



# Commercial Vehicle Product Catalog

Quality. Solutions. Fast.

(800) 229-1875

[www.imi-precision.com](http://www.imi-precision.com)

Engineering  
GREAT Solutions



## All the products you need – As soon as you need them

From replacement parts to fully-integrated solutions, we offer a comprehensive range of air, electric, and fuel management products covering every major commercial vehicle system. By supporting every major truck OEM in North America we help our customers make their trucks more cost-effective, lighter and smarter. With over 40 years of experience, IMI Norgren is a brand you can trust.

### Air & Electric Management

IMI Norgren air and electric components provide compactness, rigidity, and ease of installation built for every-day harsh environments. Made from durable zinc alloy die castings or engineering resins, our products offer excellent flow characteristics and lasting performance.

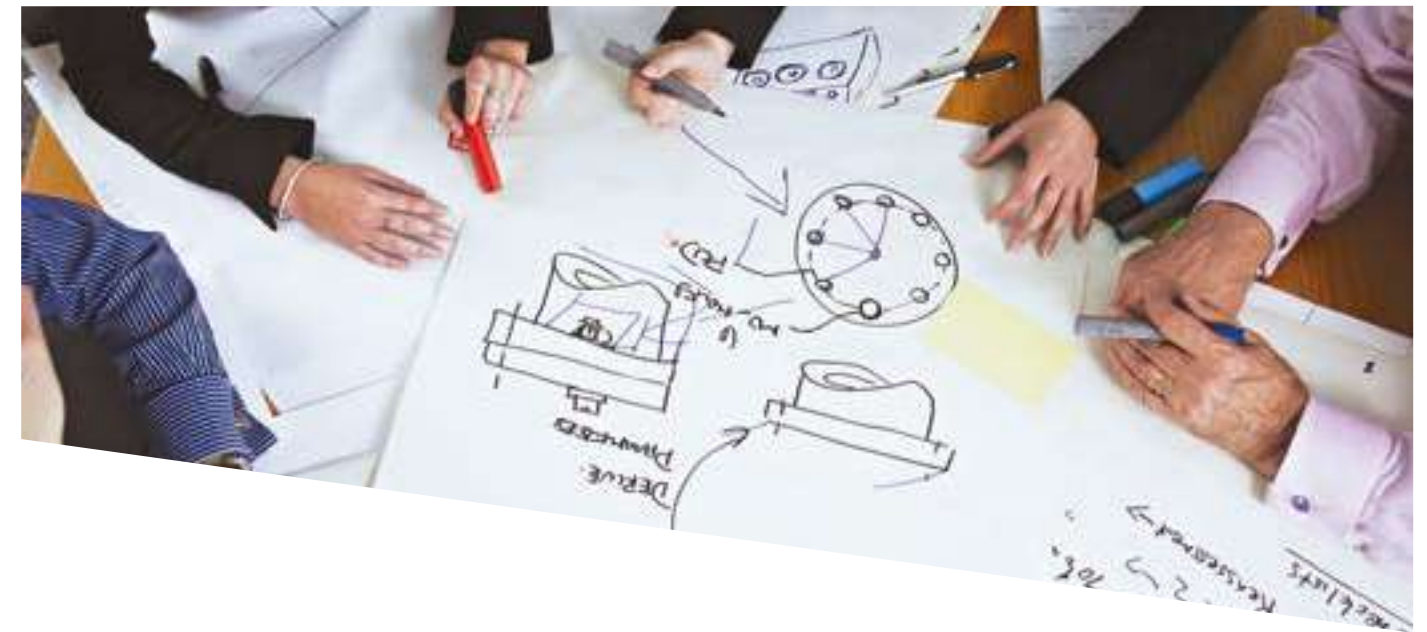
Our products include valves, seat and cab controls, filters and regulators, lift axle controls, solenoids, cylinders, DOT fittings, and more- all designed to deliver superior quality, cost savings, safety and comfort with proven technology you can trust.

### Fuel Management

An industry leader in the development of fuel system products for diesel and gas-powered trucks, our products hold a number of patents for design innovation. These include the first effective anti-spill fuel tank vent, breakaway fuel line valve, return flow splitter, and an array of fuel caps all specially designed with rollover protection, explosion prevention features and other safety components.

### Custom Solutions

Our team of experienced engineers work with you to produce a solution. From modifying existing systems to building complete custom designs, we have the breadth of product knowledge and options to help create exactly what you need.



## Engineering GREAT solutions through people, products, innovation and service

IMI Precision Engineering is a world-leader in fluid and motion control. Building close, collaborative relationships with our customers, we gain a deep understanding of their engineering needs and then mobilize our resources and expertise to deliver distinctive products and solutions.

Wherever precision, speed and engineering reliability are essential, our global footprint, problem-solving capability and portfolio of high performance products enables us to deliver GREAT solutions which help customers tackle the world's most demanding engineering challenges.

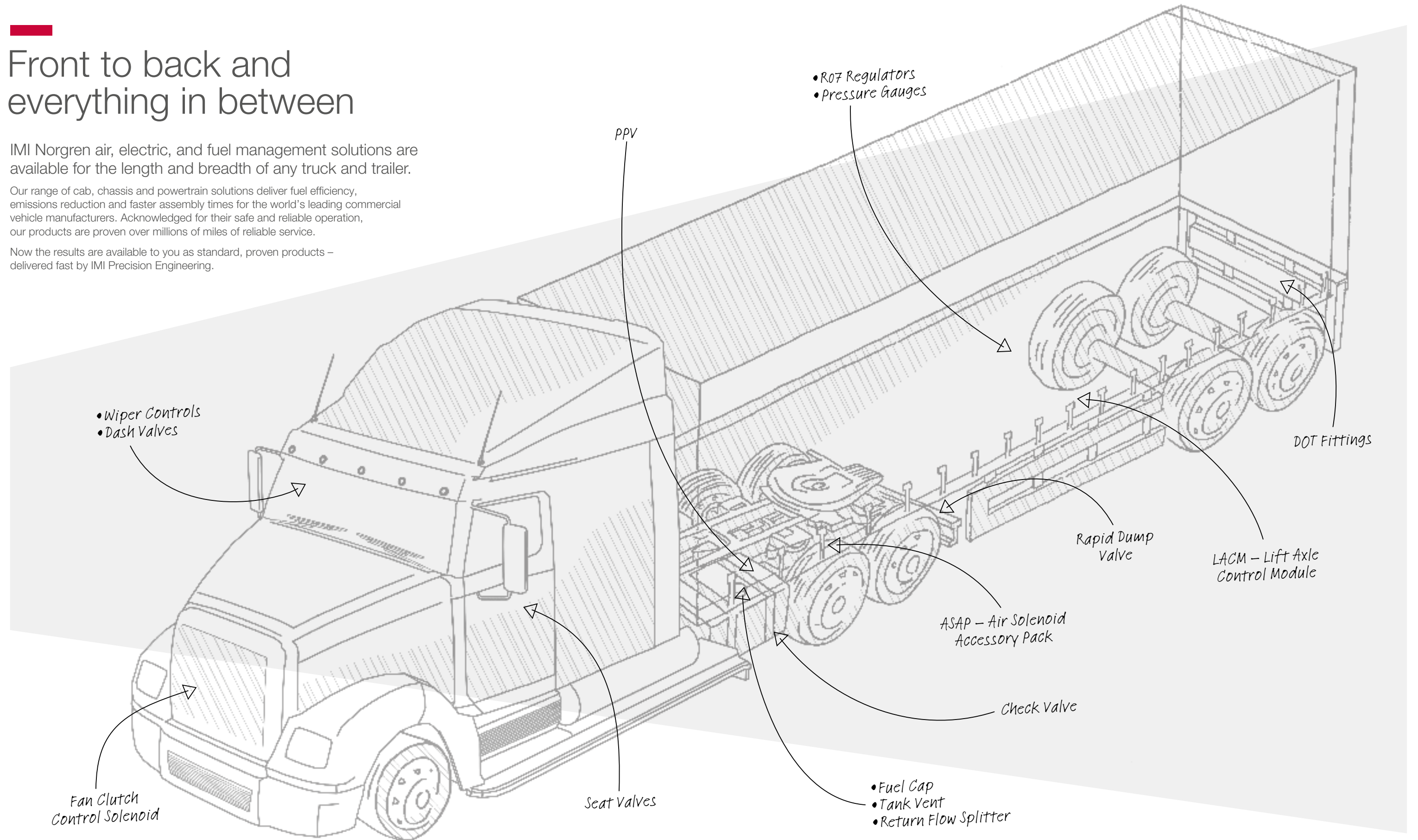
- > **Reliability**  
We deliver and support our high quality products through our global service network.
- > **High performance products**  
We offer a world-class portfolio of fluid and motion control products supplied by IMI Norgren, IMI Buschjost, IMI FAS, IMI Herion and IMI Maxseal. These parts can be supplied individually or combined in powerful customized solutions to improve performance and productivity.
- > **Partnership & Problem Solving**  
We listen closely to our customers to best understand the challenges they face.

# Front to back and everything in between

IMI Norgren air, electric, and fuel management solutions are available for the length and breadth of any truck and trailer.

Our range of cab, chassis and powertrain solutions deliver fuel efficiency, emissions reduction and faster assembly times for the world's leading commercial vehicle manufacturers. Acknowledged for their safe and reliable operation, our products are proven over millions of miles of reliable service.

Now the results are available to you as standard, proven products – delivered fast by IMI Precision Engineering.



- Wiper Controls
- Dash Valves

Fan Clutch Control Solenoid

Seat Valves

PPV

- RO7 Regulators
- Pressure Gauges

- Fuel Cap
- Tank Vent
- Return Flow Splitter

ASAP – Air Solenoid Accessory Pack

Check Valve

Rapid Dump Valve

LACM – Lift Axle Control Module

DOT Fittings

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# Air & Electric Management

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# Fast Find Guide

IMI Norgren manufactures a broad variety of pneumatic and electronic controls for heavy-duty vehicles. From pressure protection valves, dash valves, flipper valves, flipper controls to height and lumbar seat control valves, each product is engineered to provide long life and reliable operation.

## ● Brake Valves

<b>Fastbrake Quick Exhaust Valve 4000 Series</b>	<b>Park Brake Interlock</b>	<b>Work Brake</b>
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## ● Cab Controls

<b>Dash Valves Air Only 3266 Series</b>	<b>Horizontal Dash Valves 3281 Series</b>	<b>Vertical Dash Valves 3282 Series</b>	<b>Flipper Control Valve - Air Only 3222 &amp; 3224 Series</b>	<b>Flipper Control Valve - Combination Air/Electric 3220 &amp; 3223 Series</b>	<b>Toggle-Style Air Switch - Air Only 3202 Series</b>
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## ● Filters/Regulators

<b>Excelon® Modular System Pressure Regulators R72G, R73G, R74G</b>	<b>Excelon® Modular System Filter/Regulators B72G, B73G, B74G</b>	<b>Excelon® Modular System Filters F72G, F73G, F74G</b>	<b>Miniature General Purpose Regulators R07</b>
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# Fast Find Guide

## ● Fittings

<b>FleetFit Vehicle push-in fittings Inch and Metric</b>
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## ● Lift Axle Controls

<b>Intelligent Lift Axle Control Module Kit</b>	<b>Lift Axle Control Module 5040 Series</b>	<b>Trailer Lift Axle Control Valve</b>	<b>Nugget 200 Solenoid &amp; Air Actuated Spool Valve</b>
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## ● Seat Controls

<b>Paddle Seat Control Valves Air Only</b>	<b>Paddle Seat Control Valves Combination Electric/Pneumatic</b>	<b>Removable Knob Seat Valve 134 Series</b>	<b>Double End Ported Seat Valve Threaded Connections 251 Series</b>	<b>Combination Seat Valve Electric/Pneumatic 3000 Series</b>	<b>Seat Rocker Valves 3020 &amp; 3277 Series</b>
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# Fast Find Guide

## ● Solenoids Valves

<b>Solenoid Valves</b>	<b>Solenoid Valves 5030 Series</b>	<b>Solenoid Valves 5031 Series</b>	<b>Air Solenoid Accessory Pack</b>
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## ● Valves

<b>Rapid Dump Valve</b>	<b>Pressure Protection Valves 223 Series</b>	<b>Inline Pressure Protection Valves 5200-75 Series</b>	<b>Check Valves</b>	<b>Super X Manual and Mechanical Actuated Spool Valve</b>	<b>Kneeling Manifold</b>
Page 88	Page 89	Page 91	Page 92	Page 93	Page 100

## ● Cylinders

<b>Round Body Cylinders</b>	<b>Tie Rod Cylinders</b>	<b>Extruded Body Cylinders</b>	<b>Roundline Cylinders</b>	<b>Compact Cylinders</b>
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# Brake Valves

Our brake valves are capable of withstanding aggressive environments and continued operation, with integrated tube connections to reduce costs, air usage and assembly time.



← Robust design

Prevents  
pressurization



Enhance Vehicle  
performance



# FASTBRAKE QUICK EXHAUST VALVE

4000 Series

- Helps vehicle OEMs to comply with brake timing regulations
- Enhances vehicle performance\*
- Durable zinc alloy provides excellent flow characteristics

\*Requires properly plumbed air system

## Technical Data

**Operating pressure:**

10 psi min  
0.7 bar

**Port size:**

1/2" NPT

**Nipple size:**

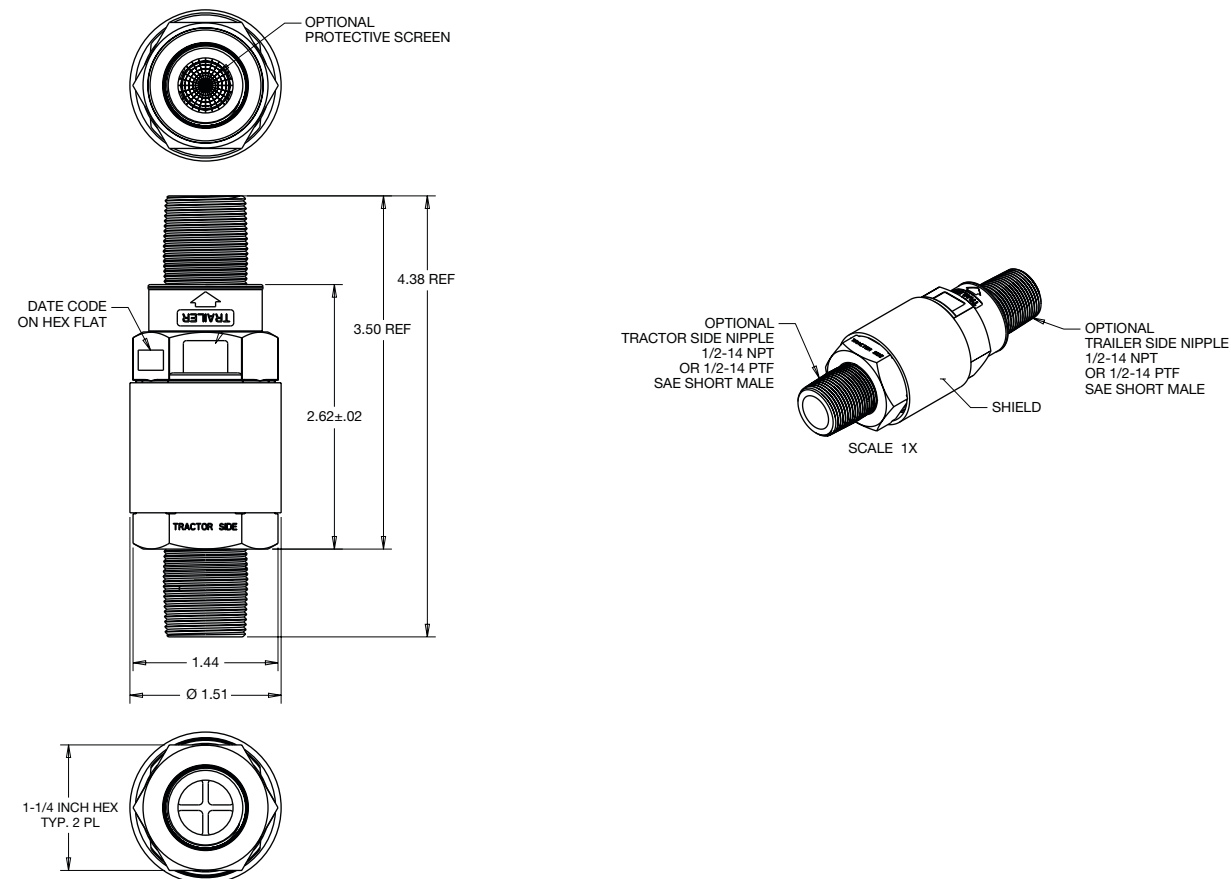
1/2" PTF male



## Models

Model	Packaging	Nipple Side: 1/2" PTF	Port Side: 1/2" NPT
4000	Bulk	Trailer	Tractor
4000-1	Individual	Trailer	Tractor
4000-6	Bulk	Trailer	Tractor
4000-8	Bulk	Tractor	Trailer
4000-8D	Individual	Tractor	Trailer
4000-11	Bulk	N/A	N/A

## Specifications



# PARK BRAKE INTERLOCK

- Prevents pressurization of the park brake circuit (release of park brakes) without service brake application
- Integral Push-to-Connect fittings (PTC)
- Material used meets DOT FMVSS 302 flammability requirements

## Technical Data

**Operating pressure:**

0 – 150 psi

**Operating temperature:**

-40°F to 200°F

**Flow:**

3/8" PTC to 3/8" PTC, 0.20 min. equivalent orifice.

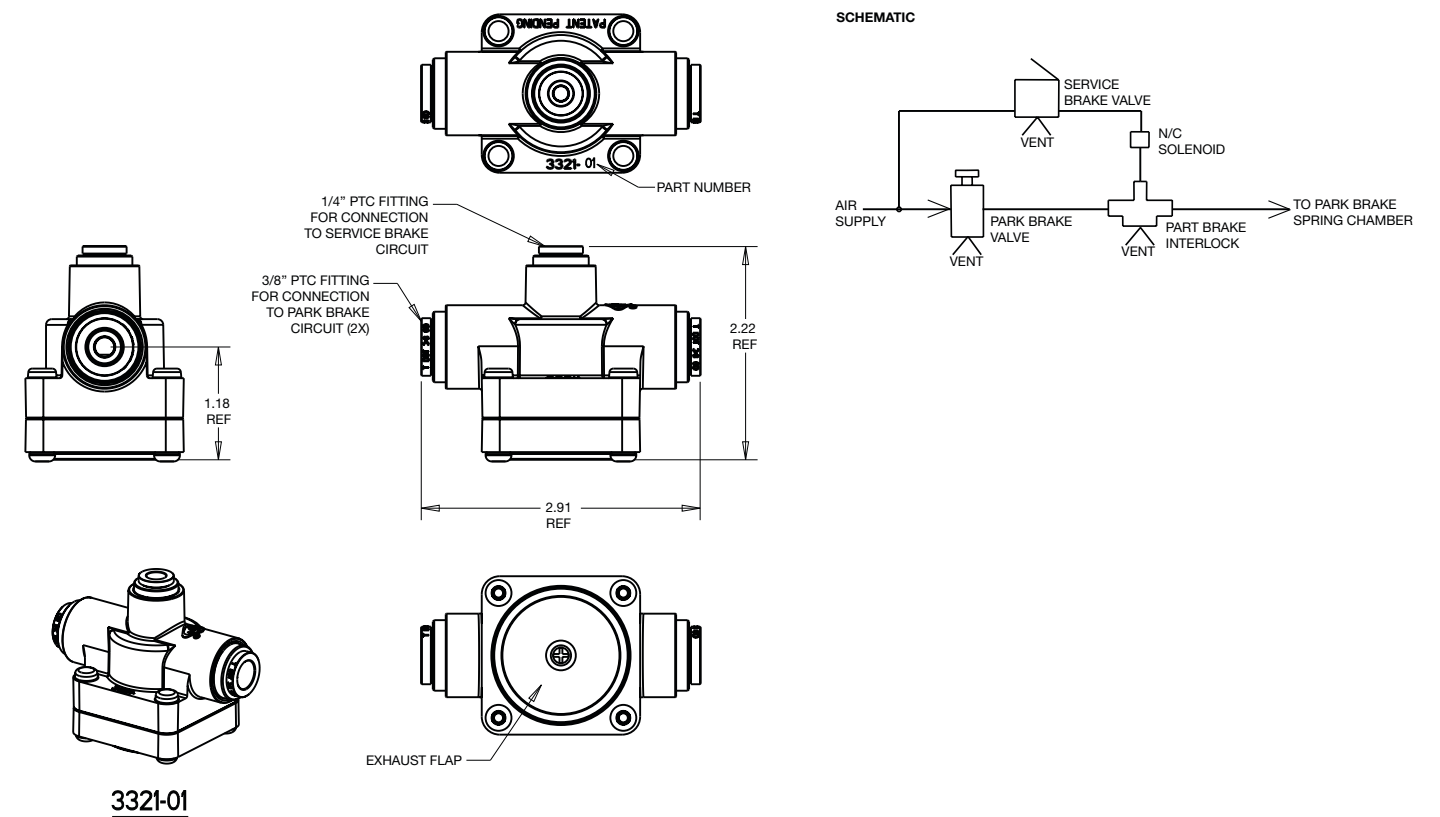
3/8" PTC to exhaust, 0.20 min. equivalent orifice.



## Models

Model	Description
3321-01	Park Brake Interlock

## Specifications



# WORK BRAKE VALVE

- Dual 3-way valve
- Heavy duty dash-mounted valve to control/apply service brakes of vehicle with demanding applications
- Prevents pressurization of the park brake circuit (release of park brakes) without service brake application
- Energy efficient, robust design, proven track record

## Technical Data

**Operating pressure:**  
0 – 125 psi

**Operating temperature:**  
-40°F - 200°F

**Tube O/D:**  
1/4"

## Material

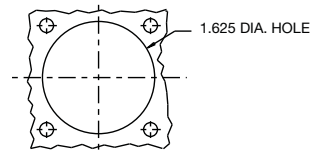
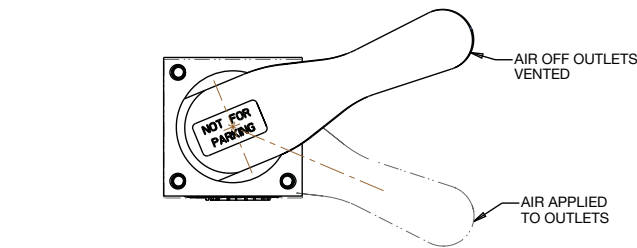
Aluminum



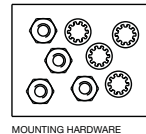
## Models

Model	Description	Port Size
4040-3	Work Brake Valve	1/4-18 NPTF
4040-1	Work Brake Valve, Mounting Hardware Included	1/4-18 NPTF

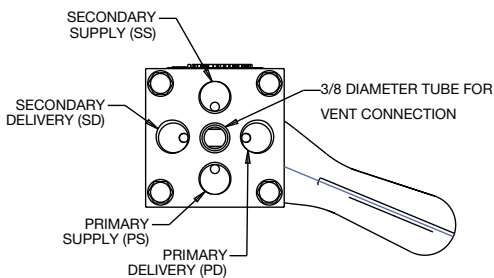
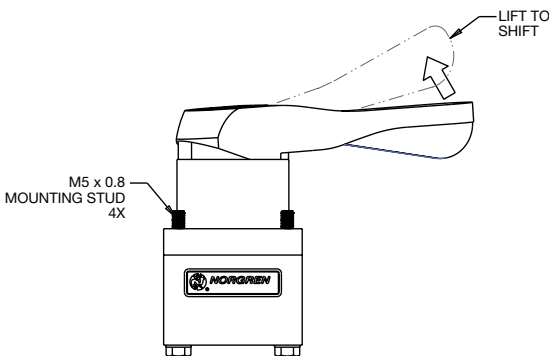
## Specifications



MOUNTING PATTERN



MOUNTING HARDWARE



# Cab Controls

Our pneumatic and electric cab controls are engineered for functionality, durability, and reliability. The compact designs occupy minimal space that blend in with the interior design and dashboard.



*Engineered for durability*



*Compact design*



*Robust design to withstand heavy use*

# DASH VALVES AIR ONLY

3266 Series

- 3-way air valve
- Designed for dashboard operation of truck air system accessories
- Engineered for functionality and durability
- Integral Push-to-Connect fittings (PTC)
- Material used meets DOT FMVSS 302 flammability requirements

## Technical Data

**Operating pressure:**  
0 to 150 psi

**Operating temperature:**  
-10°F to +160°F

**Tube O/D:**  
1/4"

## Material

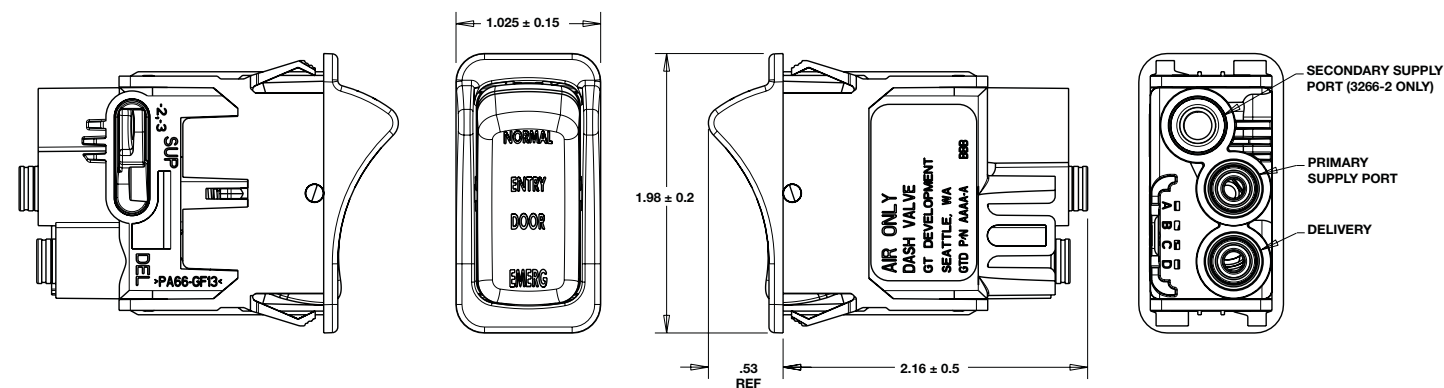
Nylon, glass filled



## Models

Model	Supply Port	Rocker Color
3266-1	Single	Black
3266-7	Single	Red

## Specifications



# HORIZONTAL DASH VALVES

3281 Series

- 3-way air valve
- Designed for dashboard operation of truck air system accessories
- Engineered for functionality and durability
- Integral Push-to-Connect fittings (PTC)
- Material used meets DOT FMVSS 302 flammability requirements

## Technical Data

**Operating pressure:**  
0 to 150 psi (0 to 10 bar)

**Operating temperature:**  
-20°F to +160°F (-20°C to +70°C)

**Tube O/D:**  
1/4"

**Status lighting:**  
Red LED oval only

## Material

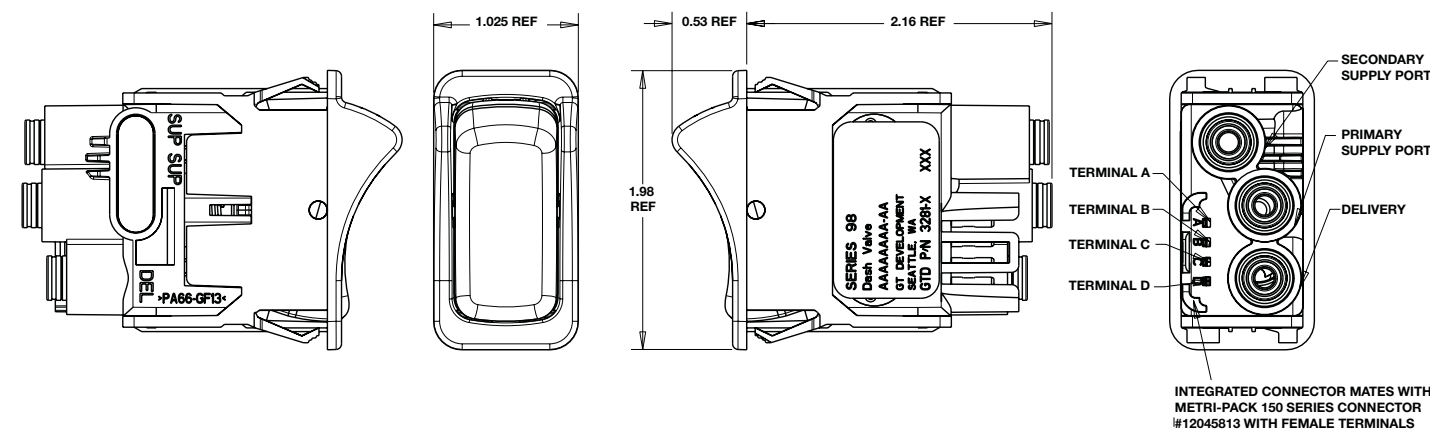
Nylon, glass filled



## Models

Model	Description	Rocker Symbol	Rocker Text
3281-1	Inter-Axle Differential Lock		INTER AXLE
3281-2	5th Wheel Slide		5TH WHEEL
3281-3	Air Suspension Dump		SUSP HEIGHT
3281-4	Power Take Off		P.T.O.
3281-5	Air Intake Routing		AIR INTAKE
3281-6	Neutral Control		NEUTRAL CONTROL
3281-7	King Pin		KING PIN
3281-8	Air Tarp		TARP
3281-9	Tail Gate Lock		TAIL GATE
3281-10	Air Pintle Hook		PINTLE HOOK
3281-11	Hyd Pump PTO		P.T.O.

## Specifications



# VERTICAL DASH VALVES

3282 Series

- 3-way air valve
- Designed for dashboard operation of truck air system accessories
- Engineered for functionality and durability
- Integral Push-to-Connect fittings (PTC)
- Material used meets DOT FMVSS 302 flammability requirements

## Technical Data

**Operating pressure:**  
0 to 150 psi

**Operating temperature:**  
-10°F to +160°F

**Tube O/D:**  
1/4"

**Status lighting:**  
Red LED oval only

## Material

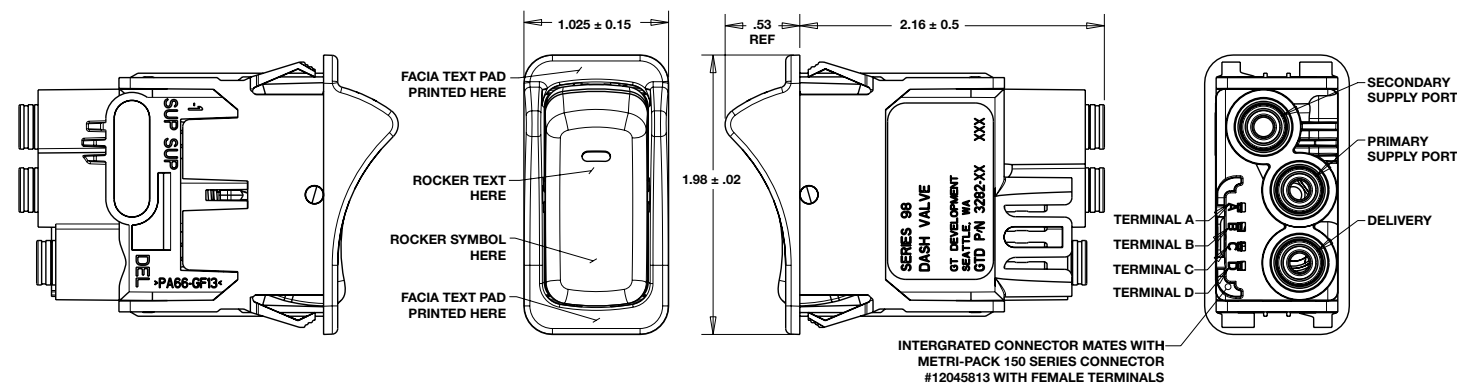
Nylon, glass filled



## Models

Model	Description	Rocker Symbol	Rocker Text
3282-01	Differential Lock – Front		OFF LOCK
3282-02	Differential Lock – Rear		OFF LOCK
3282-03	Inter-Axle Differential Lock		INTER AXLE
3282-04	5 <sup>th</sup> Wheel Slide		5TH WHEEL
3282-05	Air Suspension Dump		SUP HEIGHT
3282-06	Power Take Off		P.T.O.
3282-07	Neutral Control		NTNL CTRL
3282-08	King Pin		KING PIN
3282-09	Lift Axle		LIFT AXLE

## Specifications



# FLIPPER CONTROL VALVE - AIR ONLY

3222 & 3224 Series

- 3-way air valve
- Designed for dashboard operation of truck air system accessories
- Integral Push-To-Connect fittings (PTC)

## Technical Data

**Operating pressure:**  
0 to 150 psi (0 to 10 bar)

**Operating temperature:**  
-20°F to +160°F (-20°C to +70°C)

**Tube O/D:**  
1/4"

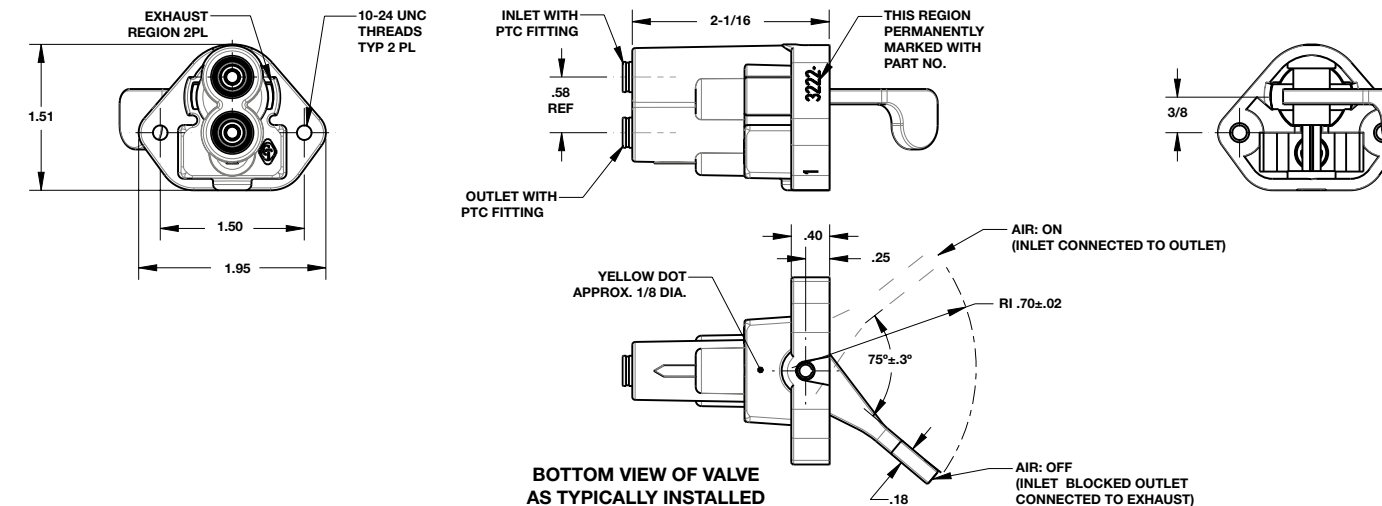


## Models

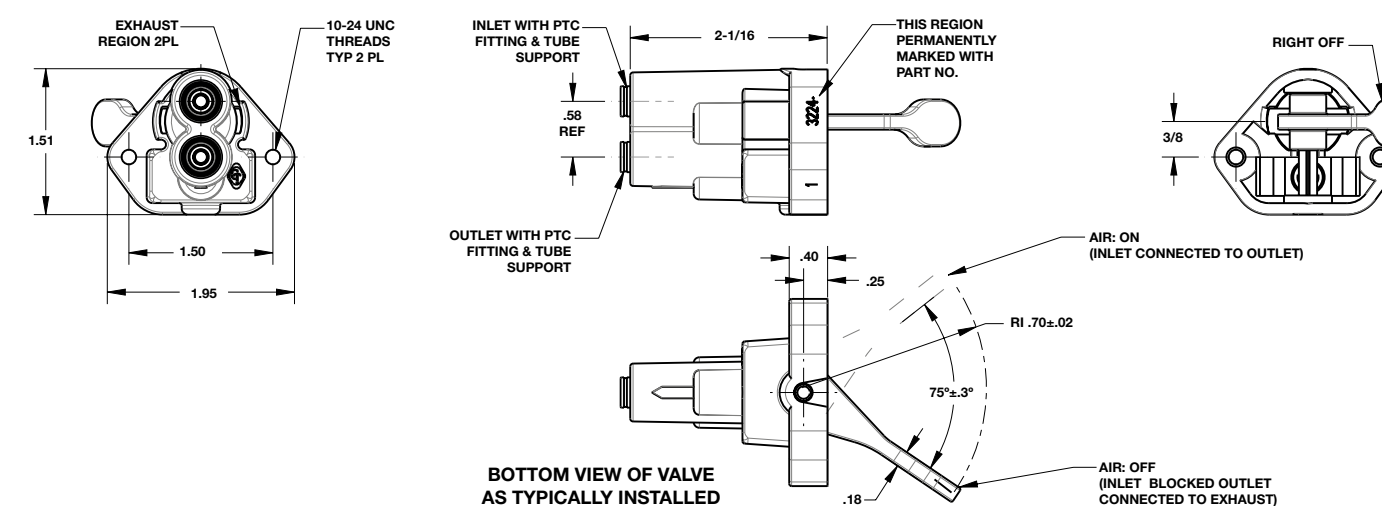
Model	Tube O/D
3222-1	1/4"
3224-1	1/4"

## Specifications

3222



3224



# FLIPPER CONTROL VALVE - COMBINATION AIR/ELECTRIC

3220 & 3223 Series

- 3-way air valve combined with integral pressure switch
- Designed for dashboard operation of truck air system accessories
- Engineered for functionality and durability
- Integral Push-To-Connect fittings (PTC)

## Technical Data

**Operating pressure:**  
0 to 150 psi (0 to 10 bar)

**Operating temperature:**  
-20°F to +160°F (-20°C to +70°C)

**Tube O/D:**  
1/4"

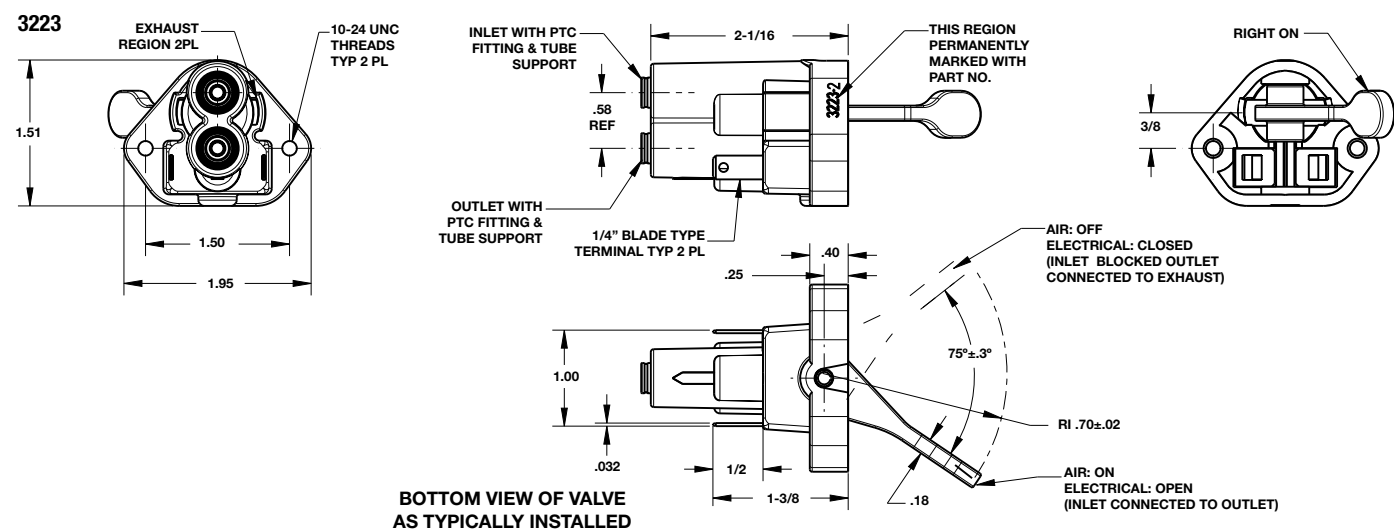
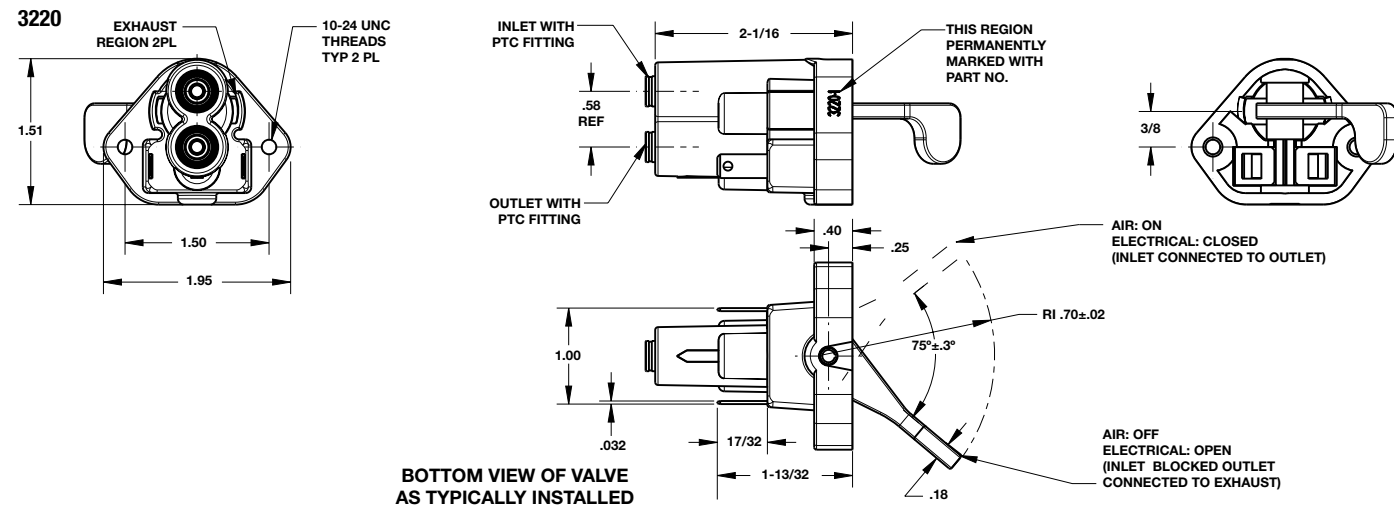
**Electrical connection:**  
Two 1/4" blade type electrical terminals



## Models

Model	Tube O/D	Max Current	Pressure Switch Configuration
3220-1	1/4"	5 amps	N/O
3223-1	1/4"	5 amps	N/O
3223-2	1/4"	5 amps	N/C

## Specifications



# TOGGLE-STYLE AIR SWITCH - AIR ONLY

3202 Series

- 3-way air valve
- Designed for dashboard operation of truck air system accessories
- Heavy-duty switch
- Integral Push-To-Connect fittings (PTC)

