



**IMI NORGREN®**

**Comercial Vehicles**



# **Commercial Vehicle Product Catalog**

**Quality. Solutions. Fast.**

**(800) 229-1875**

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

**IMI** Precision  
Engineering

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.

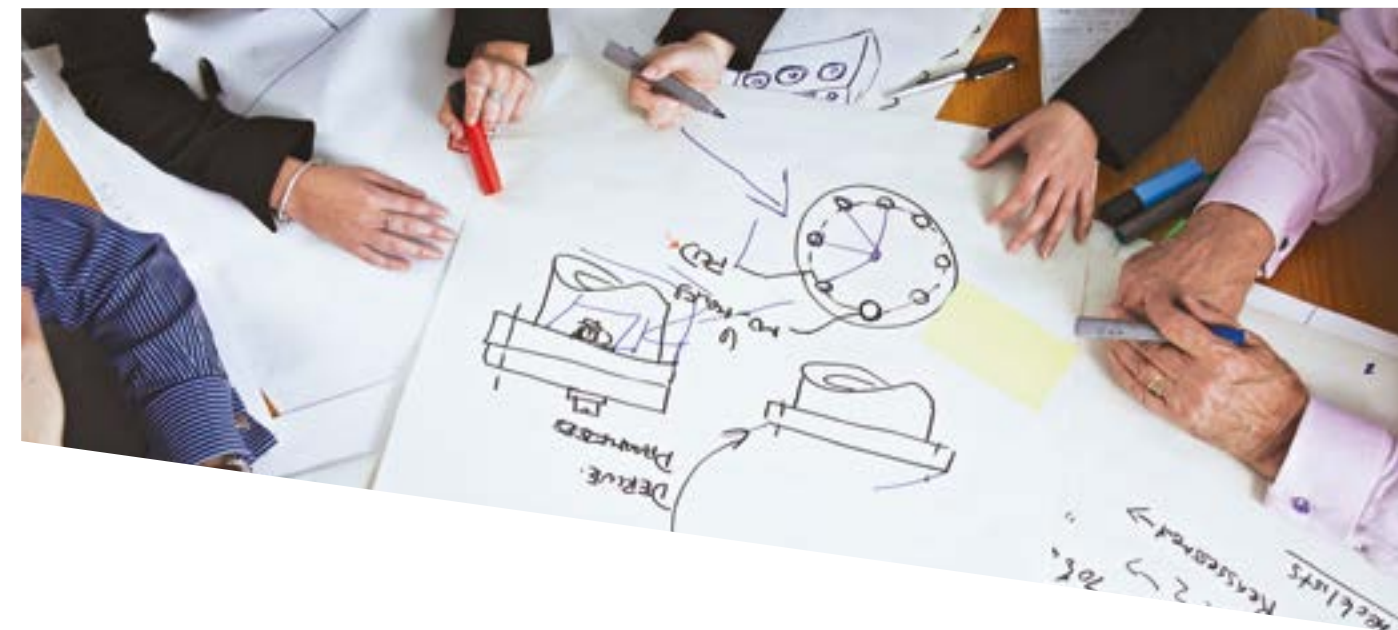
Our products include valves, seat and cab controls, filters and regulators, lift axle controls, solenoids, cylinders, DOT fittings, and more- all designed to deliver superior quality, cost savings, safety and comfort with proven technology you can trust.

### 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.

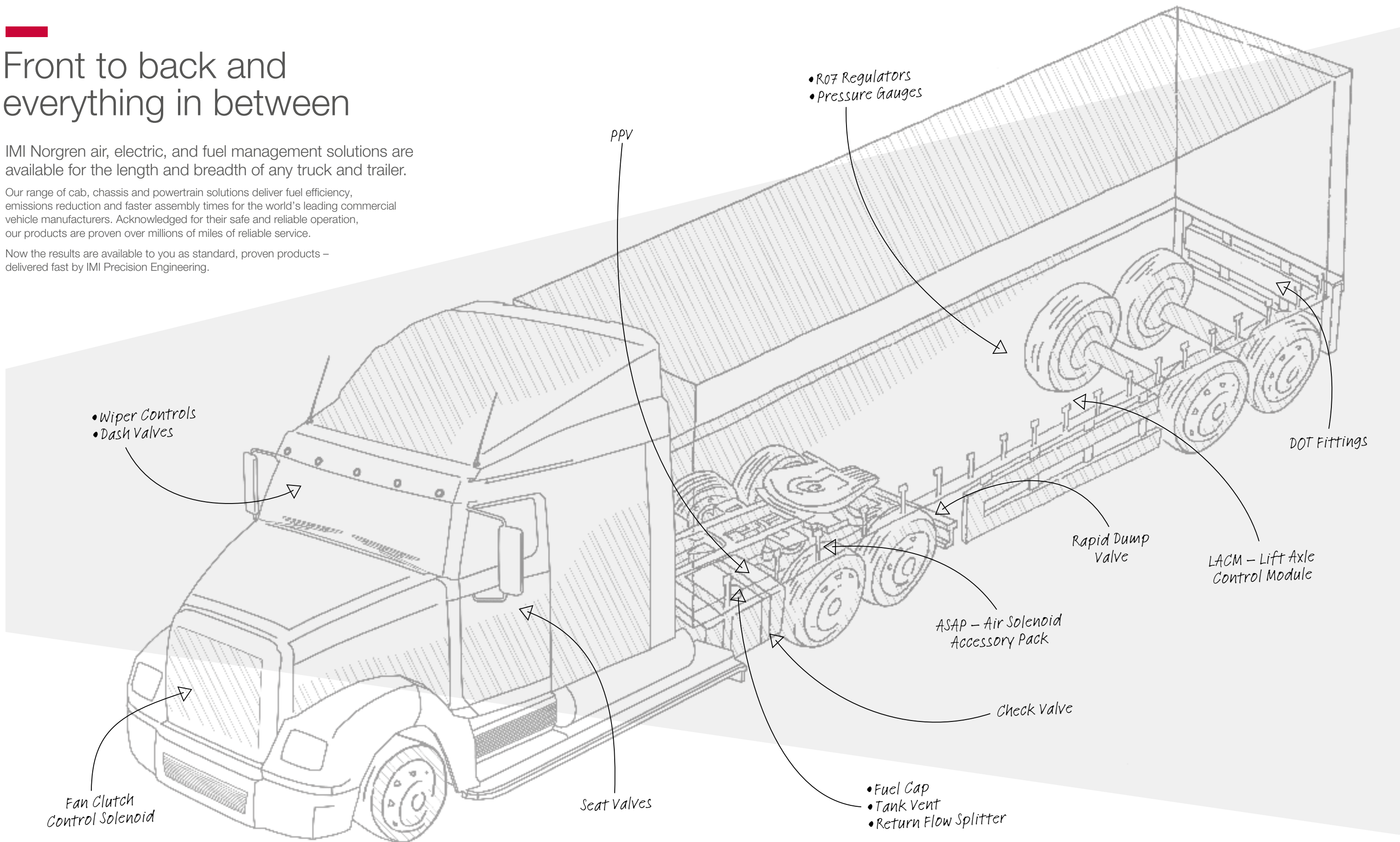


# Front to back and everything in between

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.



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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, wiper 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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| <b>Toggle-Style Switch - Air/Electric 3200 &amp; 3201 Series</b> | <b>Horn Valves 3300, 3301 &amp; 3302 Series</b> | <b>Wiper Washer Controller</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> |
| Page 38                                                  |

## 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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| <b>Seat Leveling Valve with Clutch</b>     |                                                                  |                                             |                                                                     |                                                              |                                                  |
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# Fast Find Guide

## ● Solenoids Valves

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

|                         |                                                  |                                                                 |                     |                                                                   |                          |
|-------------------------|--------------------------------------------------|-----------------------------------------------------------------|---------------------|-------------------------------------------------------------------|--------------------------|
| <b>Rapid Dump Valve</b> | <b>Pressure Protection Valves<br/>223 Series</b> | <b>Inline Pressure<br/>Protection Valves<br/>5200-75 Series</b> | <b>Check Valves</b> | <b>Super X Manual and<br/>Mechanical Actuated<br/>Spool Valve</b> | <b>Kneeling Manifold</b> |
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## ● 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

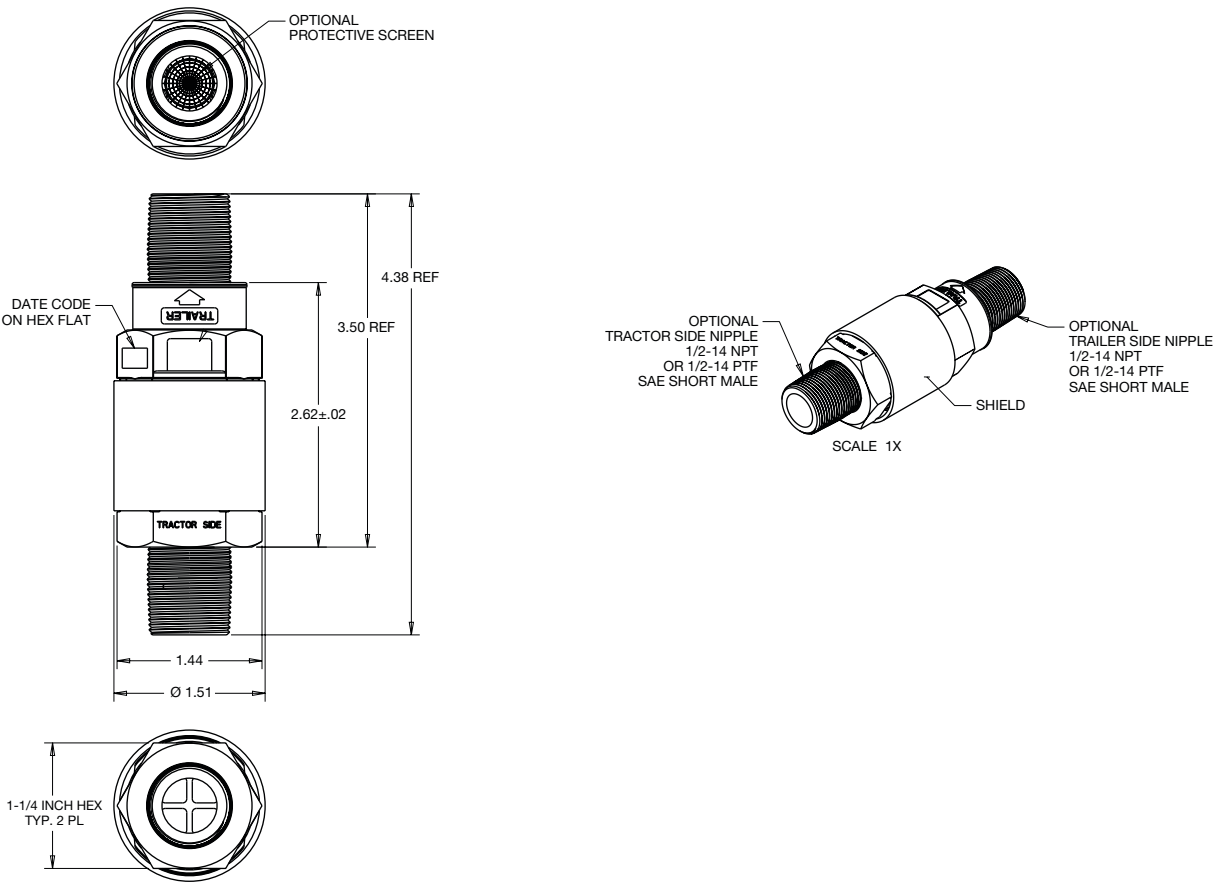
**Nipple size:**  
1/2" PTF male



## Models

| Model   | Packaging  | Nipple Side:<br>1/2" PTF | Port Side:<br>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

