

# PRODUCT CATALOG

*The Leader in  
Fueling Systems Since 1967*

**WORK FASTER, CLEANER, SAFER**

# Wiggins

## Service Systems



Volume 9-16

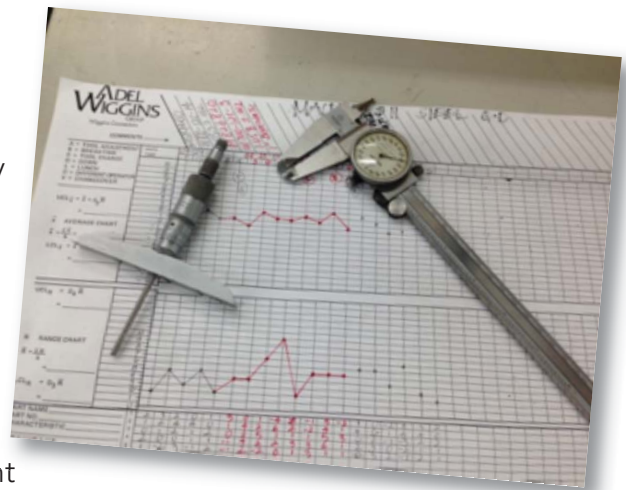
**TRANS**DIGM  
GROUP INC.

**ADEL**  
**WIGGINS**  
GROUP



## 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. And now, we are introducing the new Wiggins nozzle, ZZ9A2 and the new JNX receiver with the JVX vent; the industry's safest and most reliable refueling system.



## Contact Us

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# The Patented JNX Series Non-Pressurizing Fast Fueling System

Fast, Clean, and ULTRA SAFE

## Introduction

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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.

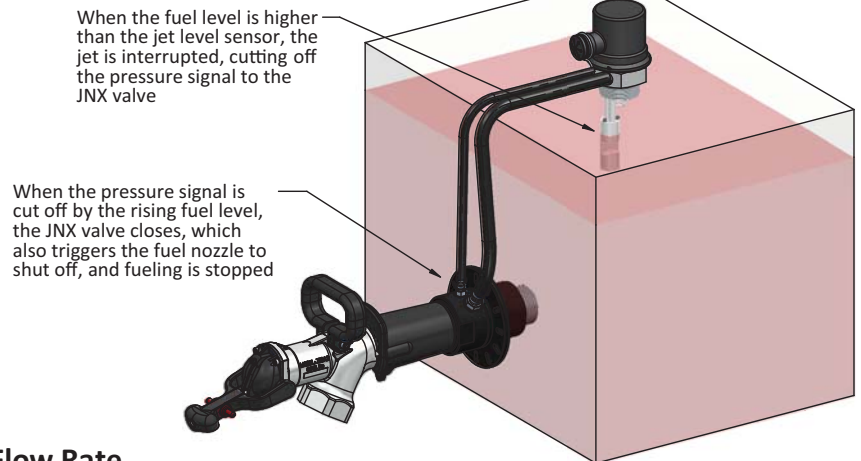
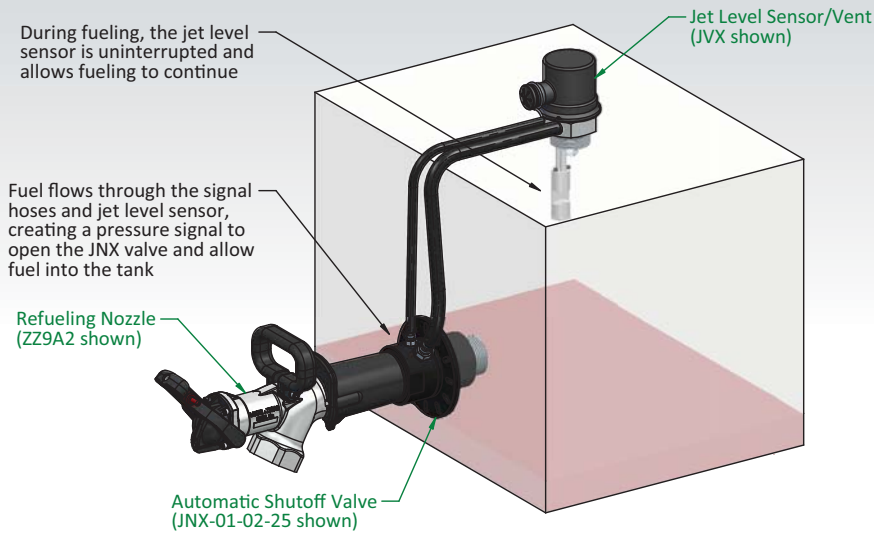
### The Wiggins Patented ULTRA SAFE JNX System

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.