## Technical Data

**Operating pressure:**  
0 to 150 psi (0 to 10 bar)

**Operating temperature:**  
-20°F to +160°F (-20°C to +70°C)

**Tube O/D:**  
1/4"

## Material

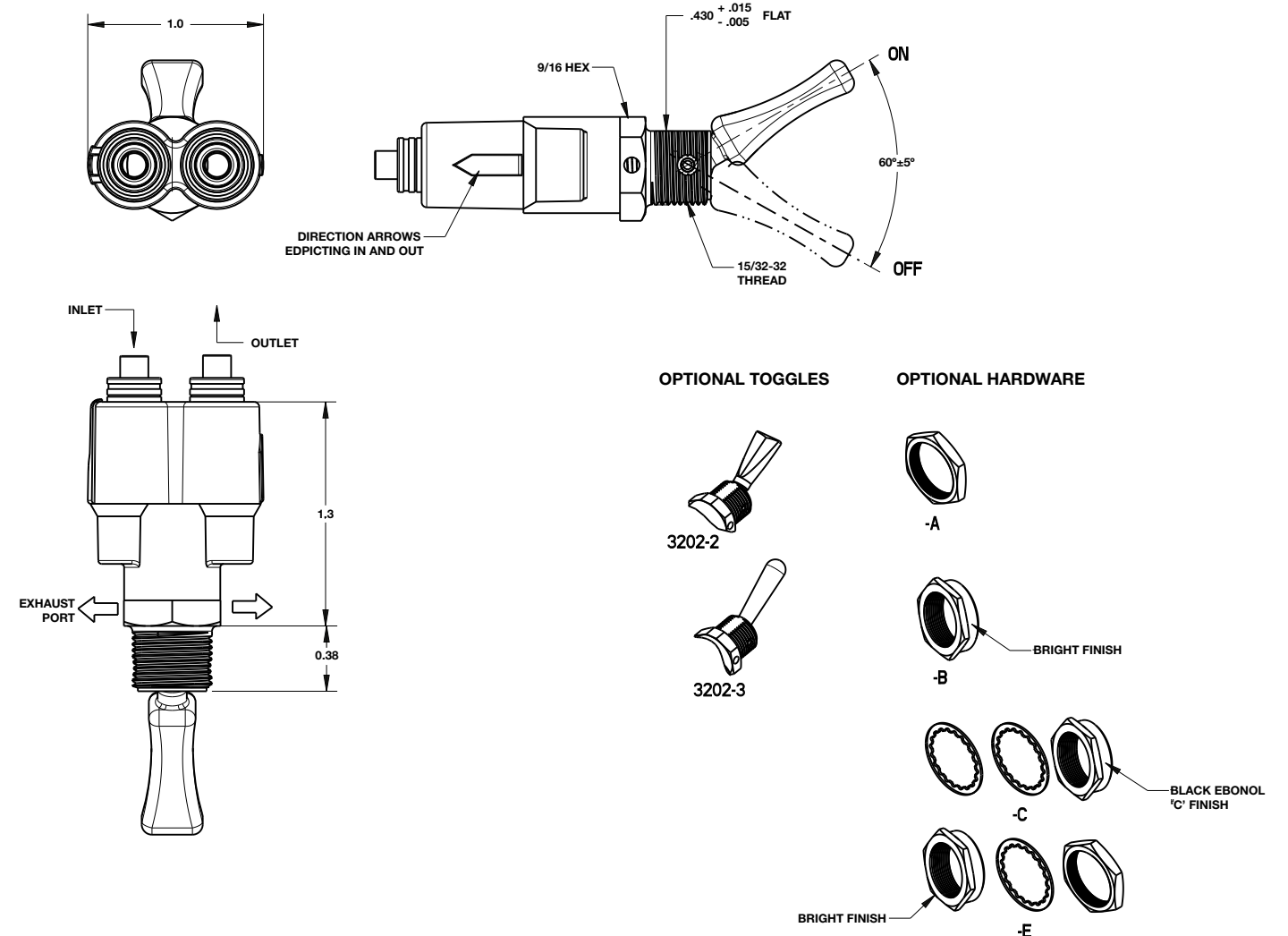
Zytel, Nylon glass filled



## Models

Model	Tube O/D
3202-1A	1/4"
3202-1C	1/4"
3202-2E	1/4"

## Specifications



# TOGGLE-STYLE SWITCH - AIR/ELECTRIC

3200 & 3201 Series

- 3-way valve combined with integral pressure switch
- Designed for dashboard operation of truck air system accessories
- Integral Push-To-Connect fittings (PTC)

## Technical Data

**Operating pressure:**  
0 to 150 psi (0 to 10 bar)

**Operating temperature:**  
-20°F to +160°F (-20°C to +70°C)

**Tube O/D:**  
1/4"

**Electrical connection:**  
Two 1/4" blade type electrical terminals

## Material

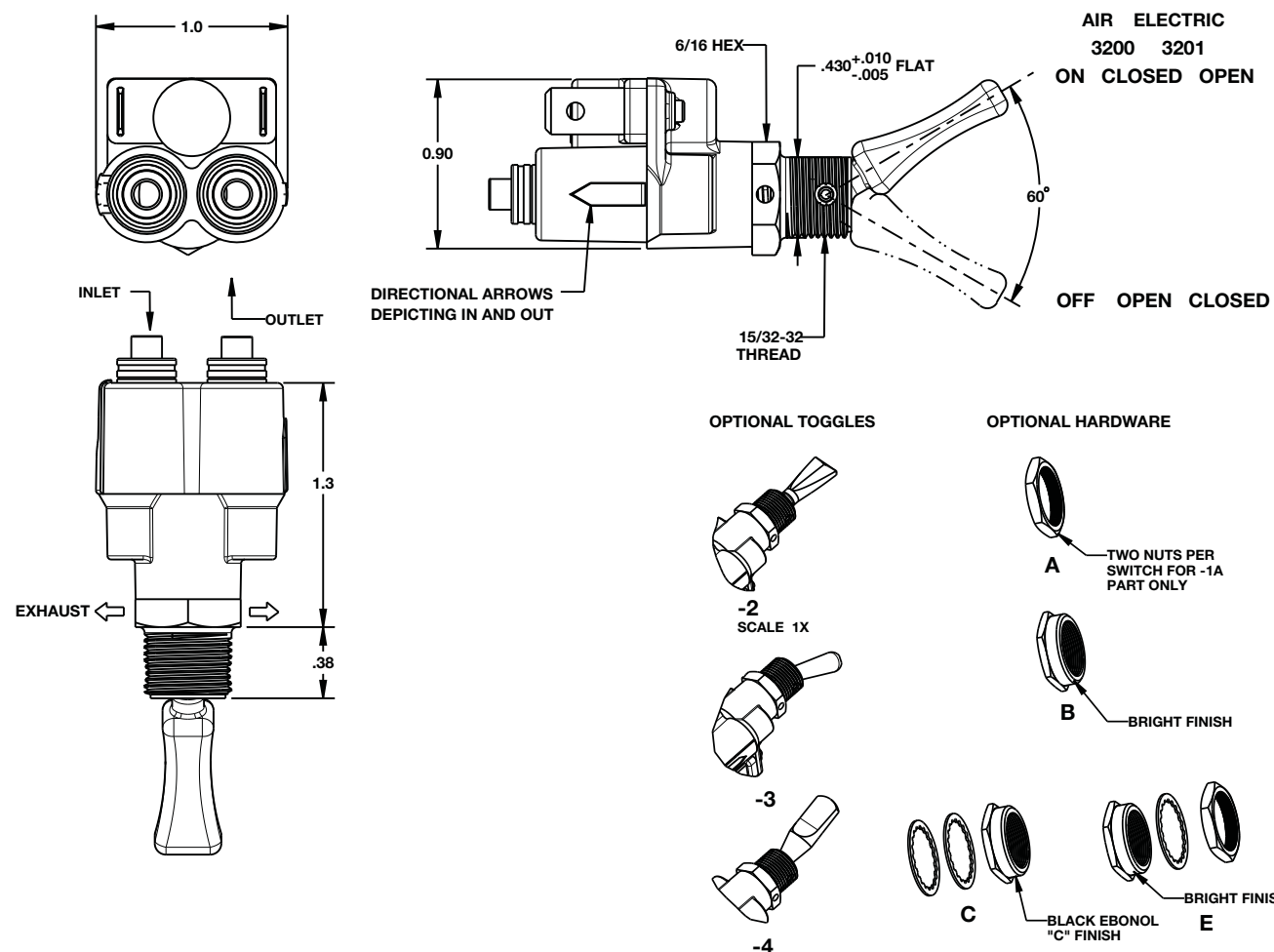
Zytel, Nylon glass filled



## Models

Model	Tube O/D	Nominal Voltage	Electrical Load	Configuration
3200-1A	1/4"	12V	5 amp	N/O
3200-1C	1/4"	12V	5 amp	N/O
3200-2A	1/4"	12V	5 amp	N/O
3200-2E	1/4"	12V	5 amp	N/O
3200-3A	1/4"	12V	5 amp	N/O
3201-1A	1/4"	12V	5 amp	N/C

## Specifications



# HORN VALVES

3300, 3301 & 3302 Series

- For use in air systems to actuate single or dual air horns
- Integral Push-to-Connect fittings (PTC)
- Material used meets DOT FMVSS Hot Pull Test requirements

## Technical Data

**Operating pressure:**  
0 – 150 psi

**Operating temperature:**  
-10°F to 185°F

## Material

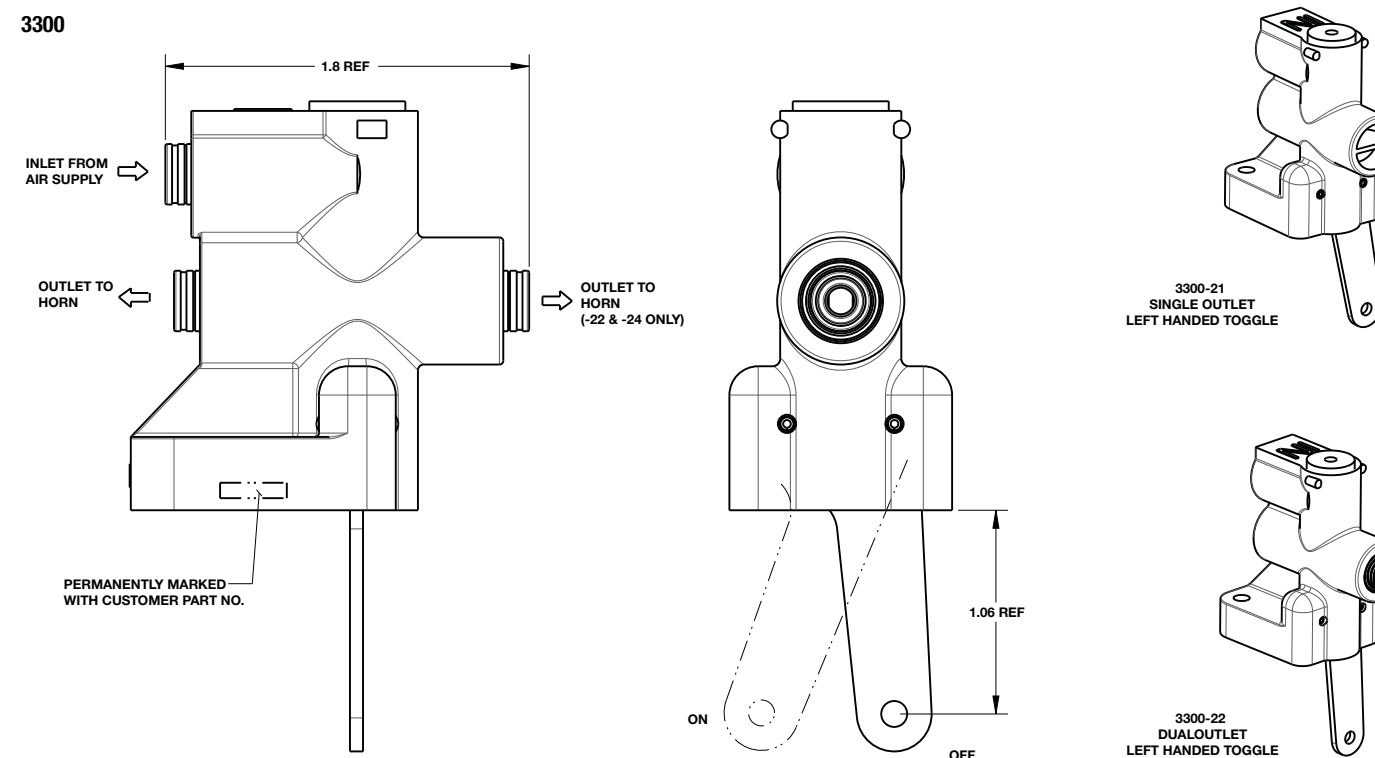
Nylon, glass filled



## Models

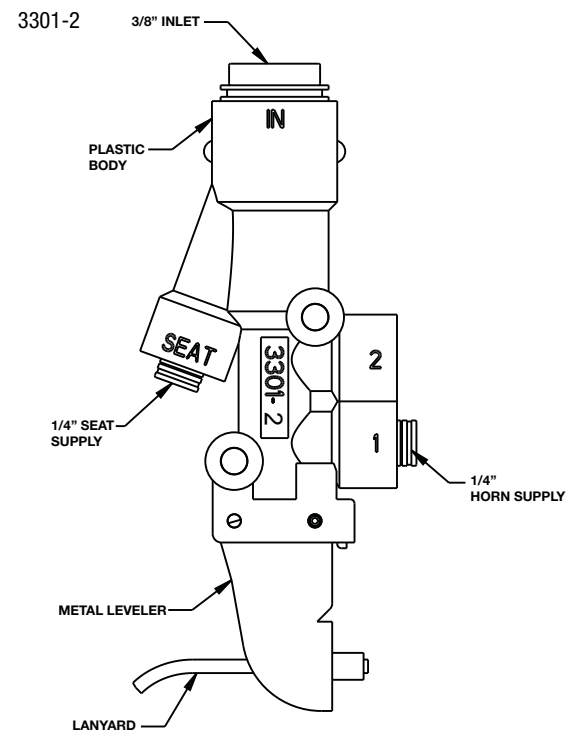
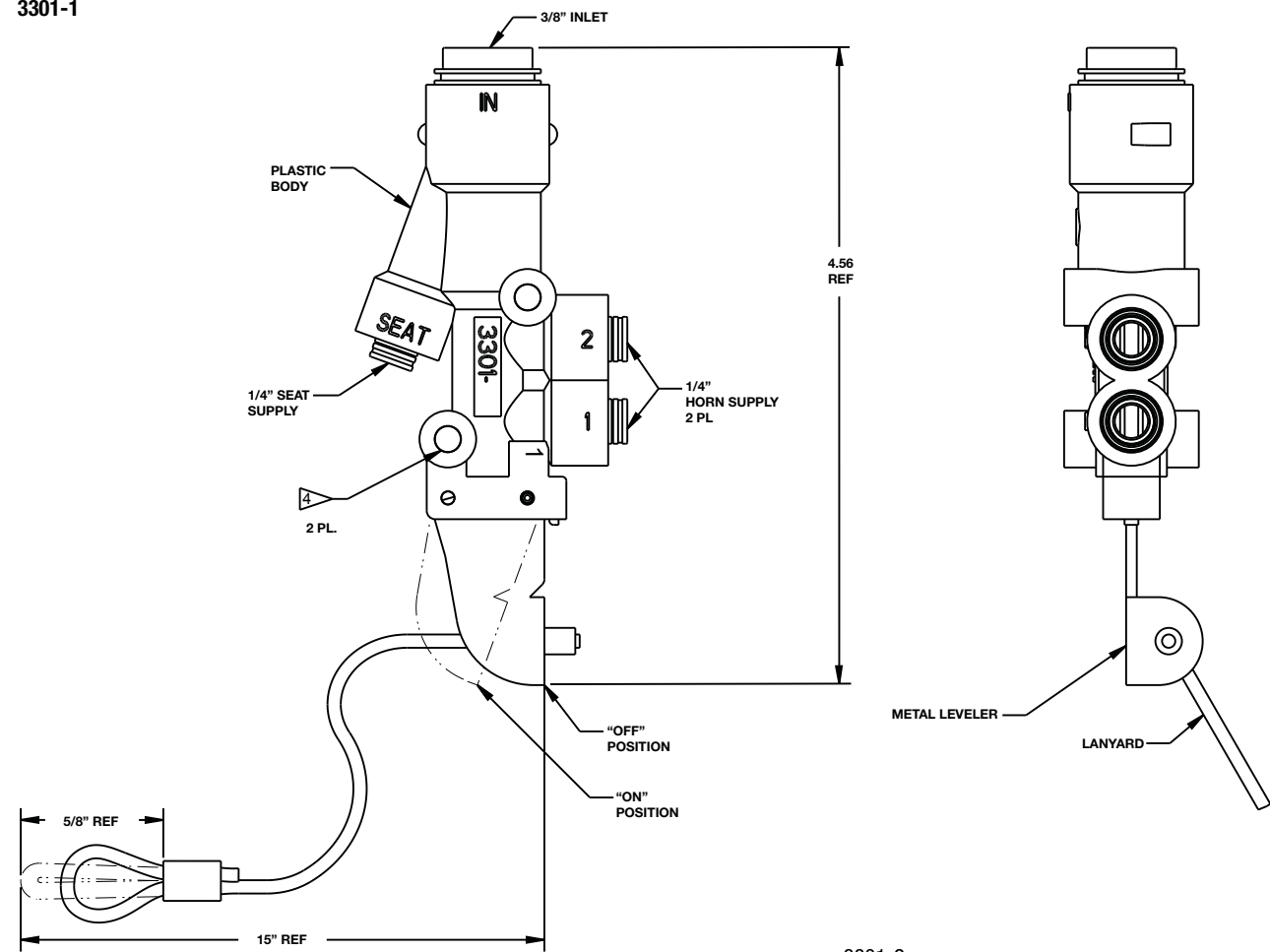
Model	Description	Tube O/D
3300-21	Single outlet, left hand toggle	1/4"
3300-22	Dual outlet, left-handed toggle	1/4"
3301-1	Dual outlet w/ lanyard lever assembly	1/4"
3301-2	Single outlet w/lanyard lever assembly	1/4"
3302-1	Medium duty	3/8"
3302-2	Conventional cab	3/8"
3302-3	Cabover	3/8"

## Specifications



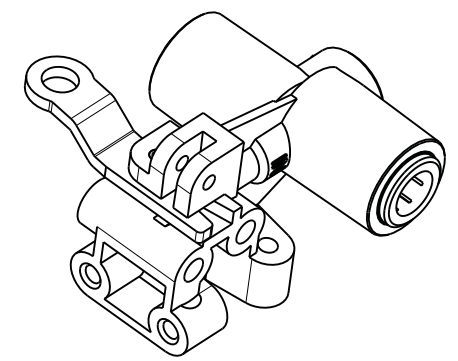
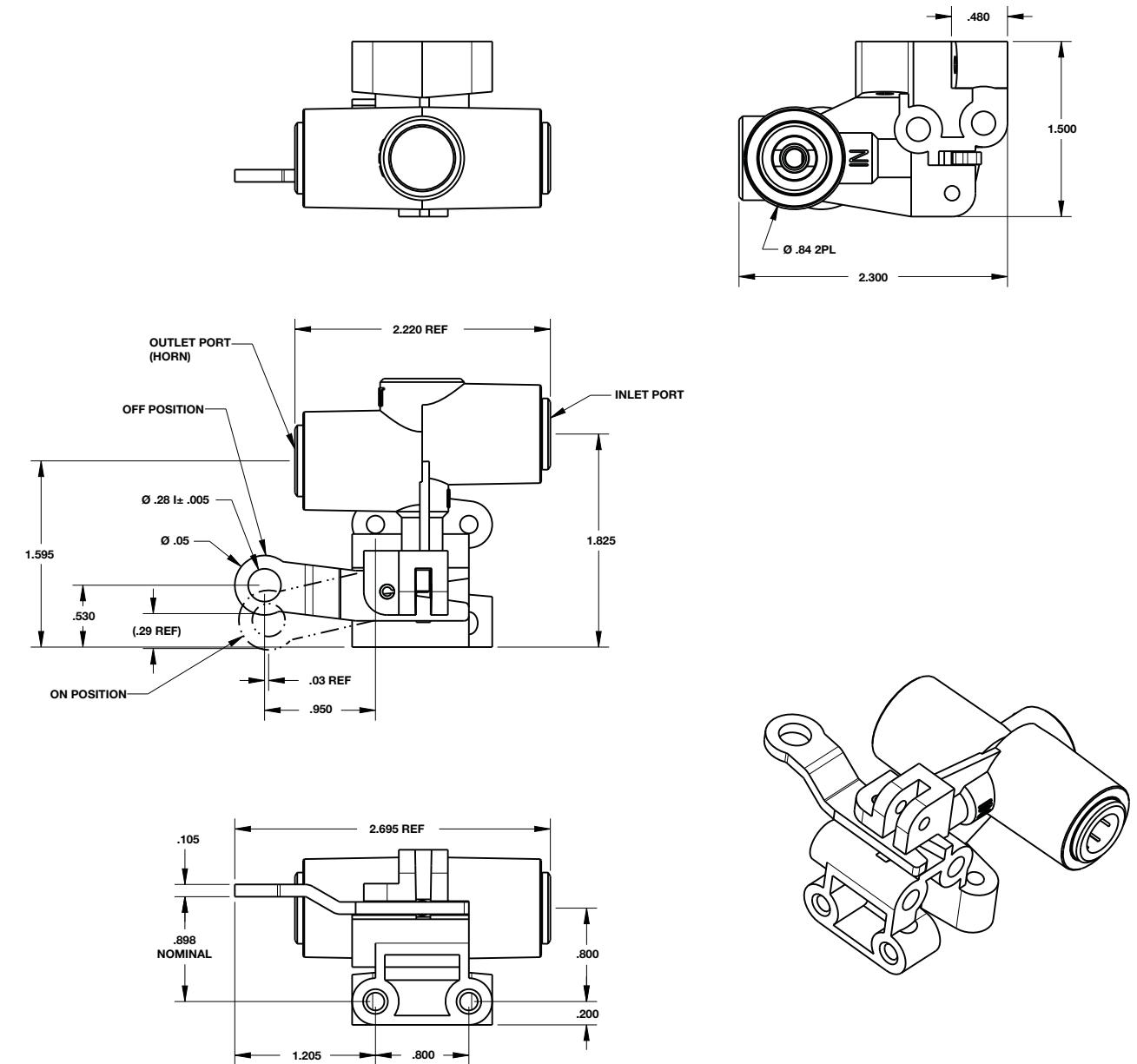
HORN VALVES  
3300, 3301 & 3302 Series

3301-1



HORN VALVES  
3300, 3301 & 3302 Series

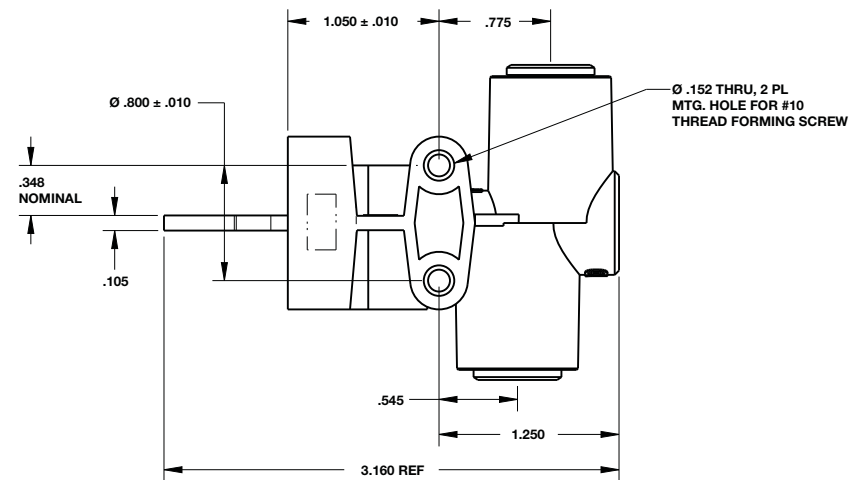
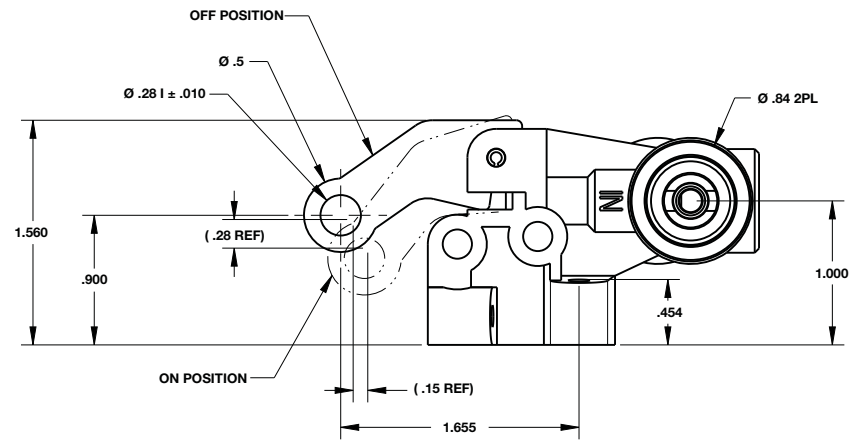
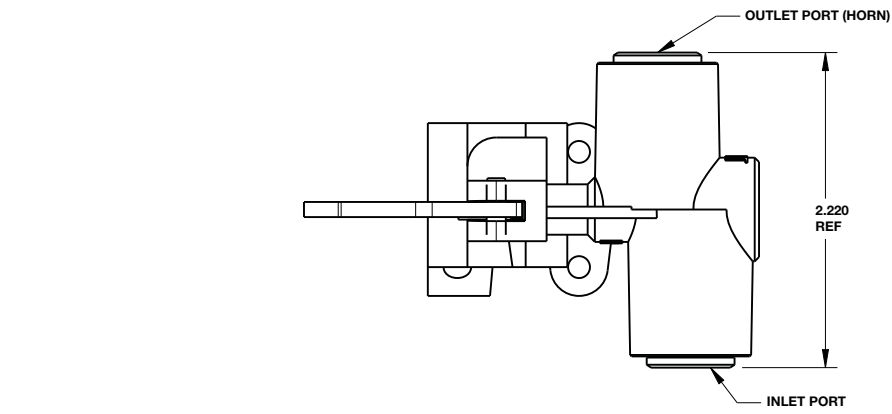
3302-1





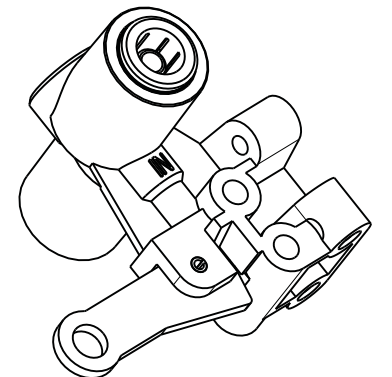
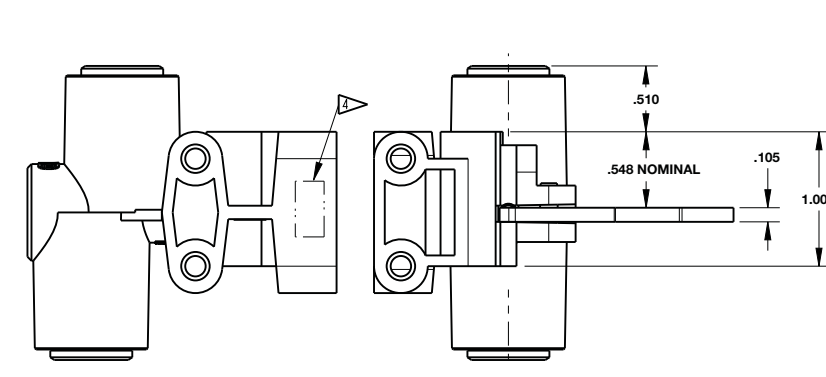
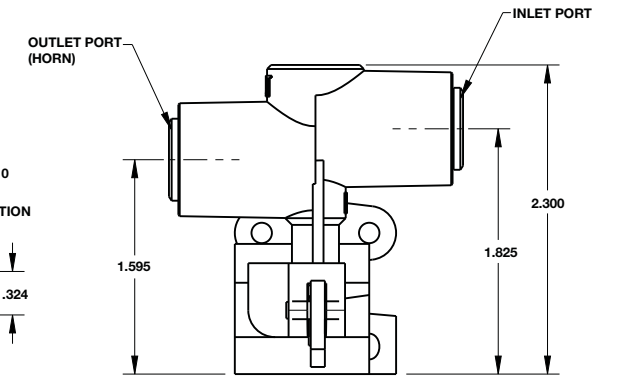
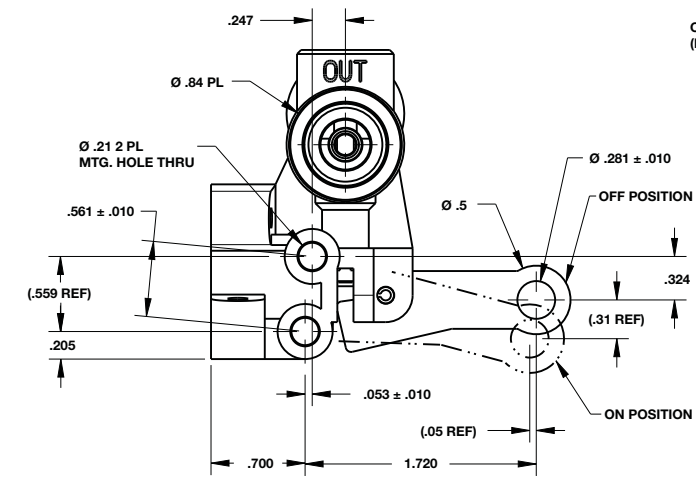
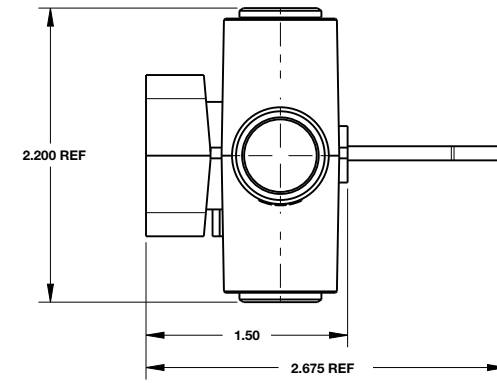
HORN VALVES  
3300, 3301 & 3302 Series

3302-2



HORN VALVES  
3300, 3301 & 3302 Series

3302-3



# WIPER WASHER CONTROLLER

- Designed for installation on vehicle dashboards
- Controls wiper speed and wash functions
- Integrated wiper delay function
- Microprocessor-based device

## Technical Data

**Mounting:**  
Mounts into a 22mm x 44mm dashboard opening

**Operating temperature:**  
-20°F to +160°F (-20°C to +70°C)

**Electrical connection:**  
8 Pin, PCB mounted amp connector

## Material

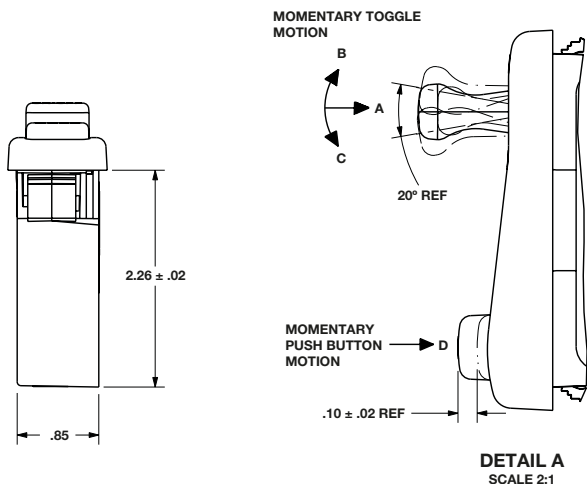
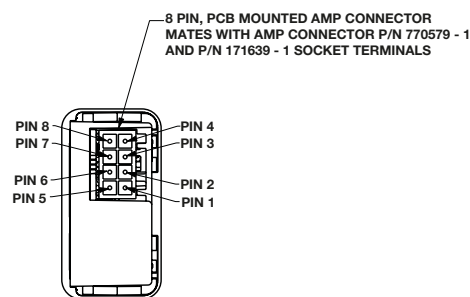
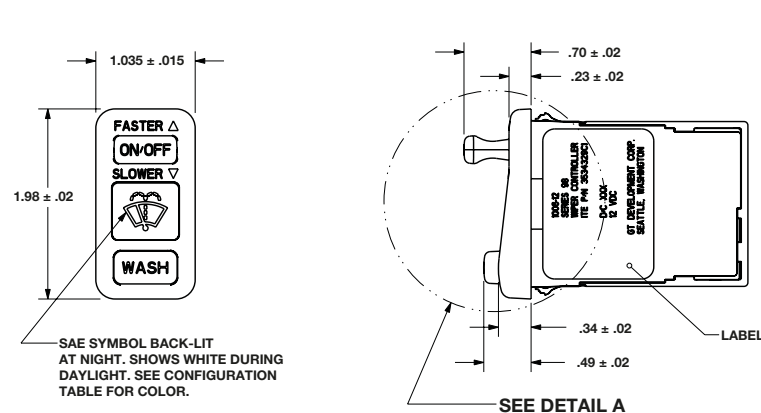
Zytel 72G13 HSIL BK black  
nylon 6/6 13% glass



## Models

Model	Nominal Voltage	Backlight Color
1006-11	12V	Green
1006-12	12V	Amber
1006-13	12V	Red
1006-14	12V	Blue

## Specifications



### PIN - FUNCTION

- 1 Power (9 to 16VDC)
- 2 Night Illumination (0 to + 16VDC)
- 3 Low speed relay (GND) 1A max.
- 4 High speed relay (GND) 1A max.
- 5 Washer Pump (GND)
- 6 Ground
- 7 Ground
- 8 Ground

# Filters/Regulators

Our filters, regulators, and combination filter/regulators offer accurate pressure adjustment and high efficiency water and particle removal to protect downstream components for longer-lasting performance.



Full flow gauge ports

High-efficiency water and particle removal



Protects air operated devices



# EXCELON® MODULAR SYSTEM PRESSURE REGULATORS

R72G, R73G, R74G

- Balanced valve design for optimum pressure control
- Standard relieving models allow reduction of downstream pressure when the system is dead-ended
- Push to lock adjusting knob with tamper evident accessory

## Technical Data

### Fluid:

Compressed air

### Maximum pressure:

300 psig (20 bar)

### Operating temperature\*:

R72: -30° to 150°F

(-34° to 65°C)

R73 and R74: -30° to 175°F

(-34° to 80°C)

\* Air supply must be dry enough to avoid ice formation at temperatures below 35°F (2°C).

## Material

Elastomers: nitrile

Bottom plug: acetal

R72G

Body: zinc

Bonnet: acetal

Valve: Polypropylene and Geolast®

R73G, R74G

Body: aluminum

Bonnet: aluminum or zinc

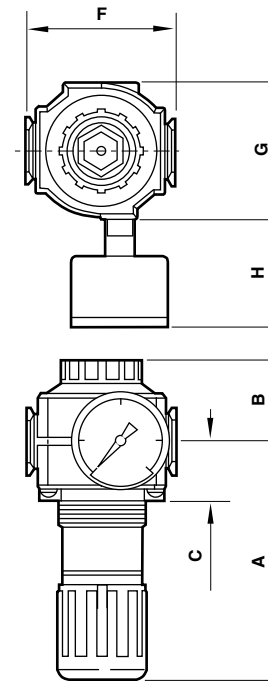
Valve: Polypropylene and Geolast®



# EXCELON® MODULAR SYSTEM PRESSURE REGULATORS










R72G, R73G, R74G

## Specifications



## Models

## Accessories

Model	Port size PTF	Flow SCFM*	Spring rate psig	Wall mounting bracket	Quick-mount pipe adapter	Quikclamp	Quikclamp and bracket	Neck mounting bracket	Tamper evident cover & wire	Gauge psig	Service kit**
	1/4"	70	5 to 150								
R72G-2AK-RMG	1/4"	70	5 to 150	4224-50	4215-02	4214-51	4214-52	74316-50	4255-51	Gauge included	4381-500
R73G-2AK-RMG	1/4"	91	5 to 150	4424-50	4315-01	4314-51	4314-52	4461-50	4455-51	Gauge included	4381-600
R73G-3AK-RMG	3/8"	144	5 to 150	4424-50	4315-02	4314-51	4314-52	4461-50	4455-51	Gauge included	4381-600
R74G-3AK-RMG	3/8"	208	5 to 150	4324-50	4315-02	4314-51	4314-52	4368-51	4355-51	Gauge included	4381-700
R74G-4AK-RMG	1/2"	220	5 to 150	4324-50	4315-03	4314-51	4314-52	4368-51	4355-51	Gauge included	4381-700
R74G-6AK-RMG	3/4"	220	5 to 150	4324-50	4315-04	4314-51	4314-52	4368-51	4355-51	Gauge included	4381-700

Products may be special ordered to meet alternative technical specifications not listed here. Please call 1-800-229-1875 to inquire.

\* Typical flow with 150 psig inlet pressure, 90 psig set pressure and a 15 psig droop from set.

NOTE: Outlet pressure can be adjusted to pressures in excess of, and less than, those specified. Do not use these units to control pressures outside of the specified ranges.

\*\* Kit includes: diaphragm, valve, valve spring, and o-rings.

Series	A	B	C	F	G	H	Panel Ø	Panel depth
72	2.87	1.30	1.02	1.97	1.89	1.38	1.57	0 to .16
73	3.78	1.54	1.22	2.68	2.44	2.20	1.89	.07 to .25
74	5.00	1.69	1.22	3.15	2.91	2.20	2.05	.07 to .25

# EXCELON® MODULAR SYSTEM FILTER/REGULATORS

B72G, B73G, B74G

- High efficiency water and particle removal
- Quick release bayonet bowl
- Push to lock adjusting knob with tamper evident accessory

## Technical Data

**Fluid:**  
Compressed air

**Maximum pressure:**  
Transparent bowl: 150 psig (10 bar)  
Metal bowl: 250 psig (17 bar)  
B72G metal bowl w/ auto drain:  
150 psig (10 bar)

**Operating temperature\*:**  
Transparent bowl:  
(72) -30° to 125°F (-34° to 50°C)  
Metal bowl:  
(72) -30° to 150°F (-34° to 66°C)  
(73, 74) -30° to 175°F  
(-34° to 80°C)  
\* Air supply must be dry enough to avoid ice formation at temperatures below 35°F (2°C).

## Material

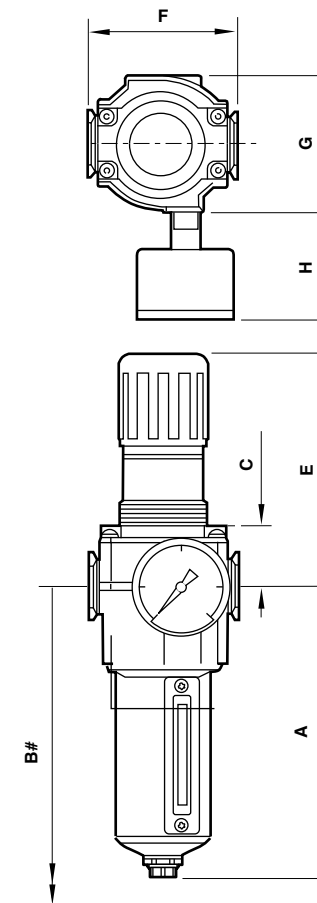
Elastomers: nitrile  
Bottom plug: acetal  
R72G  
Body: zinc  
Bonnet: acetal  
Valve: Polypropylene and Geolast®  
R73G, R74G  
Body: aluminum  
Bonnet: aluminum or zinc  
Valve: Polypropylene and Geolast®



# EXCELON® MODULAR SYSTEM FILTER/REGULATORS

B72G, B73G, B74G

## Specifications



# Minimum clearance required to remove bowl

## Models

## Accessories

Autodrain Model No.	Manual Drain Model No.	Port size PTF	Flow SCFM*	Bowl type	Element	Wall mounting bracket	Neck mounting bracket	Tamper evident cover wire	Gauge 0 to 160 psig	Replacement element	Service kit**
B72G-2AK-AE3-RMG	B72G-2AK-QD3-RMG	1/4"	80	Metal	40µ	4224-50	74316-50	4255-51	Gauge included	5925-02	4383-500
B73G-3AK-AD3-RMG	B73G-3AK-QD3-RMG	3/8"	123	Metal	40µ	4424-50	4461-50	4455-51	Gauge included	4438-03	4383-600
B73G-4AK-AD3-RMG	B73G-4AK-QD3-RMG	3/8"	123	Metal	40µ	4424-50	4461-50	4455-51	Gauge included	4438-03	4383-600
B74G-4AK-AD3-RMG	B74G-4AK-QD3-RMG	3/8"	212	Metal	40µ	4324-50	4368-51	4355-51	Gauge included	4338-05	4383-700
B74G-6AK-AD3-RMG	B74G-6AK-QD3-RMG	3/4"	212	Metal	40µ	4324-50	4368-51	4355-51	Gauge included	4338-05	4383-700



Products may be special ordered to meet alternative technical specifications not listed here. Please call 1-800-229-1875 to inquire.

\* Typical flow with 150 psig inlet pressure, 90 psig set pressure a15 psig droop from set and 40 µm element.

NOTE: Outlet pressure can be adjusted to pressures in excess of, and less than, those specified. Do not use these units to control pressures outside of the specified ranges.

\*\* Kit includes: diaphragm, valve, valve spring, and o-rings.

Series	Drain	A	B	C	E	F	G	H	Panel Ø	Panel depth
B72	Auto	5.51	7.52	1.02	2.87	1.97	1.89	1.38	1.57	0 to .16
	Manual	5.83	7.83	1.02	2.87	1.97	1.89	1.38	1.57	0 to .16
B73	Auto	5.80	8.15	1.22	3.78	2.68	2.44	2.20	1.89	.07 to .25
	Manual	6.15	8.50	1.22	3.78	2.68	2.44	2.20	1.89	.07 to .25
B74	Auto	6.35	9.06	1.22	5.00	3.15	2.91	2.20	2.05	.07 to .25
	Manual	6.95	9.69	1.22	5.00	3.15	2.91	2.20	2.05	.07 to .25

# EXCELON® MODULAR SYSTEM FILTERS

F72G, F73G, F74G

- Excelon® design allows in-line or modular installation with other Excelon® products
- Quick release bayonet bowl
- Highly visible prismatic liquid level indicator lens on metal bowls

## Technical Data

### Fluid:

Compressed air

### Operating pressure:

Transparent bowl: 150 psig (10 bar)

Metal bowl: 250 psig (17 bar)

F72G w/metal bowl and automatic drain: 150 psig (10 bar)

### Operating temperature\*:

Transparent bowl: -30° to 125°F

(-34° to 50°C)

Metal bowl:

(72) -30° to 150°F (-34° to 66°C)

(73, 74) -30° to 175°F (-34° to 80°C)

\* Air supply must be dry enough to avoid ice formation at temperatures below 35°F (2°C).

## Material

### F72G

Body: zinc

Transparent bowl: polycarbonate

Metal bowl: zinc

Metal bowl liquid level indicator lens: transparent nylon

Element: sintered polypropylene

Elastomers: CR and nitrile

### F73G & F74G:

Body: aluminum

Metal bowl: aluminum

Transparent bowl: Polycarbonate

Transparent bowl guard:

73: Steel

74: Aluminum

Metal bowl liquid level indicator lens: transparent nylon

Element: sintered polypropylene

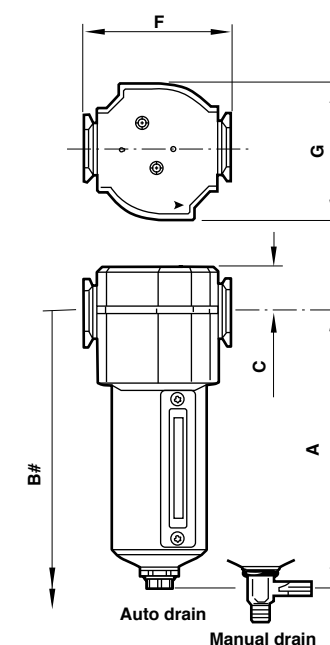
Elastomers: CR and nitrile



# EXCELON® MODULAR SYSTEM FILTERS

F72G, F73G, F74G

## Specifications



## Models

## Accessories

Autodrain Model No.	Manual Drain Model No.	Port size PTF	Flow SCFM*	Bowl type	Element	Wall mounting bracket	Quickmount pipe adapter	Quikclamp	Quikclamp and bracket	Service kit**	Element
F72G-2AN-AE3	F72G-2AN-QD3	1/4"	55	Metal	40µ	4224-50	4215-02	4214-51	4214-52	4380-500	5925-02
F73G-3AN-AD3	F73G-3AN-QD3	3/8"	63	Metal	40µ	4424-50	4315-02	4314-51	4314-52	4380-600	4438-03
F74G-4AN-AD3	F74G-4AN-QD3	1/2"	140	Metal	40µ	4324-50	4315-03	4314-51	4314-52	4380-700	4338-05
F74G-6AN-AD3	F74G-6AN-QD3	3/4"	140	Metal	40µ	4324-50	4315-04	4314-51	4314-52	4380-700	4338-05
F74G-6AN-AD1	F74G-6AN-QD1	3/4"	140	Metal	40µ	4324-50	4315-04	4314-51	4314-52	4380-700	4338-05

Products may be special ordered to meet alternative technical specifications not listed here. Please call 1-800-229-1875 to inquire.

\* Typical flow with 40 µm element at 90 psig inlet pressure and 5 psig pressure drop.

\*\* Kit includes: diaphragm, valve, valve spring, and o-rings.

Series	Drain type	A	B#	C	F	G
72	Auto	5.51	7.52	0.75	1.97	1.89
	Manual	5.83	7.83	0.75	1.97	1.89
72 Long	Auto	6.07	8.08	0.75	1.97	1.89
	Manual	6.39	8.39	0.75	1.97	1.89
73	Auto	5.80	8.15	0.98	2.68	2.44
	Manual	6.15	8.50	0.98	2.68	2.44
74	Auto	6.35	9.06	0.98	3.15	2.91
	Manual	6.95	9.69	0.98	3.15	2.91

B# - Minimum distance required to remove bowl.