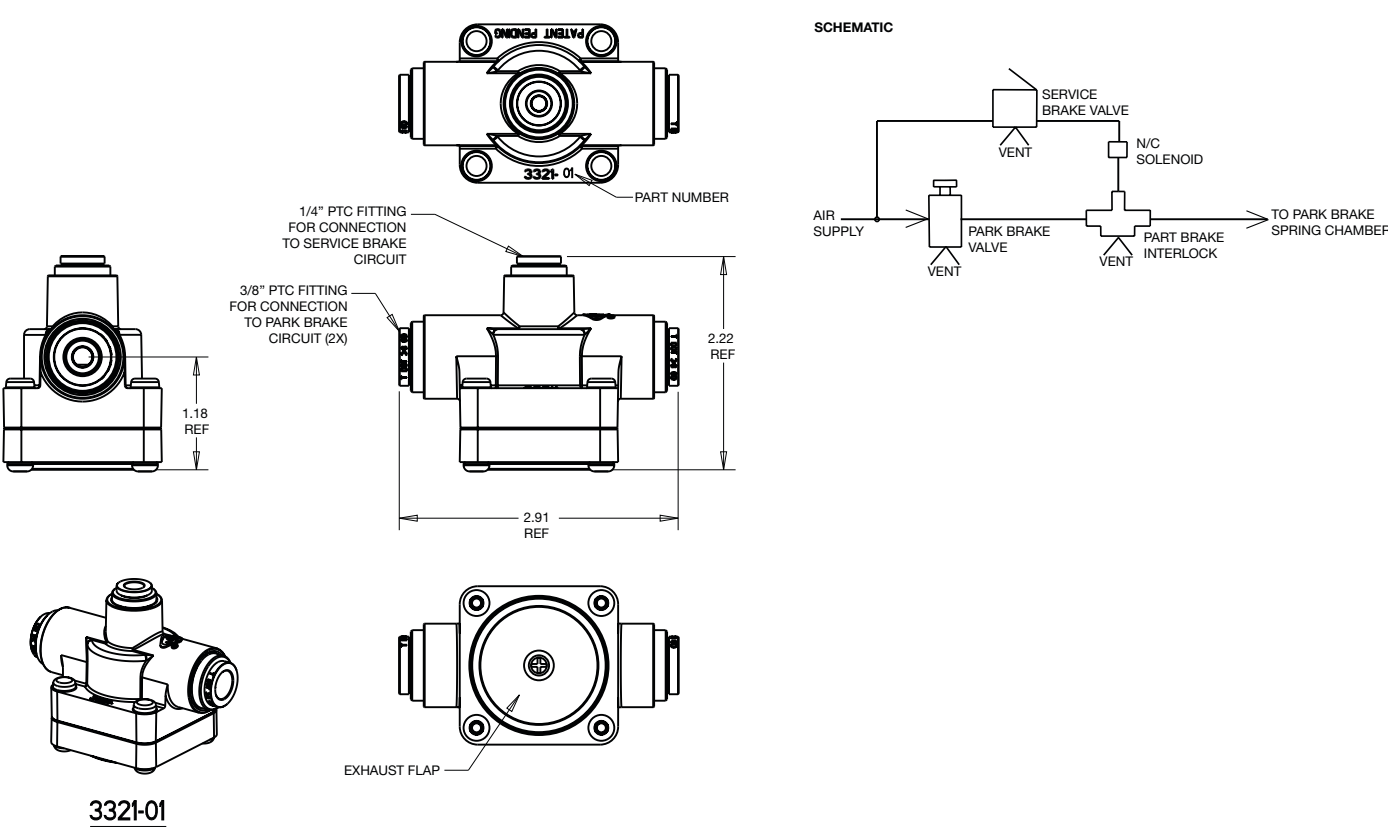
**Flow:**  
3/8" PTC to 3/8" PTC, 0.20 min. equivalent orifice.  
3/8" PTC to exhaust, 0.20 min. equivalent orifice.



## 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

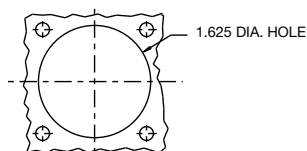
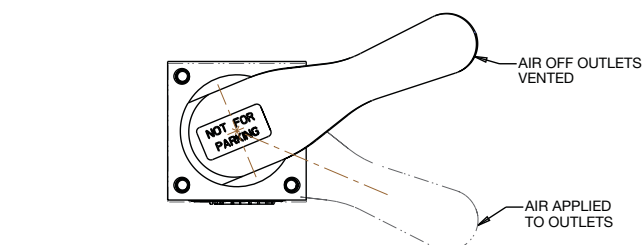
Aluminum



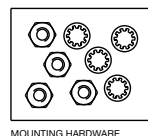
## Models

| 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 |

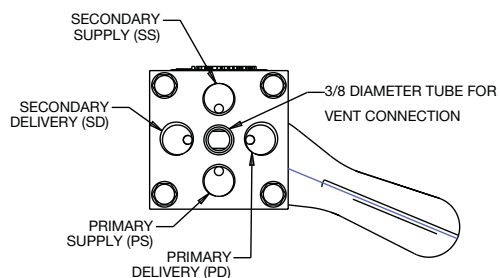
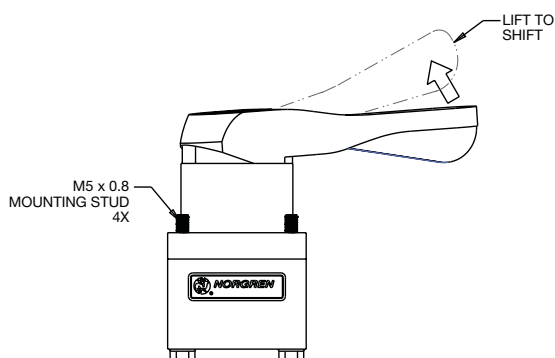
## Specifications