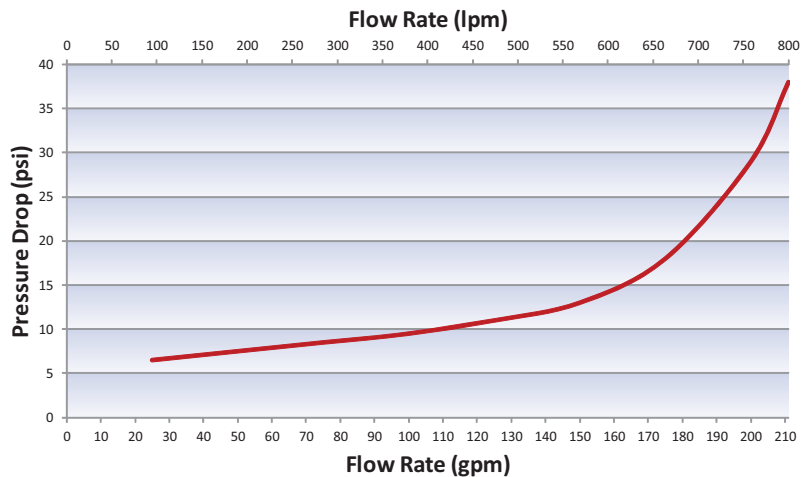
The Wiggins JNX shutoff valve is FAIL SHUT: the spring closed main valve can only be opened by a pressure signal from the jet level sensor – if for any reason the pressure signal is lost, the main valve will close, shutting off the flow of fuel into the tank. This ensures that overfilling the tank is 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.

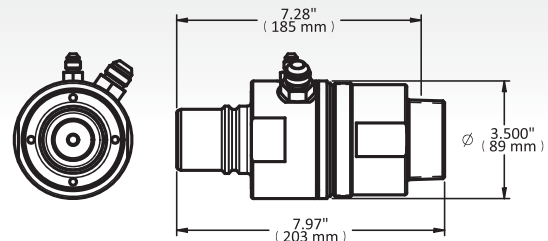
## Automatic Shutoff Valves

### JNX-01-02



<b>Min. Flow Rate</b>	25 gpm (95 lpm)
<b>Max. Flow Rate</b>	211 gpm (800 lpm)
<b>Operating Pressure</b>	75 psig (520 kPa)
<b>Weight</b>	3.33 lbs (1.51 kg)

- 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

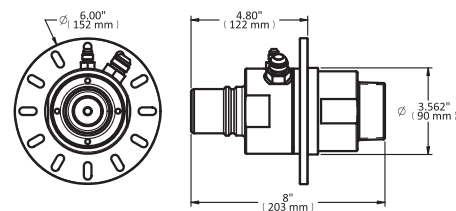


### JNX-01-02-25



<b>Min. Flow Rate</b>	25 gpm (95 lpm)
<b>Max. Flow Rate</b>	211 gpm (800 lpm)
<b>Operating Pressure</b>	75 psig (520 kPa)
<b>Weight</b>	3.94 lbs (1.79 kg)

- 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

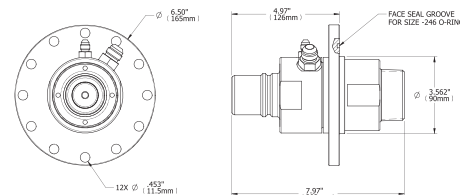


### JNX-01-02C-25S



<b>Min. Flow Rate</b>	25 gpm (95 lpm)
<b>Max. Flow Rate</b>	211 gpm (800 lpm)
<b>Operating Pressure</b>	75 psig (520 kPa)
<b>Weight</b>	3.94 lbs (1.79 kg)

- Standard automatic shutoff valve
- Stainless steel 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-01-61

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- 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

## JNX-01-61-25S

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- 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

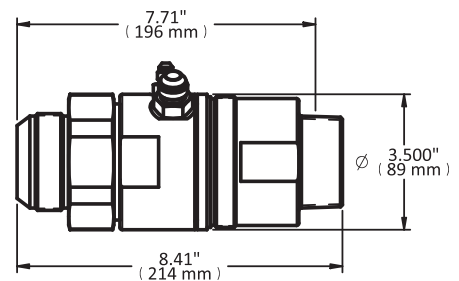
## Automatic Shutoff Valves

### 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

<b>Min. Flow Rate</b>	25 gpm (95 lpm)
<b>Max. Flow Rate</b>	211 gpm (800 lpm)
<b>Operating Pressure</b>	75 psig (520 kPa)
<b>Weight</b>	3.74 lbs (1.70 kg)