# MINIATURE GENERAL PURPOSE REGULATORS

R07

- Snap action knob locks pressure setting when pushed down
- Standard relieving models allow reduction of outlet pressure even when the system is dead-ended

## Technical Data

**Fluid:**

Compressed air

**Maximum pressure:**

300 psig (20 bar)

**Operating temperature:**

-34°F to 150°F (-35°C to 65°C)\*

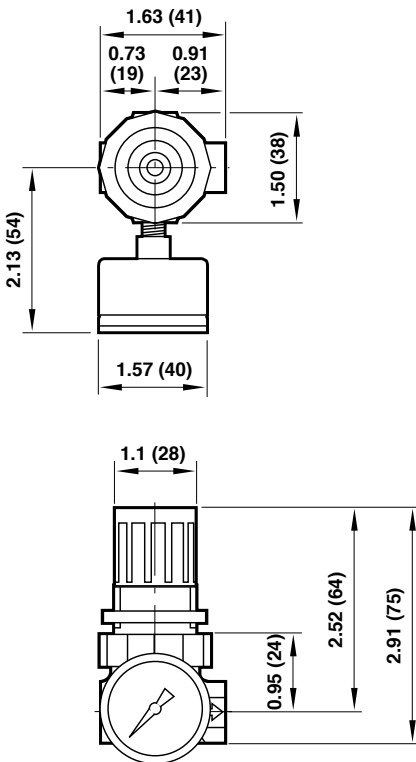


## Models

Model	Port Size	Flow SCFM*	Weight lbs (kg)
R07-100-RGLA	1/8"	14	0.31 (0.19)
R07-200-RGLA	1/4"	15	0.31 (0.19)
R07-100-RNLA	1/8"	14	0.31 (0.19)
R07-200-RNLA	1/4"	15	0.31 (0.19)

\* Typical flow with 150 psig inlet pressure, 90 psig set pressure and a 15 psig droop from set.

## Specifications



Dimensions in inches (mm)

# Fittings

Fittings are essential to any pneumatic system and choosing the right ones will improve performance and prevent leaks. Our fittings are fully certified and DOT/SAE/TUV approved for use with metric tubing.

*Designed to last  
life of vehicle* →

*Simple tube  
connection and  
disconnection* ↗

*Fully certified  
and DOT/SAE/TUV  
approved* ↙



*Very robust brass  
construction* ↖



# DOT VEHICLE PUSH-TO-CONNECT FITTINGS

Fleetfit Series

- Fittings comply to Department of Transport Federal Motor Vehicle Safety Standard, (DOT FMVSS 106) (Mandatory requirements for Inch tube fittings in U.S.A.)
- Simple tube connection and disconnection – no tools required
- Fewer component parts – Internally machined form in body to secure collet, reduces number of potential leak paths
- Corrosion resistant
- Reduced assembly and maintenance times provide time/labor savings
- Greater reliability and reduced testing
- Ease of tube insertion in areas of restricted access

## Technical Data

**Operating medium:**  
Compressed air

**Maximum working pressure:**  
0 to 150 psi (0 to 10 bar)

**Working temperature:**  
Standard: -40° to 219°F (-40° to 104°C)  
HBNR: -49° to 302°F (-45° to +150°C)  
FKM: -4° to 392°F (-20° to +200°C)

Additional temperature options are available. Please contact us directly for more information.

## Customized Fittings

The following options are available for special colon orders:

- A Thread Coated
- M Bulk Packaging & Thread Coated
- BP Bulk Packaging, No Thread Coat
- PSBP Bulk Packaging and HNBR O Rings
- PSM Thread Coated, Bulk Packaged, and HNBR O Rings
- V FKM O Ring

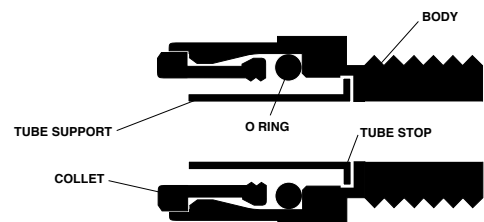
## Material

Body (Straights), Tube support, Collet  
Body (Elbows, Tees) – Brass  
'O' Ring – Nitrile  
Thread Sealant – Precoat 5  
Tubing:  
Tube should be to SAE J844 (Imperial) or DIN 74324 (Metric)

**Standards and legislation:**  
Fittings and tubing comply to Department of Transport Federal Motor Vehicle Safety Standard, (DOT FMVSS 106) (Mandatory requirements for Inch tube fittings in U.S.A.)  
Society for Automotive Engineers (SAE) J2494 (Inch tube and fittings) and meet DIN 74324 and German TÜV requirements (Metric tube and fittings)



## ● Tube Connection/Disconnection

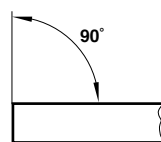


**Body:**  
The body has an internally machined form to secure the Collet(s), O-ring(s) and Tube support(s); It also has internal and externally machined thread form(s) for connection to ports where applicable.

**Collet:**  
The purpose of the collet is to grip the tube and ensure it is retained by the fitting at all times.

**O-ring:**  
The O-ring is to ensure adequate interference between the tube and fitting body therefore providing a pneumatic seal at all times.

**Tube Support:**  
The tube support prevents the tube collapsing during extreme tensile loading conditions. Such conditions are only encountered during performance testing and far exceed those experienced during normal use.



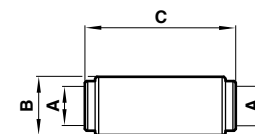
- Ensure that the end of the tube is cut square and is free from burrs.
- Push the tube through the collet into the fitting.
- Continue pushing the tube through the O-ring until it bottoms on the tube stop. Then pull back on the tube to reinforce the collet teeth gripping action.
- To disconnect: First ensure there is no air present. Push the tube into the fitting until it bottoms on the tube stop. Then hold down the collet and withdraw the tube.

# DOT VEHICLE PUSH-TO-CONNECT FITTINGS

Fleetfit Series



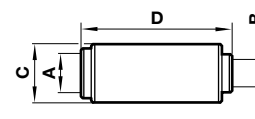
## ● Union



Models	A Tube O/D	ØB	C
94450313M	3/16"	0.47	1.36
94450304M	1/4"	0.51	1.4
94450304PSBP	1/4"	0.51	1.4
94450306M	3/8"	0.67	1.74
94450306PSBP	3/8"	0.67	1.74
94450307M	1/2"	0.81	2.01
94450307PSBP	1/2"	0.81	2.01
94450308M	5/8"	1	2.42
94450308PSBP	5/8"	1	2.42
94450309M	3/4"	1.18	2.48



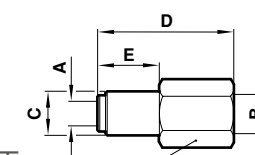
## ● Reducing Unions (Inch)



Models	A Tube O/D	B Tube	ØC	D
94450448M	3/8"	1/4"	0.67	1.71
94450464M	1/2"	3/8"	0.81	1.91



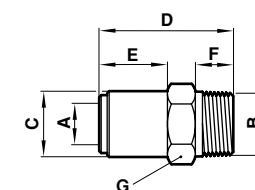
## ● Female Connectors NPT



Models	A Tube O/D	B NPT	ØC	D	E	F
95435504M	1/4"	1/8"	0.51	1.31	0.72	9/16"
95435510M	1/4"	1/4"	0.51	1.59	0.72	11/16"
95435512M	3/8"	1/4"	0.65	1.74	0.88	11/16"
95435520M	3/8"	3/8"	0.65	1.78	0.88	7/8"
95435530M	1/2"	1/2"	0.91	2.11	0.96	11/16"



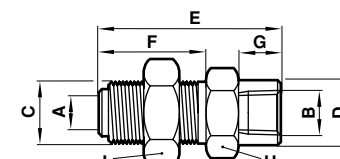
## ● Male Connectors NPT



Models	A Tube O/D	B NPT	ØC	D	E	F	G A/F
95453003M	3/16"	1/8"	0.46	1.02	0.43	0.37	1/2"
95453003BP	3/16"	1/8"	0.46	1.02	0.43	0.37	1/2"
95453004M	1/4"	1/8"	0.5	1.04	0.43	0.37	1/2"
95453004PSM	1/4"	1/8"	0.5	1.04	0.43	0.37	1/2"
95453010M	1/4"	1/4"	0.5	1.17	0.37	0.56	9/16"
95453010PSM	1/4"	1/4"	0.5	1.17	0.37	0.56	9/16"
95453018M	1/4"	3/8"	0.5	1.2	0.31	0.56	11/16"
95453006M	3/8"	1/8"	0.65	1.32	0.67	0.37	11/16"
95453009M	3/16"	1/4"	0.46	1.15	0.35	0.56	9/16"
95453012M	3/8"	1/4"	0.66	1.48	0.63	0.56	11/16"
95453012PSM	3/8"	1/4"	0.66	1.48	0.63	0.56	11/16"
95453020M	3/8"	3/8"	0.66	1.42	0.54	0.56	11/16"
95453020PSM	3/8"	3/8"	0.66	1.42	0.54	0.56	11/16"
95453029M	3/8"	1/2"	0.66	1.46	0.36	0.75	7/8"
95453029PSM	3/8"	1/2"	0.66	1.46	0.36	0.75	7/8"
95453013M	1/2"	1/4"	0.79	1.68	0.75	0.56	7/8"
95453013PSM	1/2"	1/4"	0.79	1.68	0.75	0.56	7/8"
95453021M	1/2"	3/8"	0.79	1.64	0.71	0.56	7/8"
95453021PSM	1/2"	3/8"	0.79	1.64	0.71	0.56	7/8"
95453030M	1/2"	1/2"	0.79	1.72	0.61	0.75	7/8"
95453030PSM	1/2"	1/2"	0.79	1.72	0.61	0.75	7/8"
95453022M	5/8"	3/8"	0.98	1.87	0.89	0.56	1-1/16"
95453022PSM	5/8"	3/8"	0.98	1.87	0.89	0.56	1-1/16"
95453031M	5/8"	1/2"	0.98	2.12	0.93	0.75	1-1/16"
95453049M	3/4"	1/2"	1	2.11	0.89	0.75	1-3/16"
95453055M	3/4"	3/4"	1.16	2.03	0.81	0.75	1-3/16"



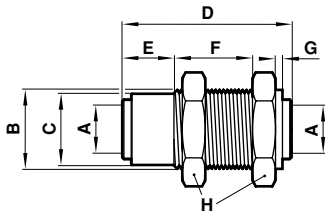
## ● Female Bulkhead Connectors NPT Female, UNF



Models	A Tube O/D	B NPT Female	C UNF	ØD	E	F	G	H	J
95457006M	1/4"	1/8"	5/8"	0.63	1.32	0.69	0.28	0.87	15/16"
95457001M	1/4"	1/4"	5/8"	0.79	1.59	0.73	0.51	0.87	15/16"
95457003M	3/8"	1/4"	3/4"	0.79	2.2	1.3	0.51	0.94	1-1/8"
95457004M	3/8"	3/8"	3/4"	0.79	2.2	1.3	0.51	0.94	1-1/8"
95457005M	1/2"	3/8"	7/8"	-	1.89	1.5	-	1.06	1-5/16"
95457007M	1/2"	1/2"	7/8"	-	2.64	1.5	-	1.06	1-5/16"

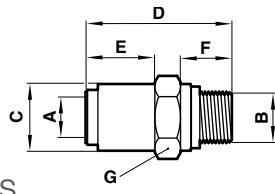
## DOT VEHICLE PUSH-TO-CONNECT FITTINGS

Fleetfit Series



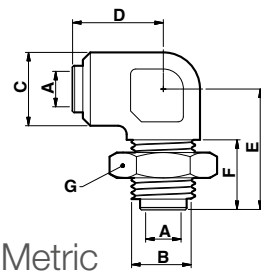
### ● Bulkhead Unions

Models	A Tube O/D	B Thread	D	F (Max)	G (Min)	H A/F
94450704M	1/4"	M15 x 1.0	1.41	0.87	0.08	0.87
94450706M	3/8"	M20 x 1.5	1.75	1.10	0.08	1.06
94450707M	1/2"	M24 x 1.5	2.02	1.38	0.08	1.18



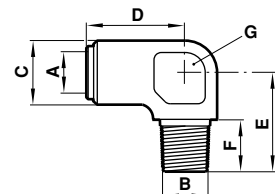
### ● Metric Male Connectors

Models	A Tube O/D	B Thread	ØC	D	E	F	G A/F
94466631M	1/4"	M10 x 1.0	0.51 (13.0)	1.12 (28.5)	0.53 (13.5)	0.39 (10.0)	0.55 (14)
94466633M	1/4"	M12 x 1.5	0.51 (13.0)	1.12 (28.5)	0.53 (13.5)	0.39 (10.0)	0.67 (17)
94466633V	1/4"	M12 x 1.5	0.51 (13.0)	1.12 (28.5)	0.53 (13.5)	0.39 (10.0)	0.67 (17)
94466653M	3/8"	M12 x 1.5	0.51 (13.0)	1.12 (28.5)	0.53 (13.5)	0.39 (10.0)	0.67 (17)
94466653M	3/8"	M12 x 1.5	0.51 (13.0)	1.12 (28.5)	0.53 (13.5)	0.39 (10.0)	0.67 (17)
9446665BP	1/2"	M16 x 1.5	0.81 (20.5)	1.54 (39.0)	0.75 (19.0)	0.47 (12.0)	0.97 (22)
94466653M	1/4"	M16 x 1.5	0.51 (13.0)	1.08 (27.5)	0.30 (7.5)	0.30 (7.5)	0.87 (22)
94466668BP	1/2"	M22x1.5	0.81 (20.5)	1.38 (35.0)	0.37 (9.5)	0.37 (9.5)	1.06 (27)
94466675BP	5/8"	M22x1.5	1.02 (26.0)	1.75 (44.5)	0.77 (19.5)	0.37 (9.5)	1.06 (27)



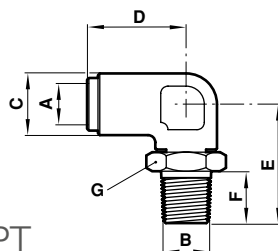
### ● Union Bulkhead Elbows Metric

Models	A Tube O/D	B Thread	ØC	D	E	F	G A/F
94459106M	3/8"	M20x1.5	23.8	27.7	39.2	22.7	27



### ● Male Elbows NPT

Models	A Tube O/D	B NPT	ØC	D	E	F	G A/F
95433103M	3/16"	1/8"	0.47	0.81	0.75	0.37	0.47
95433104M	1/4"	1/8"	0.55	0.81	0.79	0.37	0.55
95433104PSM	1/4"	1/8"	0.55	0.81	0.79	0.37	0.55
95433109M	3/16"	1/4"	0.69	0.81	0.94	0.56	0.63
95433110M	1/4"	1/4"	0.69	0.87	1.02	0.56	0.71
95433110PSM	1/4"	1/4"	0.69	0.87	1.02	0.56	0.71
95433118M	1/4"	3/8"	0.82	0.94	1.1	0.56	0.87
95433118PSM	1/4"	3/8"	0.82	0.94	1.1	0.56	0.87
95433127M	1/4"	1/2"	0.94	0.96	1.38	0.75	0.94
95433106M	3/8"	1/8"	0.69	1.08	0.87	0.37	0.71
95433112M	3/8"	1/4"	0.69	1.06	1.02	0.56	0.71
95433112PSM	3/8"	1/4"	0.69	1.06	1.02	0.56	0.71
95433120M	3/8"	3/8"	0.82	1.14	1.1	0.56	0.87
95433120PSM	3/8"	3/8"	0.82	1.14	1.1	0.56	0.87
95433129M	3/8"	1/2"	0.94	1.14	1.38	0.75	0.94
95433113M	1/2"	1/4"	0.87	1.22	1.14	0.56	0.87
95433121M	1/2"	3/8"	0.87	1.26	1.14	0.56	0.87
95433121PSM	1/2"	3/8"	0.87	1.26	1.14	0.56	0.87
95433130M	1/2"	1/2"	0.94	1.28	1.38	0.75	0.94
95433130PSM	1/2"	1/2"	0.94	1.28	1.38	0.75	0.94
95433198M	5/8"	3/8"	1.06	1.44	1.22	0.56	0.87
95433131M	5/8"	1/2"	1.15	1.54	1.42	0.75	1.18
95433131PSM	5/8"	1/2"	1.15	1.54	1.42	0.75	1.18
95433149M	3/4"	1/2"	1.3	1.52	1.48	0.75	0.94
95433155M	3/4"	3/4"	1.15	1.59	1.5	0.75	1.18



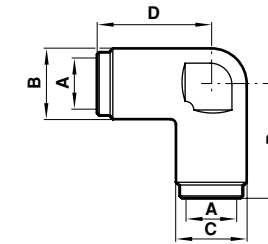
### ● Male Swivel Elbows NPT

Models	A Tube O/D	B NPT	ØC	D	E	F	G A/F
95411404M	1/4"	1/8"	0.51	0.83	0.91	0.37	0.43
95411404PSM	1/4"	1/8"	0.51	0.83	0.91	0.37	0.43
95411410M	1/4"	1/4"	0.51	0.83	1.12	0.56	0.55
95411418M	1/4"	3/8"	0.59	0.85	1.25	0.56	0.75
95411406M	3/8"	1/8"	0.67	1.07	1.05	0.37	0.55
95411412M	3/8"	1/4"	0.67	1.07	1.29	0.56	0.75
95411412PSM	3/8"	1/4"	0.67	1.07	1.29	0.56	0.75
95411420M	3/8"	3/8"	0.67	1.07	1.24	0.56	0.75
95411420PSM	3/8"	3/8"	0.67	1.07	1.24	0.56	0.75
95411429M	3/8"	1/2"	0.67	1.07	1.44	0.75	0.87
95411413M	1/2"	1/4"	0.81	1.27	1.27	0.56	0.87
95411413PSM	1/2"	1/4"	0.81	1.27	1.27	0.56	0.87
95411421M	1/2"	3/8"	0.81	1.27	1.42	0.56	0.87
95411421PSM	1/2"	3/8"	0.81	1.27	1.42	0.56	0.87
95411430M	1/2"	1/2"	0.81	1.27	1.62	0.75	0.87
95411431M	5/8"	1/2"	1.02	1.48	1.69	0.75	0.87
95411449M	3/4"	1/2"	1.18	1.52	1.77	0.75	0.87

CAUTION: Swivel adapters are not suitable for use in continuously rotating

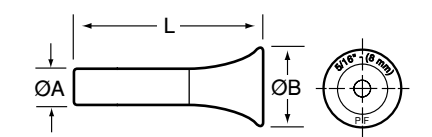
## DOT VEHICLE PUSH-TO-CONNECT FITTINGS

Fleetfit Series



### ● Union Elbows

Models	A Tube O/D	ØB	ØC	D
94451104BP	1/4"	0.43	0.51	0.83
94451106M	3/8"	0.57	0.67	1.07
94451107M	1/2"	0.71	0.81	1.26



### ● DOT Plug\*

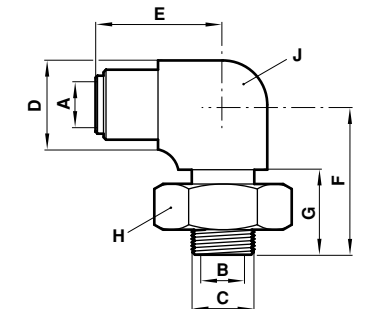
Models	A O/D Stem	ØB	L
94050904BP	1/4"	0.46	1.12
94050906BP	3/8"	0.65	1.34

\*Material: Thermoplastic



### ● 45° Male Elbows NPT

Models	A Tube O/D	B NPT	C	D	E	F A/F	G A/F
95460004M	1/4"	1/8"	0.87	0.81	0.37	0.56	-
95460010M	1/4"	1/4"	0.89	0.98	0.56	0.56	-
95460006M	3/8"	1/8"	1.02	0.93	0.37	0.75	-
95460012M	3/8"	1/4"	1.06	1.1	0.56	0.75	-
95460012PSM	3/8"	1/4"	1.06	1.1	0.56	0.75	-
95460020M	3/8"	3/8"	1.1	1.12	0.56	0.75	-
95460029M	3/8"	1/2"	1.14	1.3	0.75	0.87	-
95460013M	1/2"	1/4"	1.22	1.1	0.56	0.87	-
95460021M	1/2"	3/8"	1.26	1.12	0.56	0.87	-
95460021PSM	1/2"	3/8"	1.26	1.12	0.56	0.87	-
95460030M	1/2"	1/2"	1.3	1.3	0.75	0.87	-
95460022M	5/8"	3/8"	1.46	1.02	0.56	-	1.06
95460022PSBP	5/8"	3/8"	1.46	1.02	0.56	-	1.06
95460031M	5/8"	1/2"	1.46	1.22	0.75	-	1.06
95460049M	3/4"	1/2"	1.52	1.3	0.75	1	-



### ● Male Bulkhead Elbows, NPT Female, UNF

Models	A Tube O/D	B NPT Female	C UNF	ØD	E	F	G	H A/F	J A/F
95459704M	1/4"	1/8"	5/8"	0.81	1	1.18	0.63	15/16"	0.87
95459702M	1/2"	3/8"	7/8"	1.02	1.33	1.61	0.98	1-5/16"	0.67

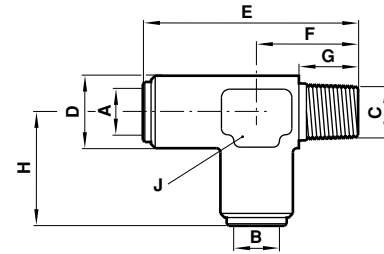
DOT VEHICLE PUSH-TO-CONNECT FITTINGS

Fleetfit Series



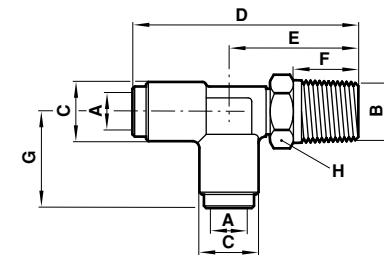
● Male Run Tees NPT

Models	A Tube O/D	B Tube O/D	C NPT	ØD	E	F	G	H	J A/F
95458628M	1/4"	1/4"	1/8"	0.55	1.67	0.79	0.37	0.89	0.55
95458613M	1/4"	1/4"	1/4"	0.69	1.85	0.96	0.56	0.89	0.71
95458617M	1/4"	1/4"	3/8"	0.82	2.03	1.1	0.56	0.93	0.87
95458607M	1/4"	3/8"	3/8"	0.82	2.03	1.1	0.56	1.14	0.87
95458607PSM	1/4"	3/8"	3/8"	0.82	2.03	1.1	0.56	1.14	0.87
95458605M	3/8"	1/4"	1/4"	0.69	2.05	0.96	0.56	0.93	0.71
95458627M	3/8"	1/4"	3/8"	0.82	2.24	1.1	0.56	0.93	0.87
95458603M	3/8"	3/8"	1/4"	0.69	2.05	0.96	0.56	1.08	0.71
95458610M	3/8"	3/8"	3/8"	0.82	2.24	1.1	0.56	1.14	0.87
95458604M	3/8"	3/8"	1/2"	0.91	2.64	1.42	0.75	1.22	0.94
95458626M	3/8"	1/2"	3/8"	0.87	2.36	1.14	0.56	1.3	0.87
95458620M	1/2"	3/8"	3/8"	0.87	2.44	1.14	0.56	1.22	0.87
95458621M	1/4"	3/8"	1/4"	0.69	1.85	1.00	0.56	1.08	0.71
95458611M	1/2"	1/2"	3/8"	0.87	2.44	1.14	0.56	1.3	0.87



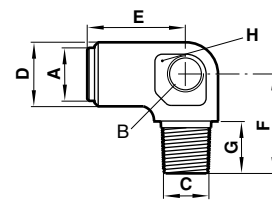
● Male Swivel Run Tees NPT

Models	A Tube O/D	B NPT	ØC	D	E	F	G	H A/F
95411204M	1/4"	1/8"	0.51	1.75	0.91	0.37	0.83	0.43
95411210M	1/4"	1/4"	0.51	1.95	1.12	0.56	0.83	0.55
95411212M	3/8"	1/4"	0.67	2.36	1.29	0.56	1.07	0.75
95411220M	3/8"	3/8"	0.67	2.32	1.24	0.56	1.07	0.75



● 90° Fixed Tee

Models	A Tube O/D	B NPT Female	C NPT	ØD	E	F	G	H
95456503M	3/8"	1/8"	3/8"	0.83	1.12	1.1	0.56	0.87
95456502M	1/2"	1/4"	1/2"	0.94	1.28	1.38	0.75	0.94



Note: Ports are threaded on side shown.

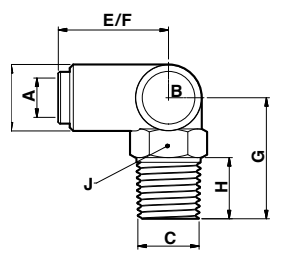
DOT VEHICLE PUSH-TO-CONNECT FITTINGS

Fleetfit Series



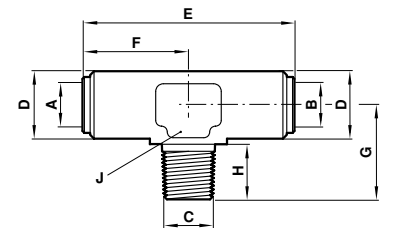
● Special 90° Tees NPT

Models	A Tube O/D	B Tube O/D	C NPT	ØD	E	F	G	H	J A/F
95458901A	1/4"	1/4"	1/4"	0.55	0.93	0.93	1.07	0.56	9/16"
95458920M	3/8"	5/8"	1/2"	1.15	1.23	1.63	1.69	0.75	0.87
95458905BP	1/2"	5/8"	1/2"	1.15	1.46	1.63	1.69	0.75	0.87
95458906M	5/8"	5/8"	1/2"	1.15	1.63	1.63	1.69	0.75	0.87



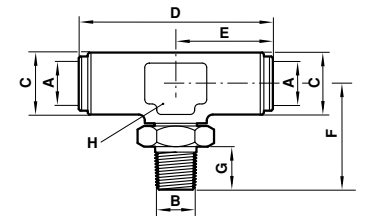
● Male Branch Tees NPT

Models	A Tube O/D	B Tube O/D	C NPT	ØD	E	F	G	H	J
95459002M	1/4"	1/4"	1/8"	0.55	1.69	0.85	0.79	0.37	0.55
95459012M	1/4"	1/4"	1/4"	0.69	1.77	0.89	0.96	0.56	0.71
95459012PSM	1/4"	1/4"	1/4"	0.69	1.77	0.89	0.96	0.56	0.71
95459016M	3/8"	1/4"	1/4"	0.69	1.97	0.89	0.96	0.56	0.71
95459010M	3/8"	3/8"	1/4"	0.69	2.17	1.08	0.96	0.56	0.71
95459004M	1/2"	1/2"	1/2"	0.91	2.68	1.34	1.42	0.75	0.94
95459001M	3/8"	3/8"	3/8"	0.82	2.28	1.14	1.10	0.56	0.87
95459013M	1/2"	1/2"	1/4"	0.87	2.44	1.22	1.14	0.56	0.87



● Male Swivel Branch Tees NPT

Models	A Tube O/D	B NPT	ØC	D	E	F	G	H A/F
95411103M	3/16"	3/16"	1/8"	1.57	0.79	0.89	0.37	0.43
95411104M	1/4"	1/8"	0.51	1.67	0.83	0.91	0.37	0.43
95411106M	3/8"	1/8"	1/8"	2.17	1.08	0.93	0.37	0.55
95411112M	3/8"	1/4"	0.67	2.17	1.08	1.29	0.56	0.75
95411120M	3/8"	3/8"	0.67	2.17	1.08	1.24	0.56	0.75
95411121M	1/2"	3/8"	0.81	2.56	1.28	1.42	0.56	0.87
95411130M	1/2"	1/2"	0.81	2.56	1.28	1.62	0.75	0.87



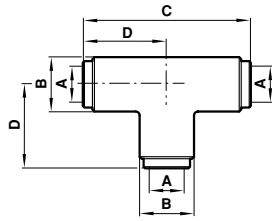
CAUTION: Swivel adapters are not suitable for use in continuously rotating or gyrating applications.

# DOT VEHICLE PUSH-TO-CONNECT FITTINGS

Fleetfit Series



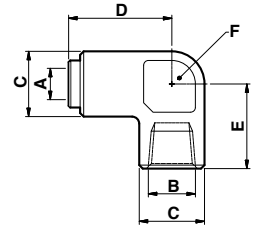
● Union Tee



Models	A Tube O/D	ØB	C	D
94451404M	1/4"	0.51	1.65	0.83
94451406M	3/8"	0.67	2.13	1.07
94451407M	1/2"	0.81	2.53	1.26
94451408M	5/8"	1.06	3.07	1.54
94451409BP	3/4"	1.14	3.35	1.67



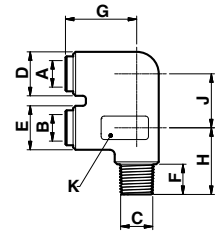
● Female Elbows NPT



Models	A Tube O/D	B NPT	C	D	E	F
95456401BP	3/16"	1/8"	0.55	0.87	0.71	0.55
95456410BP	1/4"	1/4"	0.69	0.91	0.71	0.71
95456420BP	3/8"	3/8"	0.81	1.3	0.79	0.87



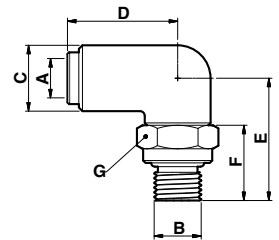
● Double Elbow Adapters NPT



Models	A Tube O/D	B Tube O/D	C NPT	D	E	F	G	H	J	K
95476101M	1/4"	1/4"	1/8"	0.55	0.55	0.37	0.89	0.83	0.67	0.54
95476101PSM	1/4"	1/4"	1/8"	0.55	0.55	0.37	0.89	0.83	0.67	0.54
95476113M	3/8"	1/4"	3/8"	0.85	0.85	0.56	1.18	1.14	1.06	0.74



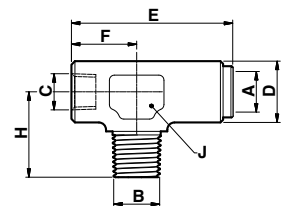
● Male Hobbs Elbows Metric



Models	A Tube O/D	B Tube O/D	C	D	E	F	G A/F
94413831BP	1/4"	M10x1.5	0.55	0.93	1.02	0.63	0.59
94413833M	1/4"	M12x1.5	0.55	0.93	1.14	0.75	0.55
94413835M	1/4"	M16x1.5	0.69	0.96	1.34	0.85	0.94
94413838VBP	1/4"	M22x1.5	1.02	1.12	1.63	0.98	1.18
94413868BP	1/2"	M22x1.5	1.02	1.36	1.59	0.98	1.18
94413853M	3/8"	M12x1.5	0.73	1.10	1.22	0.75	0.67
94413855BP	3/8"	M16x1.5	0.73	1.10	1.32	0.85	0.94
94413879BP	5/8"	M16x1.5	1.02	1.50	1.52	0.85	0.94
94413875BP	5/8"	M22x1.5	1.02	1.50	1.59	0.98	1.18
94413898BP	3/4"	M22x1.5	1.15	1.66	1.67	0.98	1.18



● Special Tee Adapters NPT, NPT Female



Models	A Tube O/D	B NPT	C NPT	D	E	F	H	J
95459312PSM	3/8"	1/8"	1/4"	0.68	1.08	0.73	0.56	0.71

# Lift Axle Controls

Integrated lift axle control solutions for chassis air systems on heavy duty trucks and trailers.



Rapid axle actuation

Helps prevent overload fines



Reliable

# INTELLIGENT LIFT AXLE CONTROL MODULE KIT

- Provides automated electric over air control of lift axles on heavy trucks with air primary rear suspensions and 12-volt electrical system
- Controlled and operated with smart phone or tablet through downloaded app via Bluetooth technology
- Chassis mounted with in-cab override switch
- Shifts reliably in cold temperatures

## Technical Data

**Operating voltage:**  
9 to 16 volts DC

**Lift Axle Load Bag Control Range:**  
30 to 120 psi

**Max. Operating Pressure:**  
150 psi

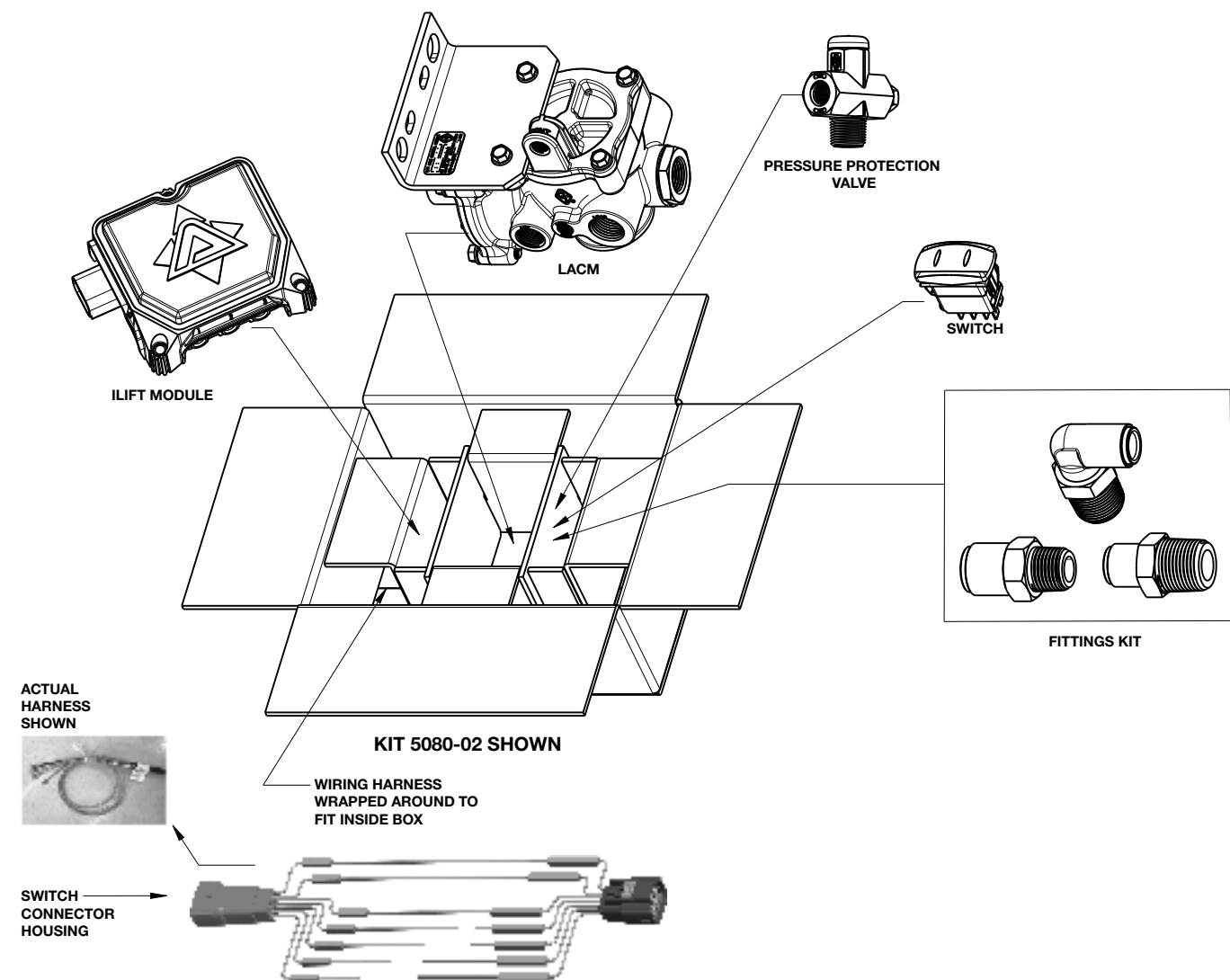
**Operating Temperature Range:**  
-40°F to 185°F



## Models

Model	Description	Kit Contents
5080-01	iLACM™ kit with Lift Axle Control Module (LACM)	LACM (Control Module), Pressure Protection Valve, Electronic Control Module, Switch, Harness, Fittings, Installation Manual
5080-02	iLACM™ Upgrade Kit without Lift Axle Control Module (LACM)	Electronic Control Module, Switch, Harness, Fittings, Installation Manual

## Kit Content



## Replacement Parts

Model	Description
50309-01	Switch
50310-01	Harness
50311-01	Control Module
50313-01	Switch Connector Housing
223-685V	Pressure Protection Valve

# LIFT AXLE CONTROL MODULE

5040 Series

- Designed for the heavy duty truck and trailer industry
- Includes two industry-proven brake-style relay valves integrated into a single unit for compactness and ease of installation
- Excellent flow capability for rapid axle actuation
- Optional control solenoid for electric control

## Technical Data

**Operating pressure:**  
30 to 120 psi

**Operating temperature:**  
-40°F to +190°F max.  
-40°C to +87.7°C max.

## Material

Cast aluminum body with thermoplastic pistons and low temperature nitrile seals



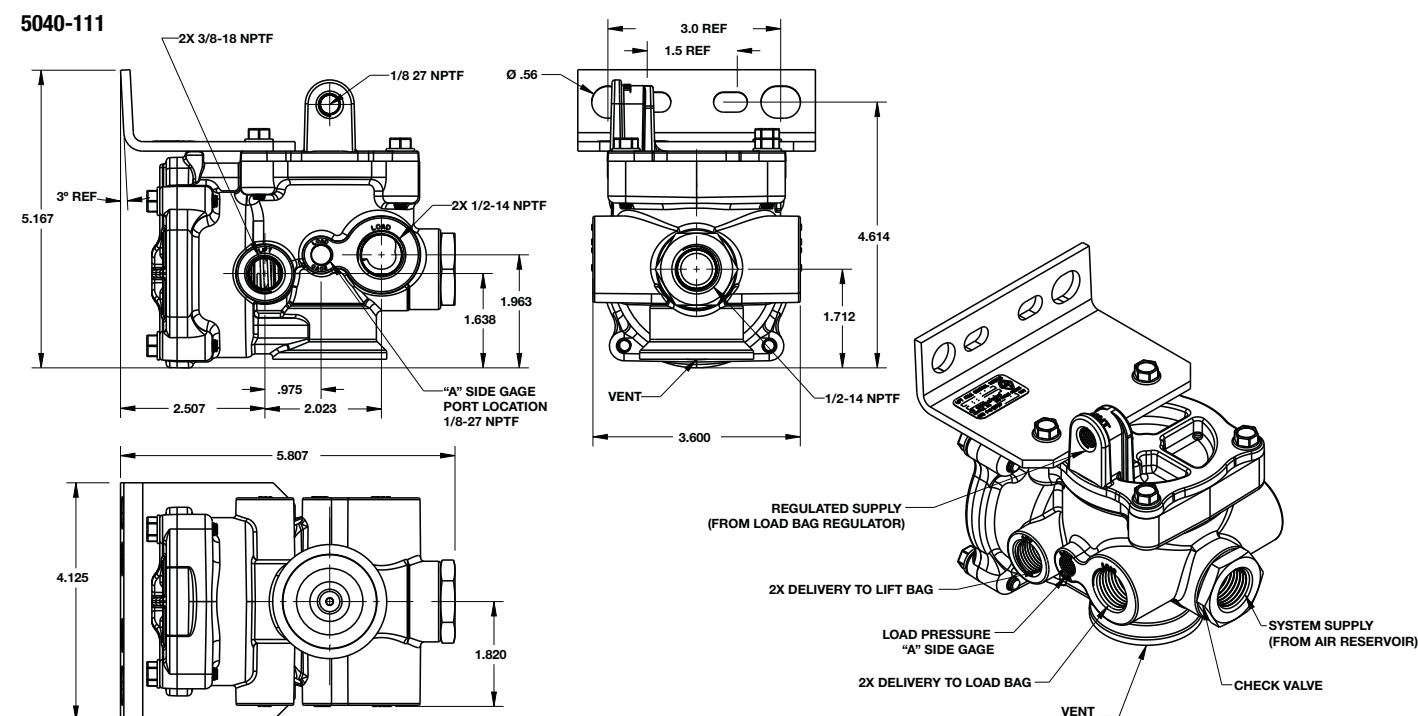
## Models

Model	Valve Type	Electrical Connection	Gage Port	Packaged
5040-111-01C	Air Actuation	N/A	A Side	Individual
5040-111-06	Air Actuation	N/A	A Side	Bulk
5040-211-01C	N/O Solenoid	Delphi Metri-Pack Series ISO sealed female connector (P/N 12052644)	A Side	Individual
5040-211-01	N/O Solenoid	Delphi Metri-Pack Series ISO sealed female connector (P/N 12052644)	A Side	Bulk
5040-311-01C	N/C Solenoid	Delphi Metri-Pack Series ISO sealed female connector (P/N 12052644)	A Side	Individual
5040-311-01	N/C Solenoid	Delphi Metri-Pack Series ISO sealed female connector (P/N 12052644)	A Side	Bulk
5040-711-03	N/C Solenoid w/out supression	Flying Leads	A Side	Individual
5040-811-01	N/O Solenoid	Flying Leads	A Side	Individual

## Replacement Solenoids for Lift Axle Control Module

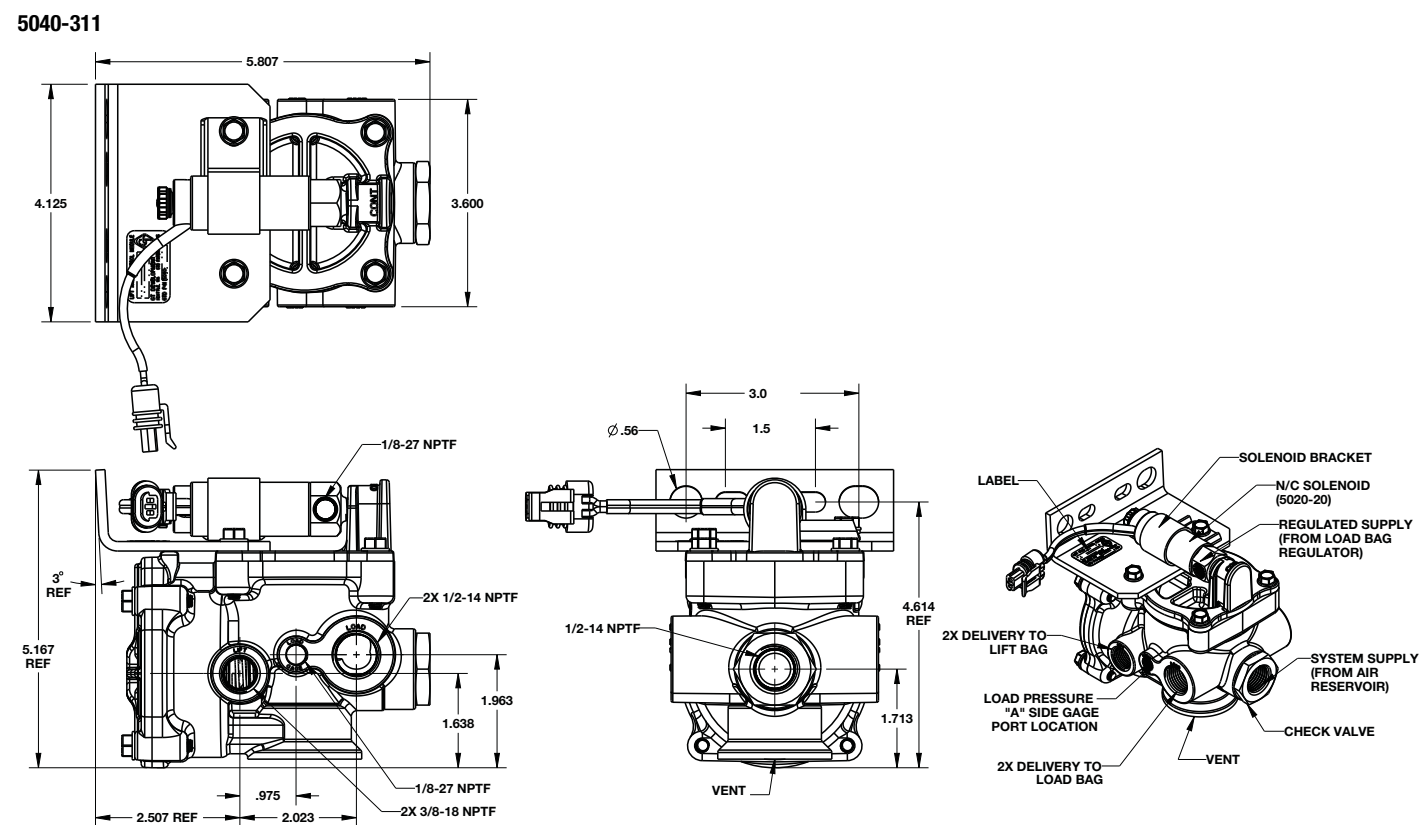
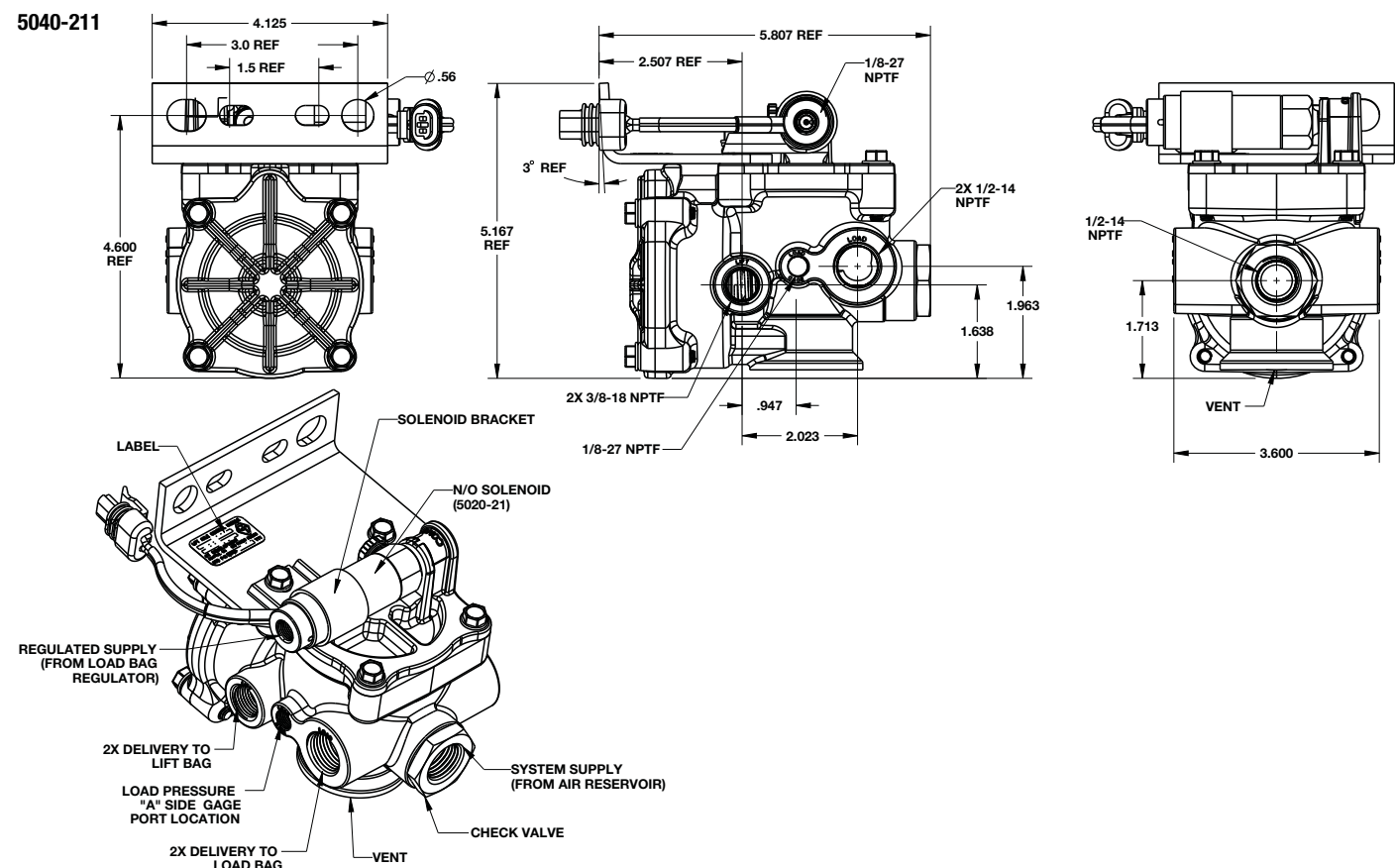
Model	LACM	Electrical Termination	Inlet Port Size	Outlet Port Size	Voltage	Configuration
5020-20A	5040-311-01C and 5040-311-01	Machine Crimped, Metric pack 150 Series Connector	1/8" -27 NPTF	1/8" -27 NPTF	12	N/C
5020-21A	5040-211-01C and 5040-211-01	Machine Crimped, Metric pack 150 Series Connector	1/8" -27 NPTF	1/8" -27 NPTF	12	N/O
5020-25A	5040-711-03	Flying Leads	1/8" -27 NPTF	1/8" -27 NPTF	12	N/C
5020-23A	5040-411	Metric pack 150 Series Connector	1/8" -27 NPTF	1/8" -27 NPTF	12	N/C
5020-28A	5040-811-01	Flying Leads	1/8" -27 NPTF	1/8" -27 NPTF	12	N/O