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

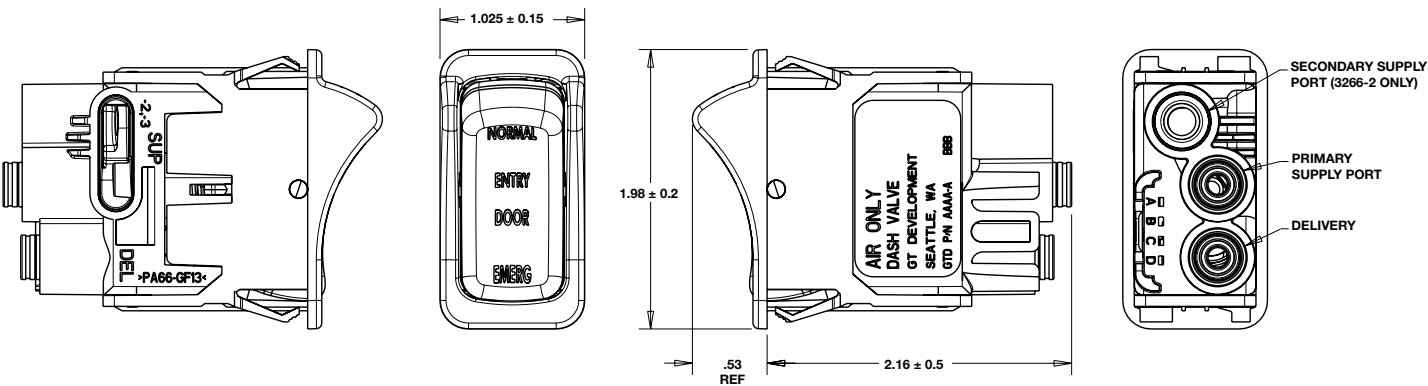
Nylon, glass filled



## 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

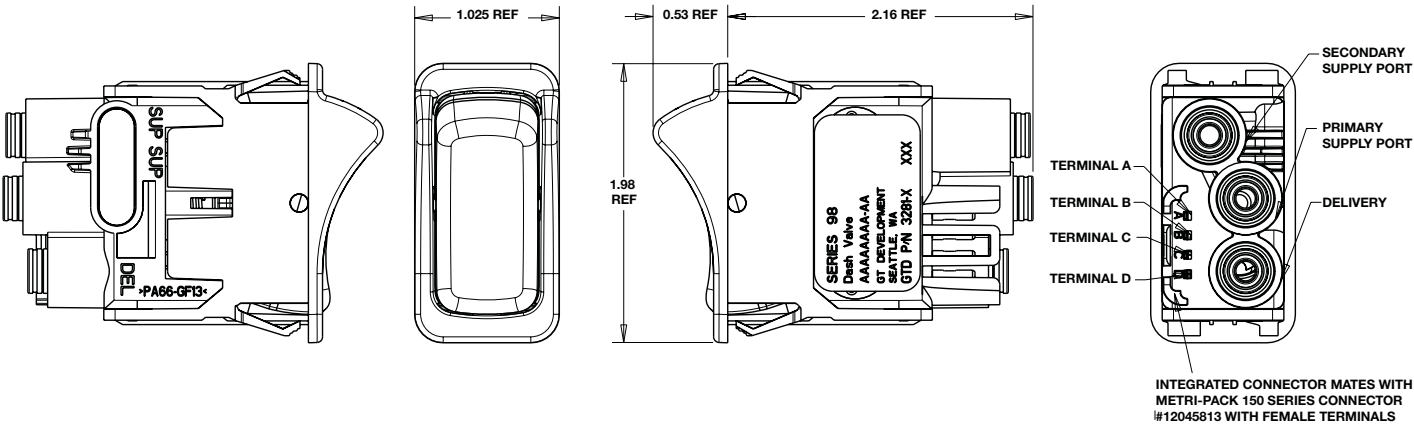
Nylon, glass filled



## 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

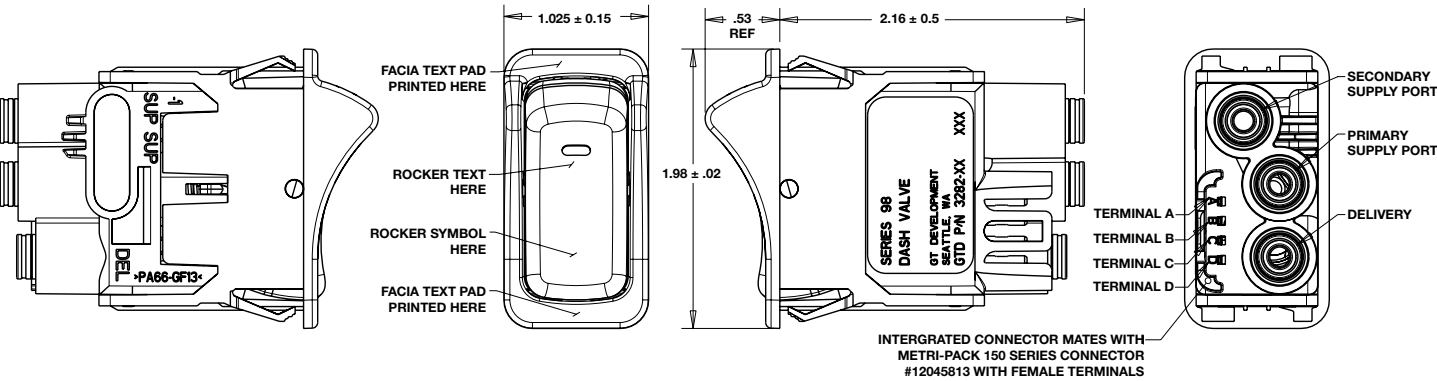
Nylon, glass filled



## Models

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

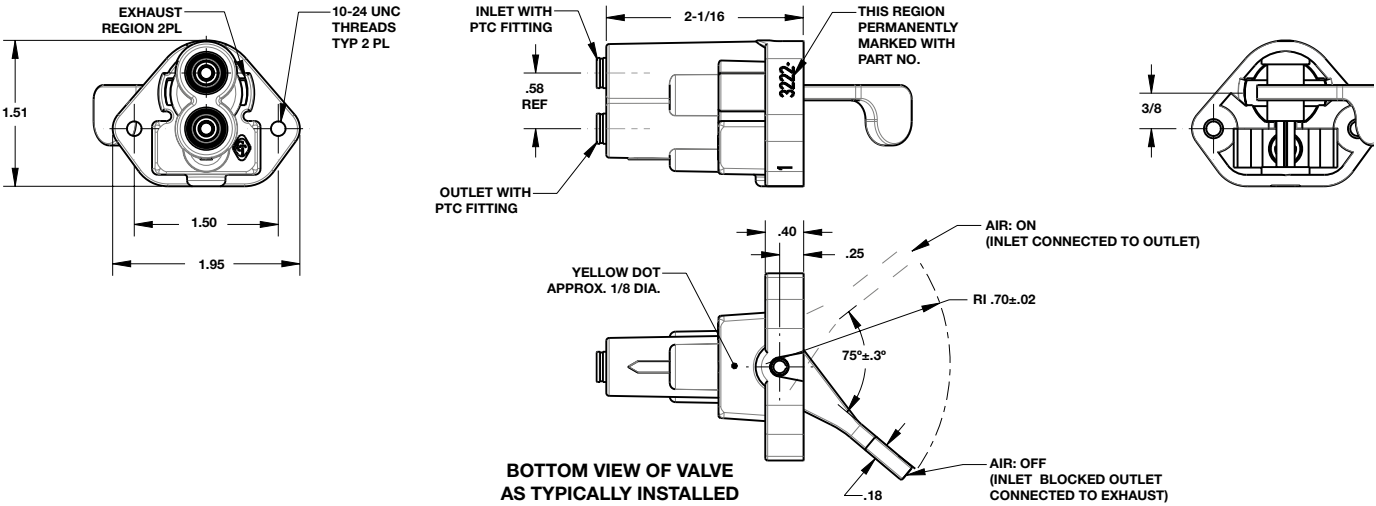


## Models

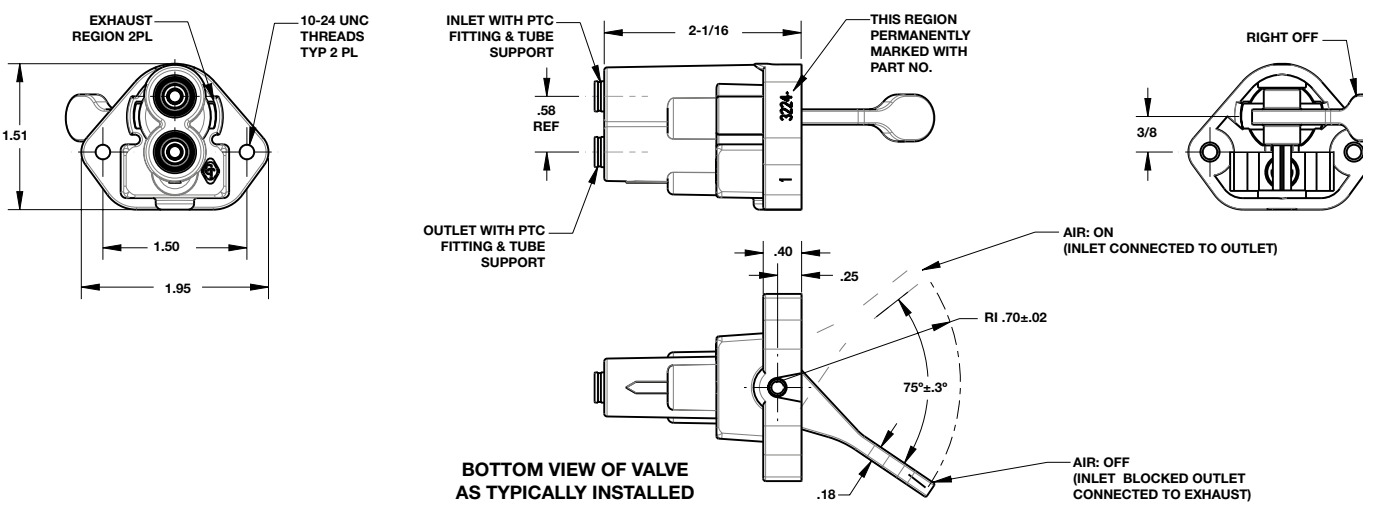
| Model  | Tube O/D |
|--------|----------|
| 3222-1 | 1/4"     |
| 3224-1 | 1/4"     |

## 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"

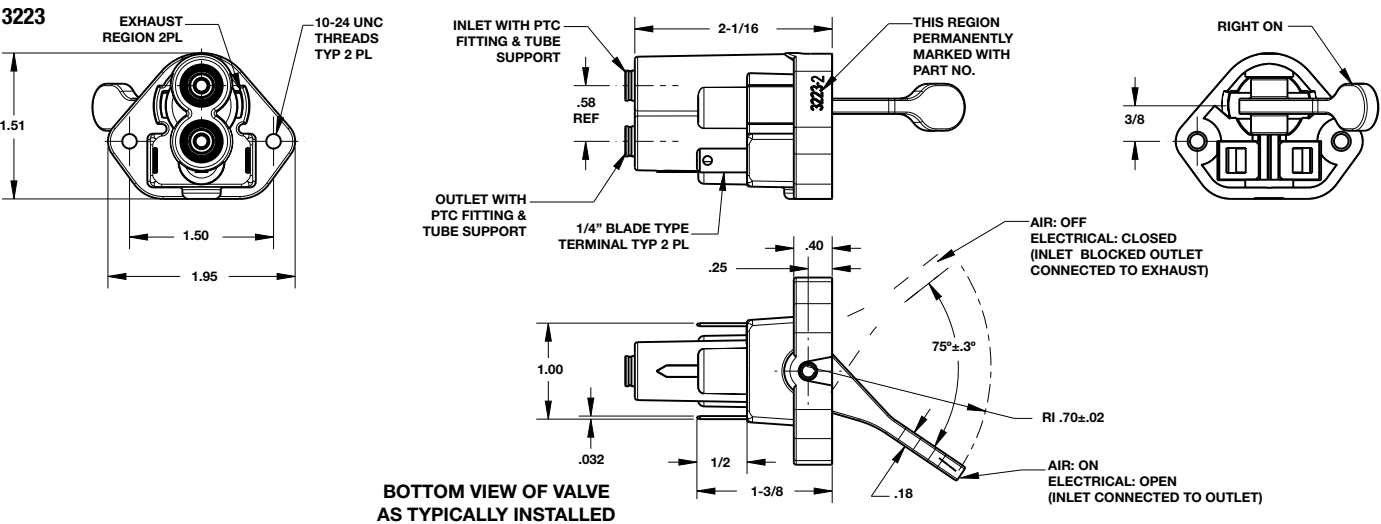
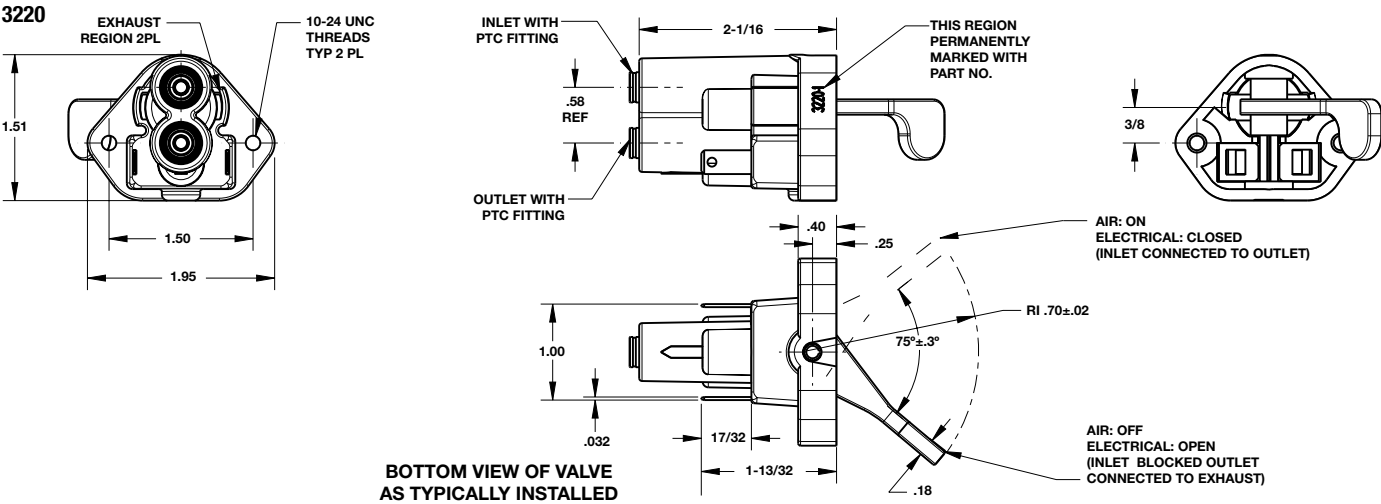
**Electrical connection:**  
Two 1/4" blade type electrical terminals