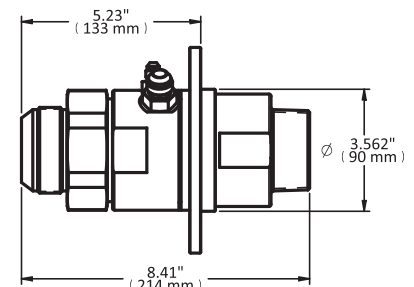
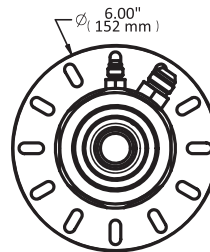


### JNX-01-64-25



- 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

<b>Min. Flow Rate</b>	25 gpm (95 lpm)
<b>Max. Flow Rate</b>	211 gpm (800 lpm)
<b>Operating Pressure</b>	75 psig (520 kPa)
<b>Weight</b>	4.35 lbs (1.97 kg)



## JNX-01-86

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

## JNX-01-86-25

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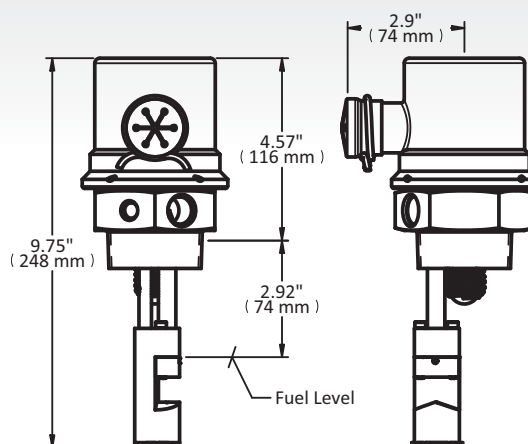
- Automatic shutoff valve
- 2" NPT adapter for ZN2-type receiver
- Bolt-on mounting flange
- Works with J VX (short) or J VXL (long) jet level sensor/vent
- 211 gpm (800 lpm) maximum flow rate

## 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



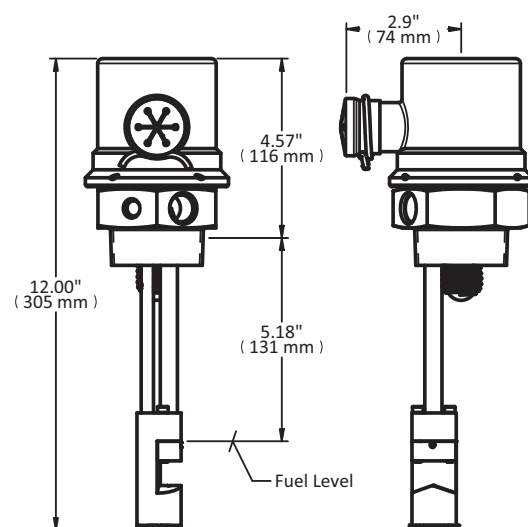
**Operating Pressure** 75 psig (520 kPa)

**Weight** 1.72 lbs (0.78 kg)

### 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



**Operating Pressure** 75 psig (520 kPa)

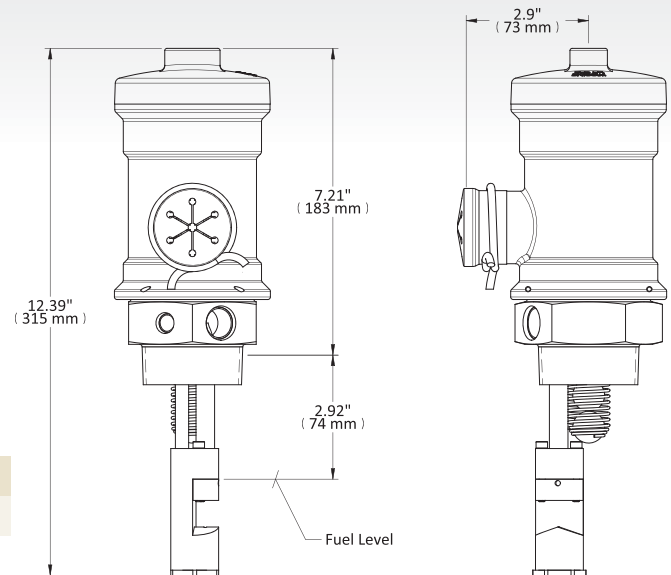
**Weight** 1.74 lbs (0.79 kg)