## Specifications



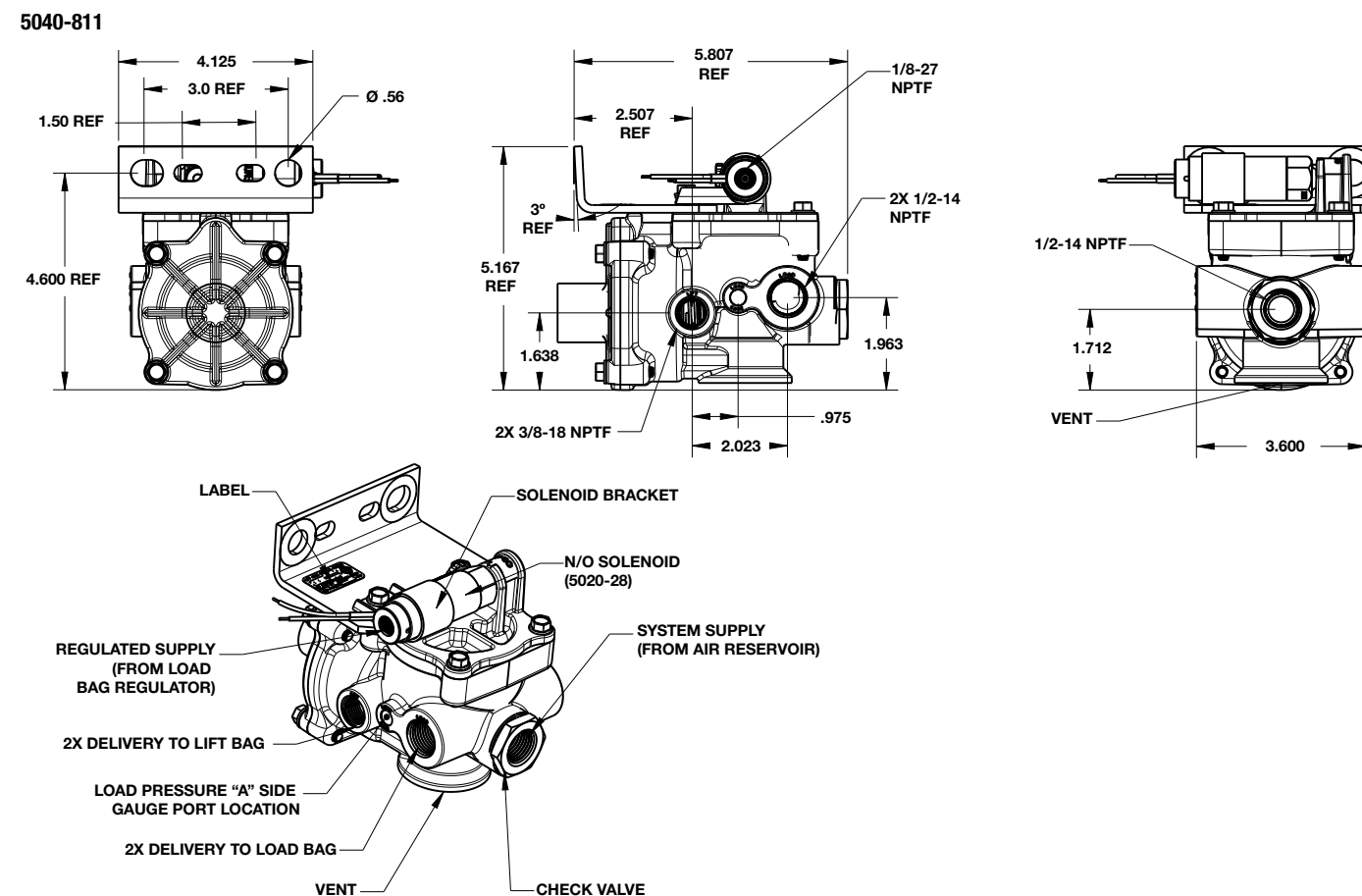
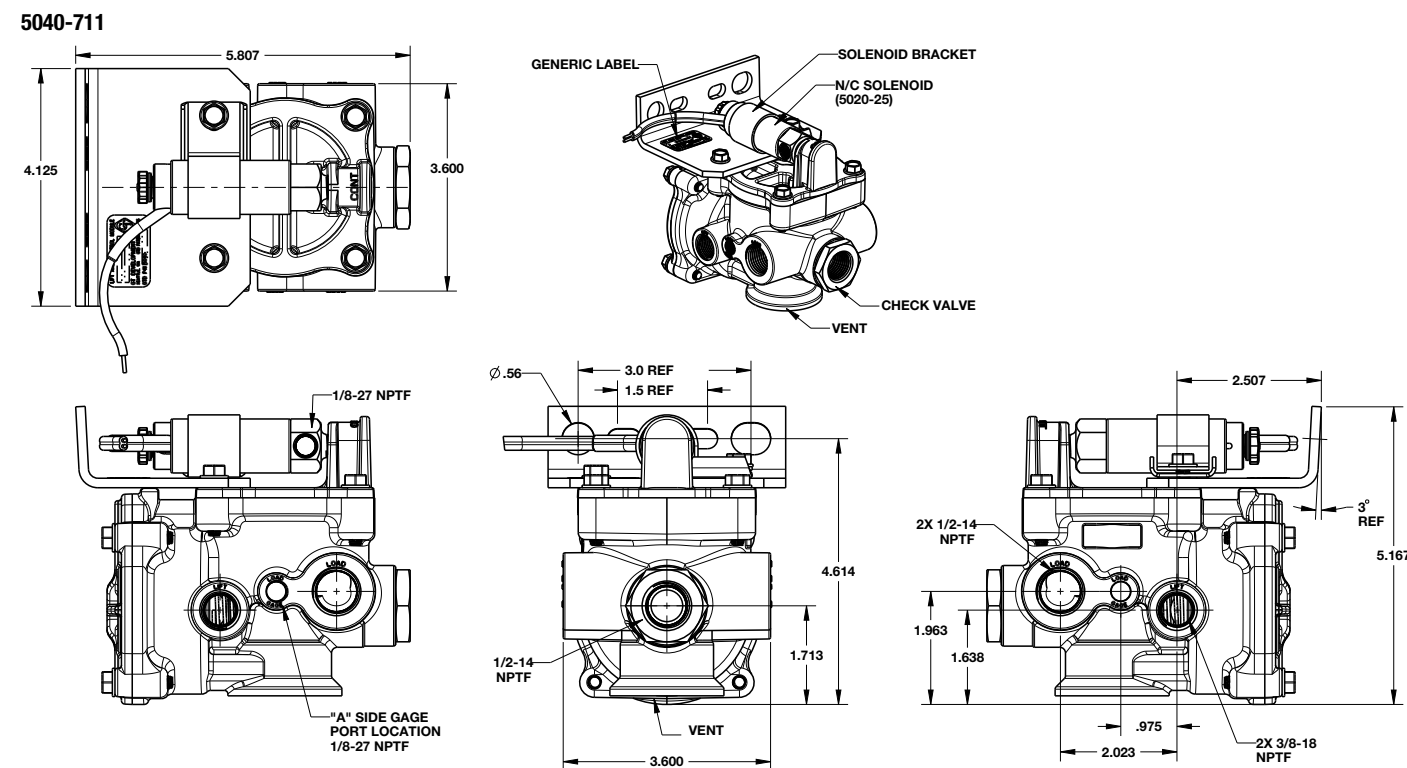
LIFT AXLE CONTROL MODULE

5040 Series



LIFT AXLE CONTROL MODULE

5040 Series

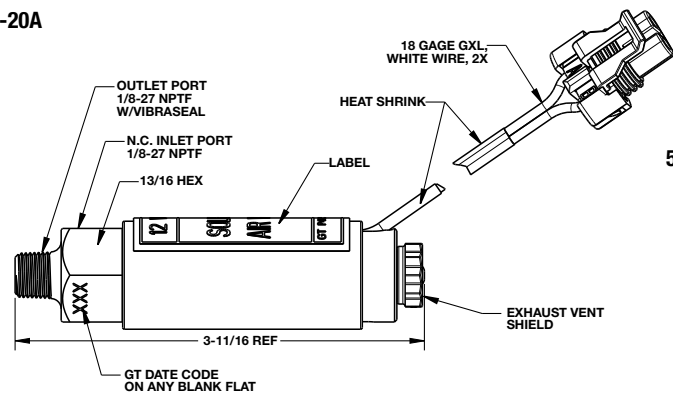


# LIFT AXLE CONTROL MODULE

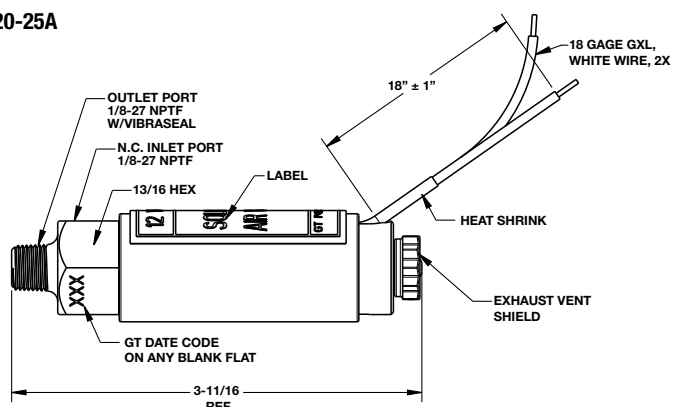
5040 Series

## REPLACEMENT SOLENOIDS

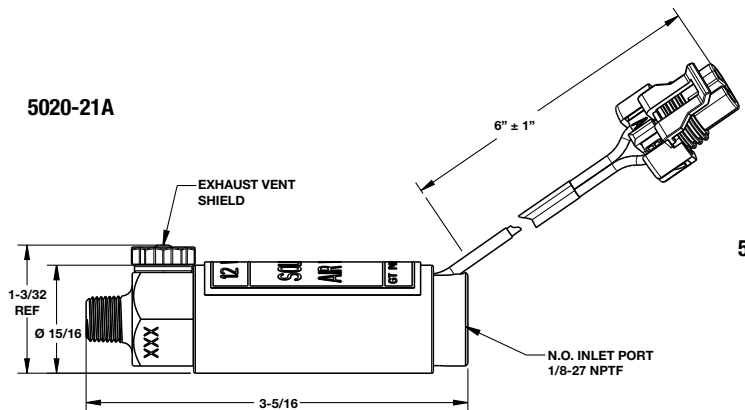
5020-20A



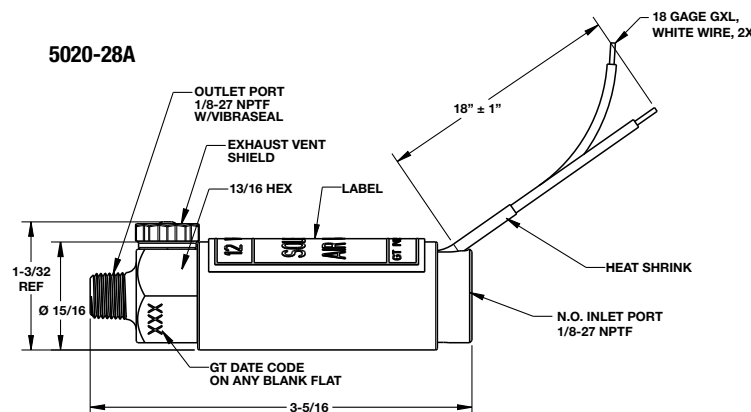
5020-25A



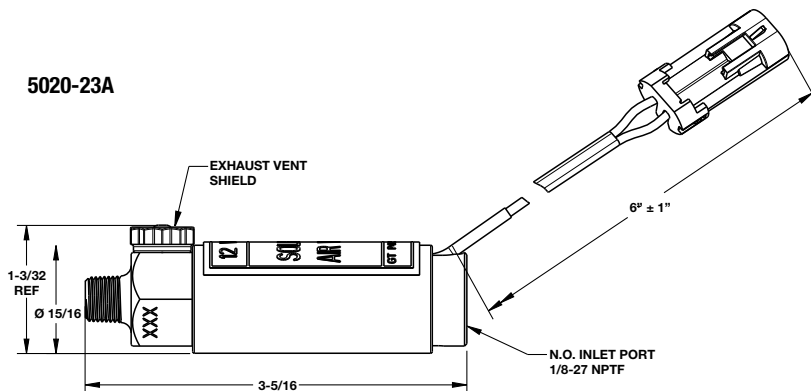
5020-21A



5020-28A



5020-23A



# TRAILER LIFT AXLE CONTROL VALVE

- Specially designed for reliable trailer lift axle application operation in hot and cold weather
- Two industry-proven valves integrated into a single unit for compactness and ease of installation
- Trailer cross-member mounted

## Technical Data

Operating pressure:  
0 to 120 psi

Pilot Control Pressure:  
Min 60 psi

Operating Temperature:  
-40°F – 180°F

Port size:  
1/8" -27

## Material

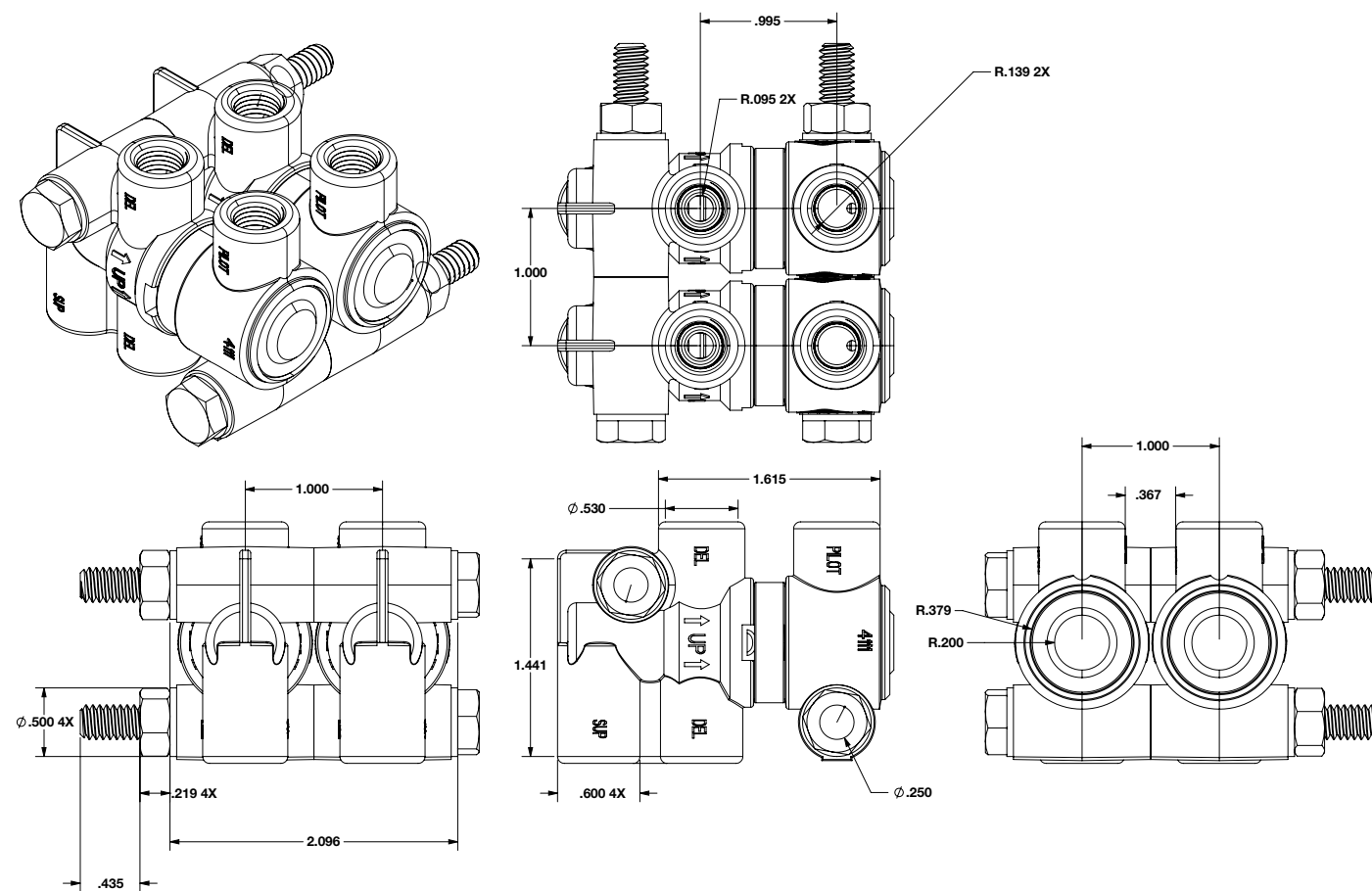
Die cast Zinc



## Models

Model	Port Size
5111-01	1/8" PTF

## Specifications





# NUGGET 200 SOLENOID & AIR ACTUATED SPOOL VALVE

- Long lasting spool design
- High flow compact valves
- Wide range of operators and voltages available
- Three functional types: available in 3/2, 5/2, and 5/3 configurations

## Technical Data

**Medium:**  
Filtered and lubricated or non-lubricated compressed air or vacuum

**Operation:**  
Spool valve solenoid pilot actuated

**Mounting:**  
Stacking – through holes on manifold base  
Inline – through holes in valve body

**Port size:**  
PTF – 1/4", 3/8", 1/2"  
ISO G – 1/4", 3/8"

**Operating Pressure:**  
Maximum 150 psig (10.3 bar)

**Operating Temperature:**  
-20° to 120°F (-29° to 50°C)  
Consult Technical Service for use below 35°F (2°C)























**Voltage:**  
12 VDC available upon request

## Material

Body: Aluminum  
Spool: Anodized aluminum  
Solenoid Operator Base: plastic  
Plunger and spring: Stainless steel  
Elastomers: Nitrile and special nitrile-based low-friction elastomers







## Models - Lift Axle Control Spool Valves





Model	Function	Description	Seal	Flow Cv	Port size (inch)	Operating pressure (psi)	Body & Spool	Operator	Repair kit
	5/2	Sol/Spring with Extended Manual override 12 VDC Connector down	Nitrile	1.67	3/8	35 - 150			
	5/2	Sol/Spring with Extended Manual override 12 VDC Connector up	Nitrile	1.67	3/8	35 - 150			
	3/2	Push/Pull 3/2 valve	Nitrile	1.67	3/8	35 - 150		N/A	
	3/2	Push Pull 3/2 valve with air pilot reset	Nitrile	1.67	3/8	35 - 150		N/A	
	5/2	12 VDC Solenoid operated 5/2 spring return valve with large push/twist locking manual override	FKM	1.67	3/8	35 - 150		N/A	
	5/2	12 VDC Solenoid operated 5/2 spring return valve with large push/twist locking manual override	Nitrile	1.67	3/8	35 - 150			
	5/2	12 VDC Solenoid/Spring return with integrated manual regulator, for power down operation on Lift-axle control	Nitrile	1.67	3/8	35 - 150	N/A	N/A	N/A

# NUGGET 200 SOLENOID & AIR ACTUATED SPOOL VALVE





## Models - 3/2 Valves - Air actuates/air return

Model	Flow Cv	Port size (inch)	Operating pressure (psi)	Body and spool	Operator	Repair kit
	1.67	1/4	35 - 150			
K41EA00KA2KA2	1.67	3/8	35 - 150	K41EA00	KA2	54237-59

## Models - 3/2 Valves - Air actuated/spring return





Model	Flow Cv	Port size (inch)	Operating pressure (psi)	Body and spool	Operator	Repair kit
	1.67	1/4	45 - 150			
K41EA00KS6KA2	1.67	3/8	45 - 150	K41EA00	KA2	54237-59

## Models - 5/2 Valves - Air actuates /spring return





Model	Flow Cv	Port size (inch)	Operating pressure (psi)	Body and spool	Operator	Repair kit
	1.67	1/4	35 - 150			
K71EA00KS6KA2	1.67	3/8	35 - 150	K71EA00	KA2	54237-56
K71EA01KS6KA1*	1.67	3/8	35 - 150	K71EA01	KA1	54237-56

\* Low profile

## Models - 5/2 Valves - Air actuates/air return





Model	Flow Cv	Port size (inch)	Operating pressure (psi)	Body and spool	Operator	Repair kit
	1.67	1/4	15 - 150			
K71EA00KA2KA2	1.67	3/8	15 - 150	K71EA00	KA2	54237-56

## Models - 5/3 Valves - Air actuates/air return





Model	Flow Cv	Port size (inch)	Operating pressure (psi)	Body and spool	Operator	Repair kit
	1.67	1/4	45 - 150			
K81EA00KACKAC3	1.67	3/8	45 - 150	K81EA00	KAC	54237-56

3 All ports blocked





● Models - 3/2 Valves - Solenoid actuates/spring return

Model	Voltage	Connection	Manual override	Flow Cv	Port size inch	Operating pressure psig	Body and spool	Operator	Repair kit
 K41DA00KS6KV21W2	24 VDC	Cable grip	Locking	1.67	1/4	35 - 150			
K41EA00KS6KV21W2	24 VDC	Cable grip	Locking	1.67	3/8	35 - 150	K41EA00	KV21W2	54237-59

● Models - 5/2 Valves - Solenoid actuated/spring return

Model	Voltage	Connection	Manual override	Flow Cv	Port size inch	Operating pressure psig	Body and spool	Operator	Repair kit
 K71DA00KS6KV21W2	24 VDC	Cable grip	Locking	1.67	1/4	35 - 150			
K71EA00KS6KV21W2	24 VDC	Cable grip	Locking	1.67	3/8	35 - 150	K71EA00	KV21W2	54237-56
K71FA00KS6KV21W2	24 VDC	Cable grip	Locking	1.67	1/2	35 - 150	K71FA00	KV21W2	54237-56

● Models - 5/2 Valves - Solenoid actuates/solenoid return

Model	Voltage	Connection	Manual override	Flow Cv	Port size inch	Operating pressure psig	Body and spool	Operator	Repair kit
 K71DA00KV2KV22W2	24 VDC	Cable grip	Locking	1.67	1/4	15 to150			
K71EA00KV2KV22W2	24 VDC	Cable grip	Locking	1.67	3/8	15 to150	K71EA00	KV21W2	54237-56

● Connectors

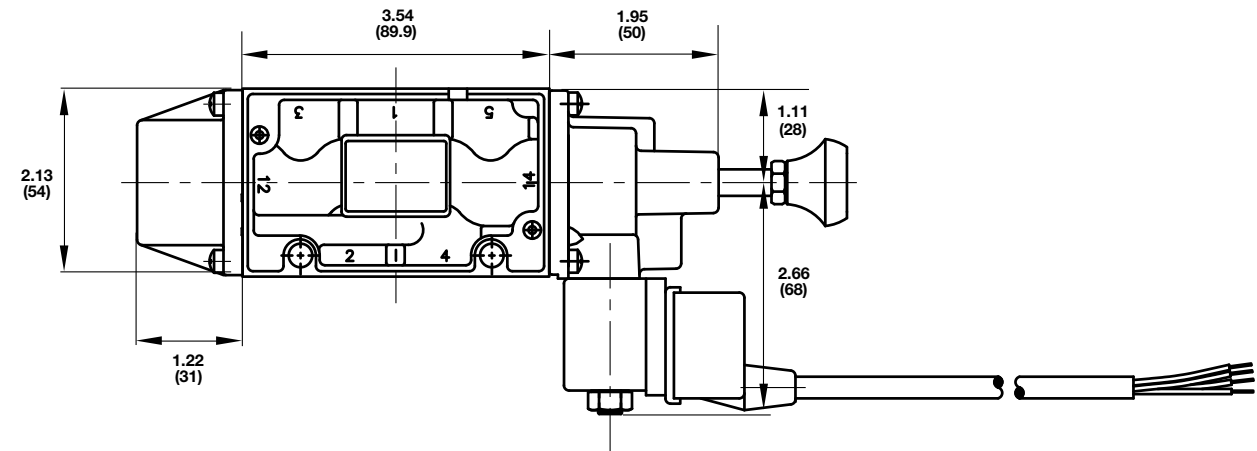
Part number	Code
-	A = no connector
54934-01	B = Cable grip 0-240 VAC/ VDC
54934-21	C = 6 ft molded cable, 0-240 VAC/ VDC
54934-08	H = Cable grip w/indicator light 24 VDC
54934-05	Z = 1/2" Conduit 0-240 VAC/ VDC
54934-30	5 = 6 ft molded cable w/indicator light, surge suppression, 24 VAC/ VDC

● Solenoid Coils

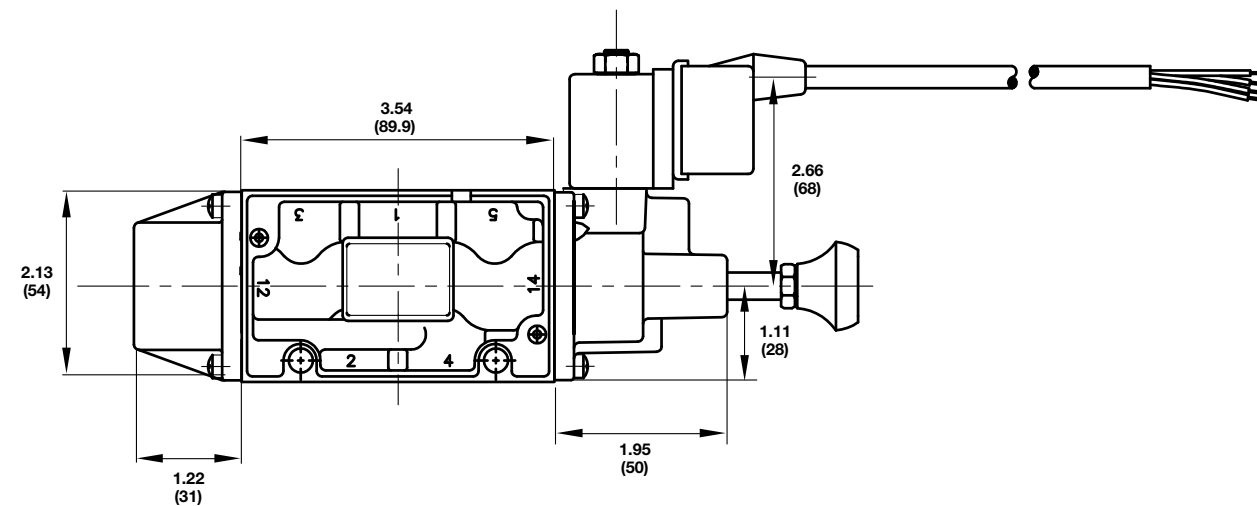
Model	Voltage
54452-02	12 VDC, 7.5W
54452-03	24 VDC, 6W
54452-05	24 VAC

● Specifications for Lift Axle Control Spool Valves

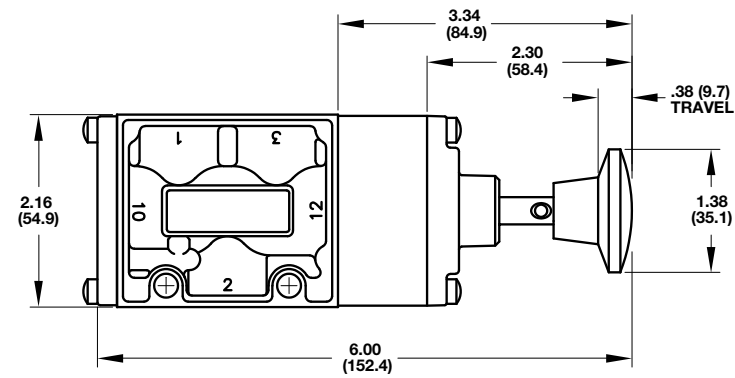
K910014



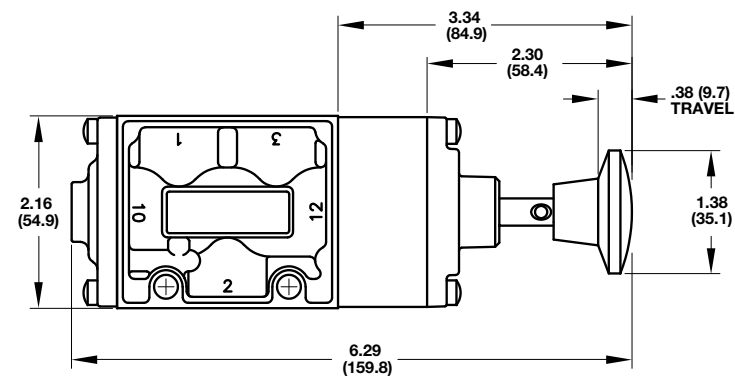
K910019



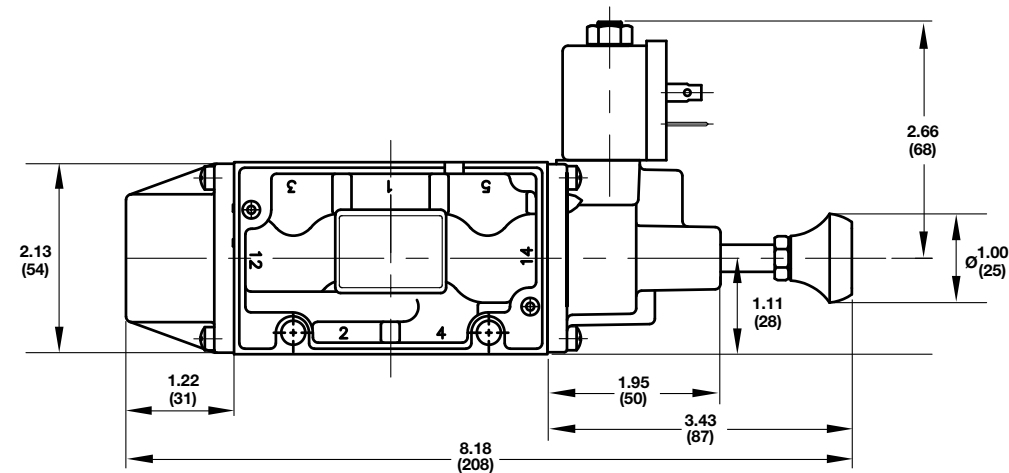
K910038



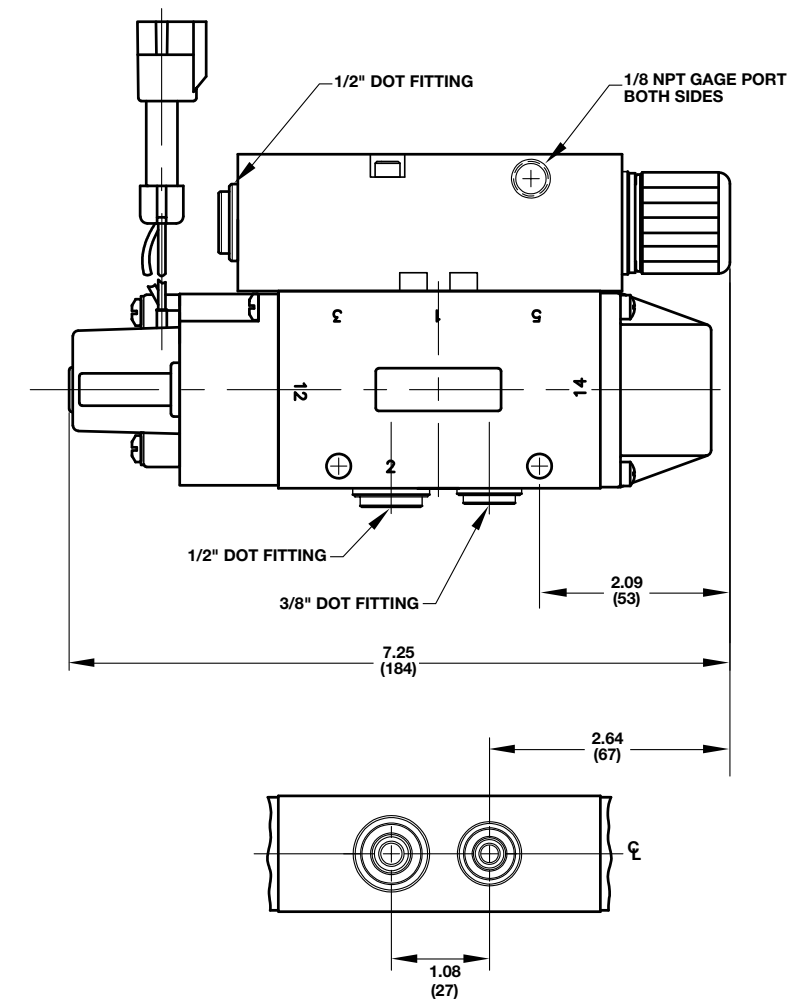
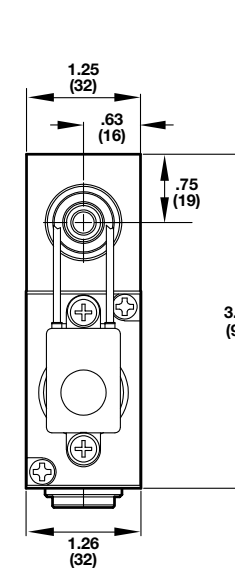
K910054



K910147, K910168

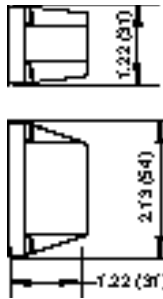


K990037

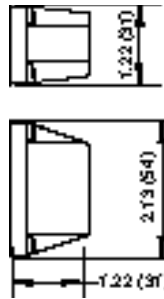


● Specifications for Standard Models

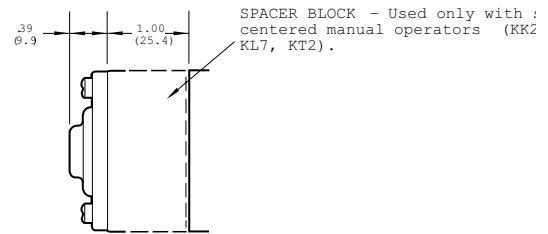
**KS1 Spring Return & End Cap**



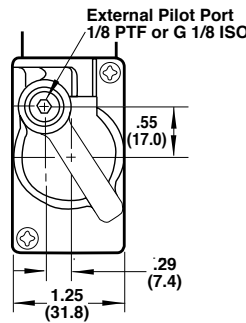
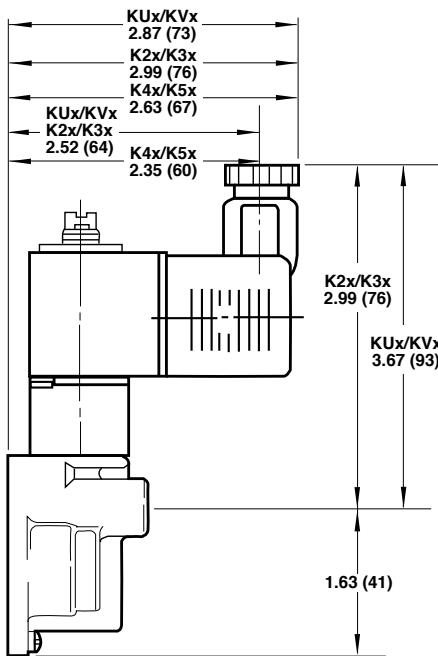
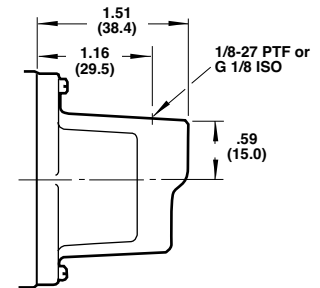
**KS6 Spring Return**



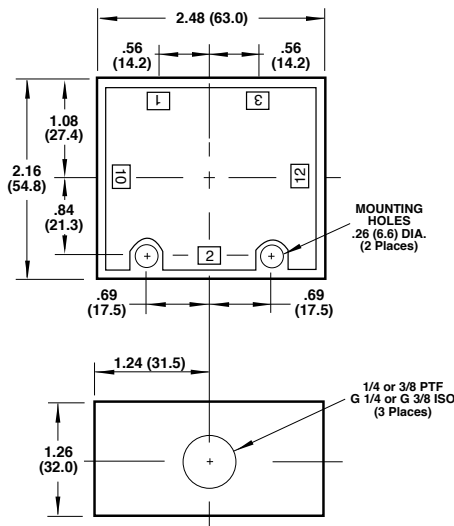
**KC0 End Cap**



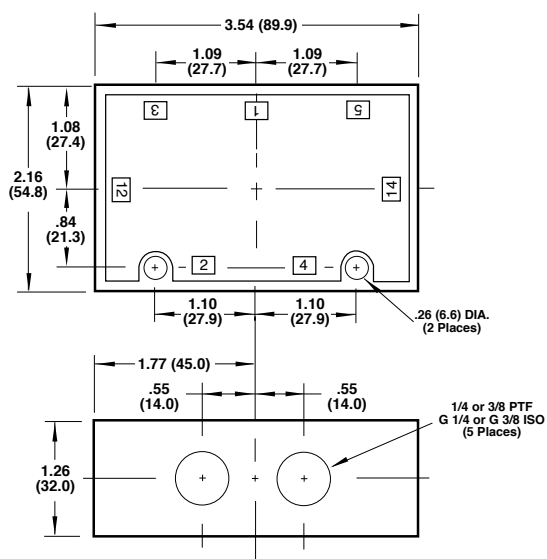
**KA2**



**3-WAY - 1/4" & 3/8" PORTS  
K41**



**4-WAY - 1/4" & 3/8" PORTS  
K71 or K81**



# Seat Controls

Our pneumatic and electric seat valves control height and lumbar support functions for driving comfort.