## 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

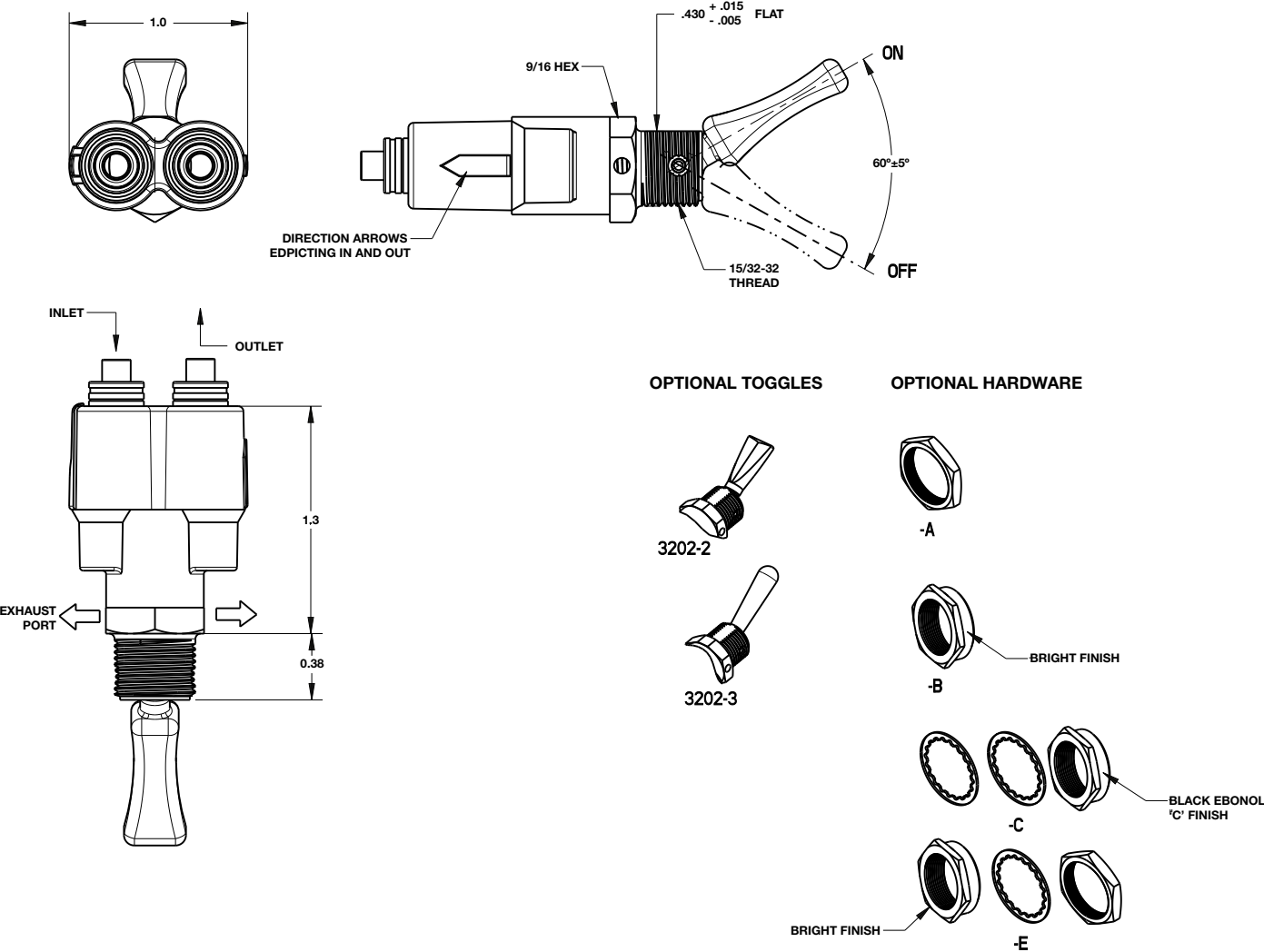
Zytel, Nylon glass filled



## 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

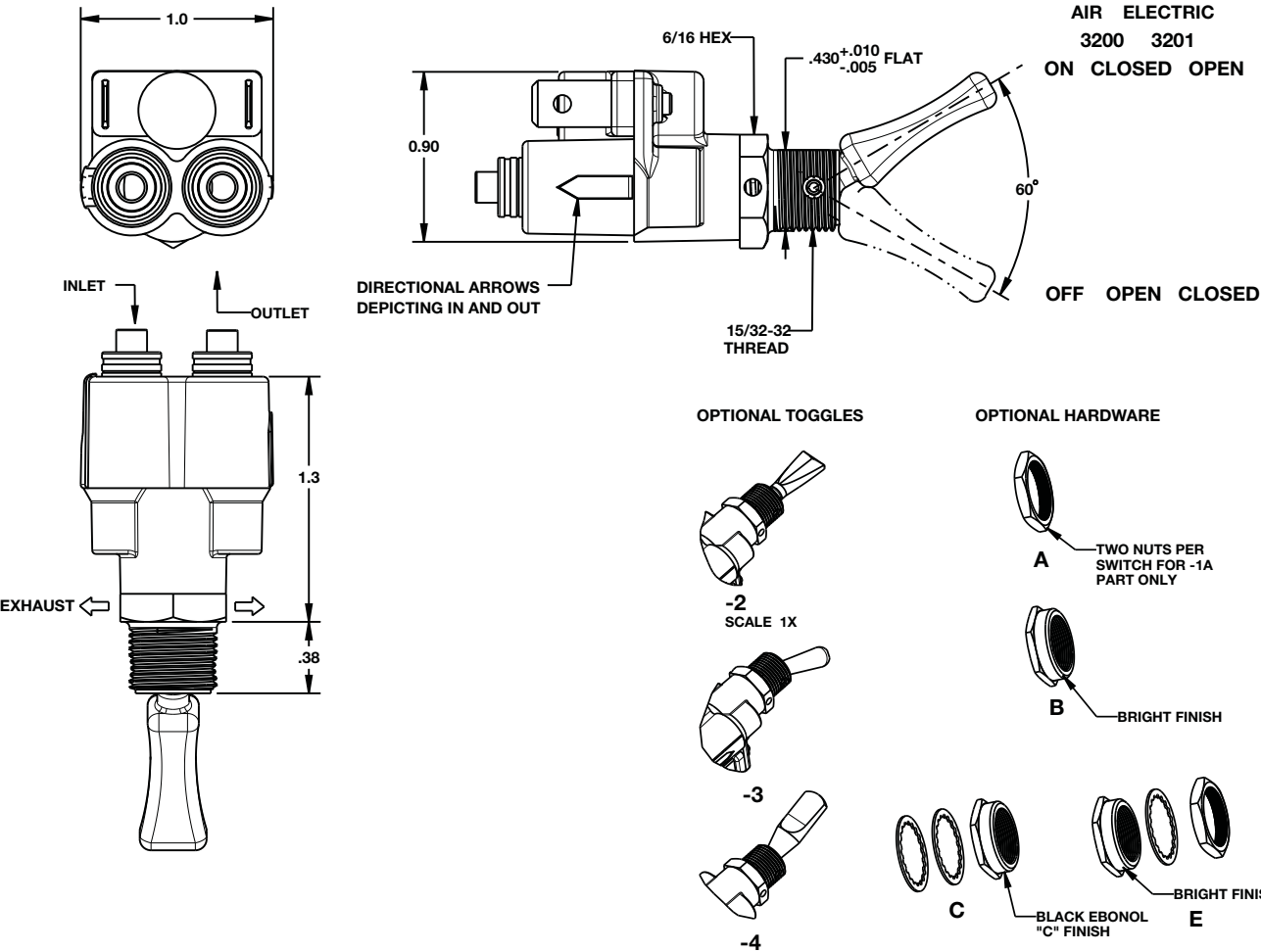
Zytel, Nylon glass filled



### 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

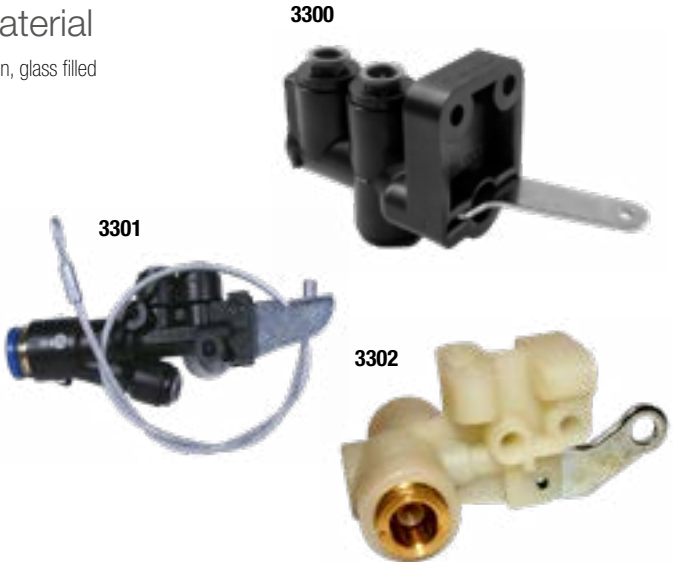
### Technical Data

**Operating pressure:**  
0 – 150 psi

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

### Material

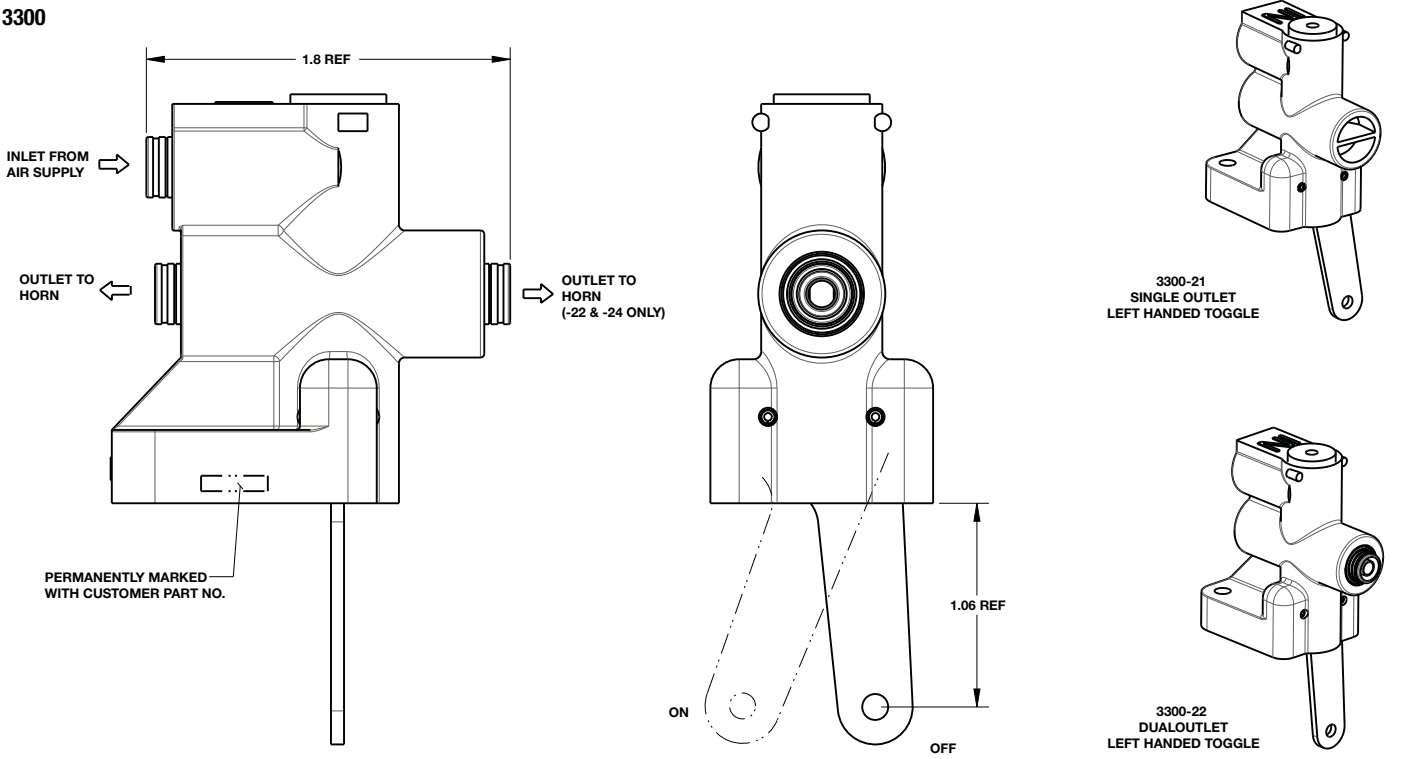
Nylon, glass filled



### Models

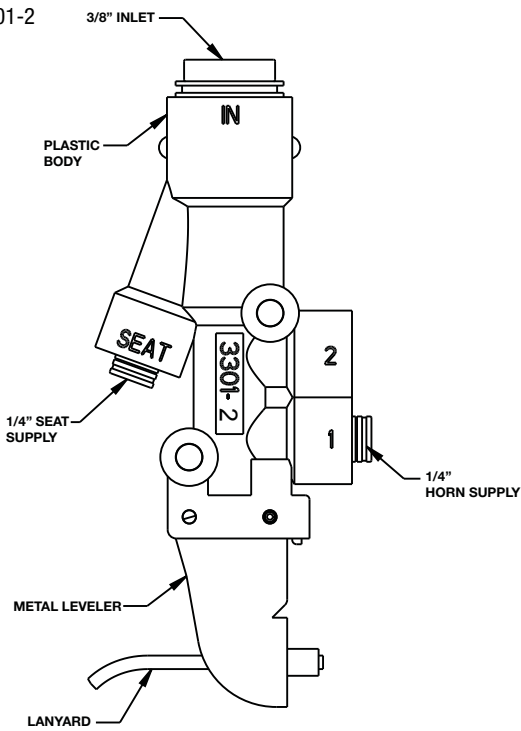
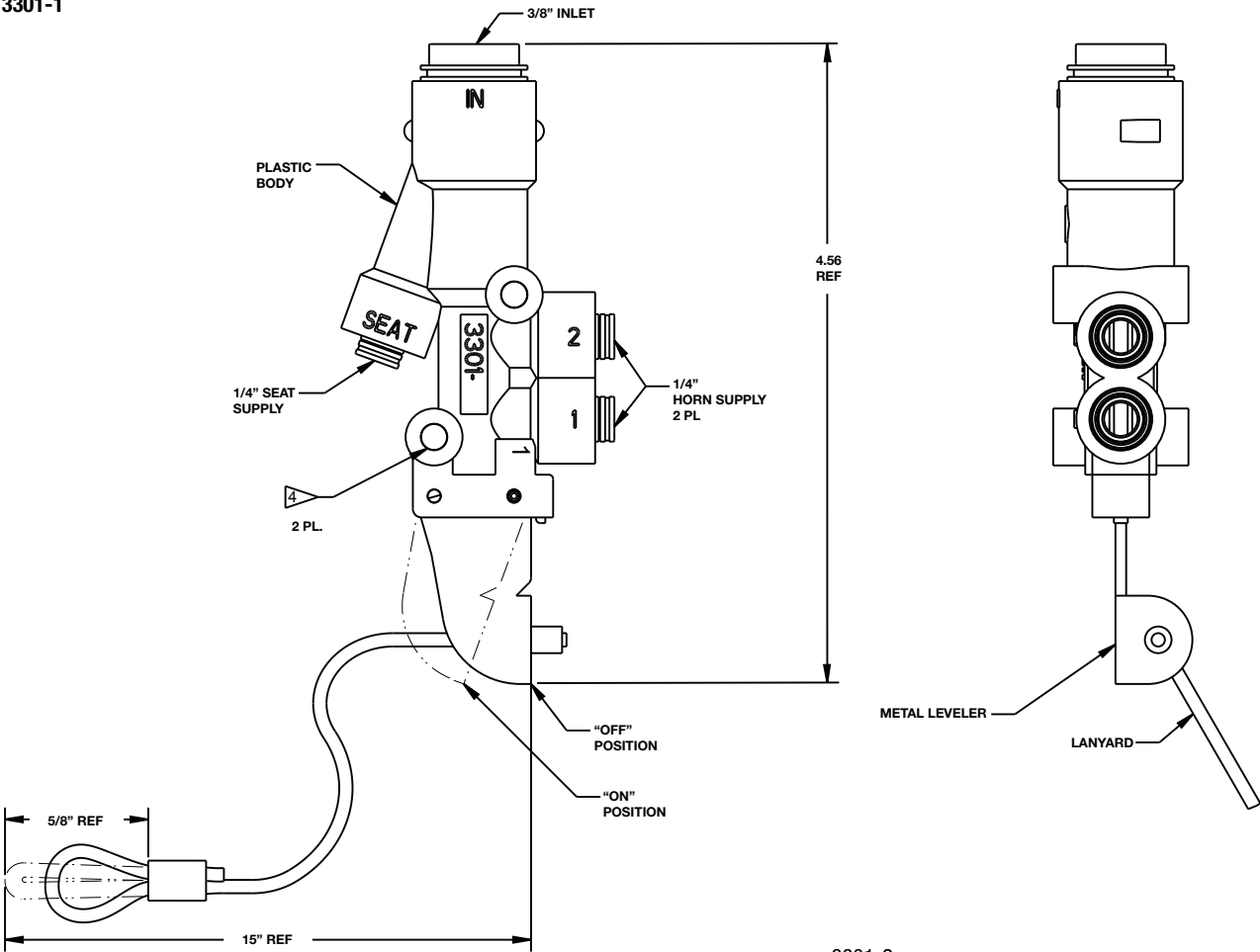
| Model   | Description                            | Tube O/D |
|---------|----------------------------------------|----------|
| 3300-21 | Single outlet, left hand toggle        | 1/4"     |
| 3300-22 | Dual outlet, left-handed toggle        | 1/4"     |
| 3301-1  | Dual outlet w/ lanyard lever assembly  | 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