## JVXF



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

**Operating Pressure** 75 psig (520 kPa)  
**Weight** 2.27 lbs (1.03 kg)

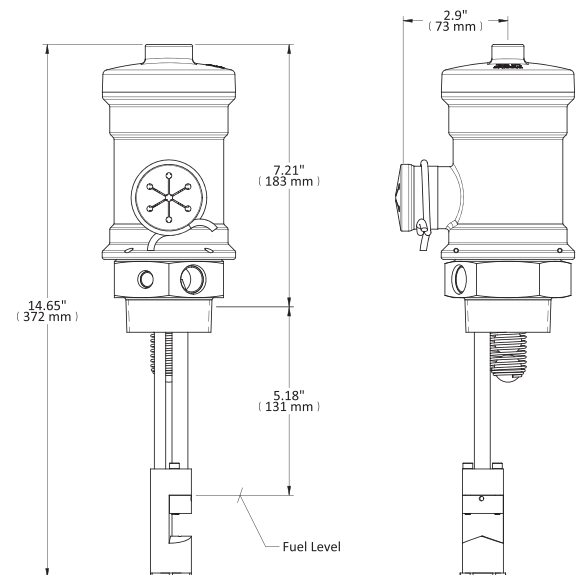


## JVXFL



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

**Operating Pressure** 75 psig (520 kPa)  
**Weight** 2.29 lbs (1.04 kg)

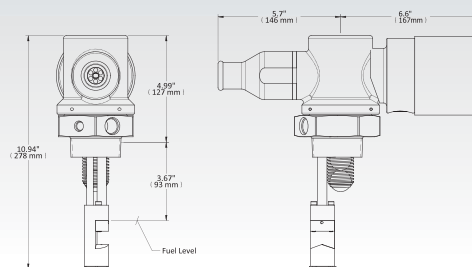


## Integrated Jet Level/Sensor/Vent

### JV23



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

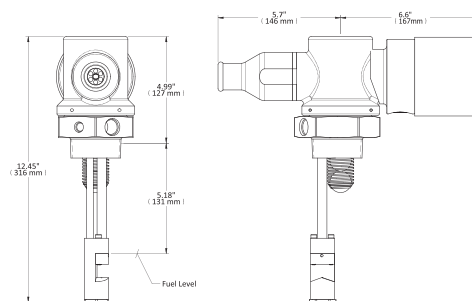


<b>Operating Pressure</b>	75 psig (520 kPa)
<b>Weight</b>	4.22 lbs (1.91 kg)

### JV23L



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

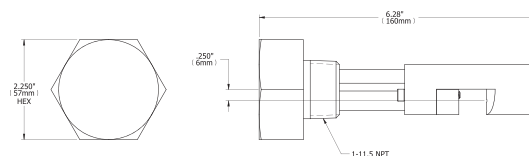


<b>Operating Pressure</b>	75 psig (520 kPa)
<b>Weight</b>	4.23 lbs (1.92 kg)

### 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

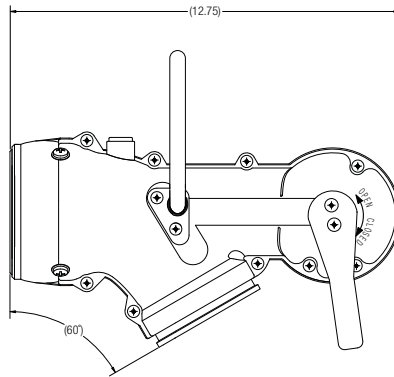
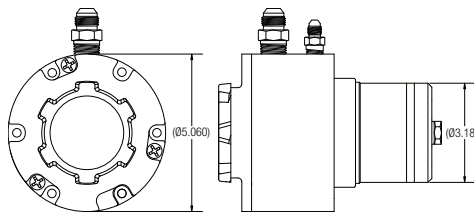
The VR300 system is also nonpressurized and has a flow capacity of up to 300 gallons per minute. Non-pressurized systems allow operators to use Wiggins high flow fueling systems on vehicles with lightweight or composite fuel tanks.



VR325



VR301



VR321

## Jet Sensor Assembly

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



VR306

## 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
- Fuel at rates up to 300 GPM
- Spend less time fueling and more time working

## Clean

- Interlock feature prevents spills from disconnecting nozzle during fueling
- Positive shut off – cannot be overfilled, shut – off 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

<b>Rated Flow:</b>	10 to 300 GPM
<b>Operating Pressure:</b>	25 to 125 PSIG
<b>Pressure Drop:</b>	7 PSID @ 200 GPM 18 PSID @ 300 GPM
<b>Connect/Disconnect Rotation:</b>	30 Degrees
<b>Disconnect Spillage:</b>	3 cc, Max.
<b>Housing Material:</b>	Aluminum
<b>Weight:</b>	9 LBS