←  
*Height and lumbar control*

*Low leakage and compact design*



↗  
*Push/pull functionality*

# PADDLE SEAT CONTROL VALVES AIR ONLY

- Designed for the control of one seat bag
- Paddle style actuation
- 3-way valve
- All plastic components meet FMVSS 302 flammability requirements
- 1/4" barb connection

## Technical Data

**Operating pressure:**  
0 to 125 psi (0 to 8 bar)

**Actuation:**  
3-way, dead center, paddle style actuation

**Assembly:**  
Valve assembly snaps into seat side panel from the outside

## Material

Black Thermoplastic

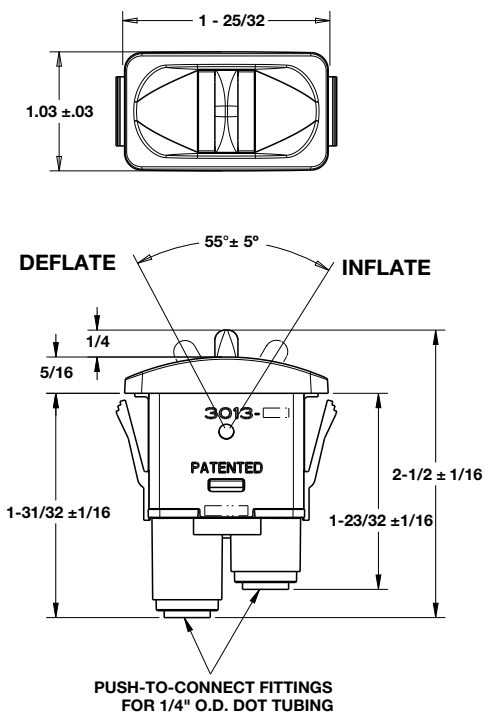


## Models

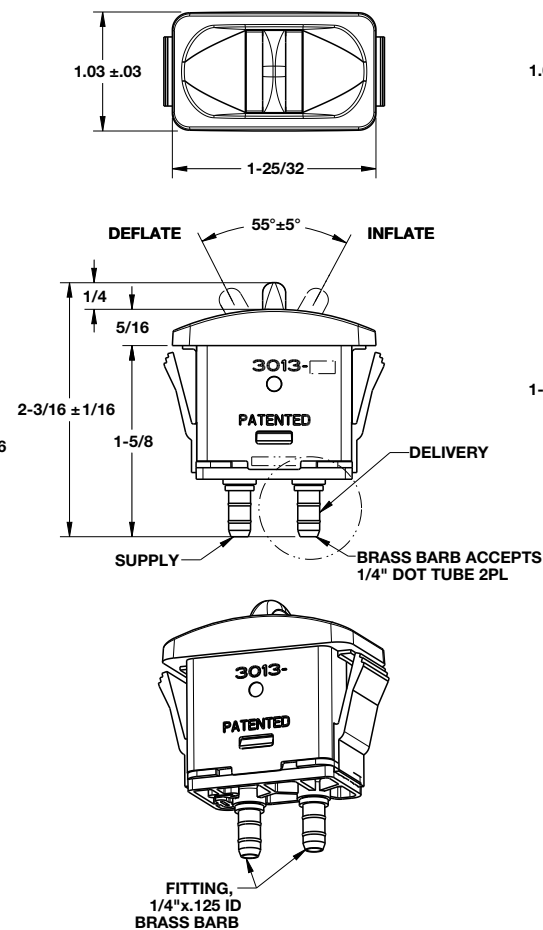
Model	Description	Fitting	Valve Type
3013-1	Paddle Valve, End Ported	1/4" OD PTC	3-way, dead center
3013-4	Paddle Valve, Barb Fitting	1/4 x .125" ID Barb (Brass)	3-way, dead center
3013-7	Paddle Valve, Momentary paddle	1/4" OD PTC	Momentary, 3-way, two position

## Specifications

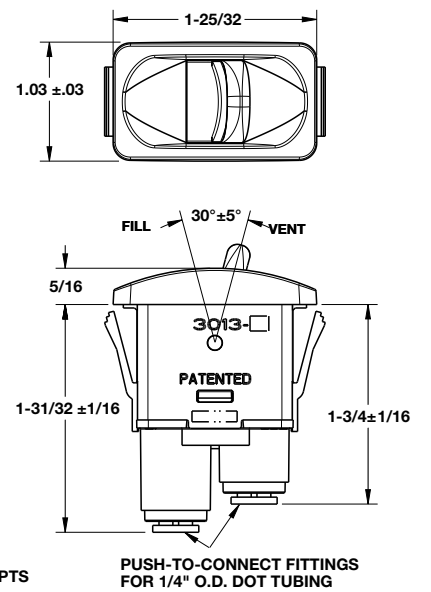
3013-1



3013-4



3013-7



# PADDLE SEAT CONTROL VALVES ELECTRIC/PNEUMATIC

- Integrated electrical switch for pneumatic and electric control of air seats
- Paddle style actuation
- All plastic components meet FMVSS 302 flammability requirements
- 1/4" barb connection

## Technical Data

**Operating pressure:**  
0 to 125 psi (0 to 8 bar)

**Actuation:**  
Paddle style

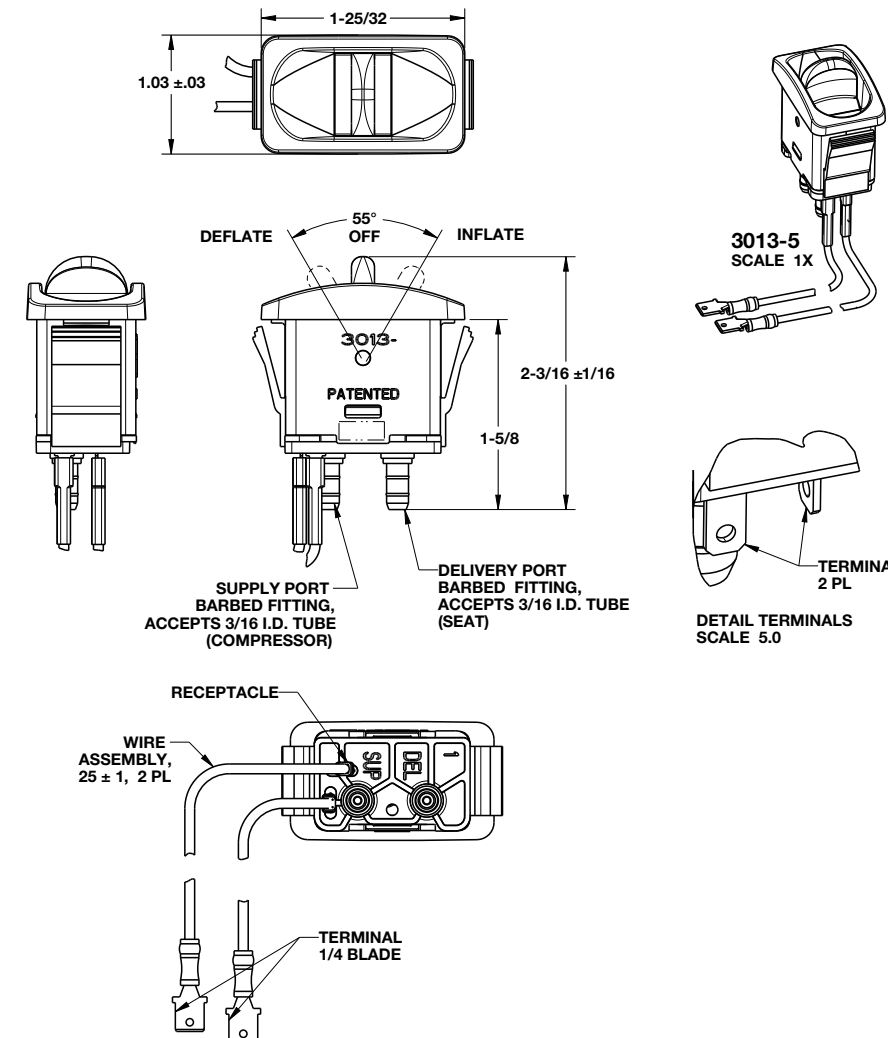
**Electrical connection:**  
Wire assembly, terminal 1/4" blades



## Models

Model	Description	Fitting	Valve Type
3013-5	Paddle Valve, barb fitting w/wire assembly	3/16 ID Barb w/wire assembly	3-way, dead center

## Specifications



# REMOVABLE KNOB SEAT VALVE

134 Series

- Controls seat height and lumbar support functions
- Removable knob
- Designed to operate air seat systems

## Technical Data

**Operating pressure:**  
0 to 200 psi (0 to 13 bar)

**Actuation:**  
Push: Applies inlet pressure to outlet port  
Pull: Vents outlet port

**Leakage:**  
Valve cannot leak to outlet port in OFF position

**Porting:**  
Outlet port configuration options:  
1/8" -27 nptf female thread



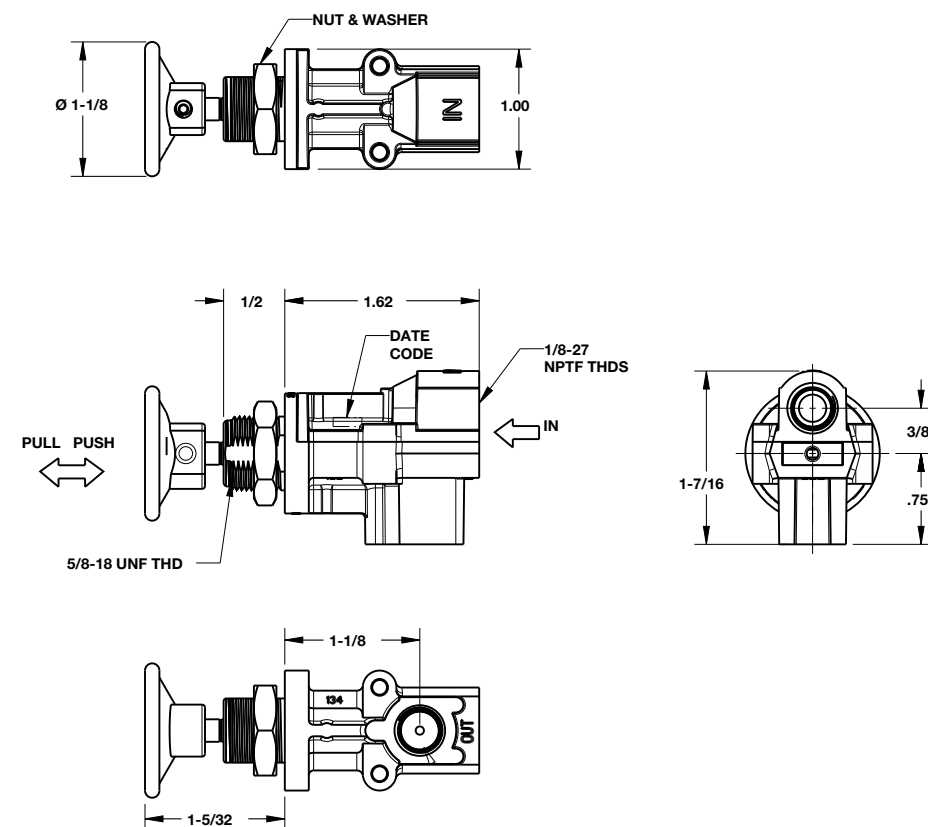
## Models

Model	Description	Port Size	Material
134-2	Bulk	1/8" - 27 NPTF	nickel plated - bright finish
134-3	Individual	1/8" - 27 NPTF	nickel plated - bright finish
134-4	Individual (no logo)	1/8" - 27 NPTF	nickel plated - bright finish
134-5	Individual	1/8" - 27 NPTF	Black Knob

## Replacement Products

Model	Description
11305	Internal Tooth Lockwasher
10726-2K	Nickel plated knob, Bulk packaged with self locking set screw installed

## Specifications



# DOUBLE END PORTED SEAT VALVE THREADED CONNECTIONS

251 Series

- Permanent knob
- Push-To-Connect fittings (PTC) or threaded ports
- Designed to operate air seat systems

## Technical Data

**Operating pressure:**  
0 to 200 psi (0 to 13 bar)

**Actuation:**  
Push: Applies inlet pressure to outlet port  
Pull: Vents outlet port

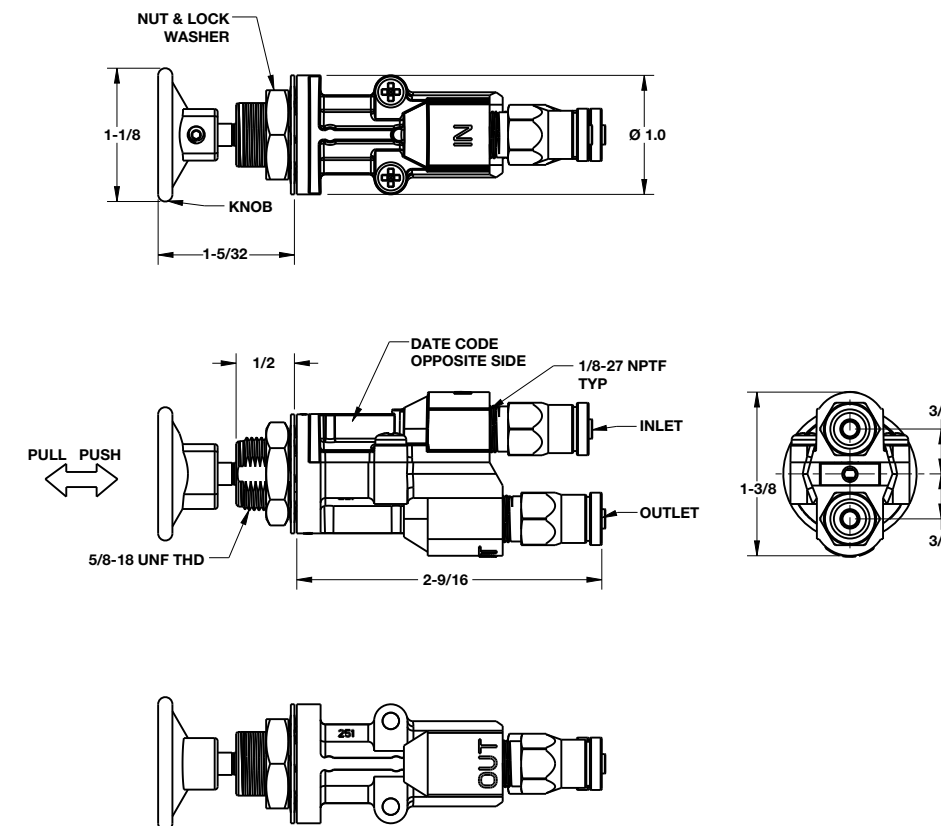
**Leakage:**  
Valve cannot leak to outlet port in OFF position



## Models

Model	Port Size	Knob
251-21A	1/8-27 NPT Female	Removable
251-22B	1/4" PTC	Removable
251-12B	1/4" PTC	Permanent

## Specifications



# COMBINATION SEAT VALVE ELECTRIC/PNEUMATIC

3000 Series

- Integrated electrical switch for pneumatic and electric control of air seats
- Removable knob
- Push-To-Connect fittings (PTC)

## Technical Data

**Operating pressure:**  
0 to 200 psi (0 to 13 bar)

**Actuation:**  
Push: Closes electrical switch. Approved for use with RDH Enterprises # 64-00450 12 Vdc compressor or equivalent  
Pull: OUT port is vented to atmosphere

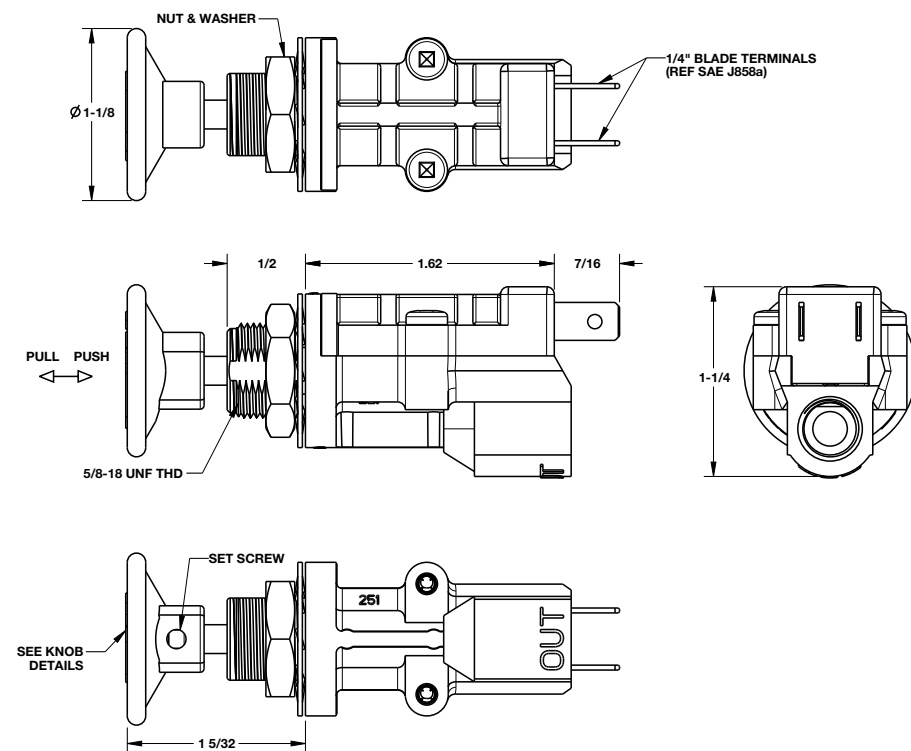
**Port Size:**  
NPTF 1/8" -27



## Models

Model	Knob Color
3000-3	Black with white symbol
3000-5	Light gray with dark gray symbol
3000-8	Black with white symbol, lock washer included

## Specifications



3000-3 & 3000-8  
KNOB



3000-5  
KNOB

# SEAT ROCKER VALVES

3020 Series

- 3-way, dead center rocker style actuation
- Single and dual valve seat control

## Technical Data

**Operating pressure:**  
0 - 150 psi

**Operating Temperature:**  
-40° F to 185° F

## Material

Black Thermoplastic

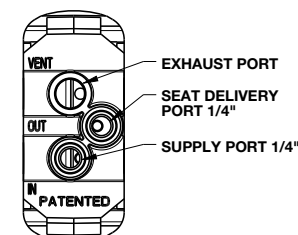
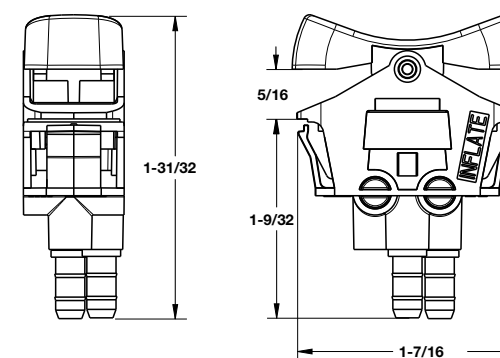
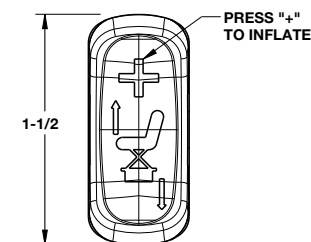


## Models

Model	Description	Fitting	Tube O/D
3020-6	Single Seat Valve	Barb Brass	1/4"
3020-7	Dual Valve Seat Control, Lumbar and Height	Barb Brass	1/4"
3020-17	Single Inlet Clutch Control Valve	Barb Brass	1/4"

## Specifications

3020-6

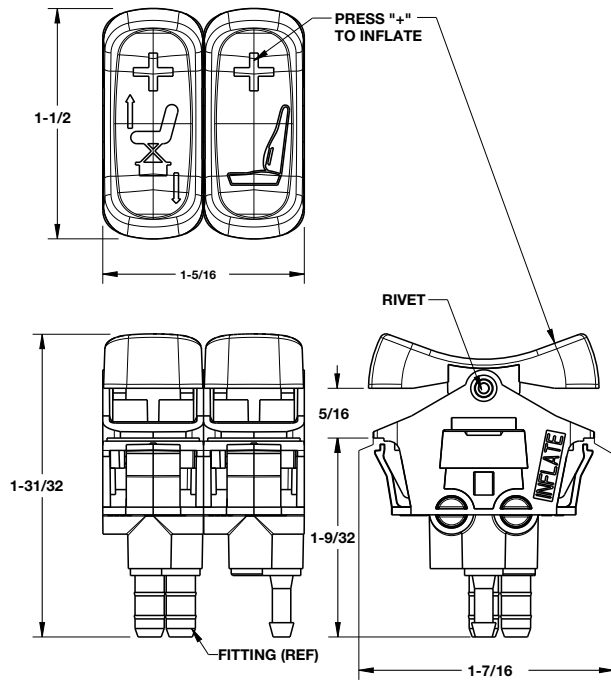




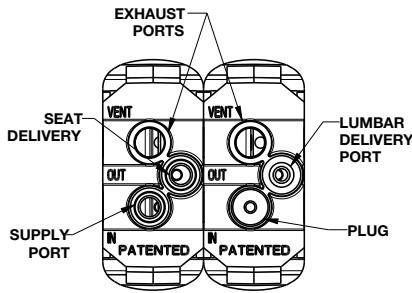
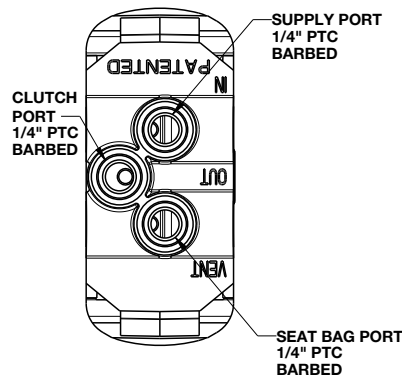
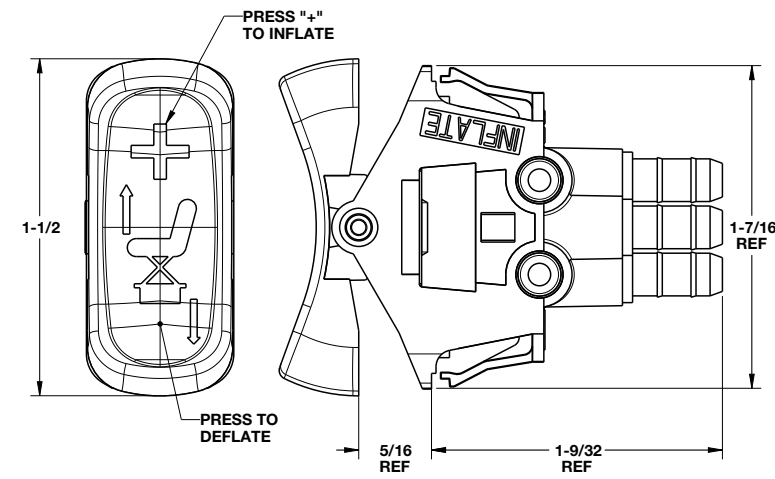
# SEAT ROCKER VALVES

## 3020 Series

3020-7



3020-17



# SEAT ROCKER VALVES

3277 Series

- 3-way air valve for use with rotary leveling valve
- Engineered for functionality and durability
- Integral Push-to-Connect fittings (PTC)
- Material used meets DOT FMVSS 302 flammability requirements

## Technical Data

**Operating pressure:**  
0 - 150 psi

**Operating Temperature:**  
-10° F to 160° F

**Tube O/D:**  
1/4"

## Material

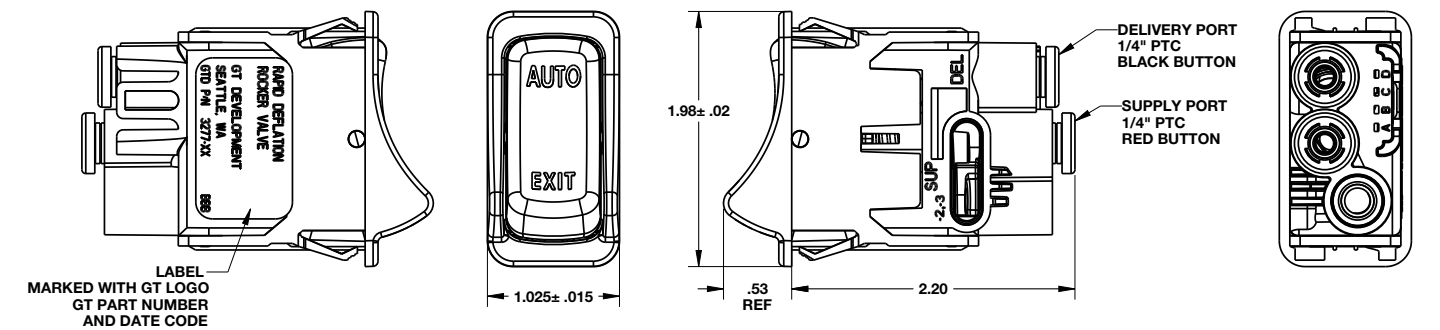
Nylon, glass filled



## Models

Model	Description	Rocker Color	Tube O/D
3277-1	Auto/Exit, Air Only Rapid Deflation Rocker	Black	1/4"
3277-03	Auto/Exit, Air Only Rapid Deflation Rocker	Gray	1/4"

## Specifications



# SEAT LEVELING VALVE WITH CLUTCH

- 3-way rotary actuated pneumatic valve for seat leveling applications
- Air disengaged, spring engaged clutch allows change to the off position location
- Thermoplastic construction

## Technical Data

**Operating pressure:**  
0 - 150 psi

**Operating Temperature:**  
-10°F to 130°F

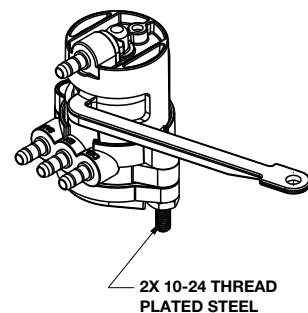
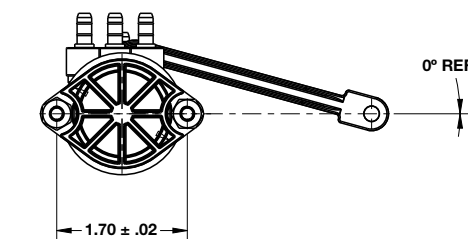
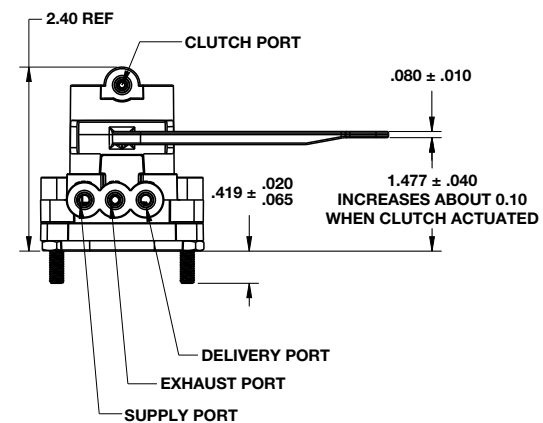
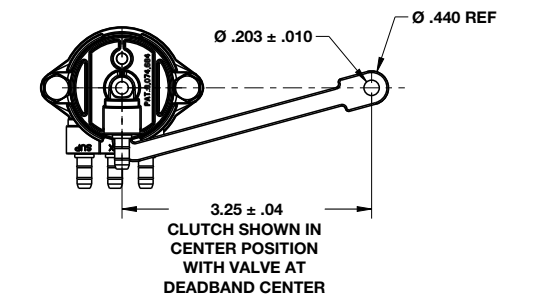
**Tube O/D:**  
1/4"



## Models

Model	Fitting	Tube O/D
3111-01	Barb	1/4"

## Specifications



# SEAT HEIGHT MEMORY CONTROL SYSTEM

The Seat Height Memory Control System provides driving comfort and convenience as a fully-pneumatic solution for automatic seat height adjustment based on weight, ride settings, road input and operator use of Easy Exit functionality.

## Features & benefits:

- > Allows for easier exit and entry from the truck
- > Eliminates the need to hold a button to re-adjust to the proper height after deflating to the floor
- > Automatically resumes operator set ride height after being switched back to auto mode
- > Provides protected buffer zones at the extremes of seat stroke to reduce back injuries
- > Self-compensates for any small air system leaks

## Technical Data:

- > Operating pressure: 0 - 150 psi
- > Operating Temperature: -10°F to 130°F
- > Tube O/D: 1/4"

Utilizes existing industry proven products for a complete seat control solution

Model	Description
3277-1	Auto/Exit, Air Only Rapid Deflation Rocker
3111-01	Seat Leveling Valve with Clutch
3020-17	Single Inlet Clutch Control Valve

Contact an IMI Norgren representative to learn more about the IMI Norgren Seat Height Memory Control System.



# Solenoid Valves

Our wide range of solenoid valves and arrays are engineered for numerous commercial vehicle applications all of which are designed to meet tough standards and extreme conditions of on highway and off highway vehicles.

*Robust modular  
3-way valve  
manifolding system*



*Patented design  
provides flexibility*



*Robust for use on and  
around the engine*

# SOLENOID VALVES

5020, 5022, 5023, 5025 & 85020 Series

- Solenoid air valve
- Designed for continuous duty in high temperature applications

## Technical Data

**Thread type:**  
1/8" NPTF

**Operating voltage:**  
12Vdc

**Electrical connector:**  
Flying lead

## Material

Steel body, Brass manifold, FPM seals



## Models

Model	Description	Packaged	Electrical Termination	Inlet Port Size	Outlet Port Size	Configuration
5020-1	Solenoid Valves	Bulk	Metric Pack 280 Series Connector (Packard 15300027)	1/8"-27 NPTF	1/8" -27 NPTF Male	N/O
5020-4	Solenoid Valves	Bulk	3/8" ring terminal on 6" wire, #10 ring terminal on 28" wire	1/8"-27 NPTF	1/8" -27 NPTF Male	N/O
5020-20A*	Solenoid Valve with 2 Diodes and Exhaust Vent Shield	Individual	Metric Pack 150 Series Connector (Packard 12052644)	1/8" -27 NPTF	1/8" -27 NPTF Male	N/C
5020-21A*	Solenoid Valve with 2 Diodes	Individual	Metric Pack 150 Series Connector (Packard 12052644)	1/8" -27 NPTF	1/8" -27 NPTF Male	N/O
5020-23A *	Solenoid Valves with Resistor	Individual	Metric Pack 150 Series Connector (Packard 12162000)	1/8" -27 NPTF	1/8" -27 NPTF Male	N/O
5020-25A*	Solenoid Valve with Exhaust Vent Shield	Bulk	Flying Leads	1/8" -27 NPTF	1/8" -27 NPTF Male	N/C
5020-28A*	Solenoid Valve with 2 Diodes and Exhaust Vent Shield	Individual	Flying Leads	1/8" -27 NPTF	1/8" -27 NPTF Male	N/O
5022-106	Solenoid Valve with Diode	Individual	Metric Pack 280 Series Connector (Packard 15300002)	1/4"-18 NPTF	1/8" -27 NPTF Female	N/C
5023-1	Solenoid Valve	Bulk	Flying Leads	1/4"-18 NPTF	1/8" -27 NPTF Female	N/O
5025-1	Solenoid Valve with Diode	Bulk	Weather Pack Series (Packard 12010973)	1/8" -27 NPTF	1/8" -27 NPTF	N/C
5025-4	Solenoid Valve with Diode, Top Bracket Placement	Individual	Metric Pack 280 Series Connector (Packard 15300002)	1/8" -27 NPTF	1/8" -27 NPTF Female	N/O
5025-7	Solenoid Valve with Diode, Bottom Bracket Placement	Individual	Metric Pack 280 Series Connector (Packard 15300002)	1/8" -27 NPTF	1/8" -27 NPTF Female	N/O
85020-0	Solenoid Valves with Mounting Hardware	Individual	Flying Leads	1/8" -27 NPTF	1/8" -27 NPTF Male	N/O
85020-1	Solenoid Valves with Mounting Hardware	Individual	Metric Pack 280 Series Connector (Packard 15300027)	1/8" -27 NPTF	1/8" -27 NPTF Male	N/O
85020-4	Solenoid Valves with Mounting Hardware	Individual	3/8" ring terminal on 6" wire, #10 ring terminal on 28" wire	1/8" -27 NPTF	1/8" -27 NPTF Male	N/O

\* Replacement Solenoids for Lift Axle Control Module 5040 series.

## Accessories

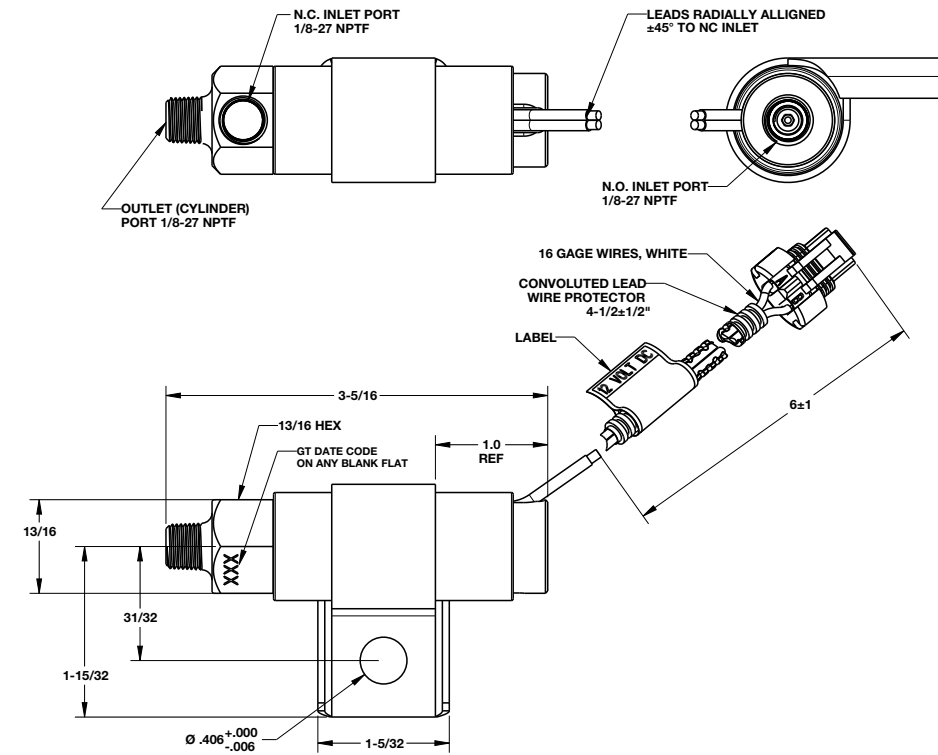
Accessories	Description
5050	Commerical In-Line Filter
5060-1	Commercial Vehicle Exhaust Vent Shield