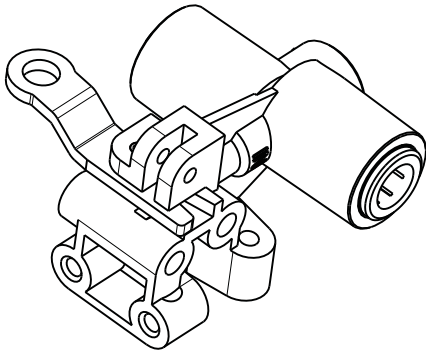
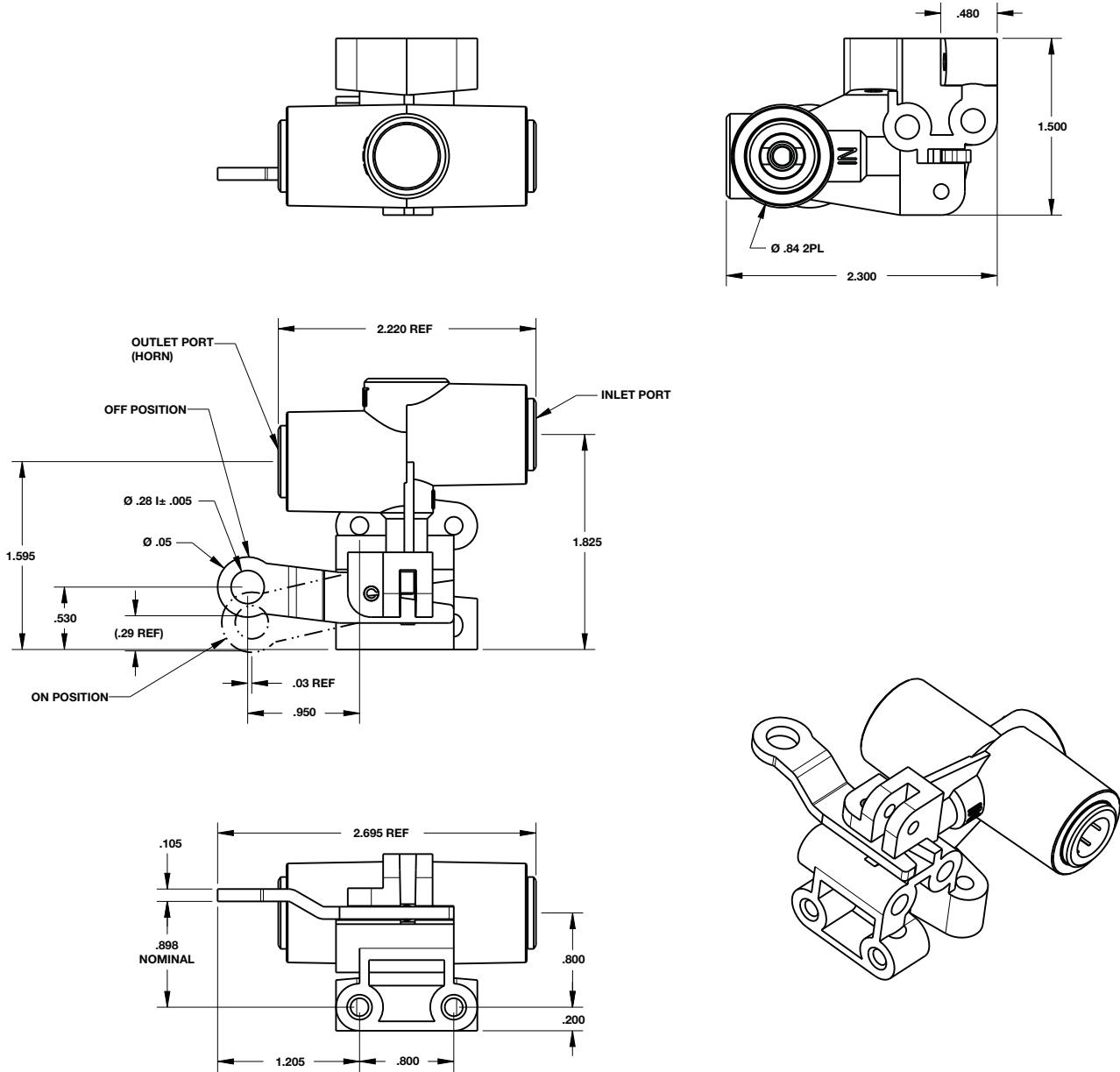
# HORN VALVES 3300, 3301 & 3302 Series

3301-1



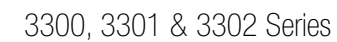
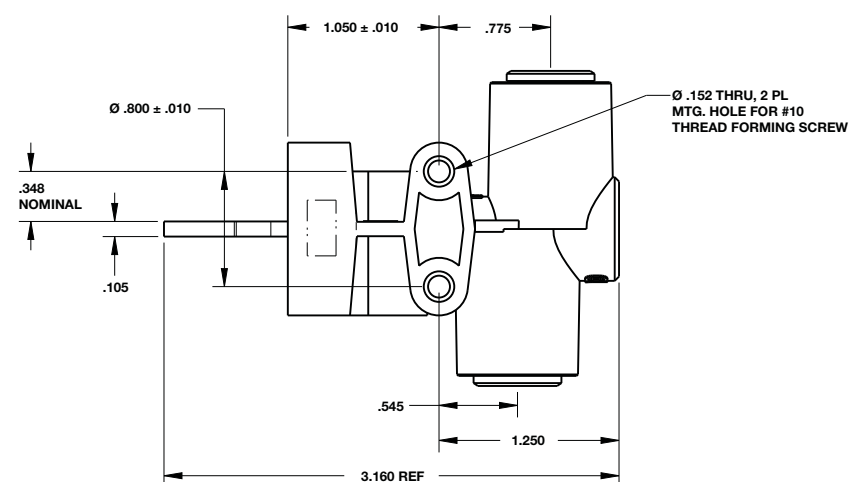
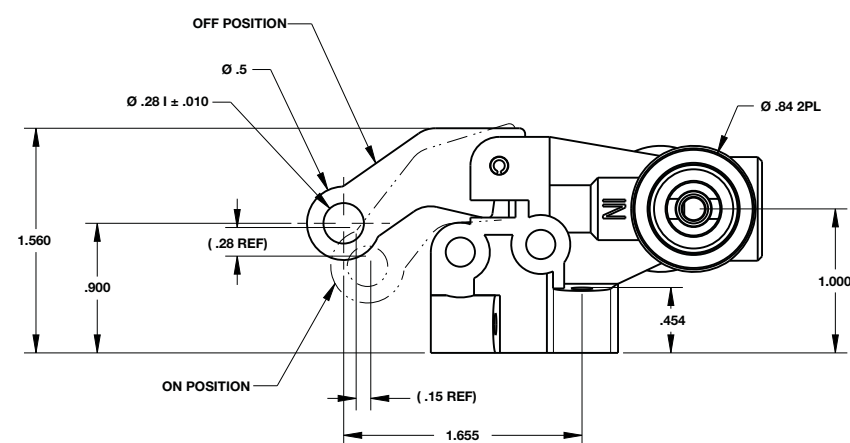
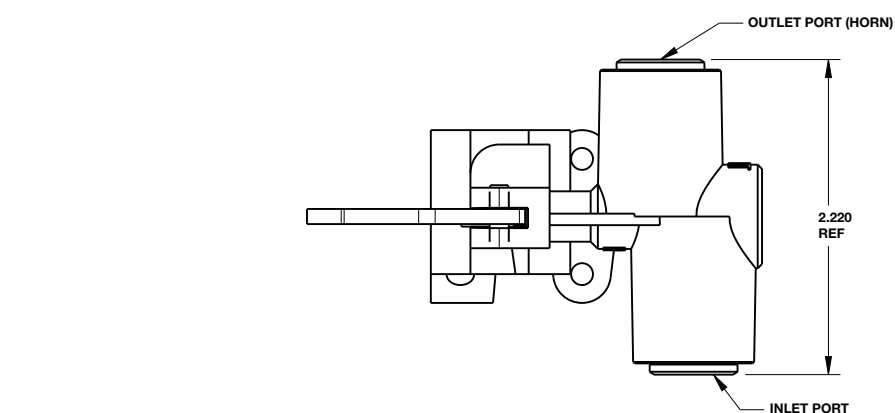
# HORN VALVES 3300, 3301 & 3302 Series

3302-1

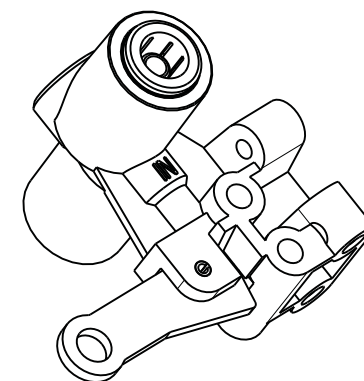
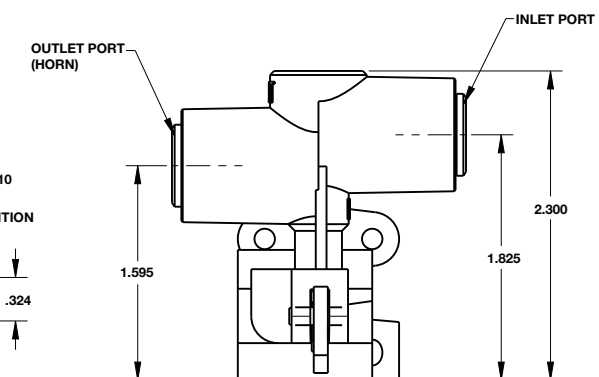
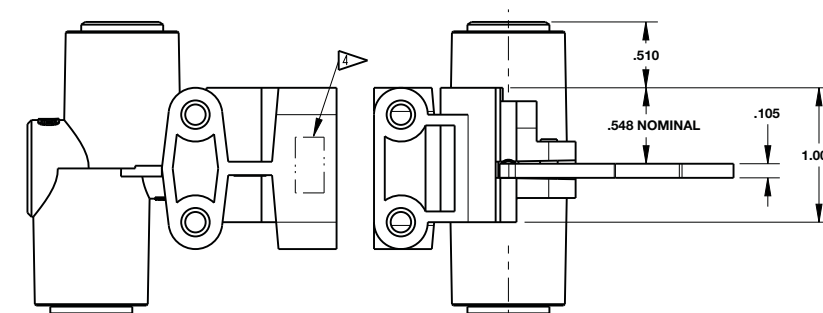
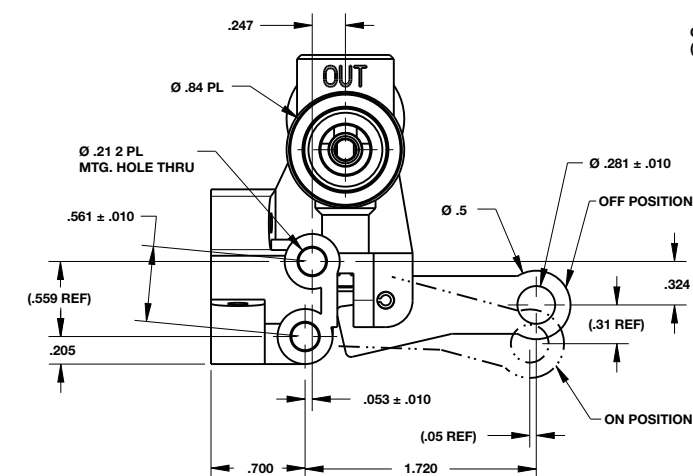
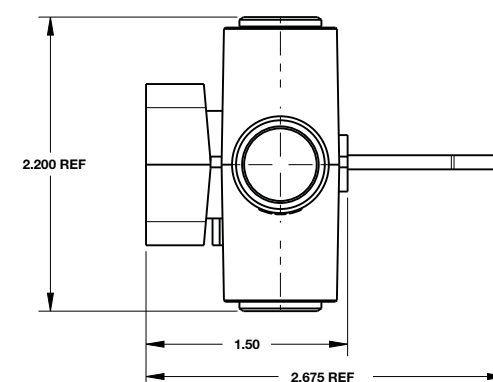


## 3300, 3301 & 3302 Series

3302-2



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

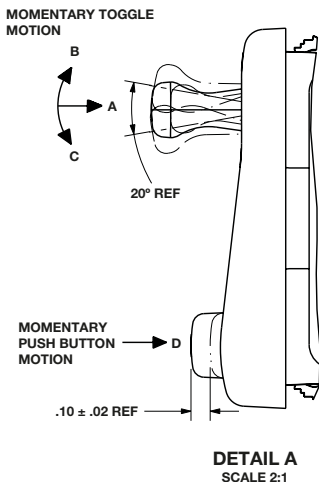
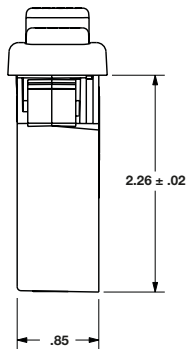
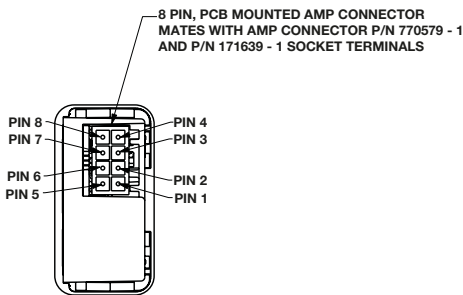
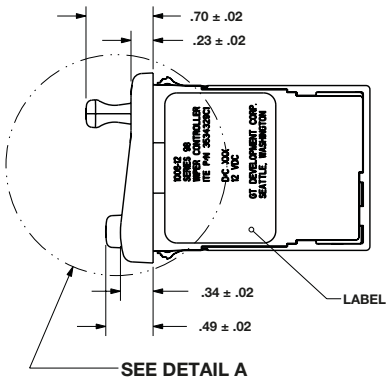
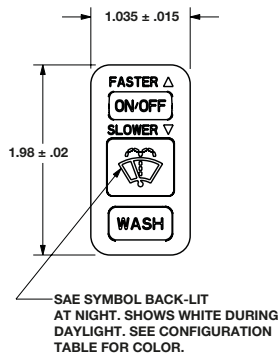
Zytel 72G13 HSIL BK black  
nylon 6/6 13% glass



## 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) IA max.
  - 4 High speed relay (GND) IA 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®



## Models

## Accessories

| Model                                                                               | Port size<br>PTF | Flow<br>SCFM* | Spring rate<br>psig | Wall<br>mounting<br>bracket                                                         | Quick-mount<br>pipe adapter                                                         | Quikclamp                                                                           | Quikclamp<br>and<br>bracket                                                         | Neck<br>mounting<br>bracket                                                          | Tamper<br>evident<br>cover & wire                                                     | Gauge<br>psig                                                                         | Service kit**                                                                         |
|-------------------------------------------------------------------------------------|------------------|---------------|---------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |                  |               |                     |  |  |  |  |  |  |  |  |
| 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.