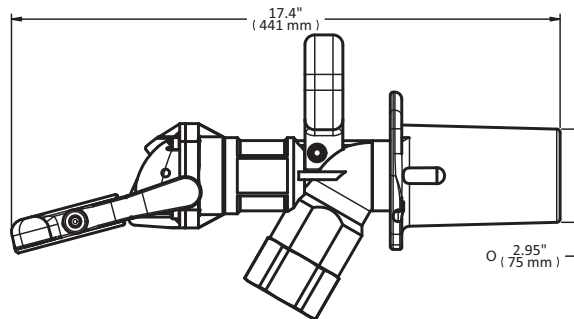
# Refueling Nozzles

## 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

<b>Min. Flow Rate</b>	25 gpm (95 lpm)
<b>Max. Flow Rate</b>	150 gpm (570 lpm)
<b>Operating Pressure</b>	75 psig (520 kPa)
<b>Weight</b>	5.64 lbs (2.56 kg)

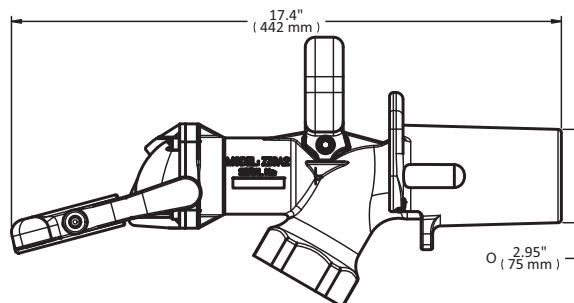


## ZZ9A2



- 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

<b>Min. Flow Rate</b>	25 gpm (95 lpm)
<b>Max. Flow Rate</b>	211 gpm (800 lpm)
<b>Operating Pressure</b>	75 psig (520 kPa)
<b>Weight</b>	6.10 lbs (2.77 kg)



## Accessories

### 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.





# Fuel Systems

## KR91

Actuating Assembly  
Replacement Kit



## KR92

Latching Mechanism  
Replacement Kit



## KR93

Housing Handle  
Replacement Kit



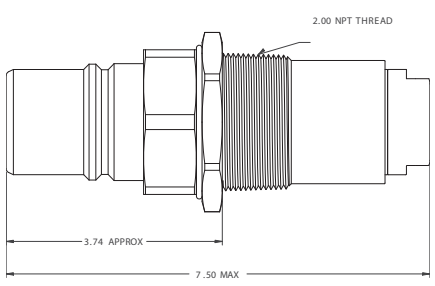
## ZN2CV

Fuel Receiver with Check Valve



### ► ZZ9A1 – Data Table

Flow Rate (gpm)	Pressure Drop	Operating Pressure	Weight (lbs)
25	1.0 psi	125 psig max	5.75
60	4.0 psi	125 psig max	5.75
100	9.0 psi	125 psig max	5.75
125	14.0 psi	125 psig max	5.75
150	24.0 psi	125 psig max	5.75