# SOLENOID VALVES

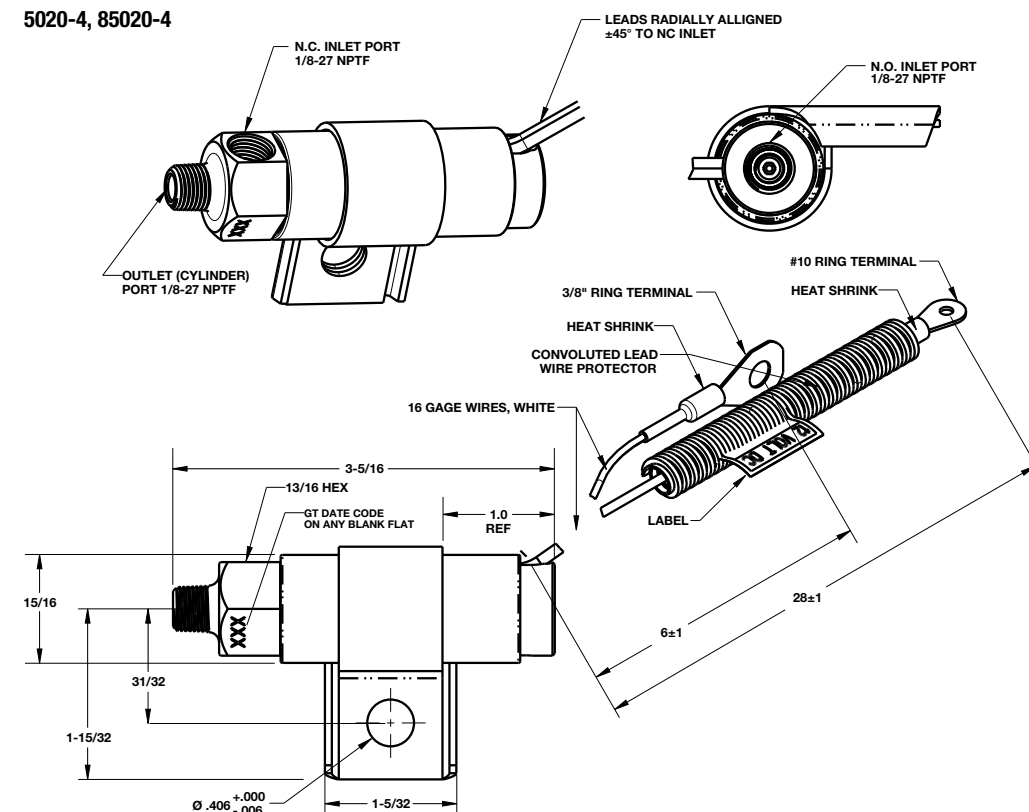
5020, 5022, 5023, 5025 & 85020 Series

## Specifications

5020-1, 85020-1



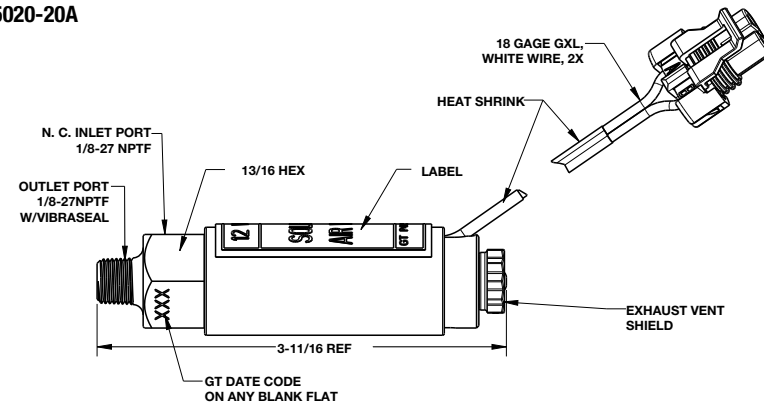
5020-4, 85020-4



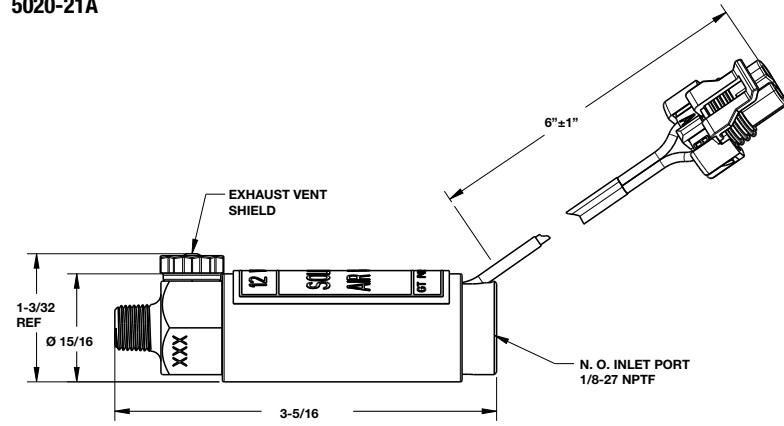
SOLENOID VALVES

5020, 5022, 5023, 5025 & 85020 Series

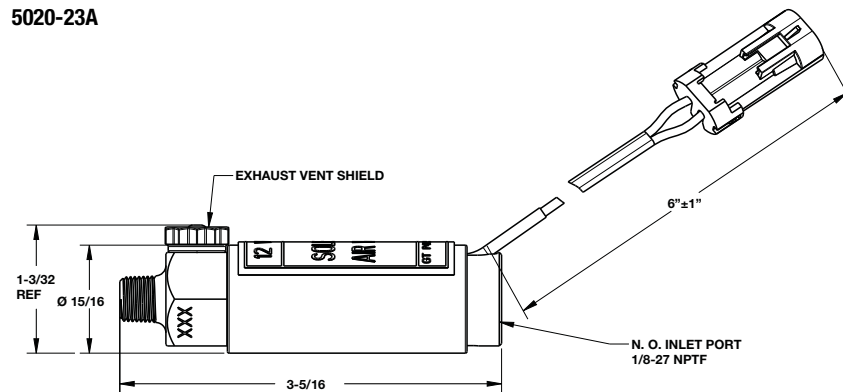
5020-20A



5020-21A



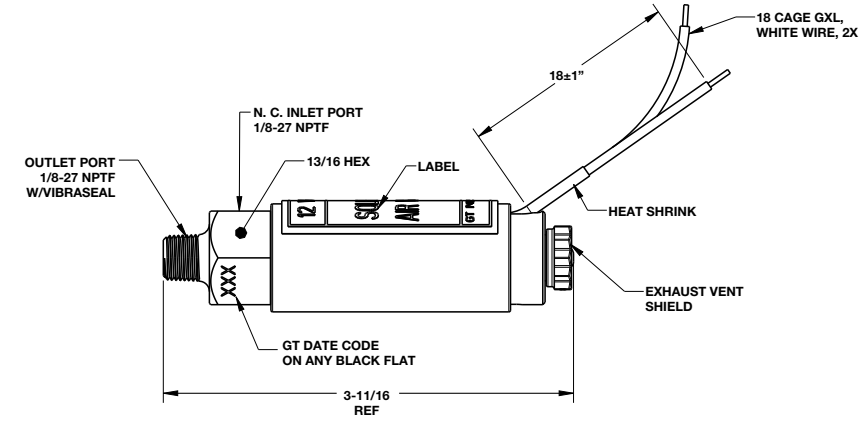
5020-23A



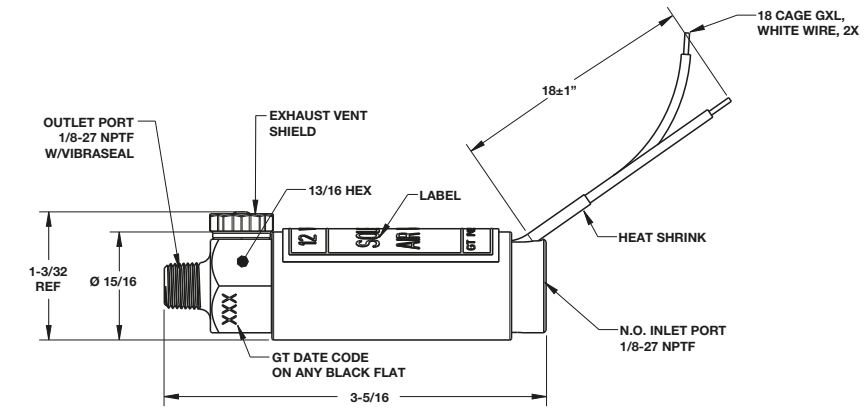
SOLENOID VALVES

5020, 5022, 5023, 5025 & 85020 Series

5020-25A



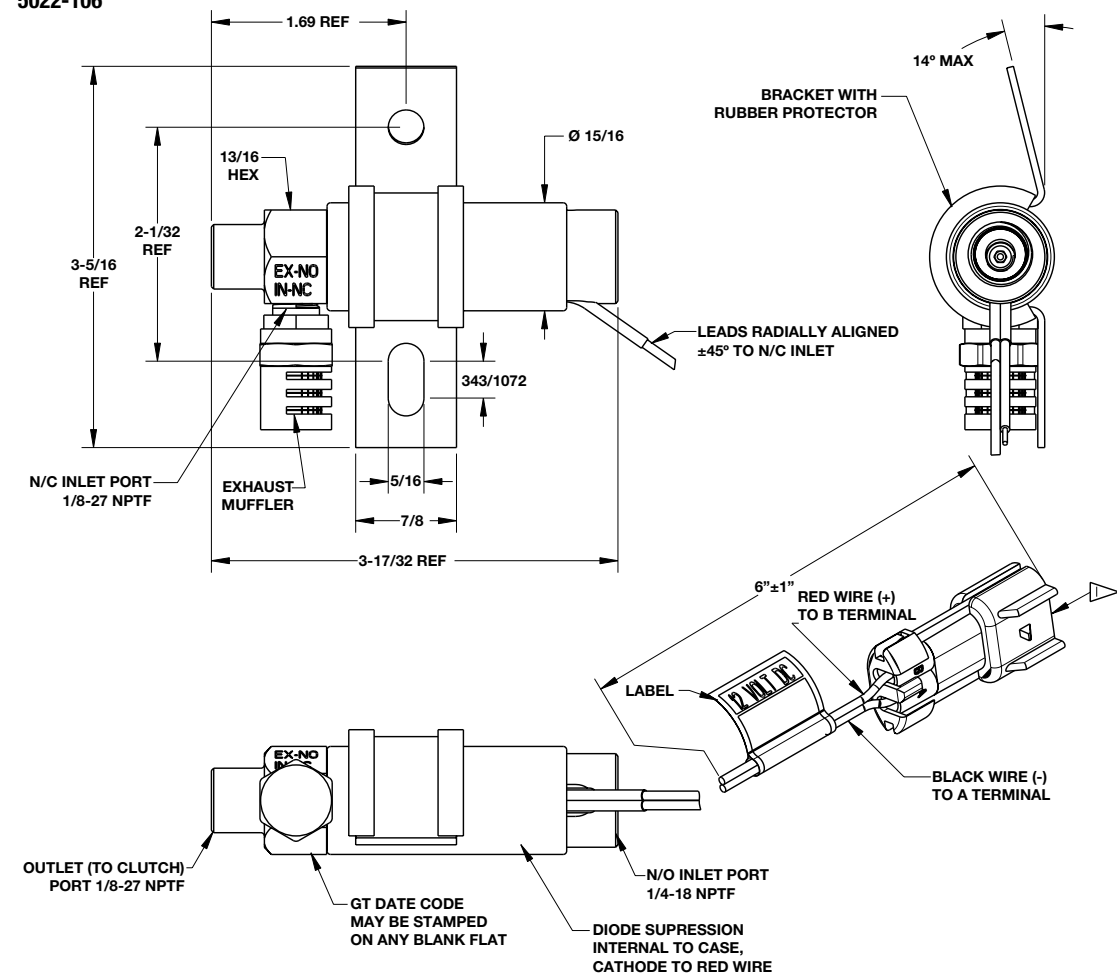
5020-28A



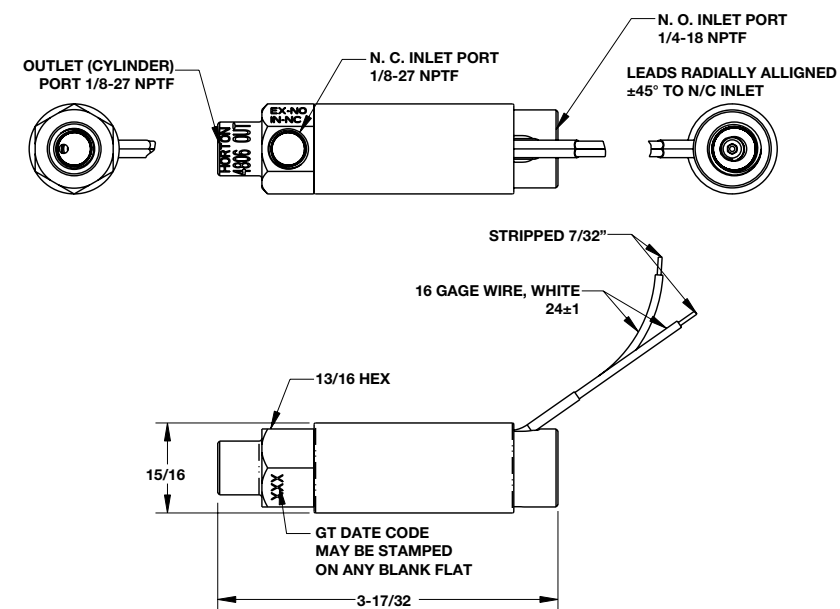
SOLENOID VALVES

5020, 5022, 5023, 5025 & 85020 Series

5022-106



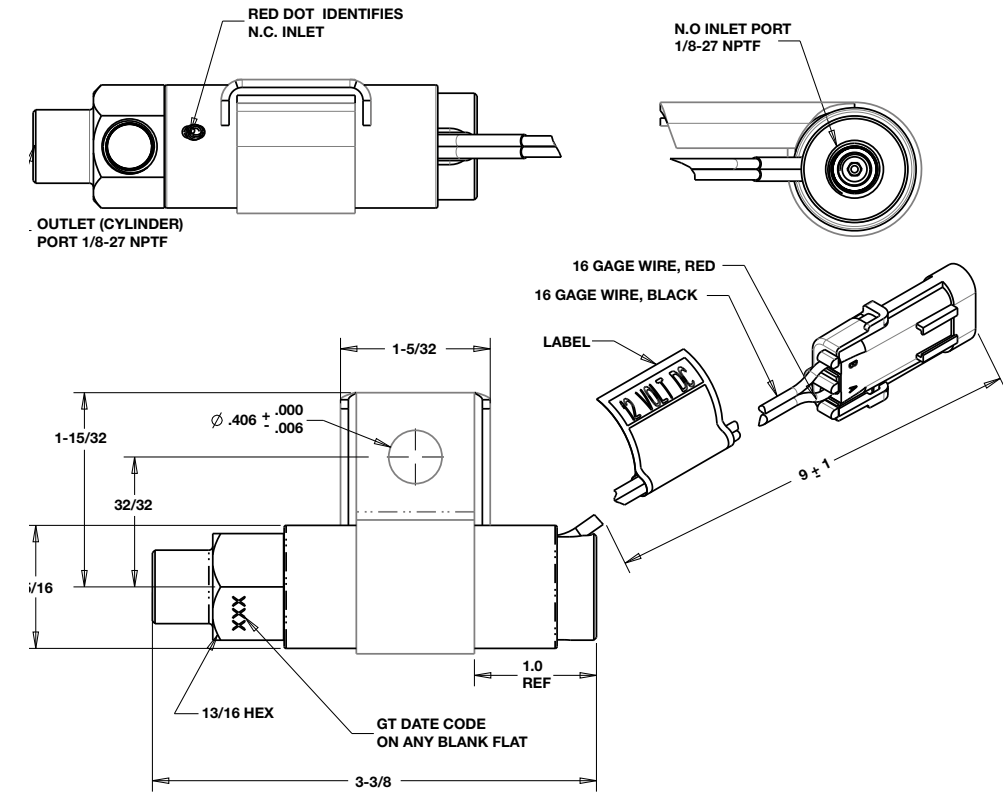
5023-1



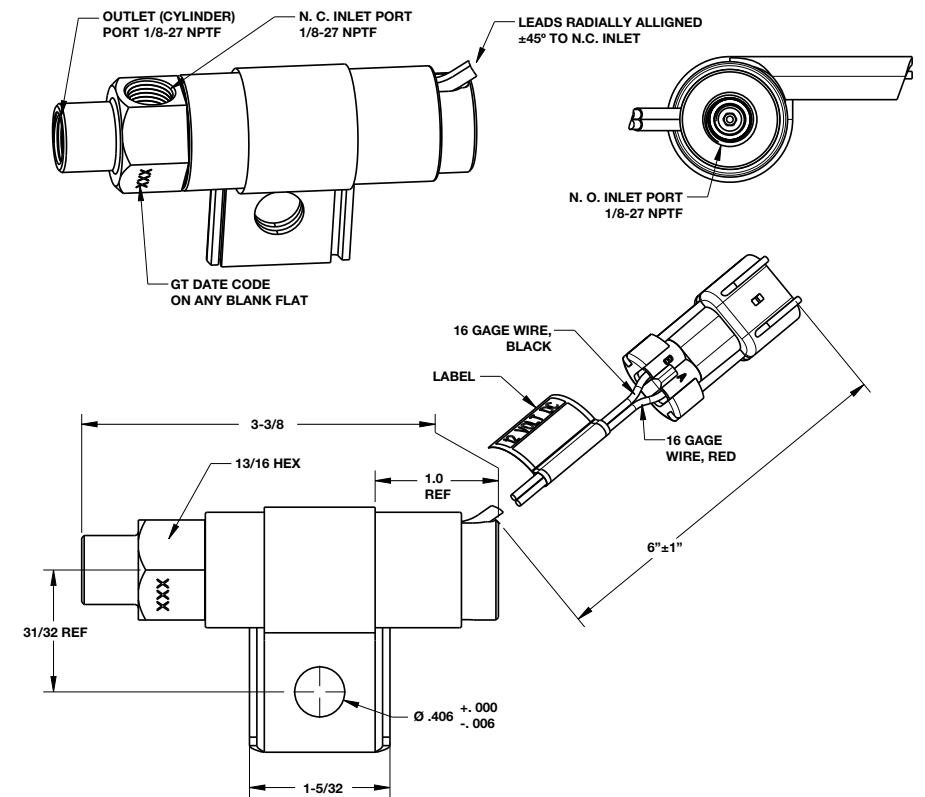
SOLENOID VALVES

5020, 5022, 5023, 5025 & 85020 Series

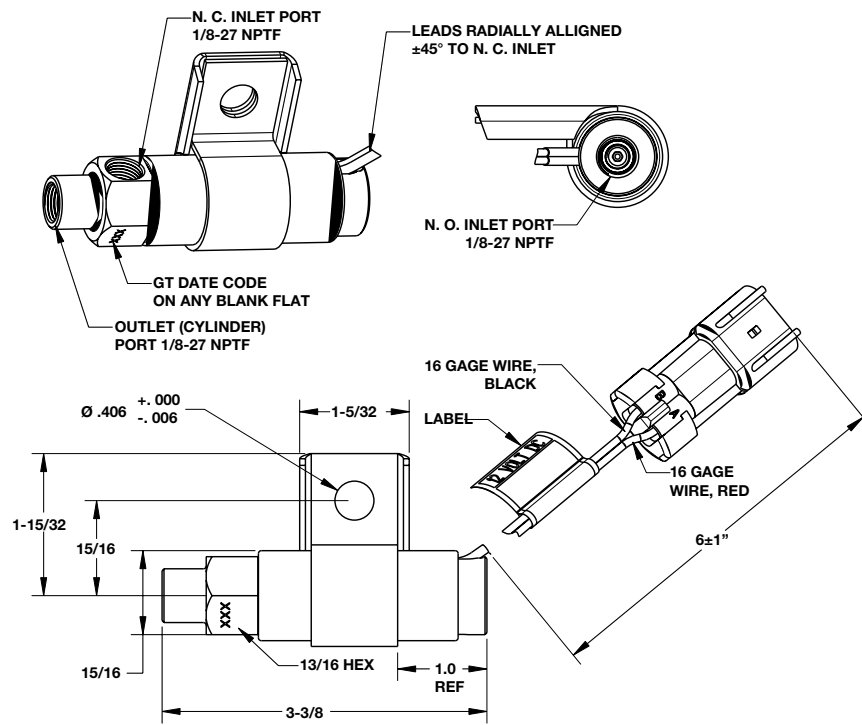
5025-1



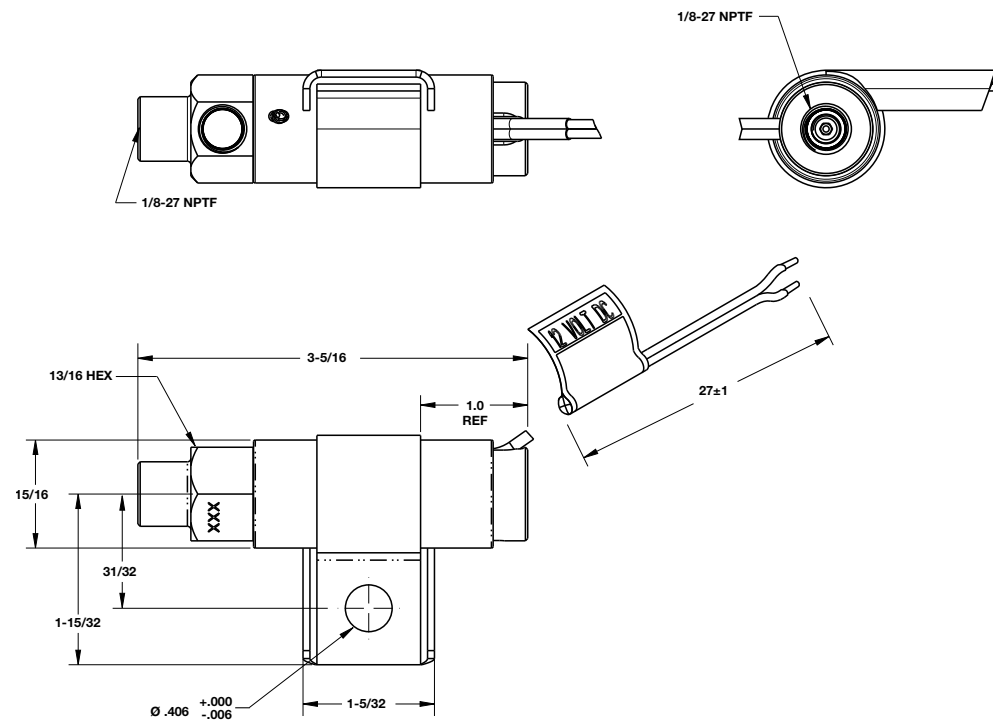
5025-4



5025-7



85020-0



# SOLENOID VALVES

## 5030 Series

- Robust component parts for use on and around the engine
- Designed for continuous duty in high temperature applications
- Integral Push-To-Connect (PTC) fittings

### Technical Data

**Operating pressure:**  
60 to 150 psi (5 to 10 bar)

**Operating temperature:**  
-40°F - 257°F (-40°C - 125°C)  
-40°F to 200°F (5030 - 310B)

**Operating voltage:**  
9 to 16 volts

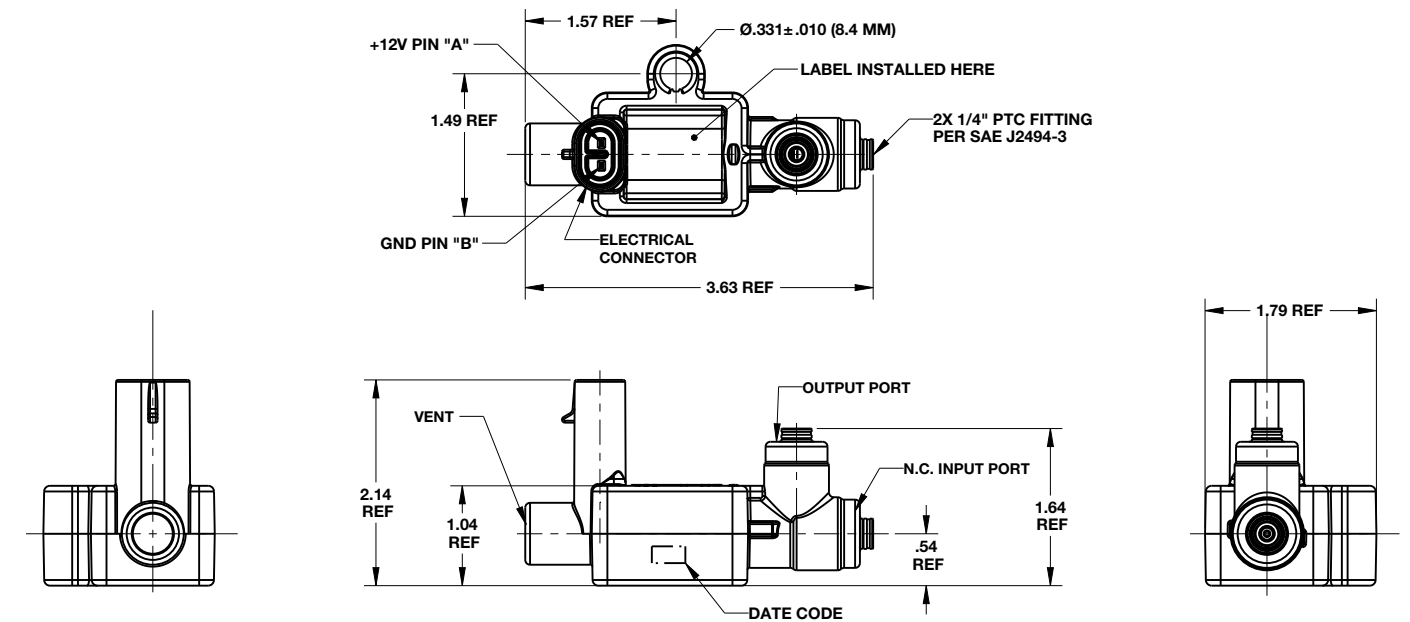


### Models

Model	Description	Configuration	Fitting	O/D Tube
5030-111	Solenoid valve, 3-way, ptc fittings	N/C	PTC	1/4"
5030-111-1	Solenoid valve, 3-way, ptc fittings, and bracket	N/C	PTC	1/4"
5030-121A	Solenoid valve, 3-way, nptf hex fittings	N/C	NPTF HEX	1/4"
5030-211	Solenoid valve, 3-way, ptc fittings	N/O	PTC	1/4"
5030-310B	Solenoid, horn valve, 2-way, ptc fittings with jumper	N/C	PTC	1/4"
5030-411A	Solenoid valve, 3-way, resistor suppression and ptc fittings	N/C	PTC	1/4"
5030-451	Solenoid valve, 3-way, resistor suppression with positional ptc elbow fitting	N/C	PTC Elbow	1/4"
5030-511A	Solenoid valve, 3 way, ptc fittings, resistor suppression	N/O	PTC Elbow	1/4"

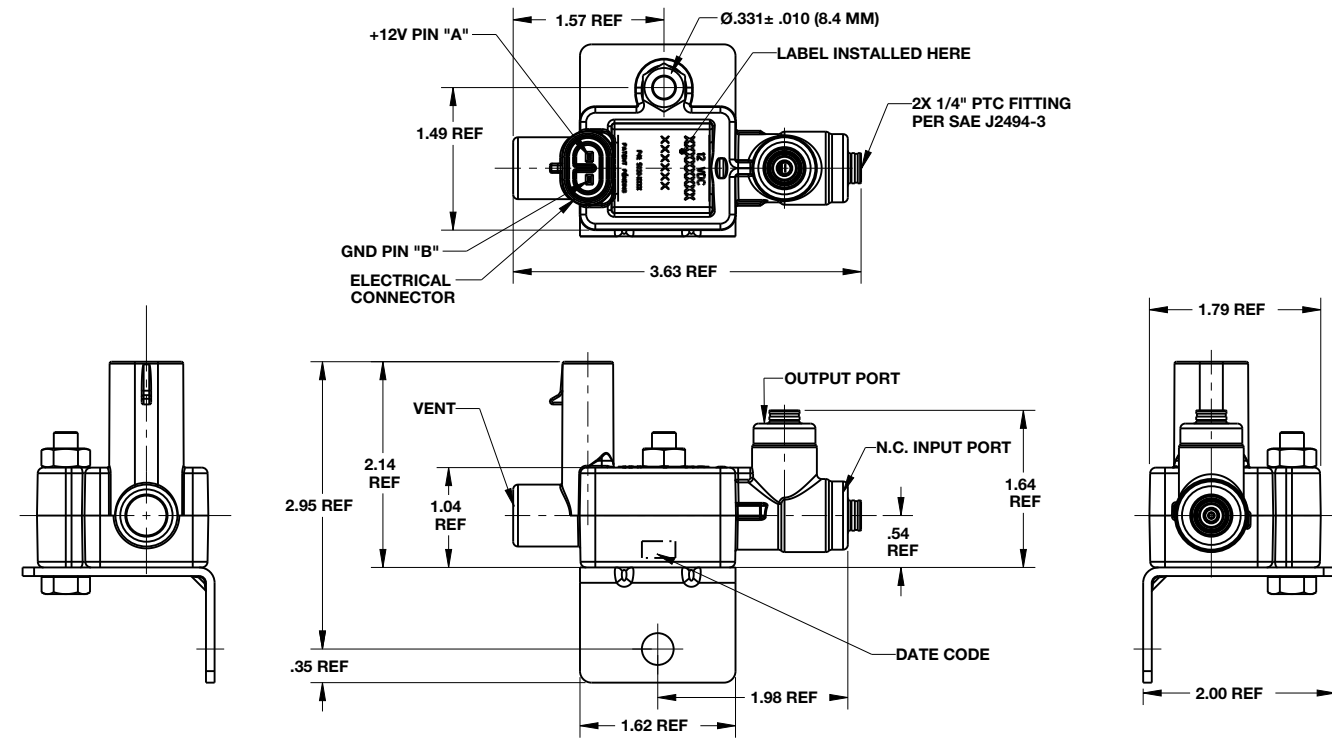
### Specifications

#### 5030-111

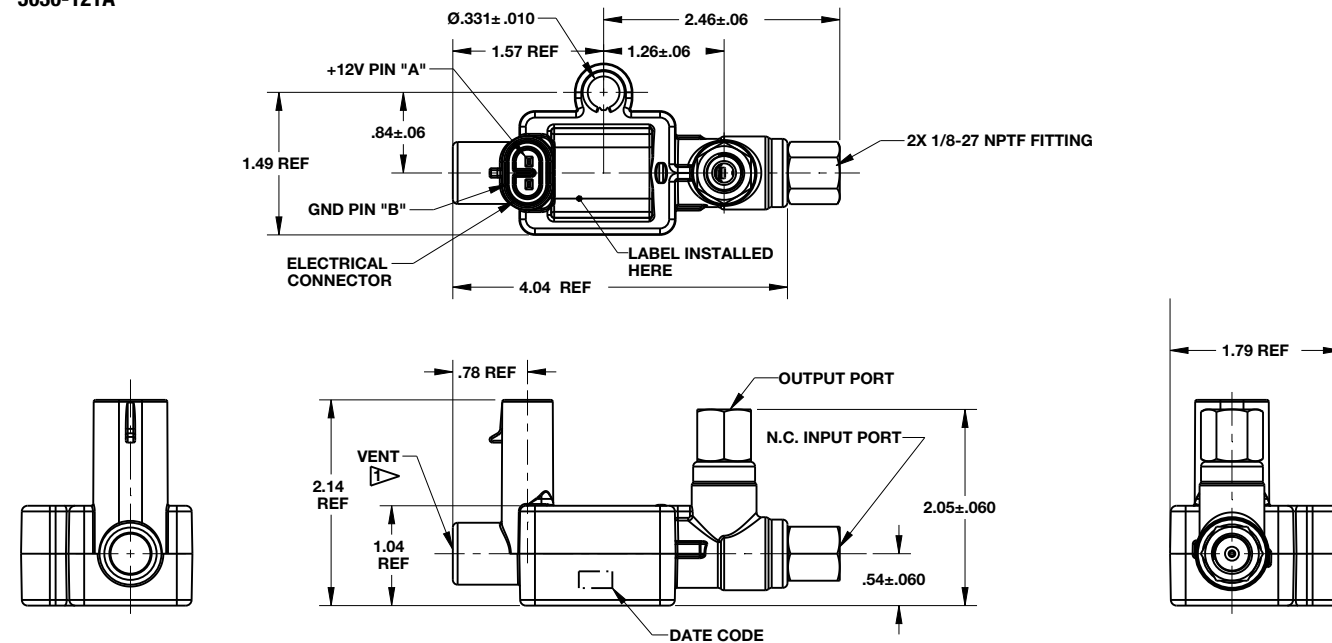


SOLENOID VALVES  
5030 Series

5030-111-1

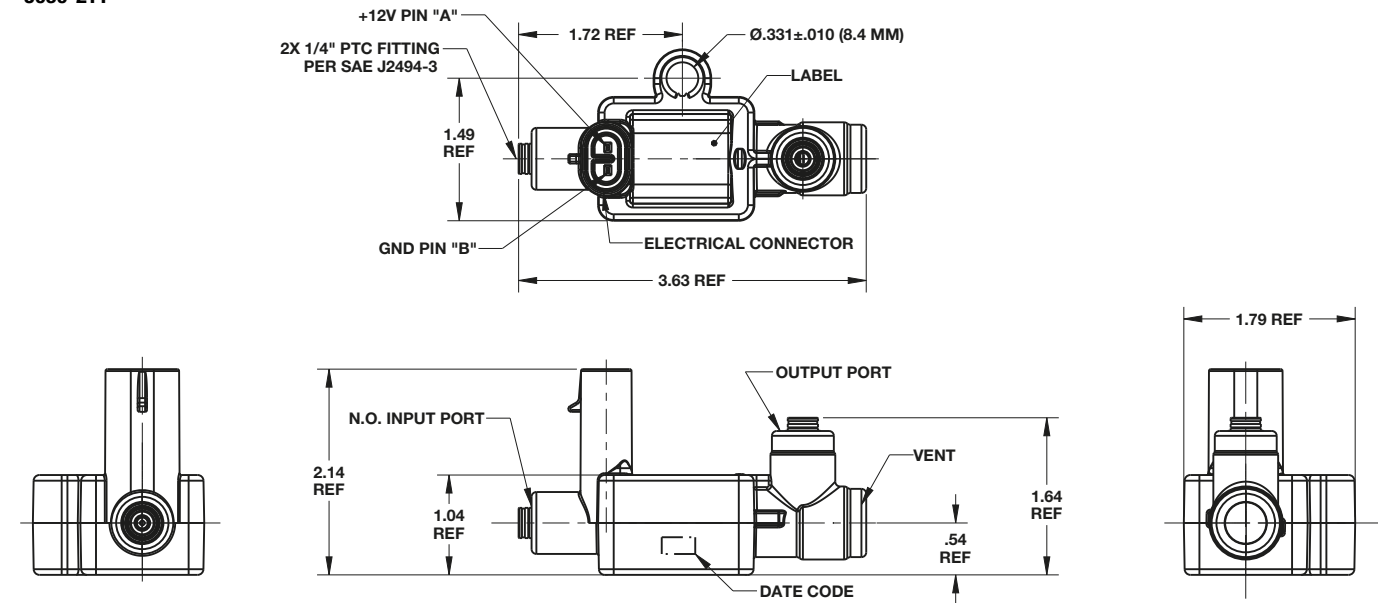


5030-121A

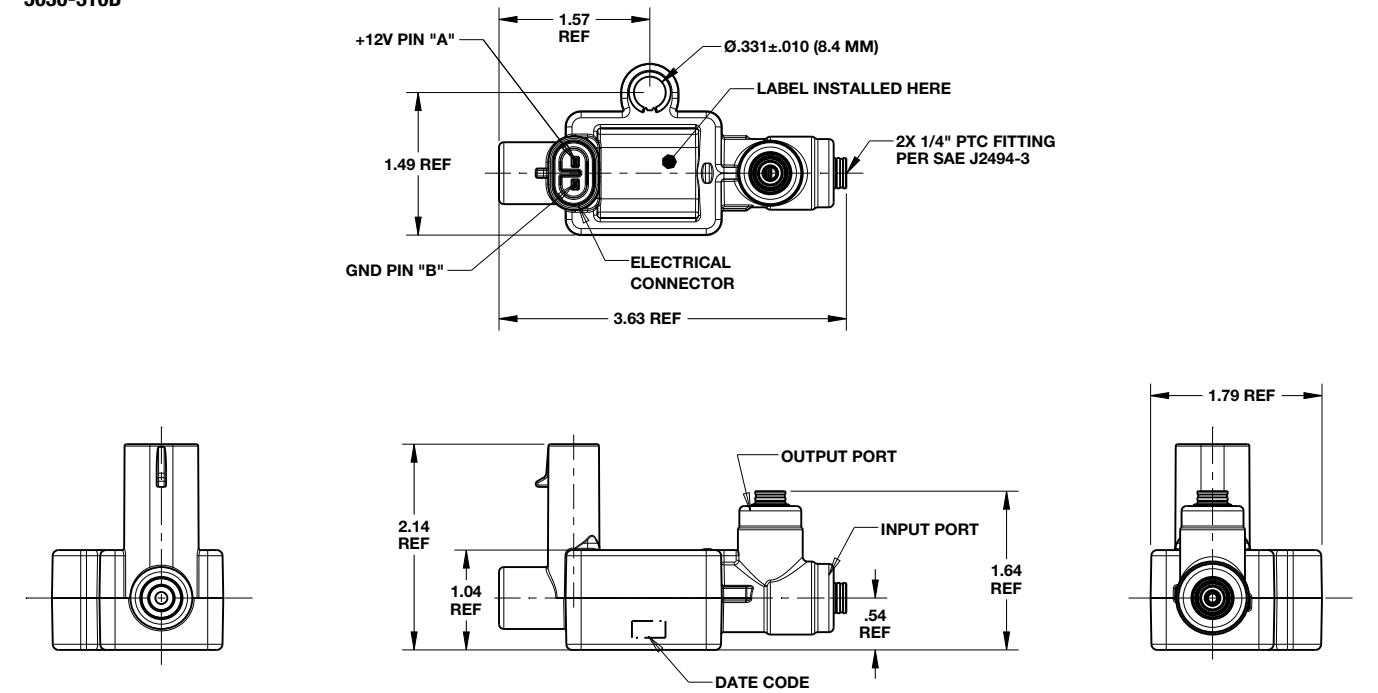


SOLENOID VALVES  
5030 Series

5030-211



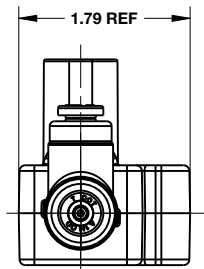
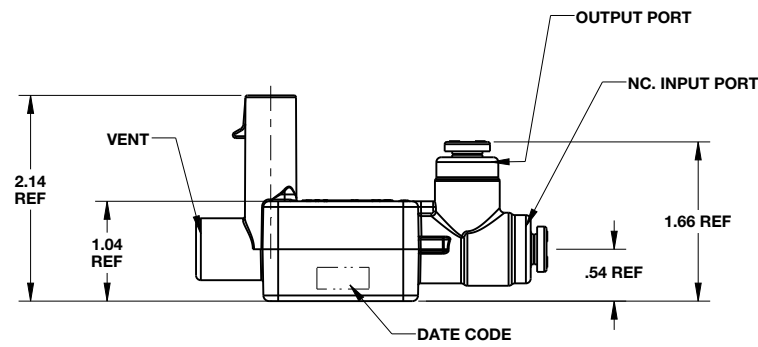
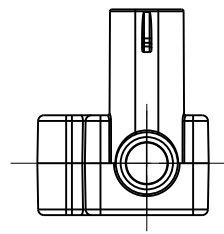
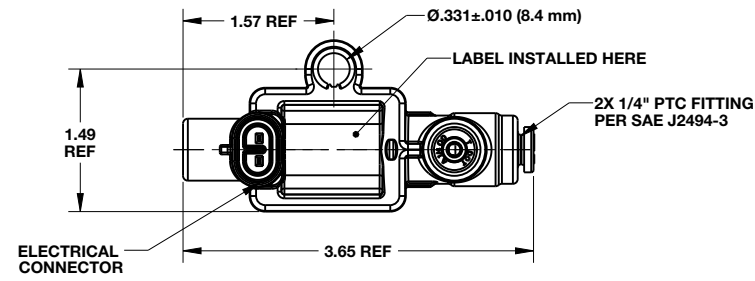
5030-310B





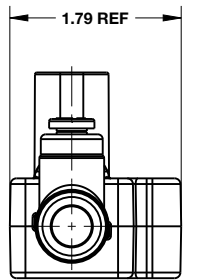
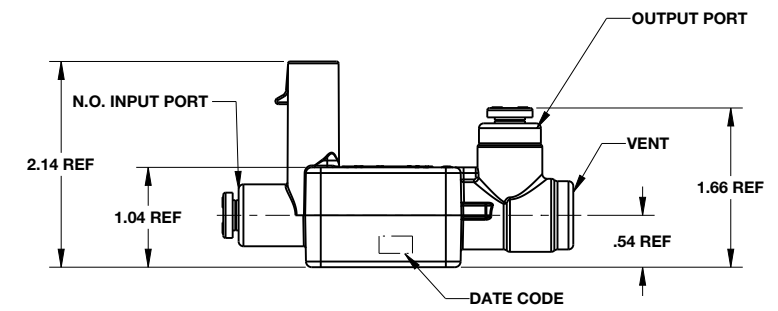
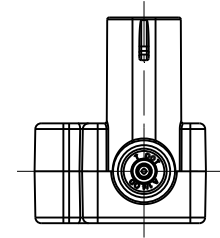
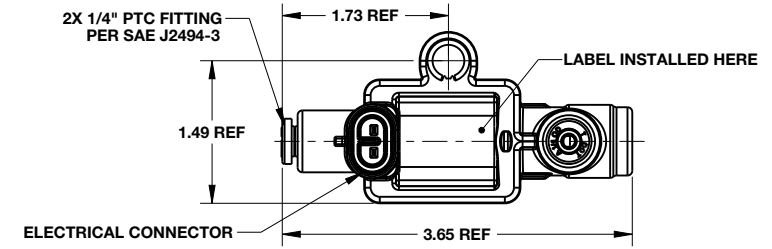
SOLENOID VALVES  
5030 Series

5030-411A

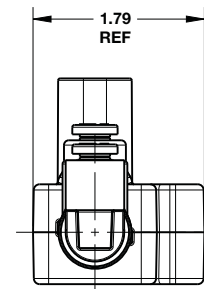
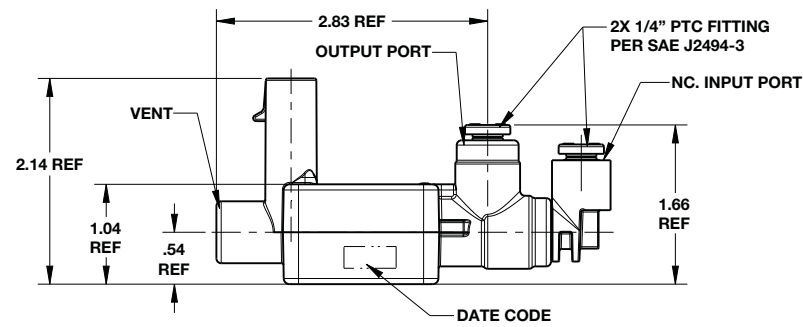
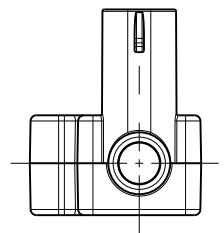
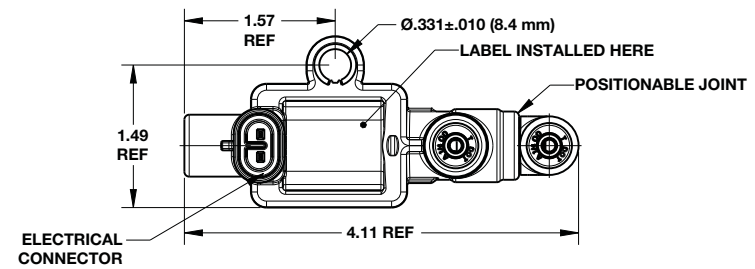


SOLENOID VALVES  
5030 Series

5030-511A



5030-451



# SOLENOID VALVES

5031 Series

- 3-way normally closed solenoid operated air valve
- Robust component parts for use on and around the engine
- Designed for continuous duty in high temperature applications
- Integral Push-To-Connect (PTC) fittings

## Technical Data

**Operating Pressure:**  
60 to 150 psi

**Operating Temperature:**  
-40°F - 257°F

**Tube O/D:**  
1/4"

## Material

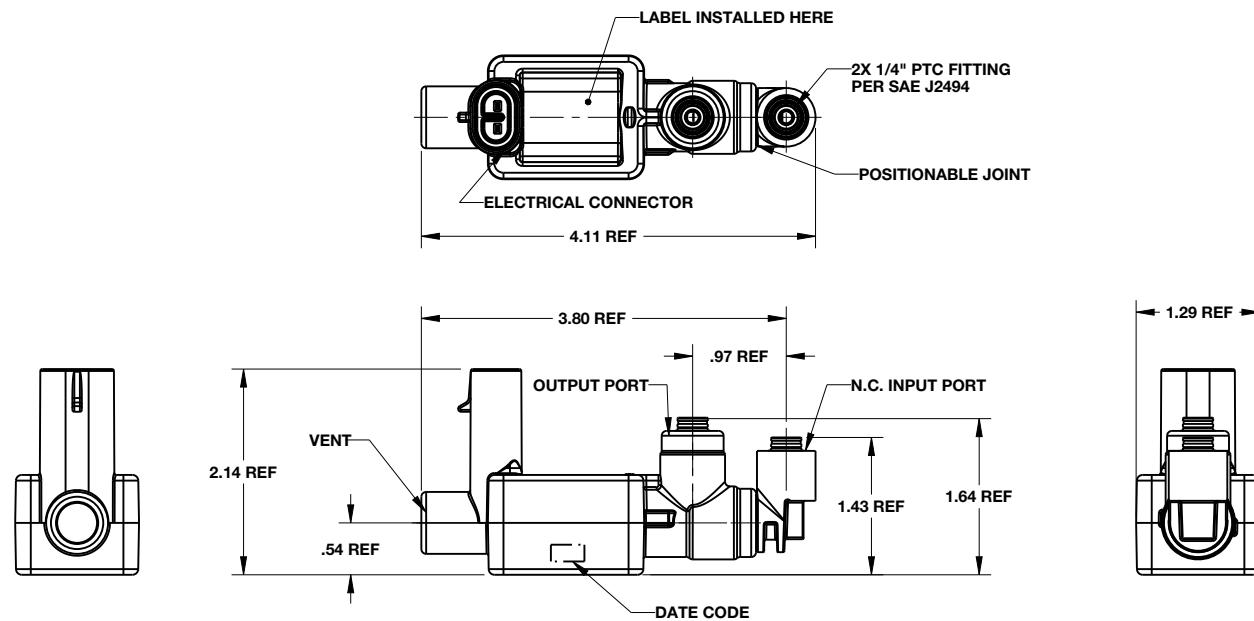
Nylon, glass filled



## Models

Model	Description	Configuration	Fitting
5031-01-02	Solenoid valve, 3-way, swivel, with positionable elbow	N/C	PTC Elbow

## Specifications



# AIR SOLENOID ACCESSORY PACK

ASAP Series

- Robust modular 3-way valve manifold system
- Patented design provides flexibility to exceed your application needs
- Customizable electrical connection to meet your specific requirements
- Integrated fittings provide faster build times
- Quicker installation with color-coded fittings caps
- Simple to connect design for building the manifold length you require
- Mountable in any orientation
- Fittings comply with US Department of Transportation, Federal Motor Vehicle Safety Standard (DOT FMVSS 106)
- Integrated Push-To-Connect (PTC)

## Technical Data

**Medium:**  
Compressed air, filtered, lubricated, non-lubricated

**Operation:**  
3/2 normally closed direct acting

**Solenoid:**  
9 - 16Vdc or 20.4 - 26.4Vdc  
7 Watts

**Port Size:**  
3/8" Inlet – tube/push in fitting (PIF)  
1/4" Outlet/Delivery – tube/push in fitting (PIF)

**Operation pressure:**  
Maximum 150 psig (10.35 bar)

**Flow characteristics:**  
3/8" Inlet Cv = 0.67  
1/4" Delivery Cv = 0.14  
Minimum orifice size: 0.078"

**Temperature range:**  
-40° to 220°F (-40° to 100°C)

## Material

Body and endcaps: 30% glass filled PBT  
Exhaust cover cap: 30% glass filled Nylon 6/6  
Coil overmold: 15% glass filled PET  
Seals: Silicone, Nitrile, FKM, and HNBR  
Springs, armature, and pole piece: Stainless Steel  
Bobbin: 30% glass filled PPS  
Valve and fittings: Brass  
Mounting sleeve: Steel  
Tubing: Tubing should be to SAE J844



Product shown with customer supplied connector.

## Models

Model	Function	Electrical Connection	Port Size	Voltage	Position
7201-70	3/2 NC	19" Flying leads	(1/4" PIF)	12 VDC	A
7239-58	3/2 NC	19" Flying leads	(1/4" PIF)	24 VDC	A

Configurable up to 8 stations.(B+A+A+A+A+A+A+A+C).  
Please consult factory for configurations using more than 8 stations.

## End Plates

Model	Description	Position
7202-70	Inlet Left Hand End Plate (3/8" PIF)	B
7203-70	Cap Right Hand End Plate	C

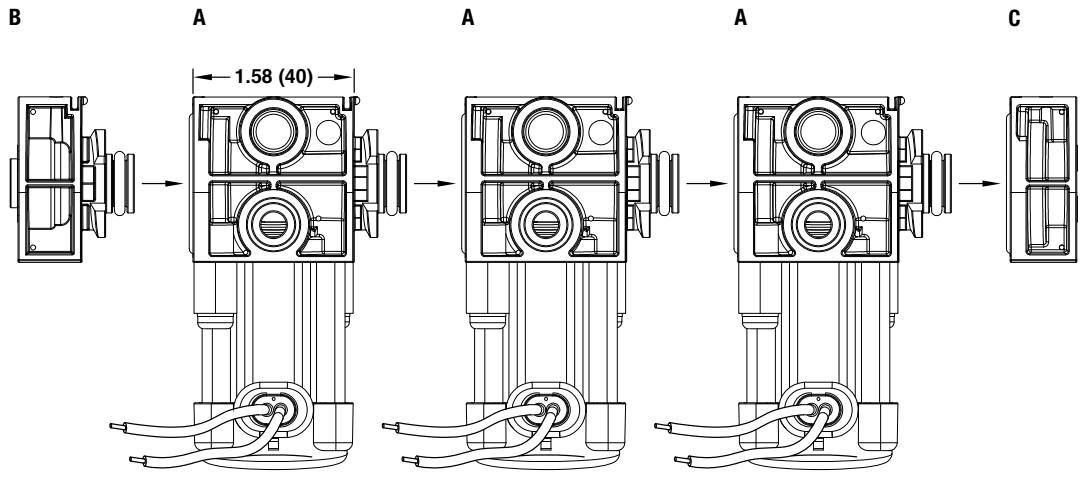
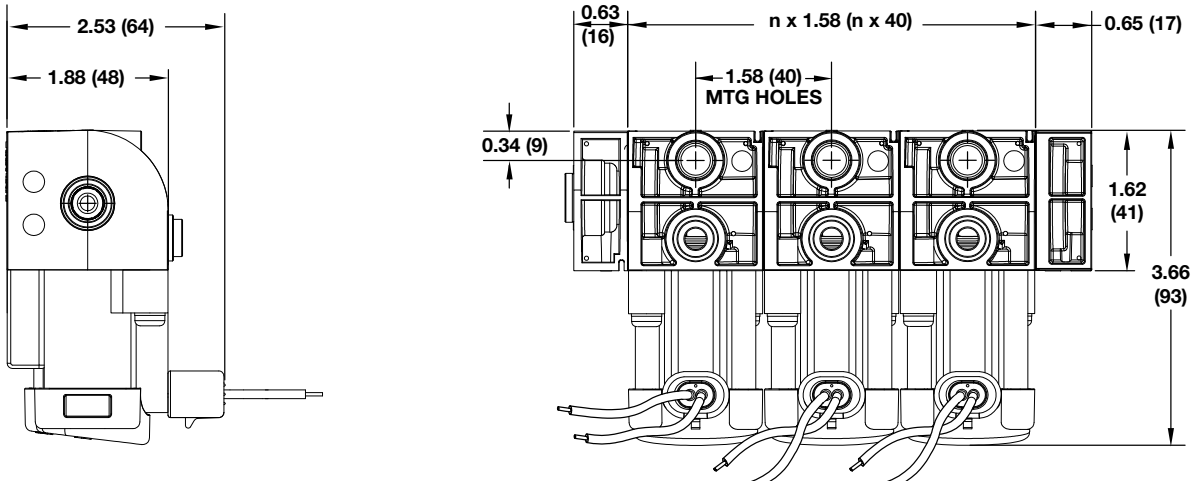
## 1/4" Colored caps

Red	Yellow	Orange	Green	Black	Tan	Violet	Blue	White	Silver
48C34901	48C34902	48C34903	48C34904	48C34905	48C34906	48C34907	48C34908	48C34909	48C34910

# AIR SOLENOID ACCESSORY PACK

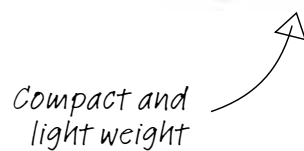
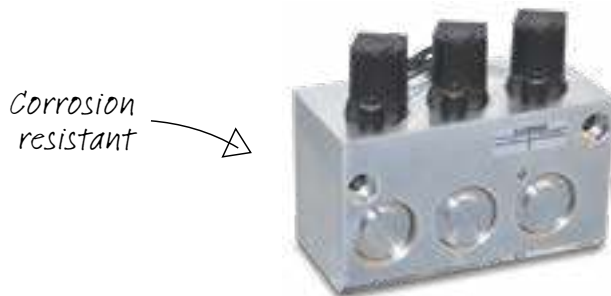
ASAP Series

## ● Specifications



# Valves

Designed to enhance vehicle performance, our valves meet the highest engineering standards for air suspension pressure, flow control and leakage protection. Our valves are available in a variety of types and configurations and comply with federal safety regulations.