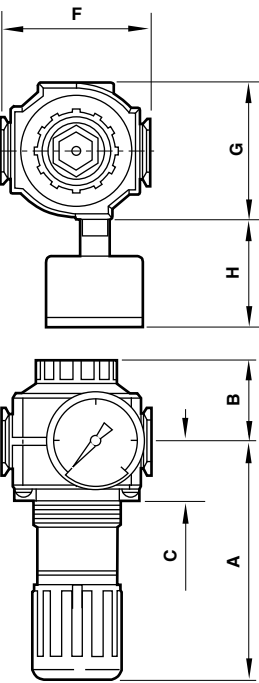
NOTE: Outlet pressure can be adjusted to pressures in excess of, and less than, those specified. Do not use these units to control pressures outside of the specified ranges.

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

# EXCELON® MODULAR SYSTEM PRESSURE REGULATORS

R72G, R73G, R74G

## Specifications



| 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®



## Models

| 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.

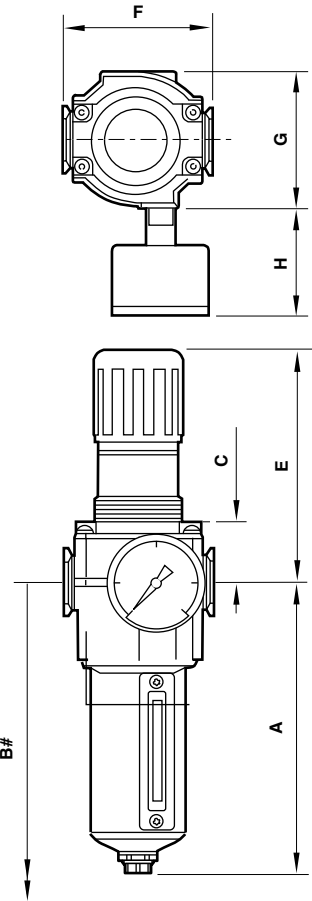
NOTE: Outlet pressure can be adjusted to pressures in excess of, and less than, those specified. Do not use these units to control pressures outside of the specified ranges.

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

# EXCELON® MODULAR SYSTEM FILTER/REGULATORS

B72G, B73G, B74G

## Specifications



# Minimum clearance required to remove bowl

| 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



## Models

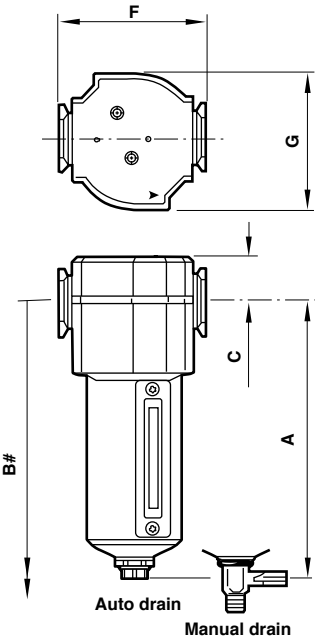
| Autodrain Model No. | Manual Drain Model No. | Port size PTF | Flow SCFM* | Bowl type | Element | Wall mounting bracket | Quickmount pipe adapter | Quikclamp | Quikclamp and bracket | Service kit** | Element |
|---------------------|------------------------|---------------|------------|-----------|---------|-----------------------|-------------------------|-----------|-----------------------|---------------|---------|
| 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.

# EXCELON® MODULAR SYSTEM FILTERS

F72G, F73G, F74G

## Specifications



| 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)\*

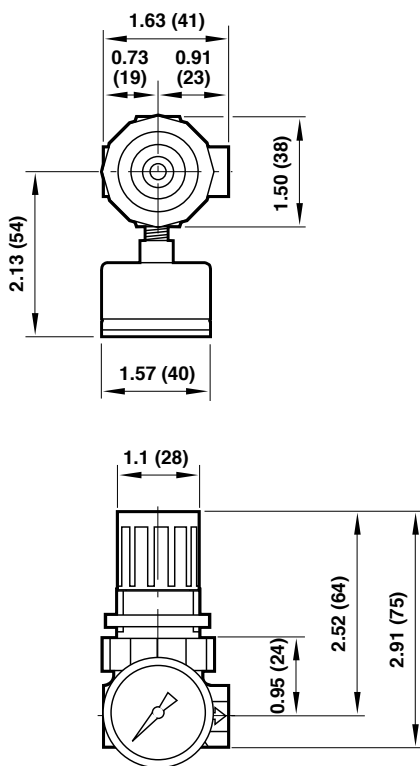


## Models

| 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

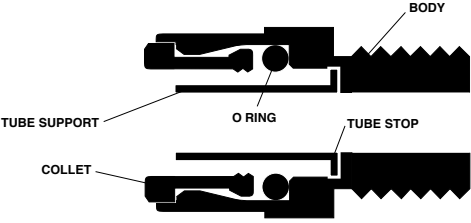
## Material

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

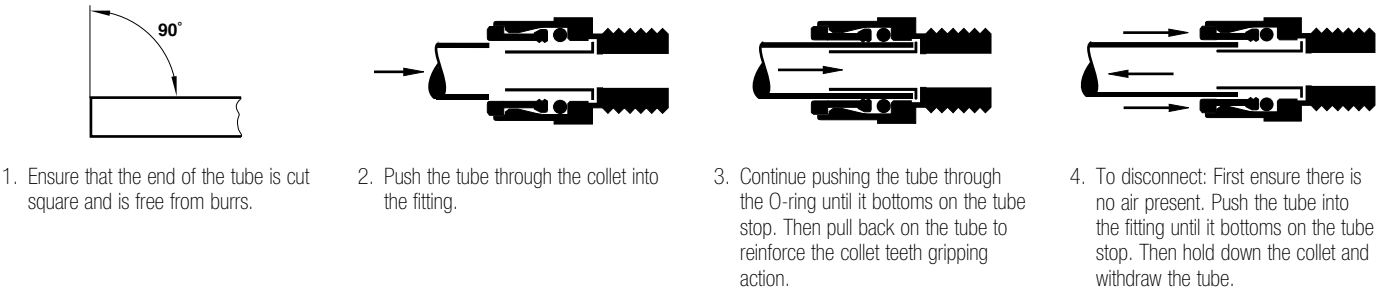


**Body:**  
The body has an internally machined form to secure the Collet(s), O-ring(s) and Tube support(s): It also has internal and externally machined thread form(s) for connection to ports where applicable.

**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.



# 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

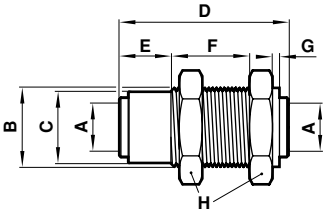
| Models    | A Tube O/D | B NPT Female | C UNF | ØD   | E    | F    | G    | H    | J       |
|-----------|------------|--------------|-------|------|------|------|------|------|---------|
| 95457006M | 1/4"       | 1/8"         | 5/8"  | 0.63 | 1.32 | 0.69 | 0.28 | 0.87 | 15/16"  |
| 95457001M | 1/4"       | 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



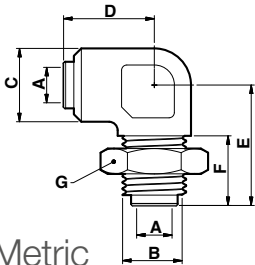
## ● Bulkhead Unions

| 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  |



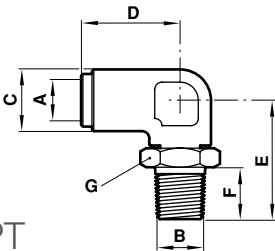
## ● Union Bulkhead Elbows Metric

| 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 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  |

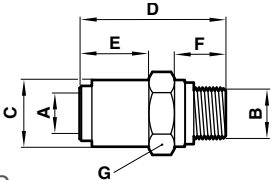


CAUTION: Swivel adapters are not suitable for use in continuously rotating



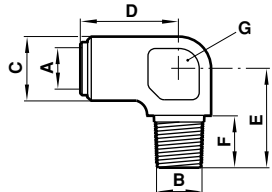
## ● Metric Male Connectors

| 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) |
| 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) |
| 94466635M  | 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) |
| 9446666BP  | 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) |



## ● 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  |

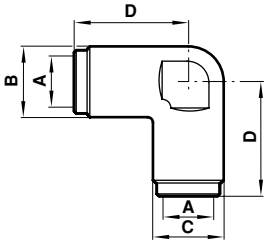


# DOT VEHICLE PUSH-TO-CONNECT FITTINGS Fleetfit Series



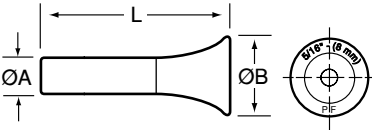
## ● Union Elbows

| 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



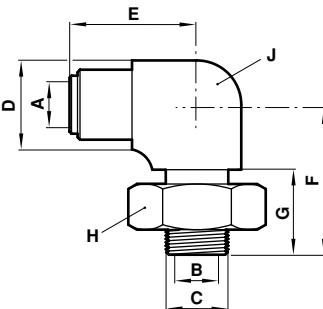
## ● 45° Male Elbows NPT

| 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  |



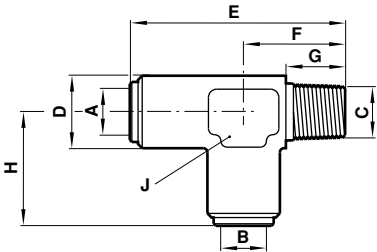


DOT VEHICLE PUSH-TO-CONNECT FITTINGS  
Fleetfit Series



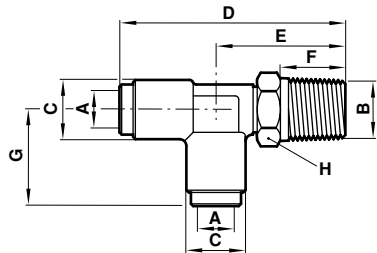
● Male Run Tees NPT

| 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  |



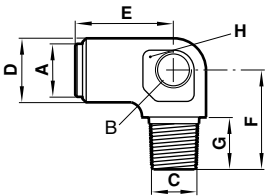
● Male Swivel Run Tees NPT

| 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 |



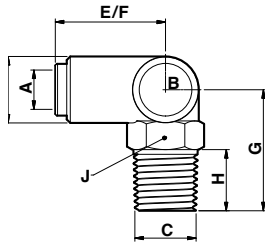
Note: Ports are threaded on side shown.

DOT VEHICLE PUSH-TO-CONNECT FITTINGS  
Fleetfit Series



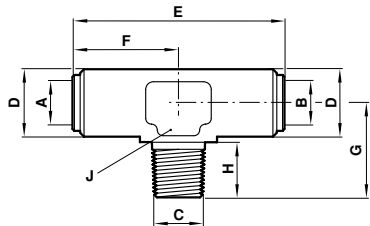
● Special 90° Tees NPT

| 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  |



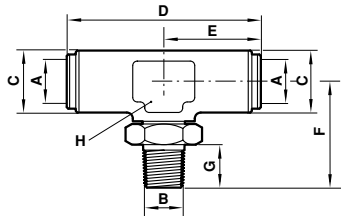
● Male Branch Tees NPT

| 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  |



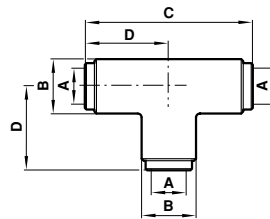
CAUTION: Swivel adapters are not suitable for use in continuously rotating or gyrating applications.