## ZN2CV-100

Rebuild Kit for ZN2CV



## ZN2CV-1

Installation Kit for ZN2CV



## ZN2CVC

Stainless Steel  
Fuel Receiver  
with Check Valve



## ZN2CVC-100

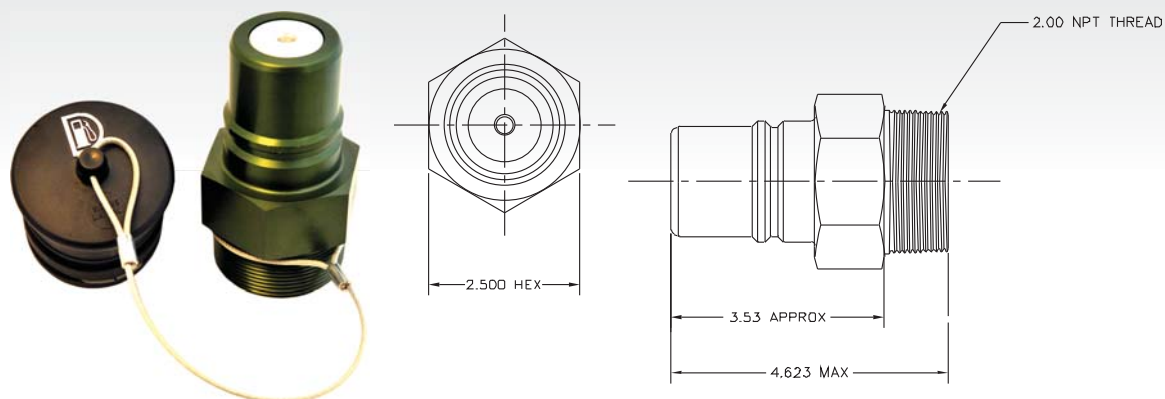
Rebuild Kit ZN2CVC



fuel systems

## Fuel Receivers

### ZN2A

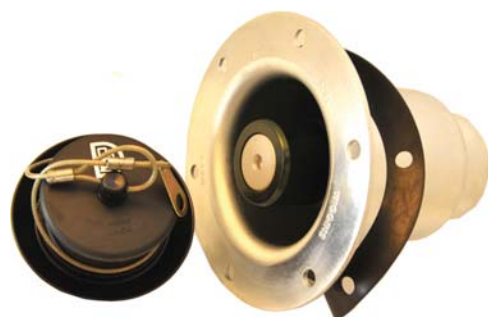


#### ► Data Table

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



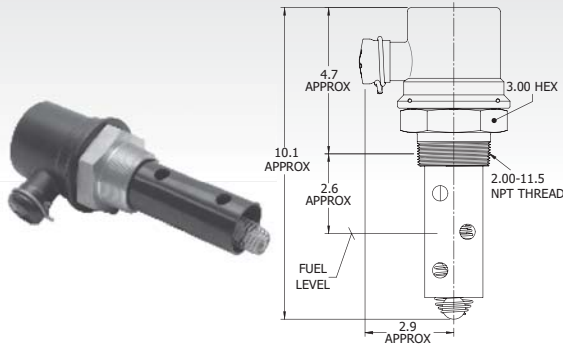
### ZNC4L

Pressurized flush mount weld-on receiver with full coupling

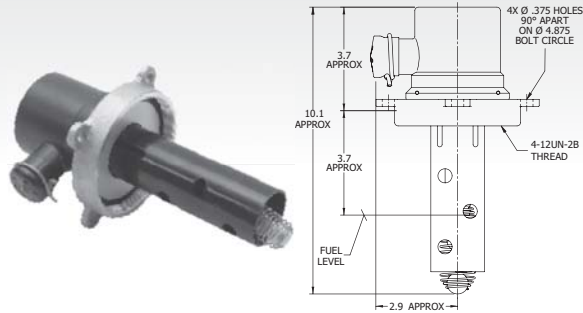


# Fuel Tank Vents

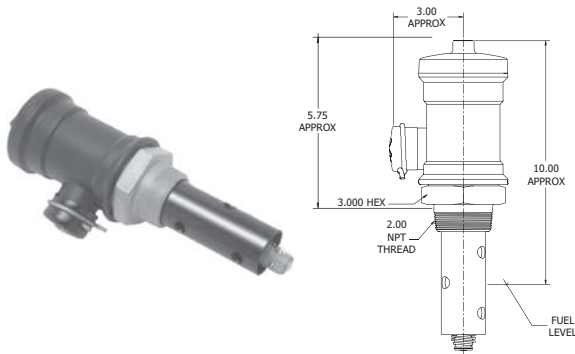
## ZV10



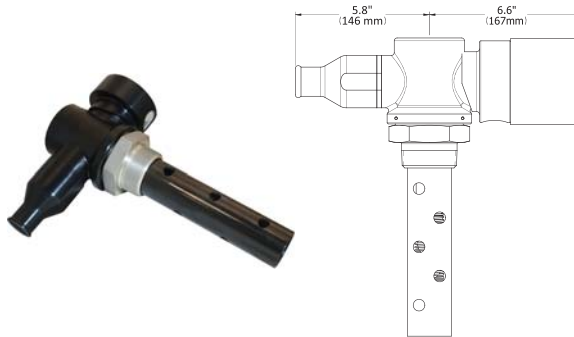
## ZV11



## ZV13



## ZV23



### ► Data Table

Vent Model	Mounting Style	Length	Pressure Relief	Rebuild Kit Number
ZV10	Pipe Thread	9.375"	10.2 - 12.9 psi	K30285
ZV10A	Welded Half-Coupling	9.375"	10.2 - 12.9 psi	K30285
ZV10B	Flange/Gasket	9.375"	10.2 - 12.9 psi	K30285
ZV10C	Same as ZV10 w/Threaded Outlet	9.500"	10.2 - 12.9 psi	K30285
ZV10F	Same as ZV10 w/Long Stem	12.50"	10.2 - 12.9 psi	K30285
ZV11	Gas Cap Mount	9.312"	10.2 - 12.9 psi	K30285
ZV11A	Gas Cap Mount w/Long Stem	12.50"	10.2 - 12.9 psi	K30285
ZV13	Vented Pipe Thread	12.00"	10.4 - 11.3 psi	N/A
ZV13F	Long Stem	14.70"	10.4 - 11.3 psi	N/A