# RAPID DUMP VALVE

4111 Series

- 3-way, pilot-operated, normally open valve
- 2 delivery ports
- Chassis-mounted on heavy-duty highway vehicles with air-ride suspensions

## Technical Data

**Medium:**  
Compressed Air

**Operating pressure:**  
90 to 120 psi  
0 - 120 psi  
Pilot Pressure Minimum: 60

**Port size:**  
1/8"-27

**Thread Type:**  
PTF

## Material

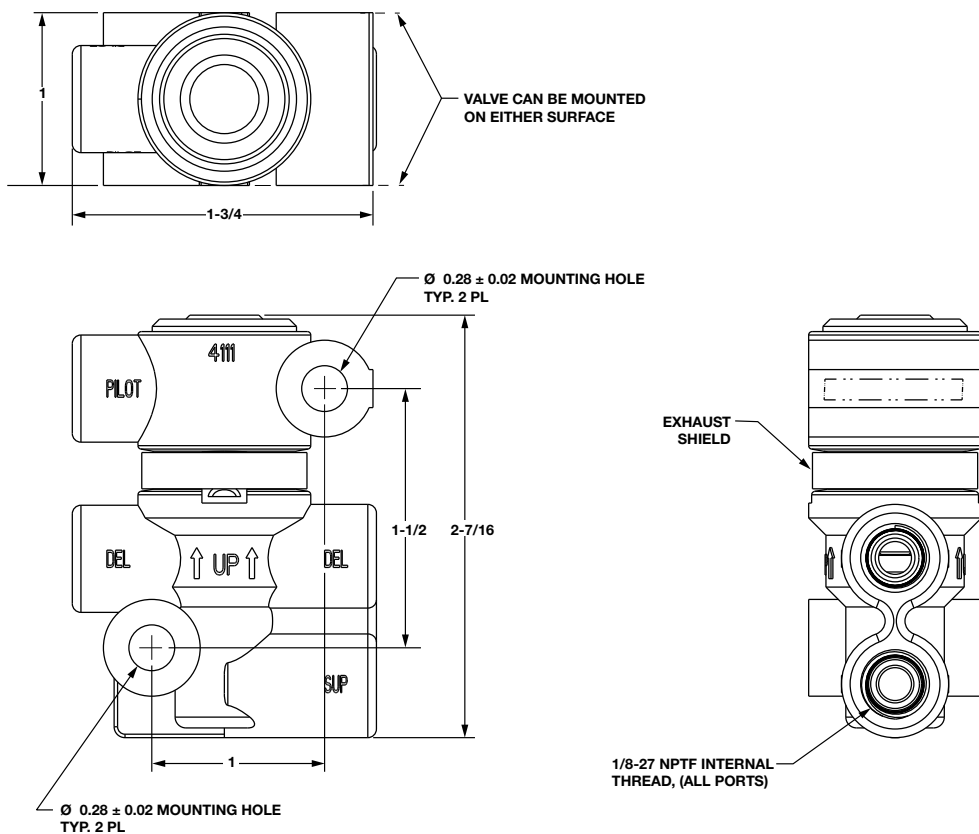
Die cast Zinc



## Models

Model	Port Size	Packaging
4111	1/8" PTF	Bulk
4111-2	1/8" PTF	Individual

## Specifications



# PRESSURE PROTECTION VALVES (PPV)

223 Series

- Designed to isolate vehicle air systems in case of leakage
- Protects the integrity of the air supply
- Convenient in tank mounting
- Variety of closing pressure options to suit application

## Technical Data

**Operating pressure:**  
0 to 150 psi  
0 to 10 bar

**Operating temperature:**  
-40°F to +200°F max.  
-40°C to +93°C max.

## Material

Zamak 3



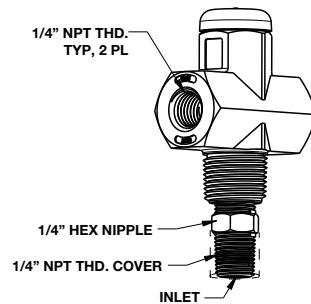
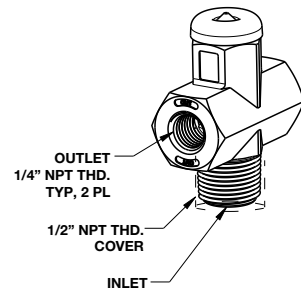
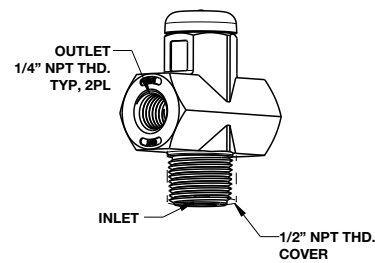
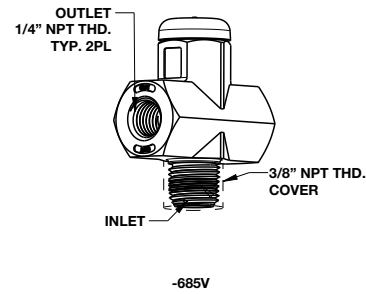
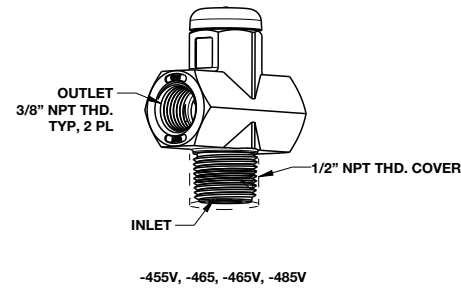
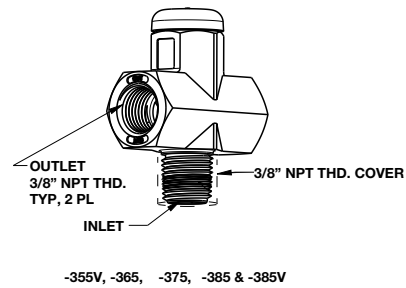
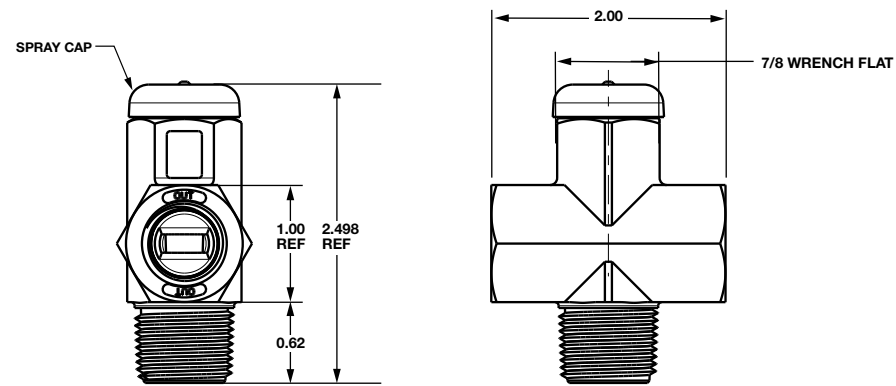
## Models

Model	Open Pressure	Close Pressure	Outlet Thread	Inlet Thread	Vibraseal	Cap Color
223-355V	55	45	3/8" NPT	3/8" NPT	Yes	Black
223-365	65	55	3/8" NPT	3/8" NPT	No	Black
223-375	75	60	3/8" NPT	3/8" NPT	No	Black
223-385	85	67	3/8" NPT	3/8" NPT	No	Red
223-385V	85	67	3/8" NPT	3/8" NPT	Yes	Black
223-455V	55	45	3/8" NPT	1/2" PTF	Yes	Black
223-465	65	55	3/8" NPT	1/2" PTF	No	Black
223-465V	65	55	3/8" NPT	1/2" PTF	Yes	Black
223-485V	85	67	3/8" NPT	1/2" PTF	Yes	Red
223-565	65	55	1/4" NPT	1/2" PTF	No	Black
223-585	100	70	1/4" NPT (port plugged)	1/2" PTF	No	Red
223-585-2	100	70	1/4" NPT	1/2" PTF	No	Red
223-585-2B	85	67	1/4" NPT	1/4" NPT	No	Black
223-585N	85	67	1/4" NPT	1/4" NPT	Yes	Red
223-585NP	85	67	1/4" NPT (port plugged)	1/4" NPT	Yes	Red
223-585T	85	67	1/4" NPT	Internal 1/4" NPT (no nipple)	No	Red
223-685V	85	67	1/4" NPT	3/8" NPT	Yes	Red

# PRESSURE PROTECTION VALVES (PPV)

223 Series

## Specifications



# INLINE PRESSURE PROTECTION VALVES (PPV)

5200-75 Series

- Designed to isolate vehicle air systems in case of leakage
- Protects the integrity of the air supply
- Inline mounting
- Integral Push-To-Connect (PTC) fittings

## Technical Data

**Medium:**  
Compressed Air

**Operating pressure:**  
0 to 150 psi  
0 to 10 bar

**Operating temperature:**  
-40°F to +200°F max.  
-40°C to +93°C max.

## Material

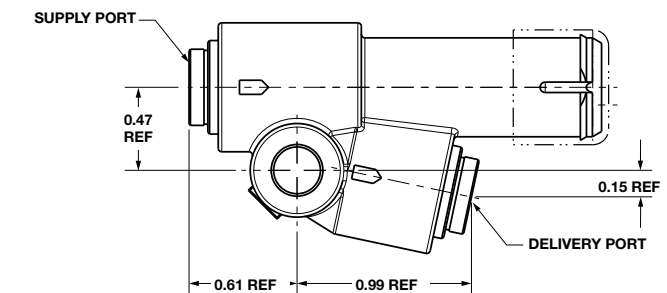
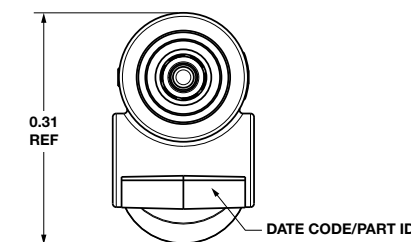
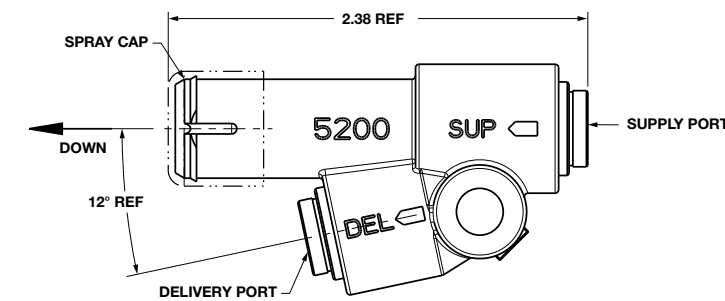
Thermoplastic body with  
Fluorosilicone seals



## Models

Model	Open Pressure	Close Pressure	PTC Connection
5200-75	75	60	1/4" OD tube

## Specifications



# CHECK VALVES

- Widely used by leading truck manufacturers around the world today, IMI Norgren check valves are designed for strength and durability
- Single and double check valves are available, with multiple port sizes
- Incorporating standard IMI Norgren check valve components and proven technology

## Technical Data

**Medium:**  
Compressed air

**Operating pressure:**  
0 to 250\*psig  
-40°F to 212°F  
\*Depending on tubing limitations.



## Models - Single Check Valves

Model	Port 1	Port 2	Port 3
95403701M	1/2" PIF	1/2" NPTF	-

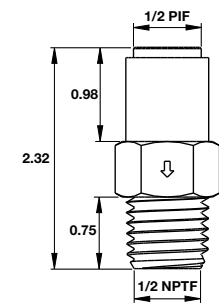
## Models - Double Check Valves

Model	Port 1	Port 2	Port 3
AI04000404074	1/4" PIF	1/4" PIF	1/4" PIF
AI06000606074	3/8" PIF	3/8" PIF	3/8" PIF
AI06000648473	3/8" PIF	3/8" PIF	1/2" PIF
AI38000404474	1/4" PIF	3/8" NPT	1/4" PIF

## Specifications

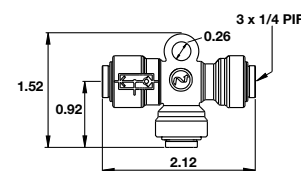
### SINGLE CHECK VALVES

95403701M

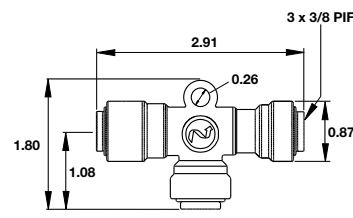


### DOUBLE CHECK VALVES

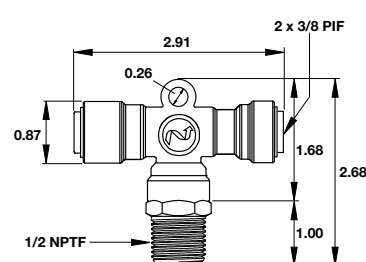
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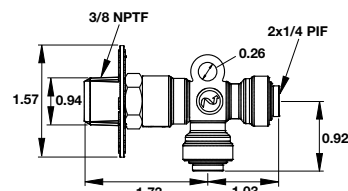
AI06000606074



AI06000648473



AI38000404474



# MANUAL AND MECHANICAL ACTUATED SPOOL VALVE

Super X

- Wide range of operators
- Suitable for multi-directional flow and dual supply applications
- High flow capacity
- Lightweight corrosion resistant materials

## Technical Data

**Medium:**  
Compressed air, filtered, lubricated and non-lubricated

**Operation:**  
Spool Valve, directly and indirectly actuated

**Mounting:**  
Through-holes in valve body

**Port Size:**  
1/8" and 1/4" NPT

**Operating Pressure:**  
Maximum 26.5" Hg to 145 psig

**Flow Characteristics:**

Size	Function	Cv	l/min
1/8" NPT	3/2, 5/2, 5/3	0.34	335
1/4" NPT	3/2, 5/2, 5/3	0.98	965

**Operating Temperature:**  
32°F to 158°F

\* Consult our Technical Service for use below 35°F

## Material

Diecast aluminum alloy body, aluminum or glass filled nylon end covers, nitrile rubber seals



## Models - 3/2 Mechanical valves

## Accessories









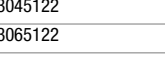







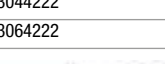







Model No.	Actuation	Port size NPT	Flow Cv	Drawing no.	Thread NPT	Tube size	Straight fitting	90° swivel elbow	Muffler
03029322 <sup>1</sup>	Roller lever (heavy duty)/Spq	1/8	0.34	A, 7	1/8	1/4	95453004M	95433104M	MS001A
03040222 <sup>1</sup>	Roller/Spring	1/8	0.34	A, 2	1/8	1/4	95453004M	95433104M	MS001A
03040022 <sup>1</sup>	Plunger Spring	1/8	0.34	A, 1	1/8	1/4	95453004M	95433104M	MS001A
03041122 <sup>1</sup>	Roller lever/Spring	1/8	0.34	A, 3	1/8	1/4	95453004M	95433104M	MS001A
03061122 <sup>1</sup>	Roller lever/Spring	1/4	0.98	B, 6	1/4	3/8	95453018M	95433112M	MS002A
03043222 <sup>1</sup>	Antenna/Spring	1/8	0.34	A, 5	1/8	1/4	95453004M	95433104M	MS001A
03041022 <sup>1</sup>	One-way trip	1/8	0.34	A, 23	1/8	1/4	95453004M	95433104M	MS001A

1 Normally closed













## MANUAL AND MECHANICAL ACTUATED SPOOL VALVE

Super X

### Models - 5/2 Mechanical valves

Model no.	Actuation	Port size NPT	Flow Cv	Drawing no.	Thread NPT	Tube size	Accessories		
							Straight fitting	90° swivel elbow	Muffler
	Roller lever (heavy duty)/Spg	1/8	0.34	D, 7	1/8	1/4			
X3039322	Roller lever (heavy duty)/Spg	1/8	0.34	D, 7	1/8	1/4	95453004M	95433104M	MS001A
	Roller lever/Spring	1/8	0.34	D, 3	1/8	1/4			
X3045122	Roller lever/Spring	1/8	0.34	D, 3	1/8	1/4	95453004M	95433104M	MS001A
	Roller lever/Spring	1/4	0.98	E, 6	1/4	3/8			
X3065122	Roller lever/Spring	1/4	0.98	E, 6	1/4	3/8	95453018M	95433112M	MS002A
	Roller/Spring	1/8	0.34	D, 2	1/8	1/4			
X3044222	Roller/Spring	1/8	0.34	D, 2	1/8	1/4	95453004M	95433104M	MS001A
	Roller/Spring	1/4	0.98	E, 4	1/4	3/8			
X3064222	Roller/Spring	1/4	0.98	E, 4	1/4	3/8	95453018M	95433112M	MS002A
	Antenna/Spring	1/8	0.34	D, 5	1/8	1/4			
X3047222	Antenna/Spring	1/8	0.34	D, 5	1/8	1/4	95453004M	95433104M	MS001A





















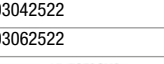







### Models - 3/2 Manual valves

Model no.	Actuation	Port size NPT	Flow Cv	Drawing no.	Thread NPT	Tube size	Accessories		
							Straight fitting	90° swivel elbow	Muffler
	Lever/lever	1/8	0.34	D,16	1/8	1/4			
03029622	Lever/lever	1/8	0.34	D,16	1/8	1/4	95453004M	95433104M	MS001A
	Toggle/toggle	1/8	0.34	A,14	1/8	1/4			
03040322	Toggle/toggle	1/8	0.34	A,14	1/8	1/4	95453004M	95433104M	MS001A
	Rotary knob/rotary knob	1/8	0.34	A, 19	1/8	1/4			
03041922	Rotary knob/rotary knob	1/8	0.34	A, 19	1/8	1/4	95453004M	95433104M	MS001A









## MANUAL AND MECHANICAL ACTUATED SPOOL VALVE

Super X

### Models - 3/2 Manual valves

Model no.	Actuation	Port size NPT	Flow Cv	Drawing no.	Thread NPT	Tube size	Accessories		
							Straight fitting	90° swivel elbow	Muffler
	Black - Button/spring	1/8	0.34	A, 9	1/8	1/4			
03040422 <sup>1</sup>	Black - Button/spring	1/8	0.34	A, 9	1/8	1/4	95453004M	95433104M	MS001A
	Black - Button/Spring	1/4	0.98	B, 8	1/4	3/8			
03060422 <sup>1</sup>	Black - Button/Spring	1/4	0.98	B, 8	1/4	3/8	95453018M	95433112M	MS002A
	Button (palm) Key	1/8	0.34	A, 20	1/8	1/4			
03041822801	Button (palm) Key	1/8	0.34	A, 20	1/8	1/4	95453004M	95433104M	MS001A
	Black - Button (shrouded) spring	1/8	0.34	A, 11	1/8	1/4			
03041422 <sup>1</sup>	Black - Button (shrouded) spring	1/8	0.34	A, 11	1/8	1/4	95453004M	95433104M	MS001A
	Knob/knob	1/8	0.34	A, 18	1/8	1/4			
03042522	Knob/knob	1/8	0.34	A, 18	1/8	1/4	95453004M	95433104M	MS001A
	Knob/knob	1/4	0.98	B, 13	1/4	3/8			
03062522	Knob/knob	1/4	0.98	B, 13	1/4	3/8	95453018M	95433112M	MS002A
	Knob/knob or pilot	1/8	0.34	A, 18	1/8	1/4			
03042422	Knob/knob or pilot	1/8	0.34	A, 18	1/8	1/4	95453004M	95433104M	MS001A

### Models - 5/2 Manual valves

Model no.	Actuation	Port size NPT	Flow Cv	Drawing no.	Thread NPT	Tube size	Accessories		
							Straight fitting	90° swivel elbow	Muffler
	Black palm button	1/8	0.34	E, 9	1/8	1/8			
X3044422	Black palm button	1/8	0.34	E, 9	1/8	1/8	95453004M	95433104M	MS001A
	Black palm button	1/4	0.98	E, 12	1/4	3/8			
X3064422	Black palm button	1/4	0.98	E, 12	1/4	3/8	95453018M	95433112M	MS002A

















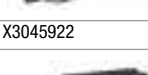



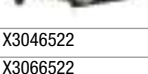















1 Normally closed







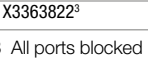



# MANUAL AND MECHANICAL ACTUATED SPOOL VALVE

Super X

## Models - 5/2 Manual valves

Model no.	Actuation	Port size NPT	Flow Cv	Drawing no.	Thread NPT	Tube size	Accessories		
							Straight fitting	90° swivel elbow	Muffler
	Toggle/toggle	1/8	0.34	E, 14	1/8	1/4			
X3044322	Toggle/toggle	1/8	0.34	E, 14	1/8	1/4	95453004M	95433104M	MS001A
	Lever/lever	1/8	0.34	E, 15	1/8	1/4			
X3047722	Lever/lever	1/8	0.34	E, 15	1/8	1/4	95453004M	95433104M	MS001A
	Lever/lever	1/4	0.98	E, 15	1/4	3/8			
X3067722	Lever/lever	1/4	0.98	E, 15	1/4	3/8	95453018M	95433112M	MS002A
	Heavy Duty Lever / Lever	1/8	0.34	E, 17	1/8	1/4			
X3029622	Heavy Duty Lever / Lever	1/8	0.34	E, 17	1/8	1/4	95453004M	95433104M	MS001A
	Rotary knob/rotary knob	1/8	0.34	E, 19	1/8	1/4			
X3045922	Rotary knob/rotary knob	1/8	0.34	E, 19	1/8	1/4	95453004M	95433104M	MS001A
	Knob, push/knob, pull	1/8	0.34	E, 13	1/8	1/4			
X3046522	Knob, push/knob, pull	1/8	0.34	E, 13	1/8	1/4	95453004M	95433104M	MS001A
	Knob, push/knob, pull	1/4	0.98	G, 13	1/4	3/8			
X3066522	Knob, push/knob, pull	1/4	0.98	G, 13	1/4	3/8	95453018M	95433112M	MS002A
	Button (palm) Key	1/8	0.34	E, 20	1/8	1/4			
X3045822801	Button (palm) Key	1/8	0.34	E, 20	1/8	1/4	95453004M	95433104M	MS001A
	RED Emergency Stop / Twist ring	1/8	0.98	E, 10	1/4	3/8			
X3046822	RED Emergency Stop / Twist ring	1/8	0.98	E, 10	1/4	3/8	95453018M	95433112M	MS002A

## Models - 5/3 Manual valves

Model no.	Actuation	Port size NPT	Flow Cv	Drawing no.	Thread NPT	Tube size	Accessories		
							Straight fitting	90° swivel elbow	Muffler
	Lever/spring/lever	1/8	0.34	21	1/8	1/4			
X3343822 <sup>3</sup>	Lever/spring/lever	1/8	0.34	21	1/8	1/4	95453004M	95433104M	MS001A
	Lever/spring/lever	1/4	0.98	22	1/4	3/8			
X3363822 <sup>3</sup>	Lever/spring/lever	1/4	0.98	22	1/4	3/8	95453018M	95433112M	MS002A

3 All ports blocked

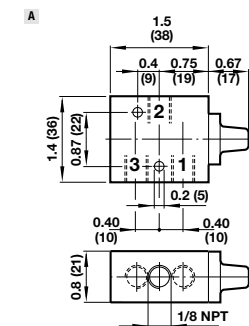
# MANUAL AND MECHANICAL ACTUATED SPOOL VALVE

Super X

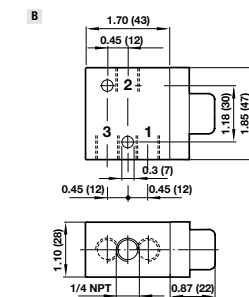
## Specifications

### VALVE BODIES

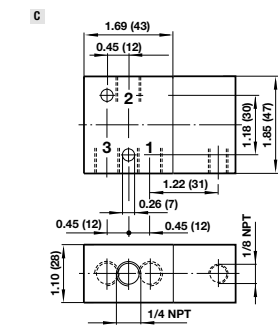
1/8, 3/2 Spring return, basic body



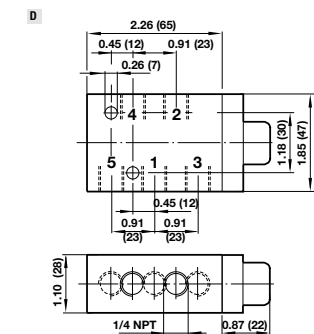
1/4, 3/2 Spring return, basic body



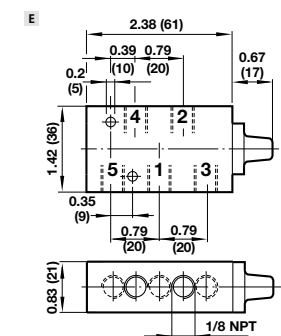
1/4, 3/2 Pilot return, basic body



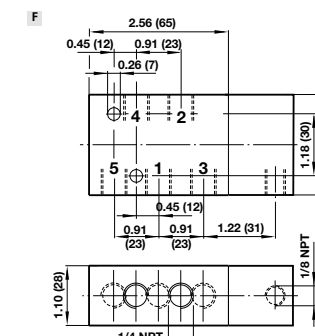
1/8, 5/2 Spring return, basic body



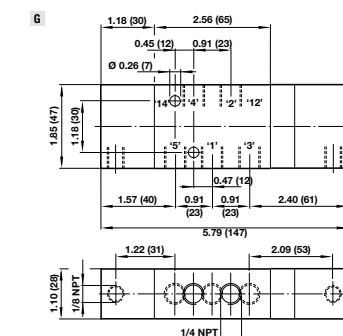
1/4 and 1/8, 5/2 Spring return, basic body



1/8, 5/2 Pilot return, basic body

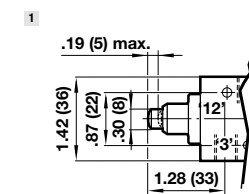


1/4, 5/3 Spring return, basic body

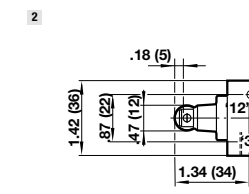


### MECHANICAL VALVE ACTUATORS

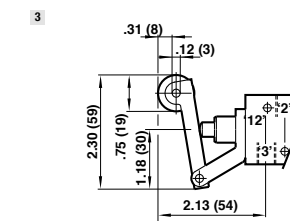
Plunger - 1/8 valves



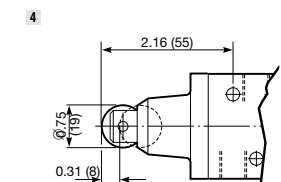
Roller - 1/8 valves



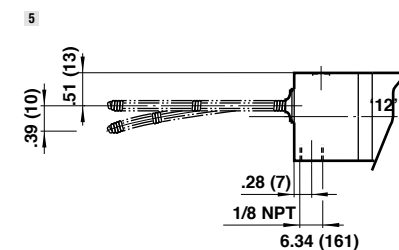
Roller lever - 1/8 valves



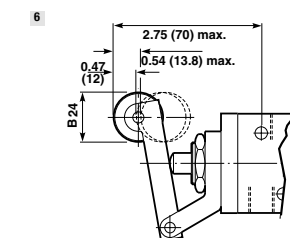
Roller - 1/4 valves



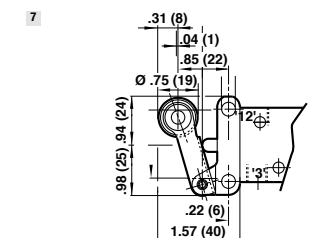
Antenna - 1/8 valves



Roller lever - 1/4 valves



Heavy duty roller lever - 1/8 valves

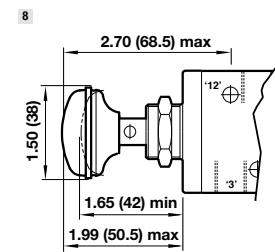


# MANUAL AND MECHANICAL ACTUATED SPOOL VALVE

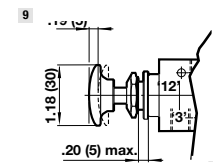
Super X

## MANUAL VALVE ACTUATORS

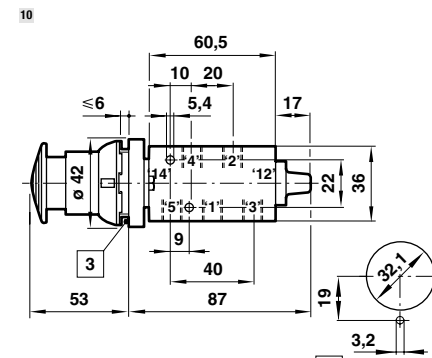
Button – 1/4 Valves



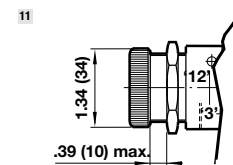
Button – 1/8 valves



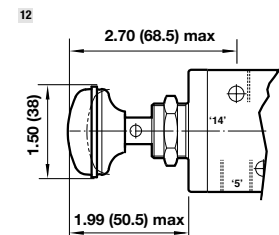
Emergency stop – 1/8 valves



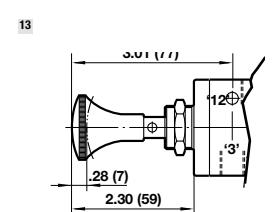
Button (shrouded) – 1/8 valves



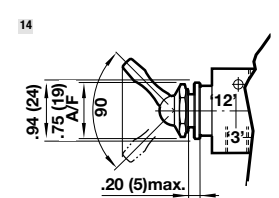
Button operated spring return valve – 1/4 valves



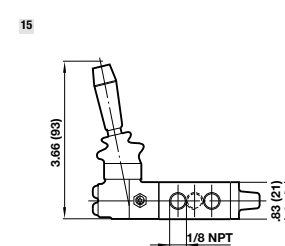
Knob – 1/4 and 1/8 valves



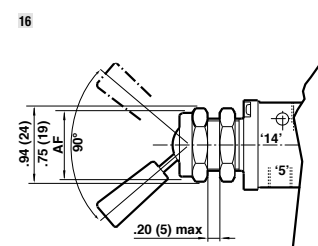
Lever operated spring return valve – 1/8 valves



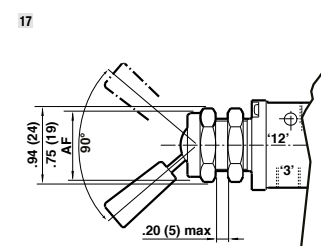
Lever operated spring return valve – 1/8 and 1/4 valves



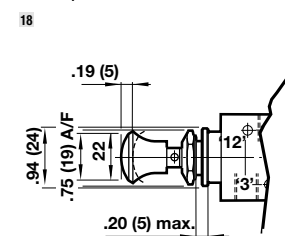
Lever operated lever return valve – 1/8 valves



5/2 Lever operated lever return valve – 1/8 valves



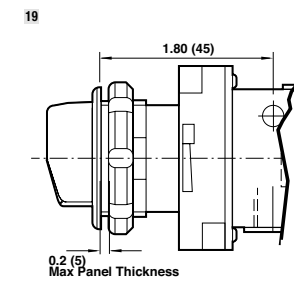
Knob operated knob return valve – 1/8 valves



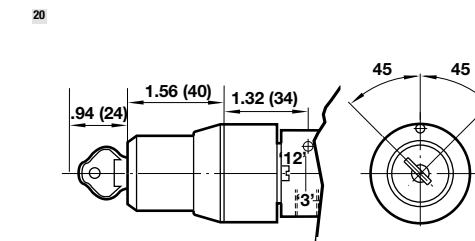
# MANUAL AND MECHANICAL ACTUATED SPOOL VALVE

Super X

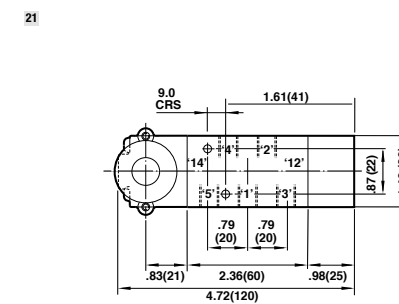
Rotary knob – 1/8 valves



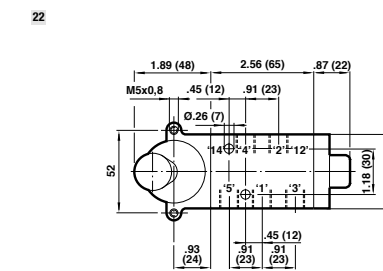
Key – 1/8 valves



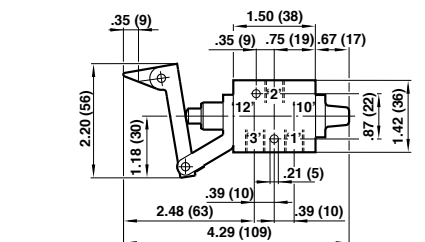
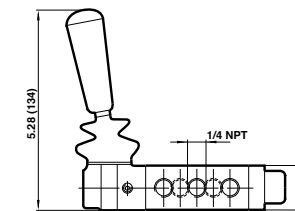
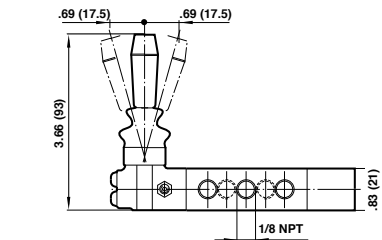
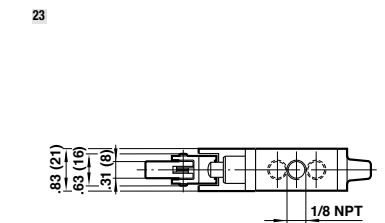
Lever/spring/lever – 1/8 valves



Lever/spring/lever – 1/4 valves



One-way trip – 1/8 valves



Operating force: 12 N (X3 3638 02 & X3 3678 02), 15 N (X3 3637 02 & X3 3677 02)  
 Panel hole: Ø 31 mm  
 Panel thickness: 8 mm maximum

# KNEELING MANIFOLD

K990073 Series

- Compact, light weight
- Fully integrated airbag control
- Anodized for corrosion resistance
- Packard Electrical connection options
- Eliminates need for multiple valves

## Technical Data

**Medium:**  
Filtered and lubricated or non-lubricated compressed air

**Operating pressure:**  
70 to 120 psig (4.8 to 8.3 bar)

**Operating temperature:**  
-40°F to 160°F (-40° to 71°C)

**Weight:**  
4 lbs. (1.8 kg)

**Power/voltage:**  
24 Nominal (16-32) VDC  
3.4 watt

**Enclosure classification:**  
IP64 per DIN 40050

**Operation:**  
Energize the level solenoid to block communication of the height control valve. Then energize the exhaust solenoid to initiate kneel. De-energize the exhaust solenoid and energize the fill solenoid to allow bus to quickly rise up. Then de-energize the fill solenoid and level solenoid to allow communication of the height control valve.  
Note: HCV solenoid must be energized and remain on when kneeling the bus/coach.

## Material

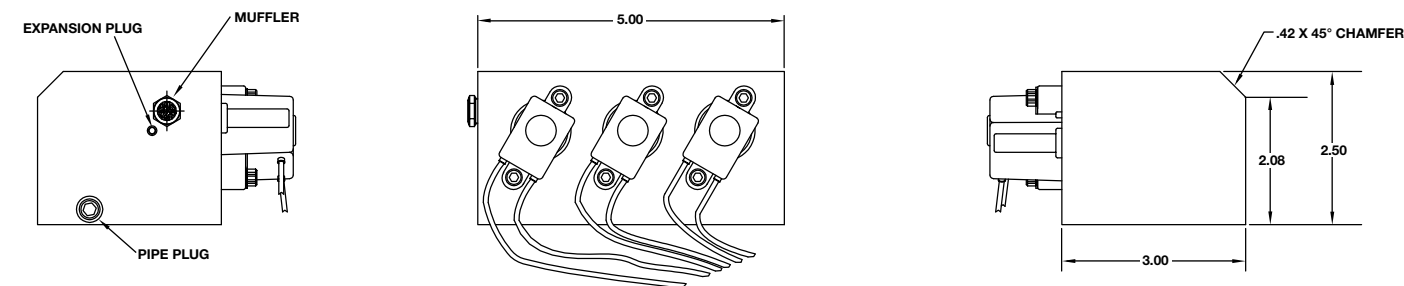
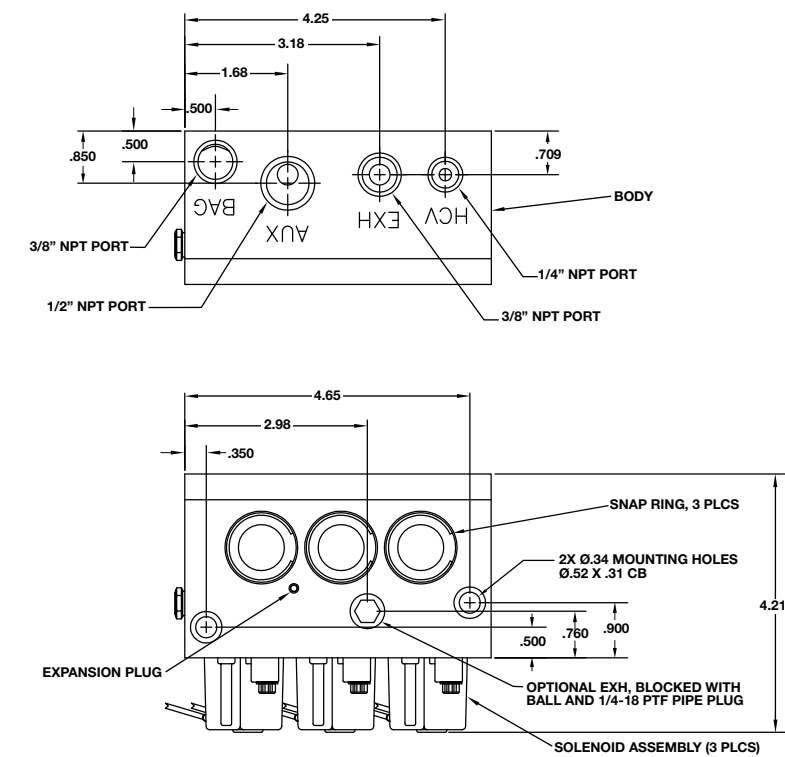
Body: Aluminum  
Elastomers: Carboxylated Nitrile



# KNEELING MANIFOLD

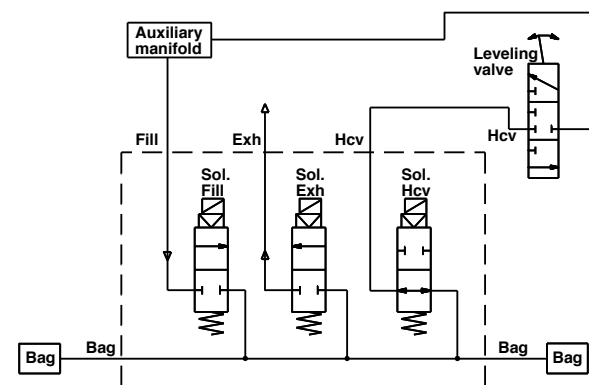
K990073 Series

## Specifications



## Models

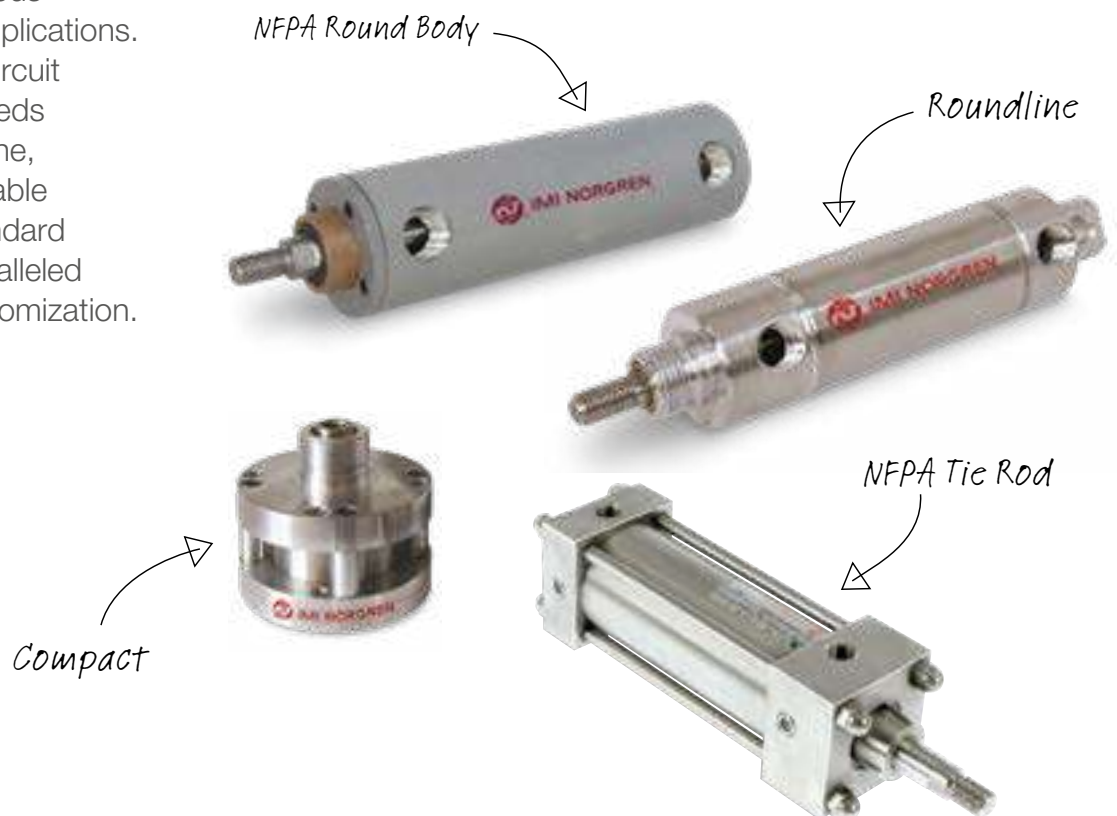
Model	Power/voltage	Weight
K990073	24 nominal (16-32) VDC, 3.4 watt	4 lbs. (1.8 kg)



Function	Port Size	EXH	AUX	BAG
Two 3/2 NC and one 3/2 N/O	1/4" NPT	3/8" NPT	1/2" NPT	3/8" NPT

# Cylinders

Pneumatic actuators keep things moving with a vast array of standard models that accommodate numerous commercial vehicle applications. Build the pneumatic circuit best suited to your needs with compact, roundline, and NFPA interchangeable actuators; unique standard options provide unparalleled versatility without customization.



# CYLINDERS

## NFPA Interchangeable

### Round Body (dual wall reinforced)

- > Built for the harshest environments with dual wall protection; outer epoxy-coated aluminum shell shields the inner stainless steel body wall from impact
- > Most Ideal cylinder for commercial vehicle applications

### Tie Rods (aluminum, steel, and stainless steel)

- > Repairable cylinders in a variety of mounting options
- > Optional adjustable cushioning available

### Extruded Body (aluminum)

- > Versatile and cost-effective solution for a variety of commercial vehicle applications
- > Lightweight construction and modern design matched with flexible mounting configurations
- > Adaptive cushioning simplifies installation



## Roundline

- > Suited for lighter duty, lower force applications
- > Full range of bore sizes
- > Available in both single and double acting versions and aluminum or stainless steel construction.
- > Long-lasting and corrosion-resistant designs



## Compact

- > Compact design ideal for use in tight spaces
- > Cylinders have extended life and a repairable design for improved performance
- > Variety of model options with an array of stroke lengths, bore sizes, and mounting styles
- > Stainless steel body with clear anodized aluminum head and cap
- > Nitrile seals ensure low friction operation and long life



Our cylinders come in a wide range of sizes and specifications. Contact a IMI Norgren representative to find the product that meets your specific commercial vehicle needs.

# Fuel Management

10

11

12

# Fast Find Guide

IMI Norgren manufactures a broad variety of pneumatic and electronic controls for heavy-duty vehicles. From pressure protection valves, dash valves, flipper valves, wiper controls to height and lumbar seat control valves, each product is engineered to provide long life and reliable operation.

## ● Caps

<b>Fuel &amp; Hydraulic Tank Caps</b>
Page 110

## ● Vents

<b>Fuel Tank Vents 201 Series &amp; 2113-1</b>	<b>High-flow Fuel Tank Vents 2989-11, 2989-11V</b>
Page 118	Page 121

## ● Other Fuel Products

<b>Return Flow Splitter 2252 Series</b>	<b>Linegard® Breakaway Valves 2200-1</b>
Page 124	Page 125

# Caps

Our range fuel caps offer a unique combination of thermal, venting, and pressure relief options and meet or exceed FHWA guidelines for leakage, drop tests and flame tests. Caps are available in various sizes with locking and non-locking functionality.

*Maximum fuel  
system protection*



*Great safety  
features*



# FUEL & HYDRAULIC TANK CAPS

- IMI Norgren fuel caps incorporate a unique combination of thermal, pressure relief, and breather type caps
- Protect the fuel system in the event of fire or a roll over
- Minimizes the opportunity for pressure to build up in the tank
- All designs meet or exceed FHWA guidelines for leakage, drop tests and flame tests

## Material

Aluminum die-casting

### Options:

Matching locking, venting, safety features\*  
\* Please contact your local IMI Norgren technical representatives.