# DOT VEHICLE PUSH-TO-CONNECT FITTINGS

Fleetfit Series



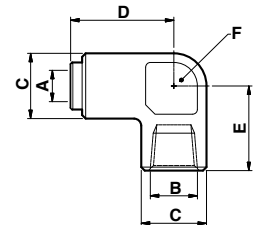
## ● Union Tee



| 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 |



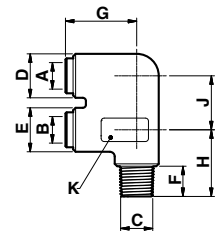
## ● Female Elbows NPT



| 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 |



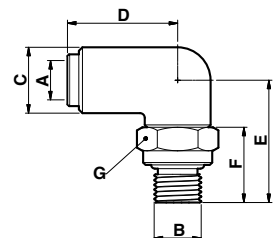
## ● Double Elbow Adapters NPT



| 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 |



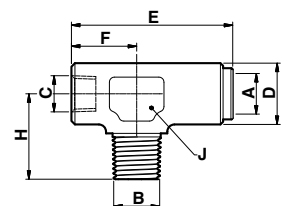
## ● Male Hobbs Elbows Metric



| 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 axes 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



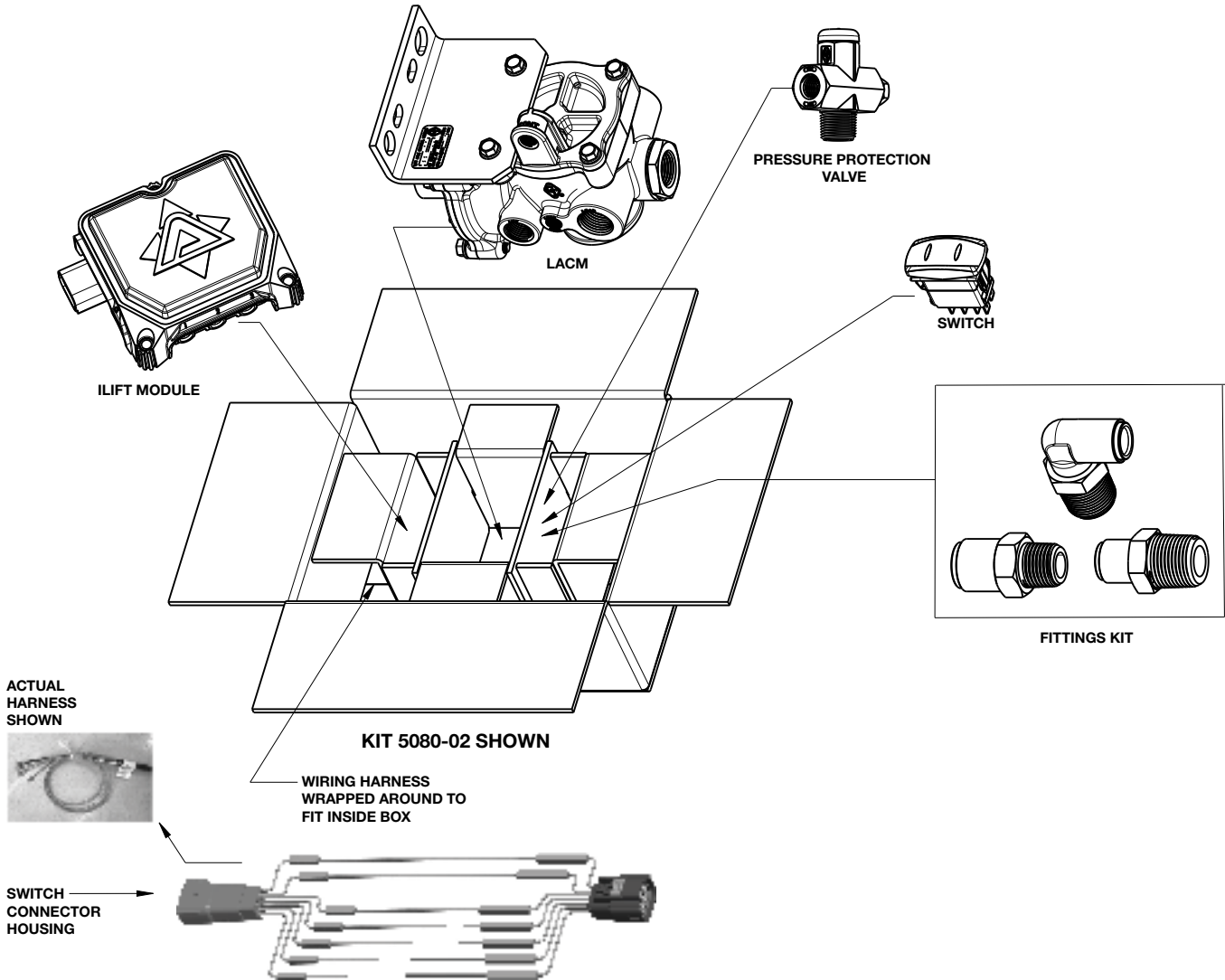
## Models

| 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                                                   |

## Replacement Parts

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

## Kit Content



# 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



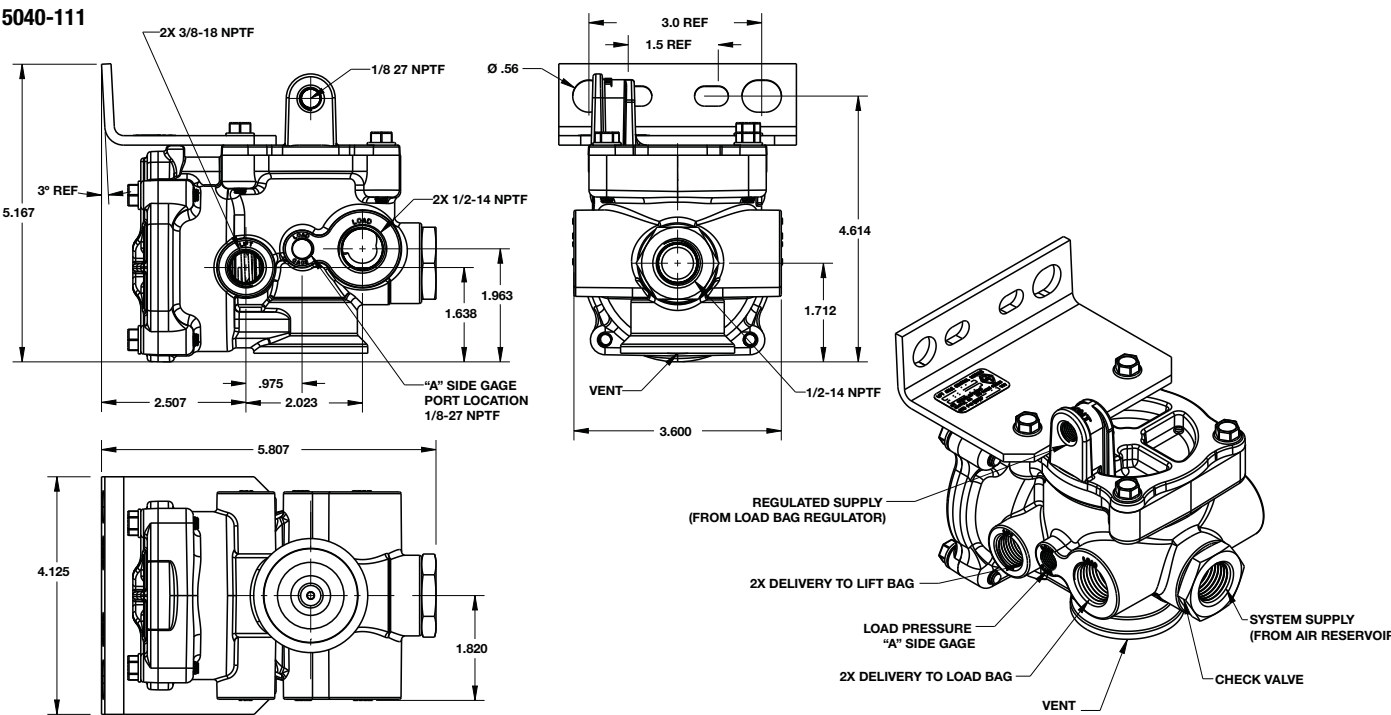
## Models

| 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

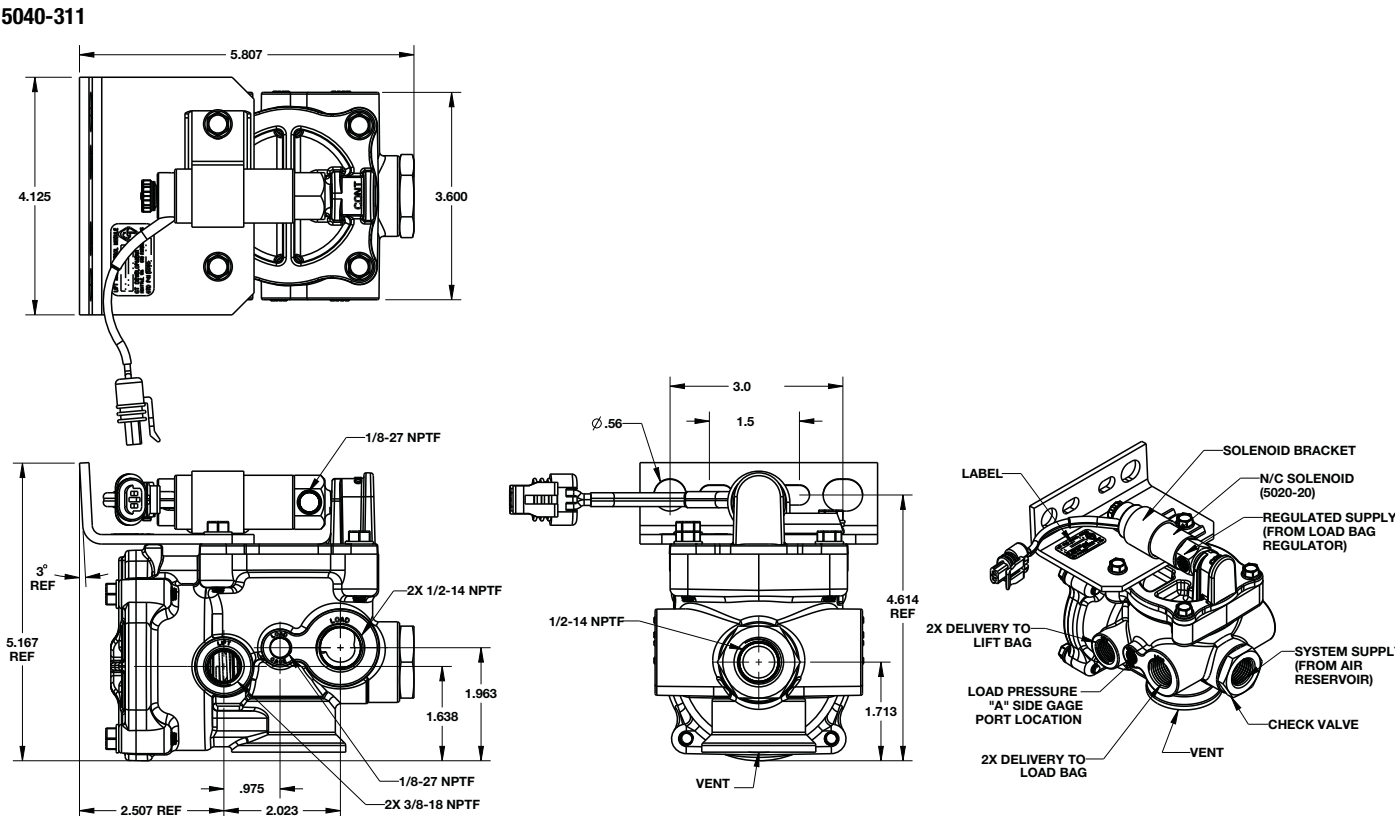
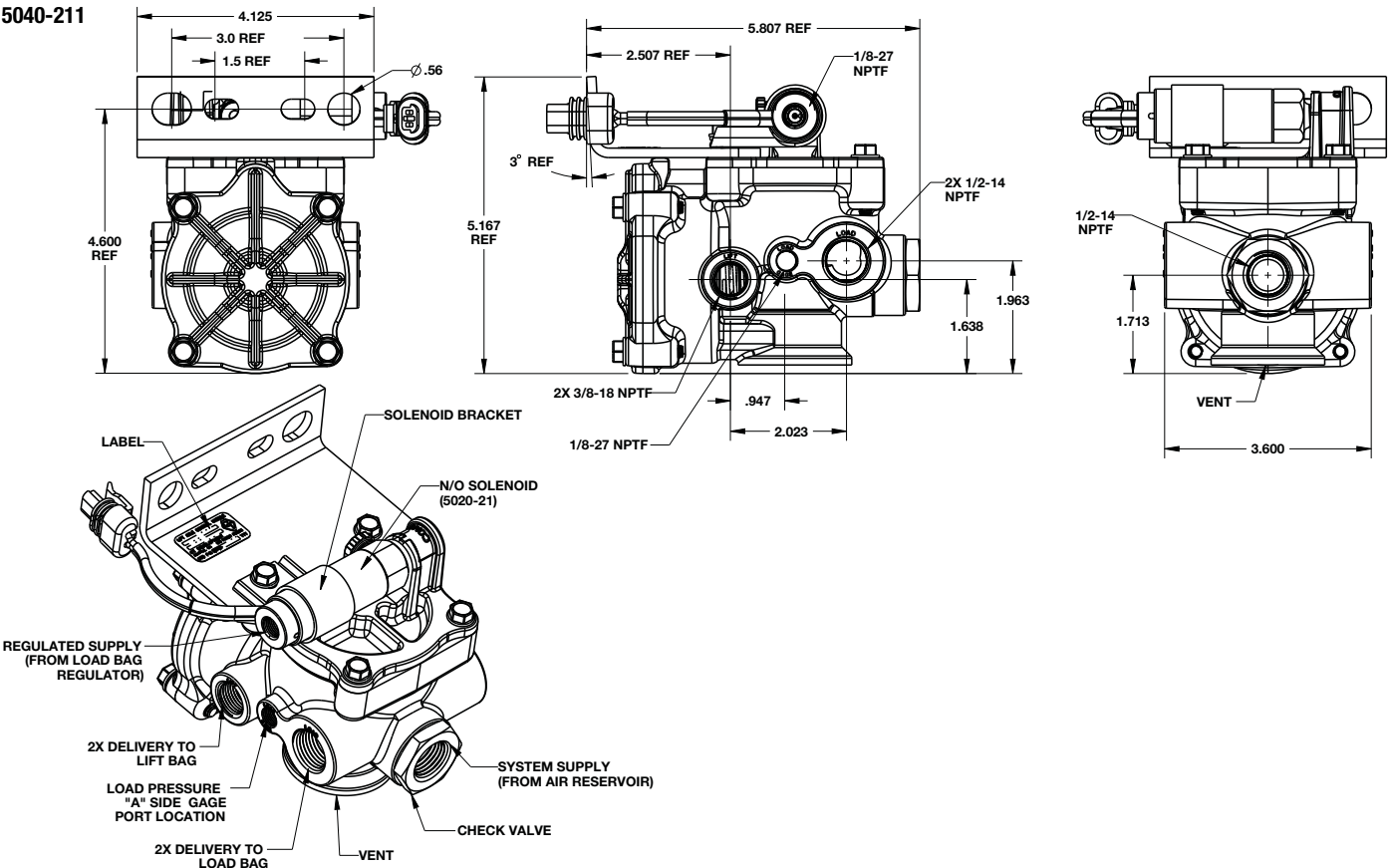
| Model    | LACM                         | Electrical Termination                            | Inlet Port Size | Outlet Port Size | Voltage | Configuration |
|----------|------------------------------|---------------------------------------------------|-----------------|------------------|---------|---------------|
| 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