fuel tank vents

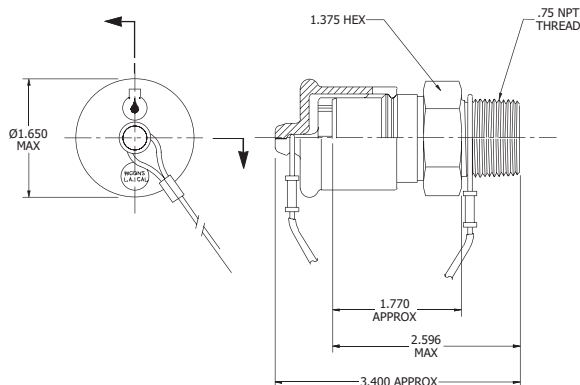
# Service Couplings

## 0N2 / C3B12P

### Crankcase Receiver and Cap

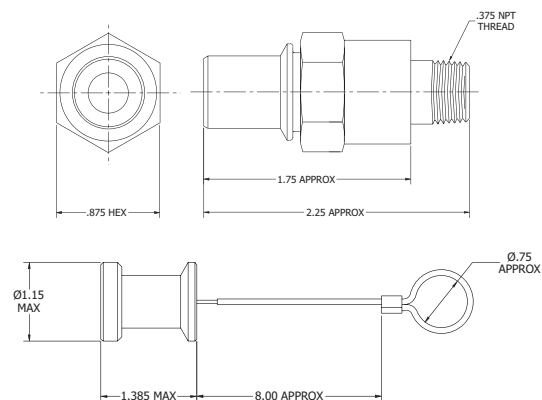


To order receiver with cap, specify 0NC2A



## P-1804 / P-1880

### Transmission Receiver and Cap



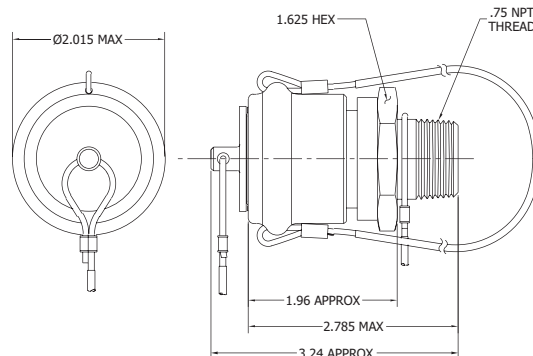
## 0S2

### Crankcase Nozzle and Plug



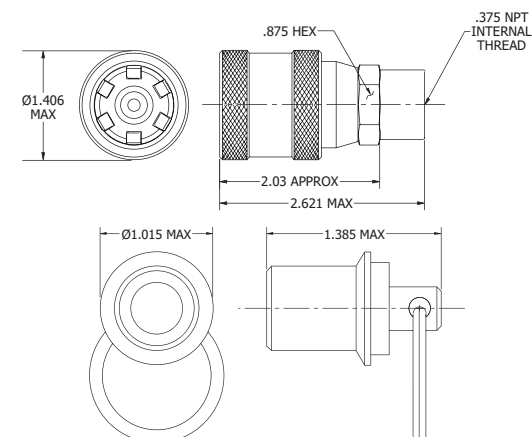
To order nozzle with plug (0P12), specify 0SP2