## Models

### Fuel Tank Caps

Model	Description	Cap Size	Thermal Relief	Pressure Relief	Venting	Locking	Chrome	Chain Length	Drawing No.
31302-1	2" Closure only cap	2"-11.5 NPSM	No	No	No	No	No	10"	6
8100	2" fuel cap for diesel fuel	2"-11.5 NPSM	Yes	Yes	Yes	No	No	12"	9
253-2	2" fuel cap for diesel fuel	2"-11.5 NPSM	Yes	Yes	Yes	No	No	12"	5
31307-1	2" fuel cap, single tank	2"-11.5 NPSM	No	Yes	No	Yes	No	9.5"	8
8103	2" Full function cap, chrome	2"-11.5 NPSM	Yes	Yes	Yes	No	Yes	12"	10
8105-2	2.5" Fuel cap for diesel fuel	2.5"-8 UN	Yes	Yes	Yes	No	No	12"	10
31303-1	3" Closure-only cap	3"-8 NPSL	No	Yes	No	No	No	9.5"	7
31303-2C	3" Closure-only cap	3"-8 NPSL	No	Yes	No	No	Yes	8"	7
249-1S	3" Float style cap	3"-8 NPSL	Yes	Yes	Yes	No	No	5.75"	2
249-3S	3" Float style cap	3"-8 NPSL	Yes	Yes	Yes	Yes	No	5.75"	3
8120	3" Float style cap	3"-5.5 custom thread	Yes	Yes	Yes	No	No	12"	11
8121	3" Float style cap	3"-5.5 custom thread	Yes	Yes	Yes	Yes	No	12"	12
8110-1	3" Float style cap, Blistered Packaged	3"-8 NPLS	Yes	Yes	Yes	No	No	12"	11
8111-1	3" Float style cap, Blistered Packaged	3"-8 NPLS	Yes	Yes	Yes	Yes	No	12"	12
8110	3" Float style cap, bulk	3"-8 NPSL	Yes	Yes	Yes	No	No	12"	11
8111	3" Float style cap, bulk	3"-8 NPSL	Yes	Yes	Yes	Yes	No	12"	12
249-5P	3" fuel cap for diesel fuel	3"-8 NPSL	Yes	Yes	No	Yes	No	12"	4
8131-1	4" Fuel cap for diesel fuel	4"-8 NPSM	Yes	Yes	Yes	Yes	No	12"	14
8131	4" fuel cap for diesel fuel	4"-8 NPSM	Yes	Yes	Yes	Yes	No	12"	14
2011-1C	4" fuel cap for diesel fuel	4"-8 NPSM	Yes	Yes	No	No	Yes	12"	1
8130	4" fuel cap for diesel fuel	4"-8 NPSM	Yes	Yes	Yes	No	No	12"	13
2011-1	4" fuel cap for diesel fuel, female thread	4"-8 NPSM	Yes	Yes	No	No	No	12"	1

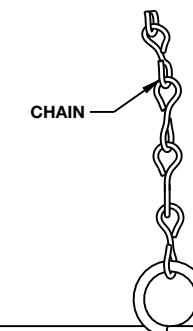
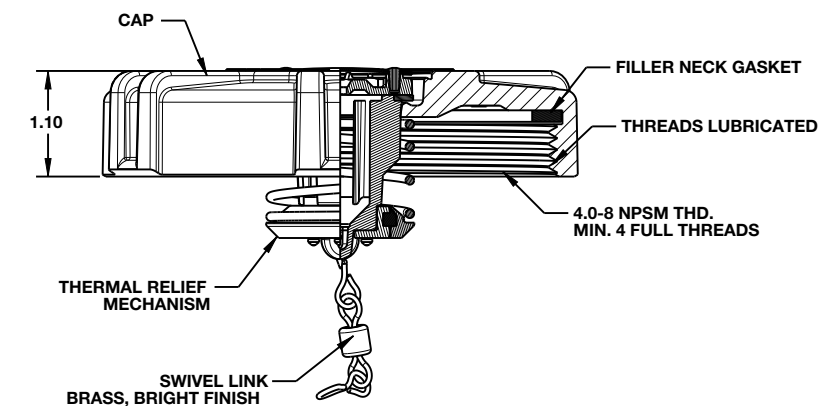
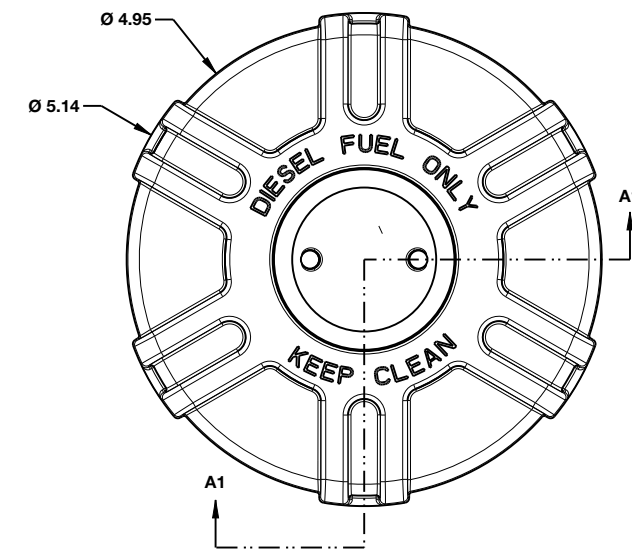
### Other Caps

Model	Description	Chain Length	Drawing No.
2017-1	2.5" Hydraulic Tank Cap	12"	16

## FUEL TANK CAPS

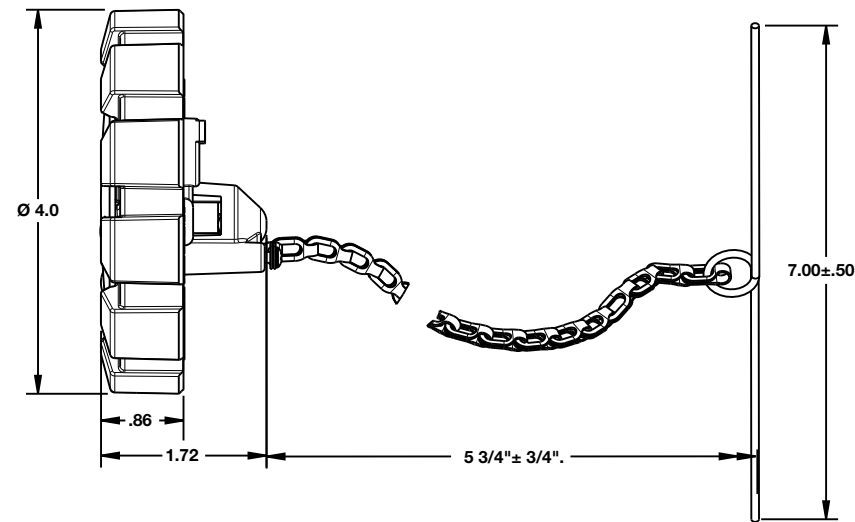
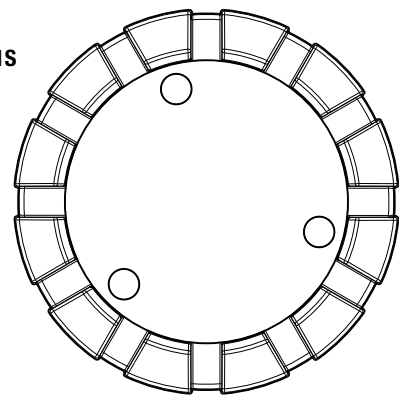
## Specifications

①  
2011-1, 2011-1C

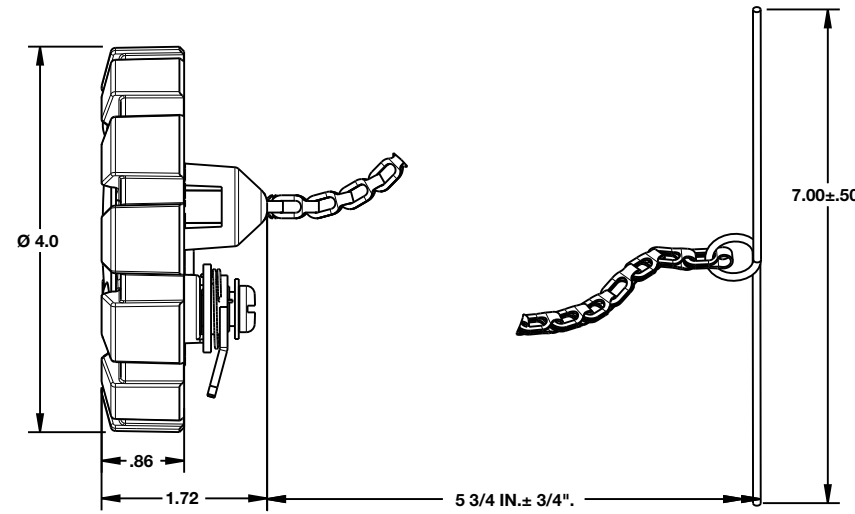
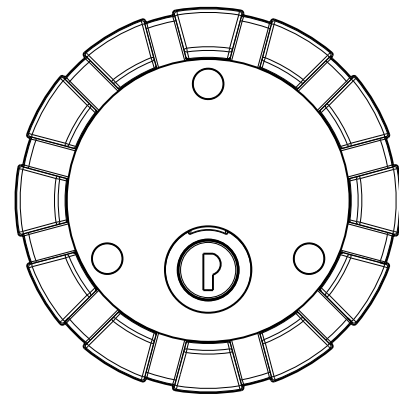


CHAIN  
8 1/2" ± 1/4"

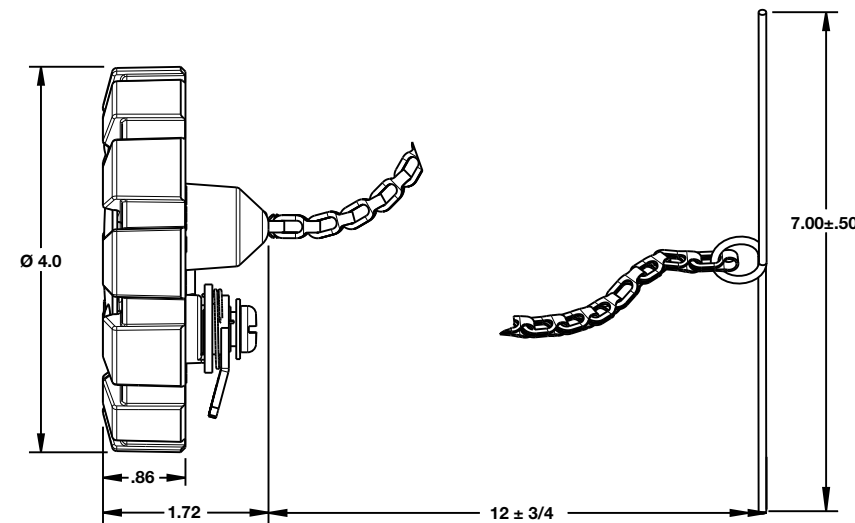
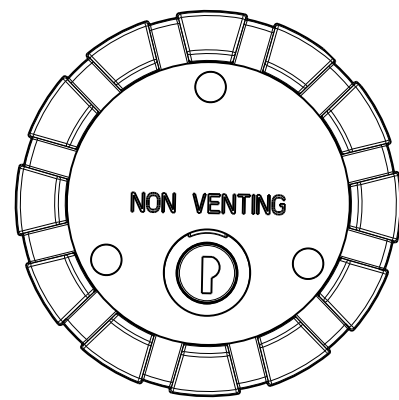
②  
249-1S



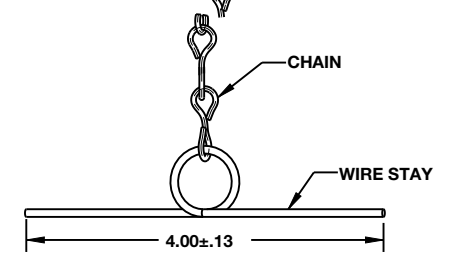
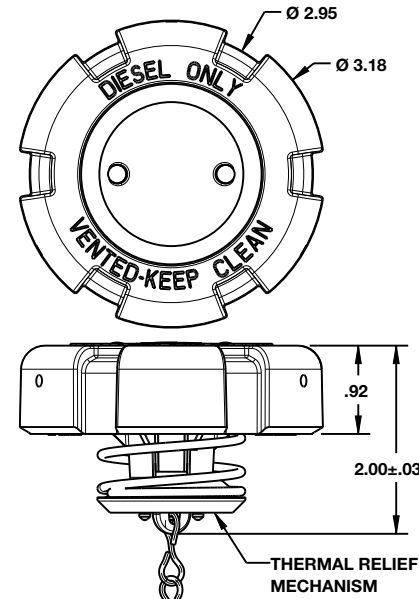
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249-3S



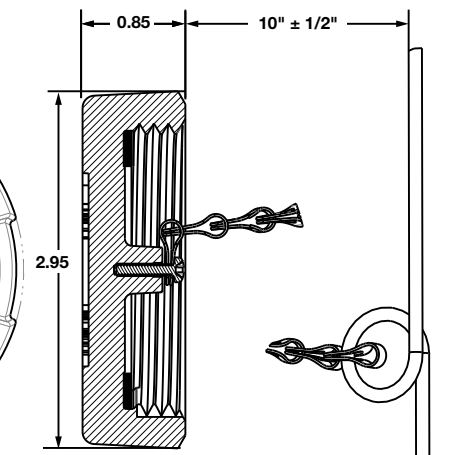
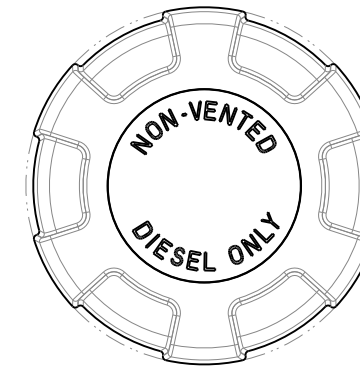
④  
249-5P



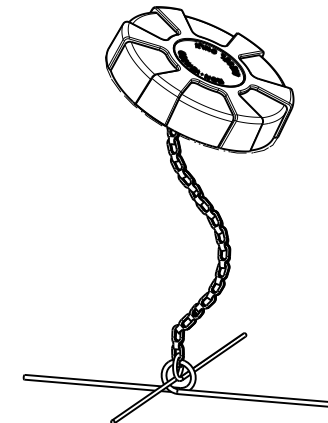
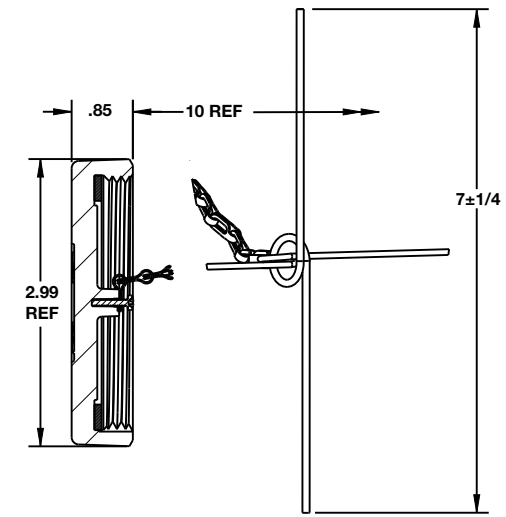
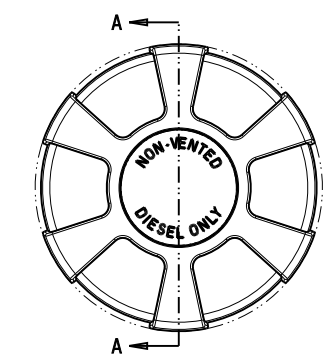
⑤  
253-2



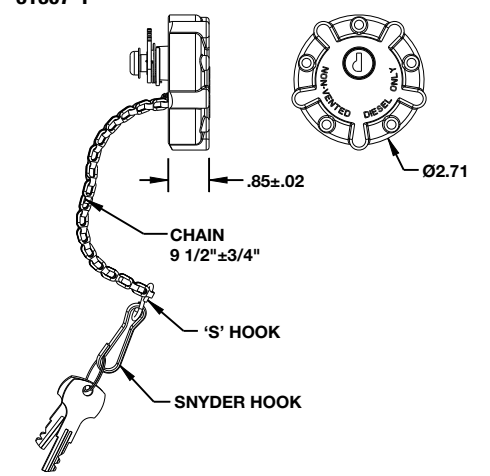
⑥  
31302-1



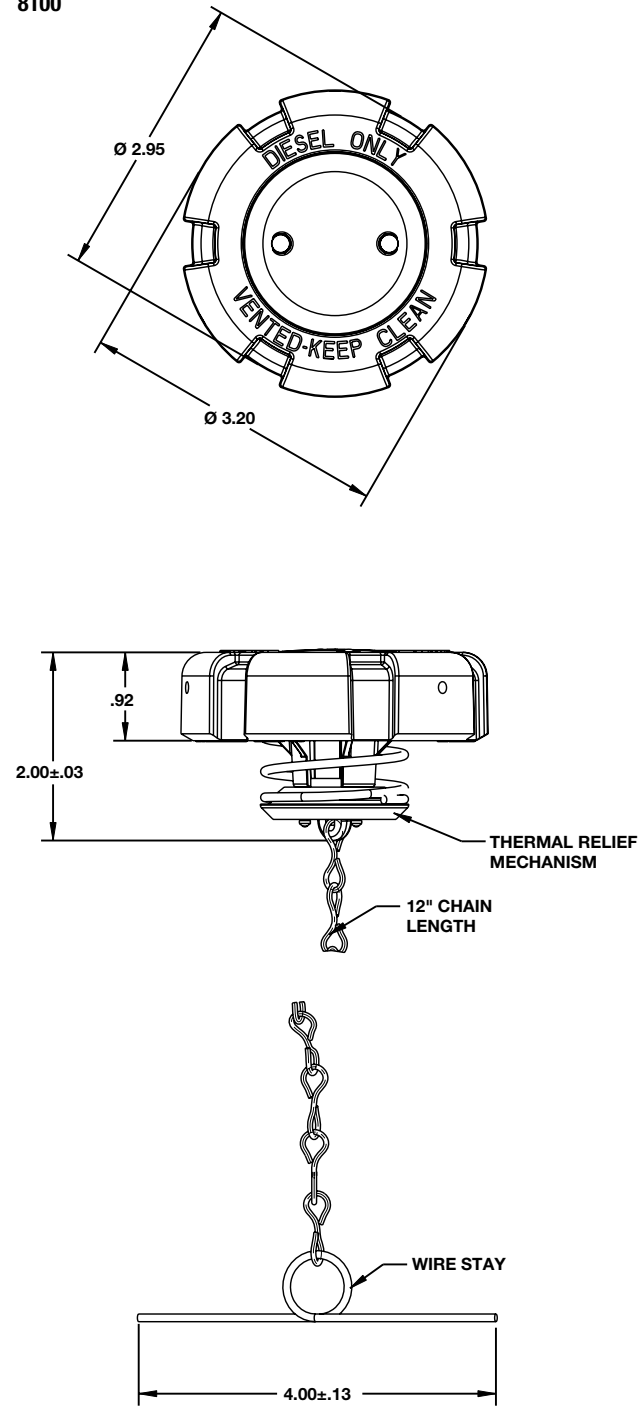
⑦  
31303-1, 31303-2C



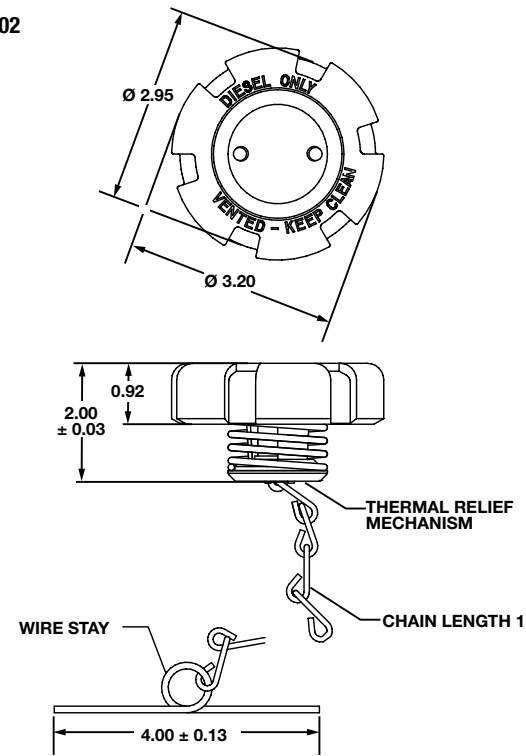
⑧  
31307-1



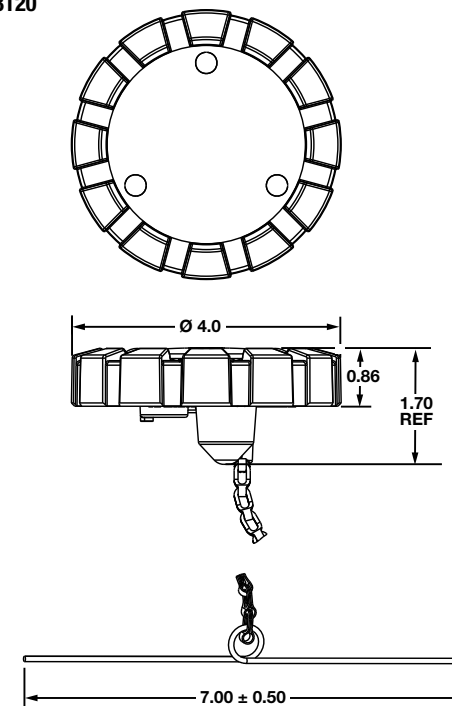
⑨  
8100



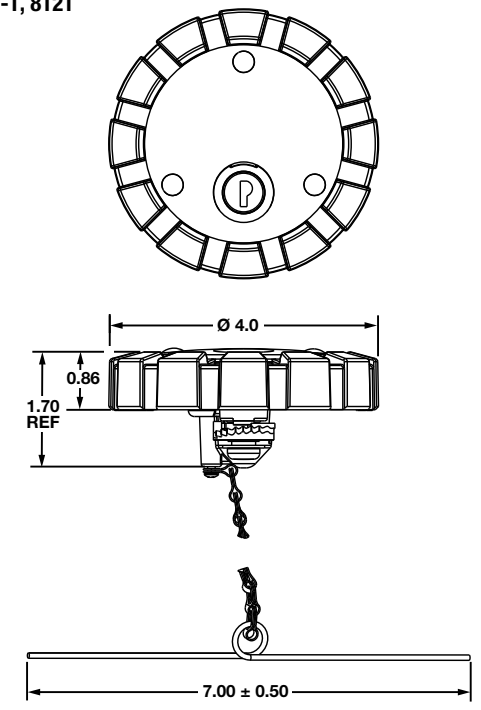
⑩  
8103, 8105-02



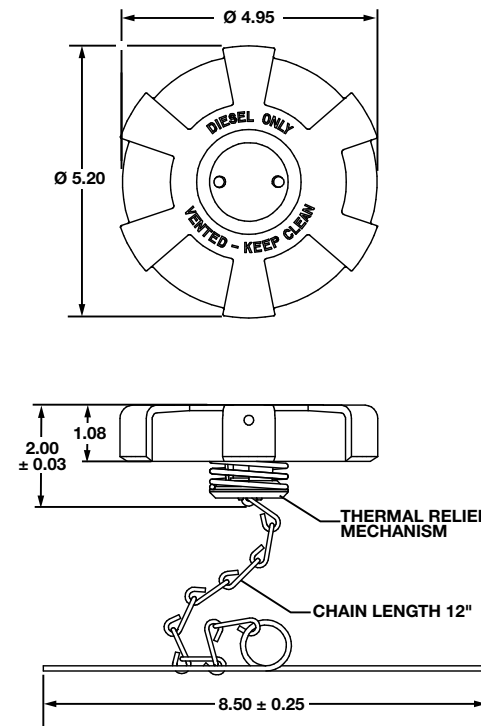
⑪  
8110, 8110-1, 8120



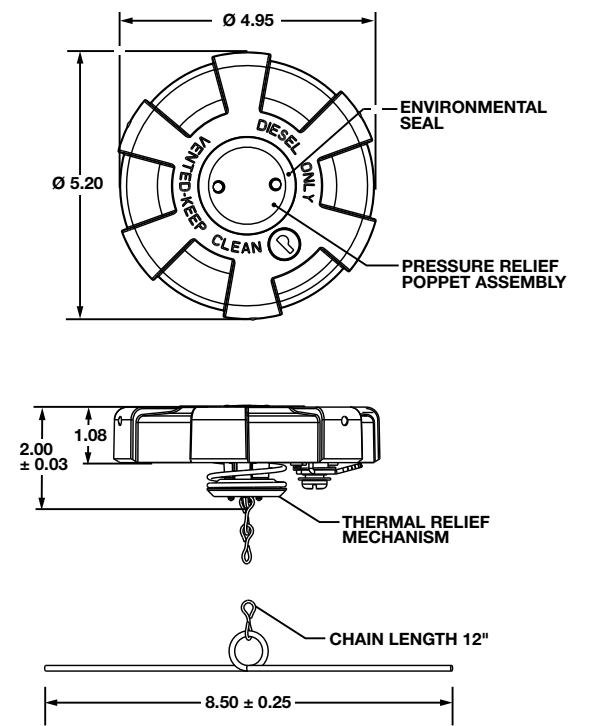
⑫  
8111, 8111-1, 8121



⑬  
8130



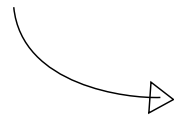
⑭  
8131, 8131-1



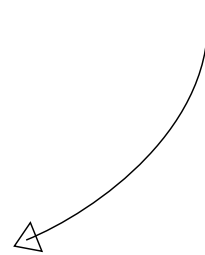
# Vents

With safety in mind, our fuel tank vents deliver peace of mind, rollover protection, and other safety features to prevent excess pressure, fuel spillage and explosion of the fuel tank.

*Anti-spill protection*



*Rollover protection*



# FUEL TANK VENT

201 SERIES & 2115-1

- Anti-spill protection
- Available with pressure relief and safety venting
- Provides tank breathing
- Corrosion resistant

## Technical Data

**Pipe thread:**  
 1/4-18 NPTF  
 1/2-14 NPTF  
 1-1/4 PTF

**Hex size:**  
 7/8"  
 9/16"  
 1/2"  
 1.0"  
 25.4 mm

**Overflow hose diameter:**  
 5/16" ID  
 1/4" ID  
 1/8" ID

**Outward flow rate:**  
 30 SCFH @ 8" water pressure  
 30 SCFH @ 6" water pressure  
 45 SCFH @ 4" water pressure  
 45 SCFH @ 4.5" water pressure



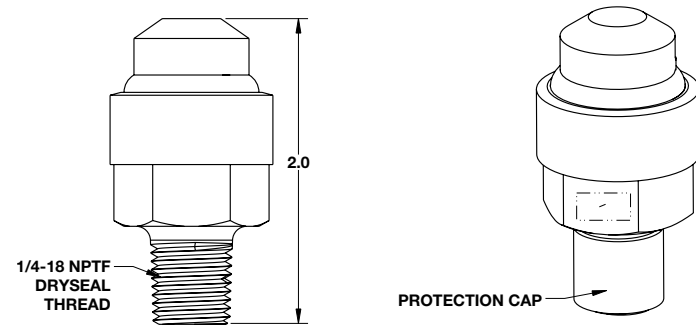
## Models

Model	Description	Thread	Diesel/Gas	Thermal Relief	Pressure Relief	Overflow hose diameter	Outward Flow rate	Hex Size
139-1	Fuel Tank Vent, Bulk Packaged	1/4"-18" NPTF	Diesel	Yes	Yes	N/A	30 SCFH @ 8" water pressure	7/8"
150-5	Fuel Tank Vent, Float Style with Barb & Cup	1"-1/4" PTF	Diesel	No	No	1/4"	30 SCFH @ 6" water pressure	1-3/4"
201-1	Fuel Tank Vent, Gasoline or Diesel	1/2"-14" PTF	Diesel/Gas	No	No	5/16"	30 SCFH @ 6" water pressure	1"
201-3	Fuel Tank Vent, Diesel Only	1/2"-14" PTF	Diesel	No	No	5/16"	30 SCFH @ 6" water pressure	1"
218-1	Fuel Tank Vent, Low Profile	1/4"-18" NPTF	Diesel	No	No	1/4"	30 SCFH @ 6" water pressure	9/16"
261-3	Fuel Tank Vent, Government	1/2"-14" PTF	Diesel	No	No	1/4"	30 SCFH @ 6" water pressure	1/2"
2115-01	Fuel Tank Vent, Full Function	1/2"-14" PTF	Diesel	Yes	Yes	5/16"	45 SCFH @ 4.5" water pressure	1"
2115-02	Fuel Tank Vent, Full Function w/ Vibraseal	1/2"-14" PTF	Diesel	Yes	Yes	5/16"	45 SCFH @ 4.5" water pressure	1"
2115-03	Fuel Tank Vent, Low Pressure & Thermal Relief*	1/2"-14" PTF	Diesel	Yes	Yes	5/16"	45 SCFH @ 4.5" water pressure	1"

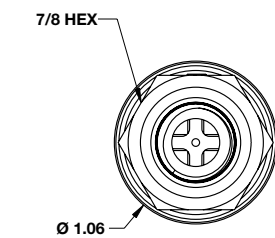
\* For plastic diesel fuel tanks.

## Specifications

139-1



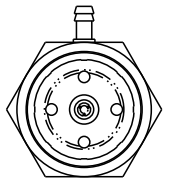
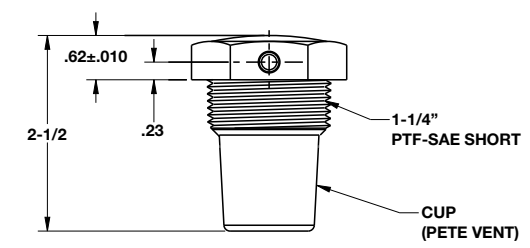
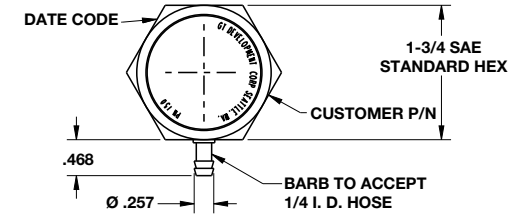
Special low pressure relief setting for use on plastic diesel fuel tanks.



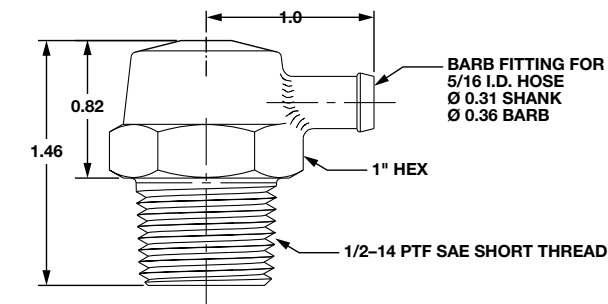
# FUEL TANK VENT

201 SERIES & 2115-1

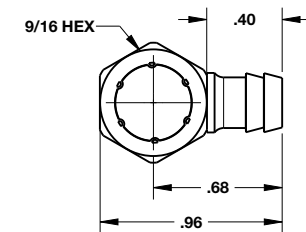
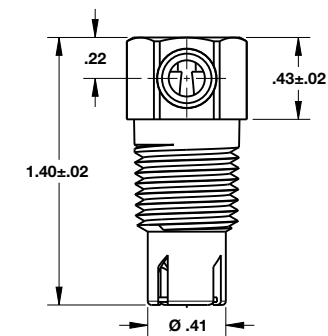
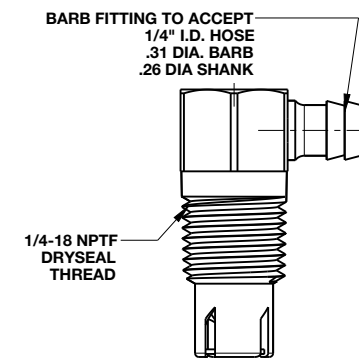
150-5



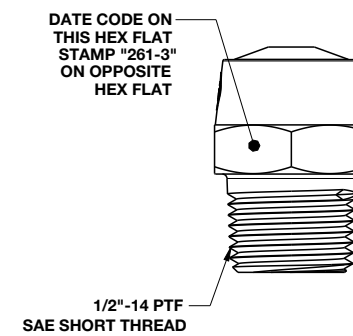
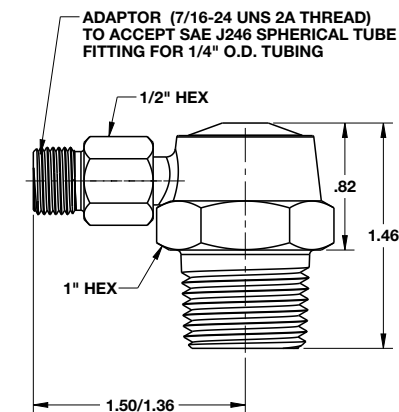
201-1, 201-3



218-1

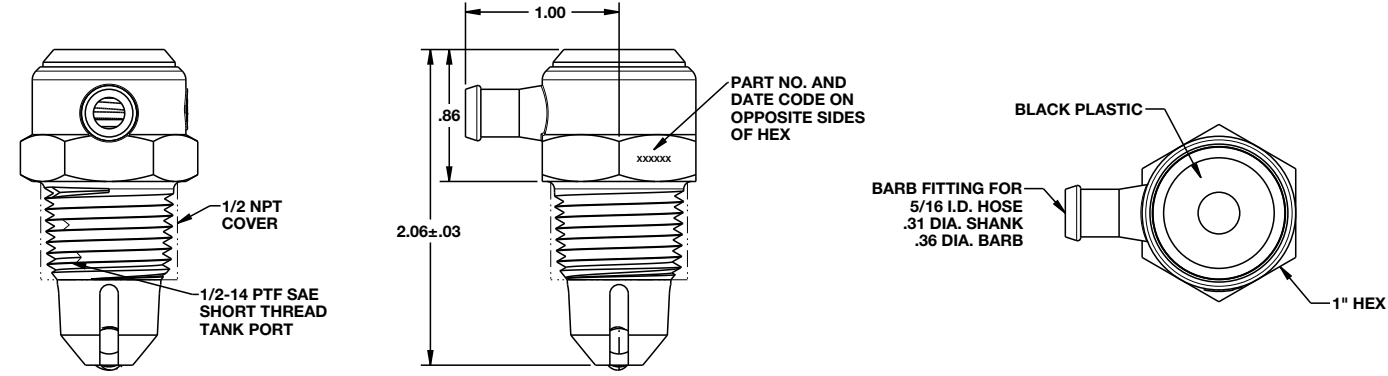


261-3

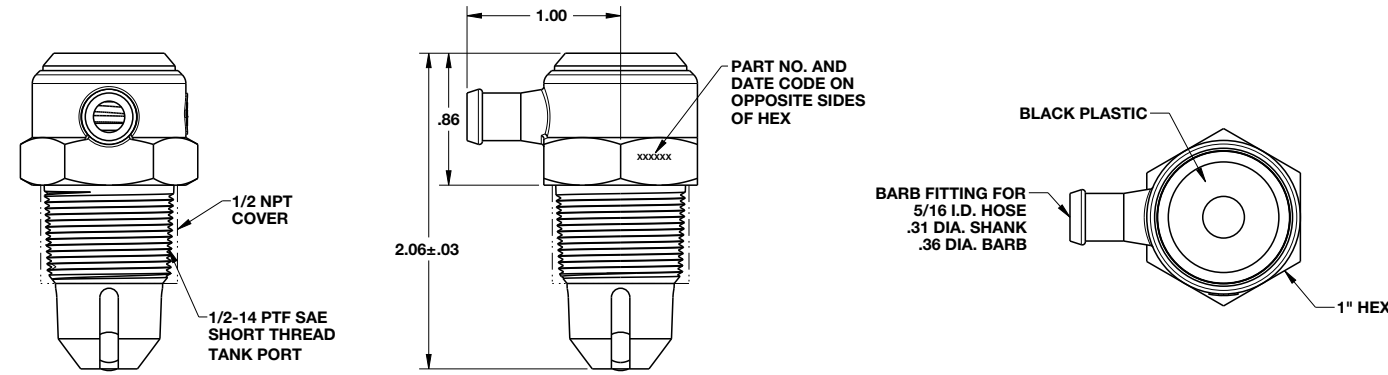


FUEL TANK VENT  
201 SERIES & 2115-1

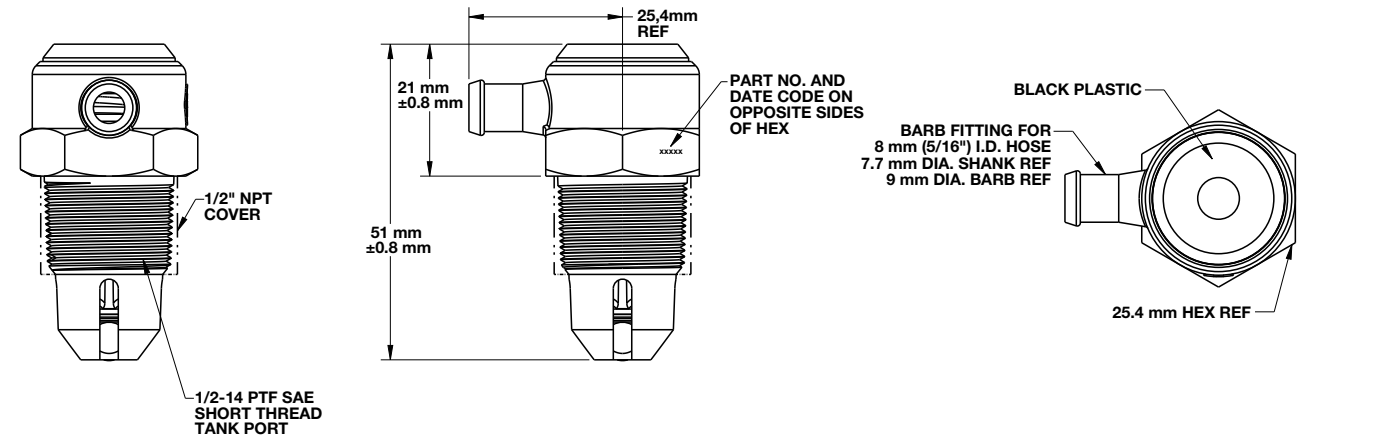
2115-01



2115-02



2115-03



HIGH-FLOW FUEL TANK VENT

2989-11, 2989-11V

- 1/2" NPT male thread with 1/4" barb fitting
- Anti-spill protection
- Available with pressure relief and safety venting
- Provides tank breathing
- Thermal and pressure relief

Technical Data

Pipe thread:  
1/2-14 PTF

Overflow hose diameter:  
5/16" ID

Outward flow rate:  
70 SCFH @ 18" water pressure

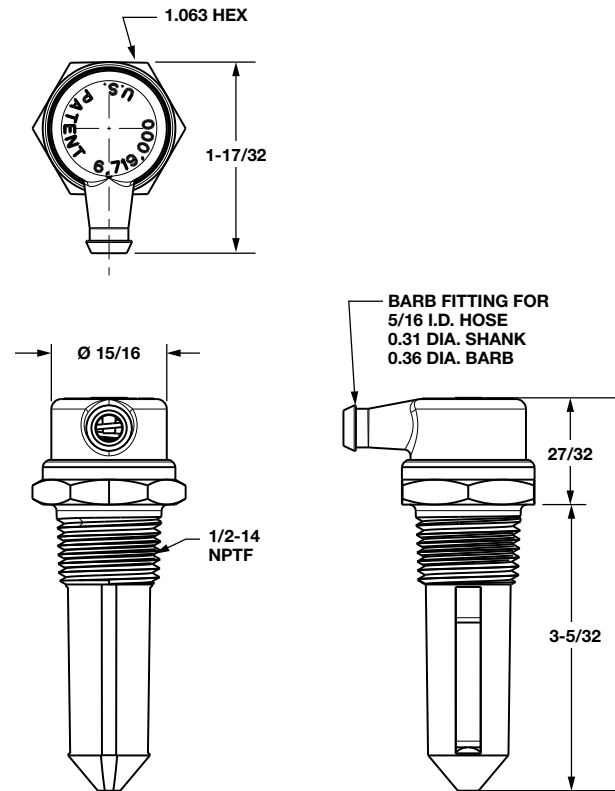
Hex size:  
1.063"



Models

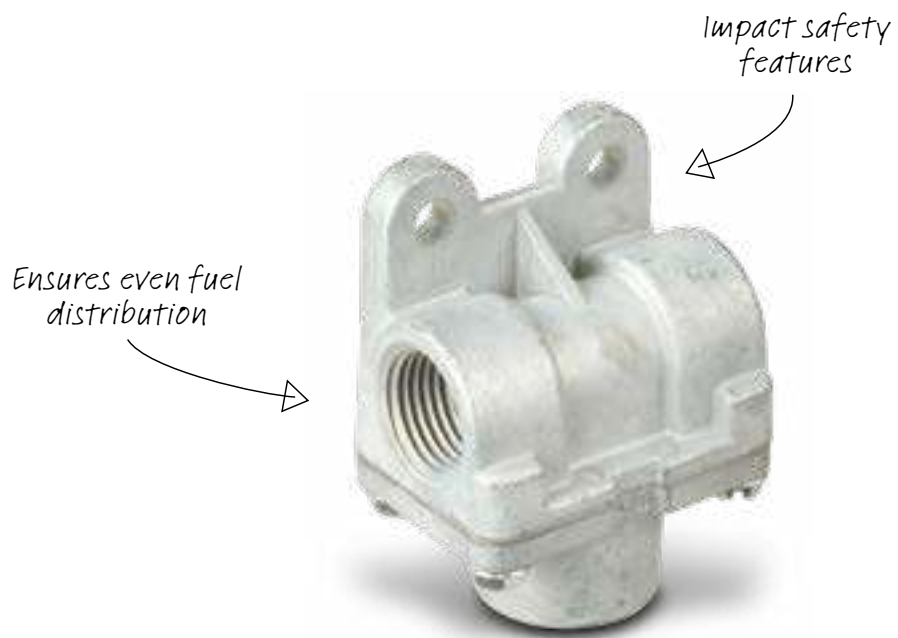
Model	Description	Thread	Diesel/Gas	Thermal Relief	Pressure Relief
2989-11	High Flow Fuel Tank Vent	1/2" - 14 NPTF	Diesel	Yes	Yes
2989-11V	High Flow Fuel Tank Vent w/ Vibraseal	1/2" - 14 NPTF	Diesel	Yes	Yes

Specifications



# Other Fuel Products

Our fuel products are engineered for improved safety and enhanced performance for dual fuel tank systems.



# RETURN FLOW SPLITTER

2252 Series

- Evenly distributes return flow of fuel to the fuel tanks
- Eliminates the need for a crossover line
- Features identical variable flow openings to control return fuel flow
- Provides proper fuel balance in dual tank systems

## Technical Data

**Operating Temperature:**  
-40°F to 180°F (-40°C to 82°C)

**Port size:**  
1/2" NPT

**Flow:**  
2252-1 and 2252-1D  
60 GPH @ 20" water pressure  
A2252-2 and A2252-2D  
60 GPH @ 12" water pressure

## Material

Heavy duty zinc die cast construction

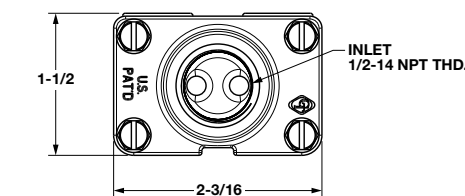


## Models

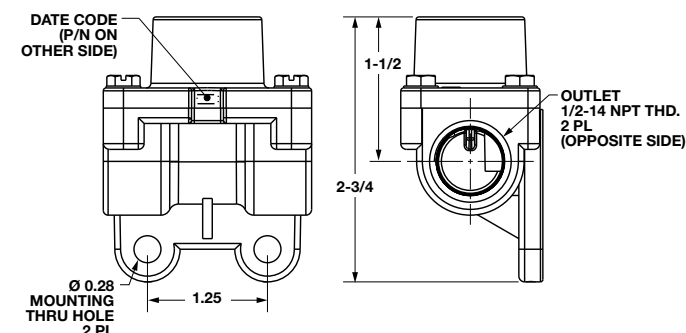
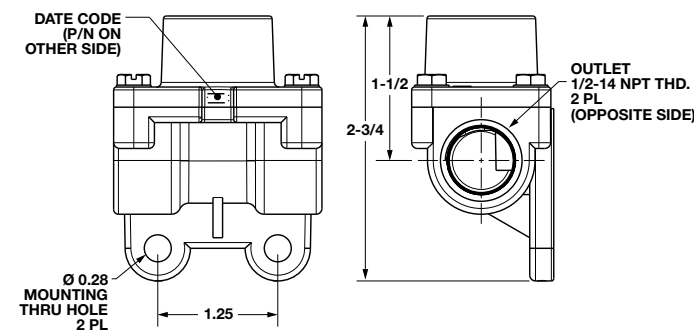
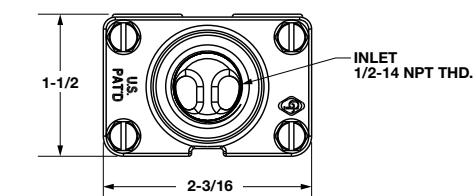
Model	Port Size	Thread type	Flow	Packaged
2252-1	1/2"-14	NPT	Standard	Bulk
2252-1D	1/2"-14	NPT	Standard	Individual
A2252-2	1/2"-14	NPT	High	Bulk
A2252-2D	1/2"-14	NPT	High	Individual

## Specifications

### Return Flow Splitter 2252-1



### High-flow Return Flow Splitter A2252-2



# LINEGARD® BREAKAWAY VALVES

2200-1

- The valves separate in the event of an impact and seal off both the fuel tanks and bottom crossover lines
- Prevents loss of fuel while leaving the system intact
- Available in different mounting configurations for various applications
- Valve shall flow less than 4.0 GPM of diesel fuel #2 at 70°F (21°C) at a different pressure of 1psi

## Technical Data

**Operation temperature:**  
-40°F to 185°F (-40°C to 85°C)

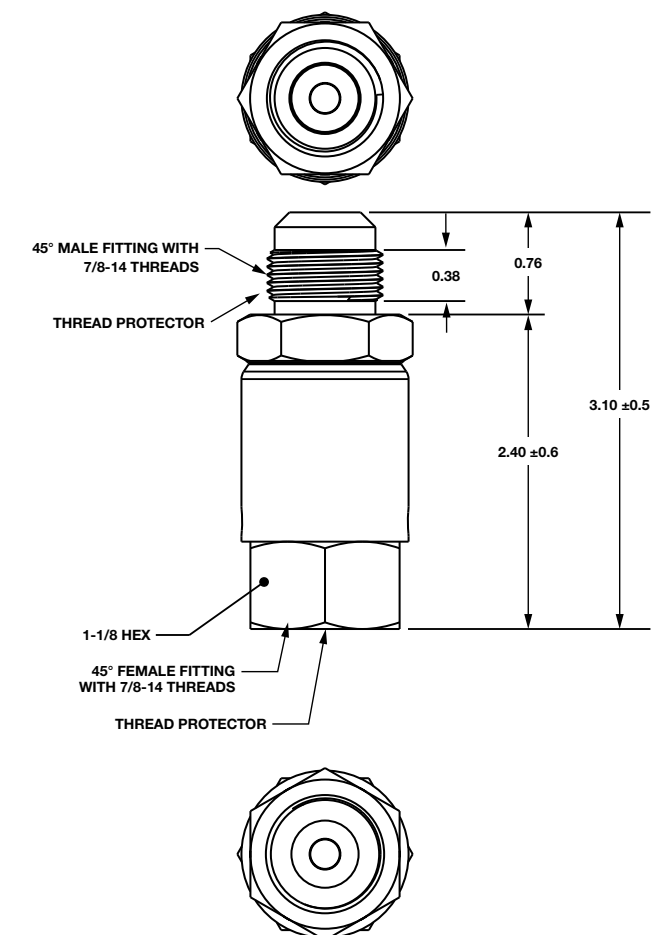
**Port size:**  
Male end: 7/8"-14 NPT  
Female end: 7/8"-14 NPT



## Models

Model	Port Size	Thread Type	Packaged
2200	7/8"-14	NPT	Bulk
2200-1	7/8"-14	NPT	Individual

## Specifications





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# Warning and Warranty

## Warning

These products are intended for use in industrial systems only. Do not use these products where pressures and temperatures can exceed those listed under Specifications.

Before using these products with fluids other than those specified, for nonindustrial applications, life-support systems, or other applications not within published specifications, consult IMI Norgren.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes. The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure modes.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided. System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products, or posted on the IMI Norgren website under "Downloads." System designers should also provide for all OSHA requirements including Title 29 CFR 1910.147 Lockout/Tagout.

It should be recognized that warnings are valid for any product, regardless of manufacturer, and are not restricted to products manufactured by IMI Norgren. IMI Norgren's reputation for product quality and performance is well established. We feel we have the additional obligation to provide information or warnings to customers to assist them in applying our products in a reasonable and safe manner.

**Proposition 65:** This product contains chemicals known to the state of California to cause cancer, or birth defects, or other reproductive harm.

## Warranty

Items sold by IMI Norgren are warranted to be free from defects in materials and workmanship for a period of two years\* from the date of invoice, provided said items are used according to IMI Norgren's recommended usages. IMI Norgren's liability is limited to the repair of, refund of purchase price paid for, or replacement in kind of, at IMI Norgren's sole option, any items proved defective, provided the allegedly defective items are returned to IMI Norgren prepaid. The warranties expressed above are in lieu of and exclusive of all other warranties. There are no other warranties, expressed or implied, except as stated herein.

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Parts listed in this catalog all have functionality that are intended to provide solutions to our customers' commercial vehicle applications. Our products are designed with proven technology and manufactured in ISO 9001 or IATF certified facilities. However, in order to meet the stringent commercial vehicle quality requirements, all new applications must be fully reviewed and potentially a new special part number will be required to ensure all customer specific requirements are achieved. Due to unlimited application and system conditions, it is the buyers responsibility to validate the product within their specific application. Please contact one of our sales team to discuss.





For further information, scan this QR code or visit [www.imi-precision.com](http://www.imi-precision.com)

## Air & Electric Management

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BRAKE VALVES



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CAB CONTROLS



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FILTERS/  
REGULATORS



4

FITTINGS



5

LIFT AXLE  
CONTROLS



6

SEAT CONTROLS



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SOLENOIDS



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OTHER FUEL  
PRODUCTS



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