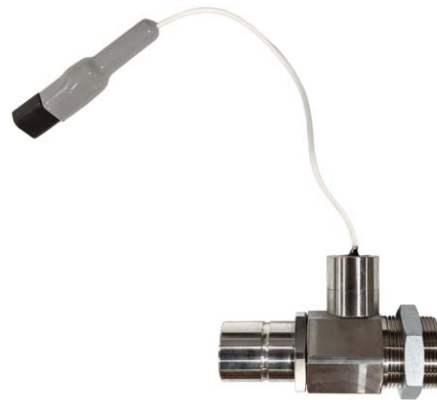
(Patented)

Features:	Benefits:
Automatic shutoff system	<i>Eliminates overfilling</i>
Receiver has integrated 24V heater	<i>Receiver is protected from freezing</i>
Valve has integrated 24V heater	<i>Valve is protected from freezing</i>
Capable of 30 gpm flow rate	<i>High flow rate improves efficiency</i>
Nozzle and receiver are dry-break	<i>Minimizes contamination and spillage</i>
Vent has dual check valves	<i>Minimizes evaporation, crystallization, and contamination</i>
Made from 304/316 stainless steel	<i>Material is compatible with DEF</i>
Remote mounted option	<i>Accessible fill point eliminates slip and fall hazard</i>

DEFN Nozzle



DEFR Receiver



DEFVALVEHR Shutoff Valve



DEFVENT Vent





Wiggins Service Systems has been the leader in fast fueling systems since 1967. Wiggins product is made with aerospace-grade materials and combines superior performance with unmatched quality and reliability. To learn more about Wiggins fast fueling systems, contact your authorized Wiggins distributor or visit www.adelwiggins.com.

Wiggins Service Systems
5000 Triggs Street, Los Angeles, CA 90022
323.269.9181
www.adelwiggins.com