Mates with 0N2 and 0NC2A Receivers



## C-1807 / P-1844

### Transmission Nozzle and Plug



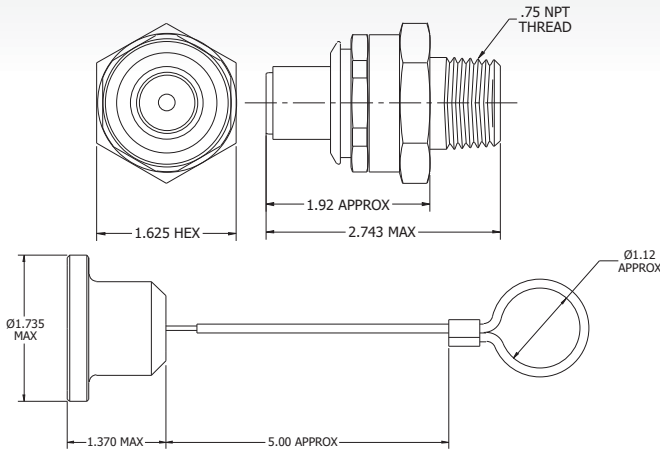
## 6005A12 / 6008-12

### Hydraulic Receiver and Cap

6005A12



6008-12



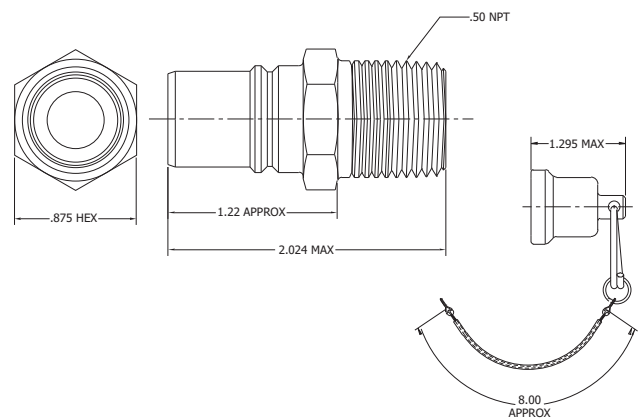
## EC285A8 / 1208-8

### Coolant Receiver and Cap

EC285A8



1208-8



## 6000B12 / 6009-12

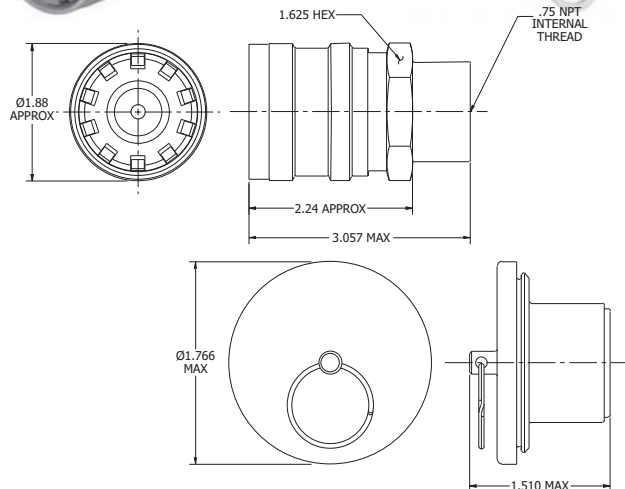
### Hydraulic Nozzle and Plug

6000B12

Mates with  
6005A12  
Receiver



6009-12



## EC280B8 / 1209-8

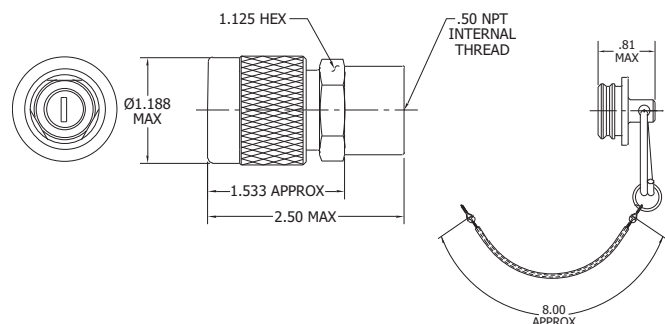
### Coolant Nozzle and Plug

EC280B8

Mates with EC285A8 Receiver



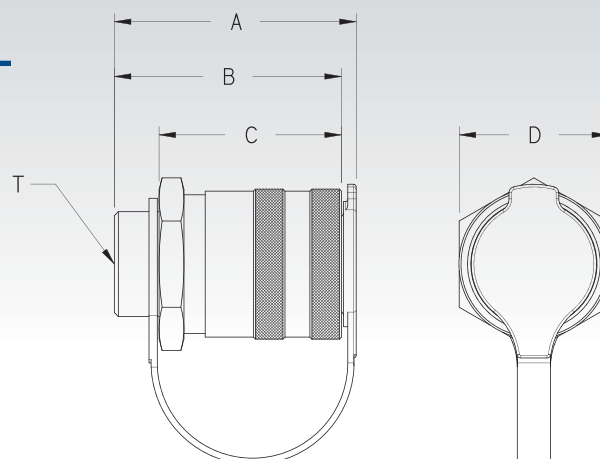
1209-8



# Service Couplings

## R11

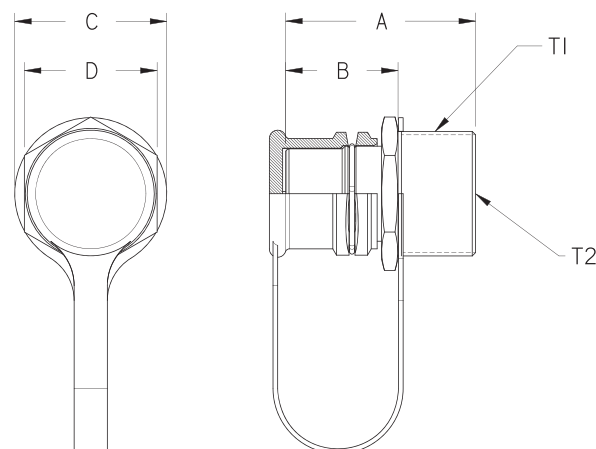
### Coolant Nozzle



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

## R12

### Coolant Receiver



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



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## *Service Systems*



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.fastfueling.com](http://www.fastfueling.com).