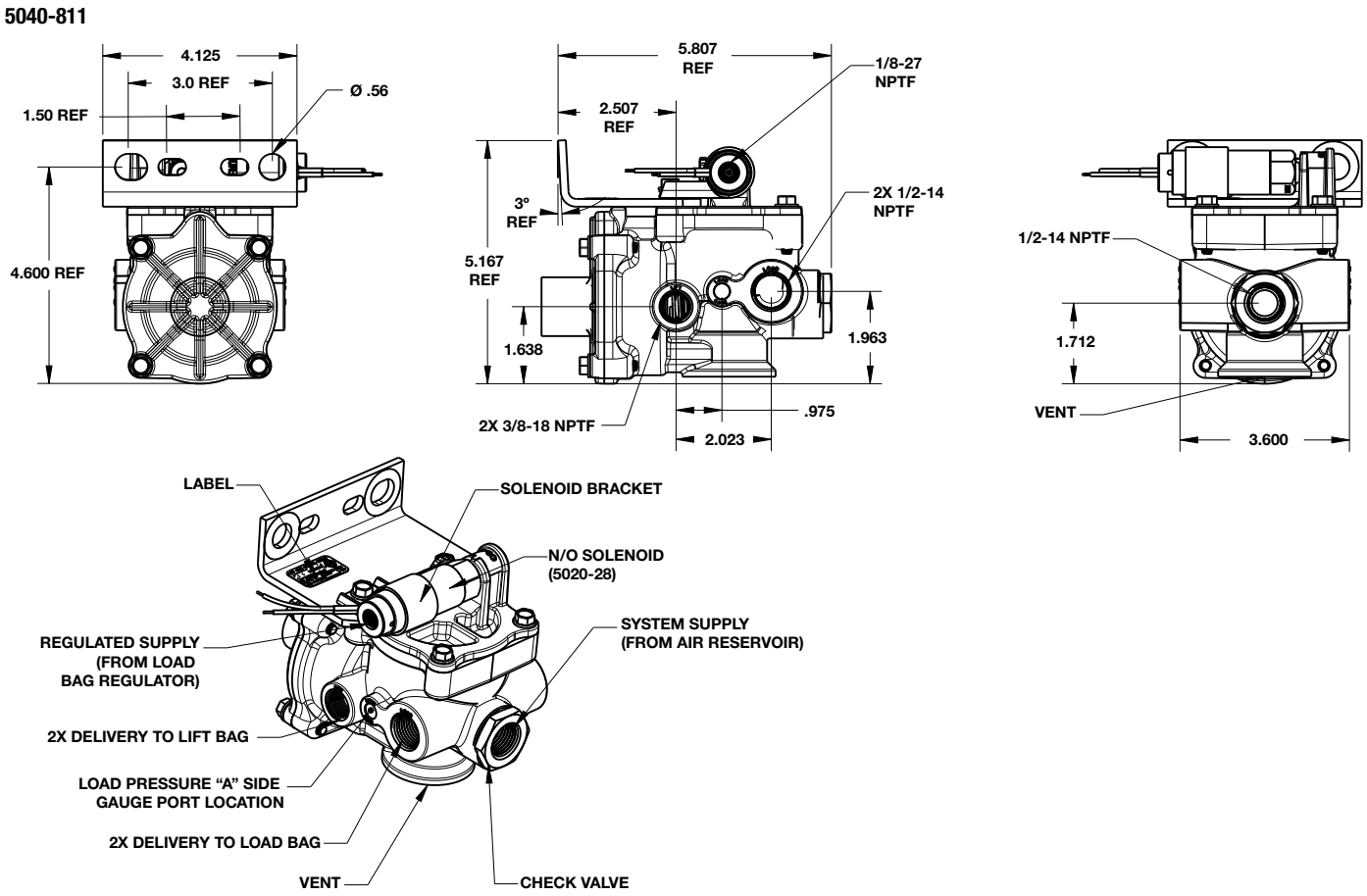
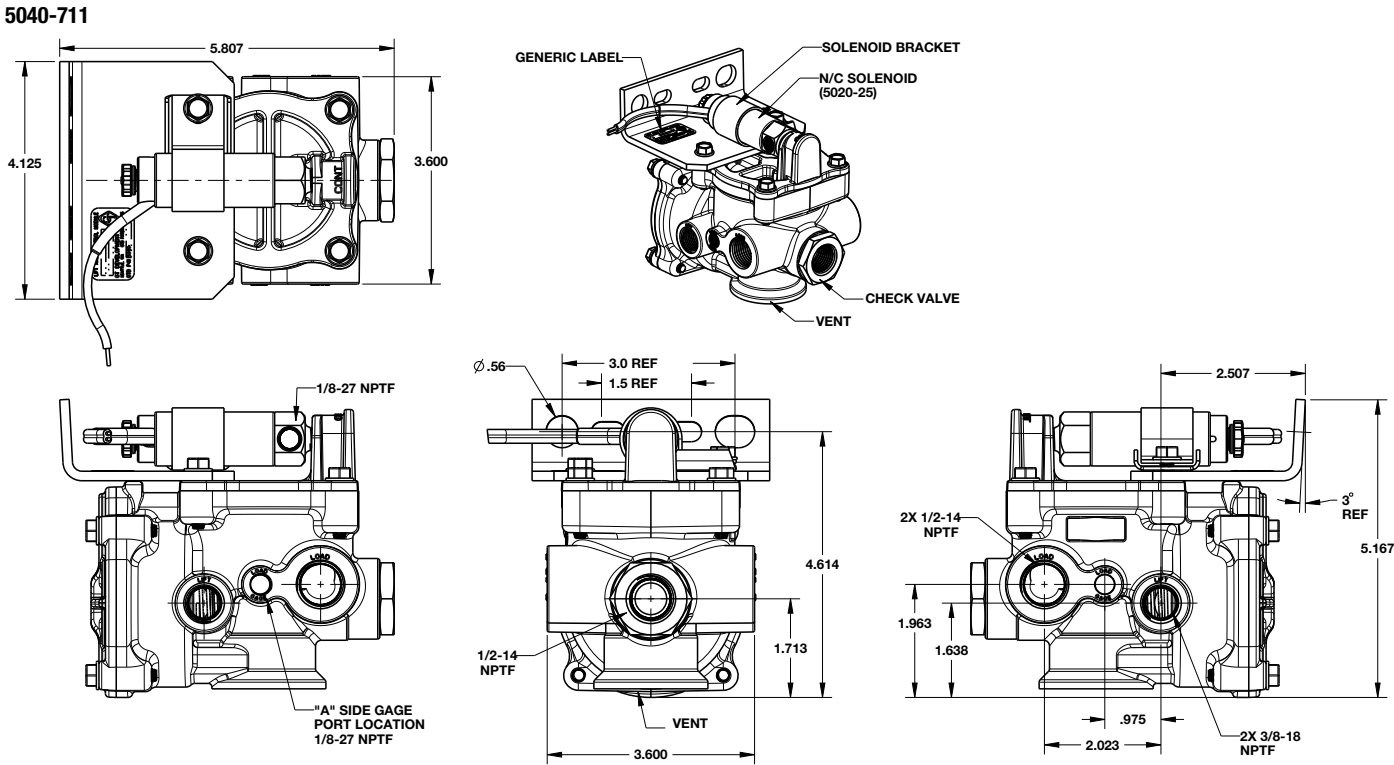




# LIFT AXLE CONTROL MODULE 5040 Series



# LIFT AXLE CONTROL MODULE 5040 Series

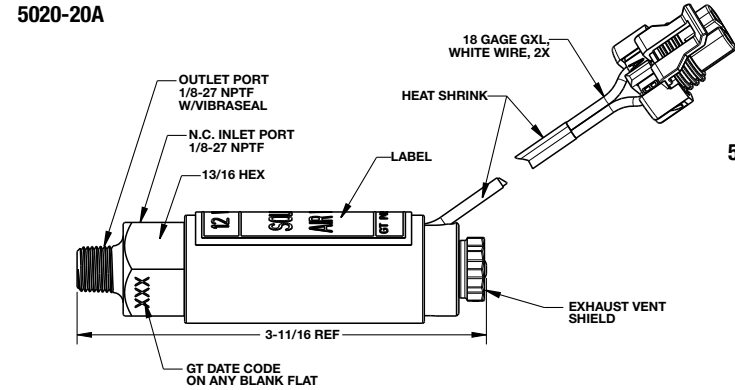




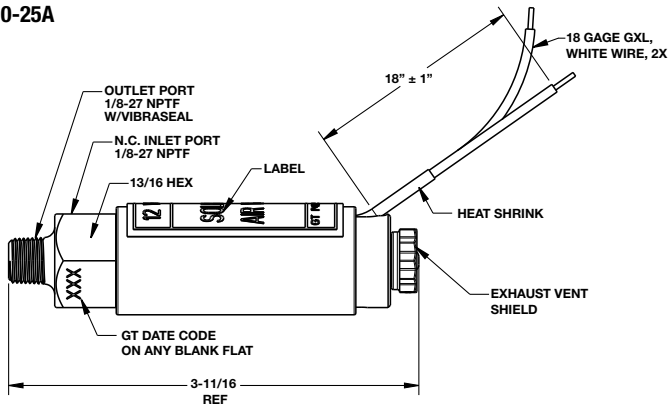
LIFT AXLE CONTROL MODULE  
5040 Series

REPLACEMENT SOLENOIDS

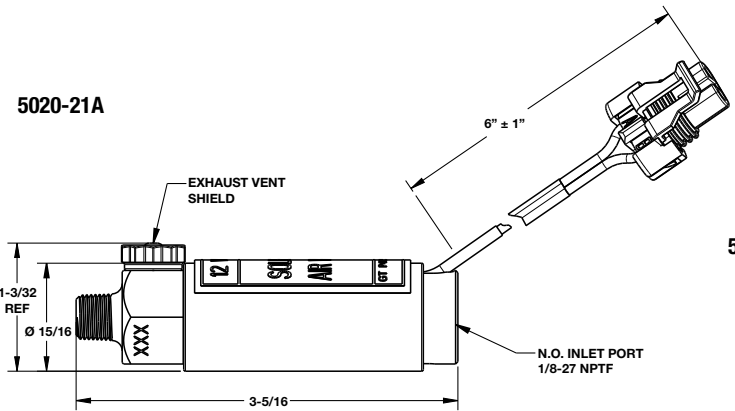
5020-20A



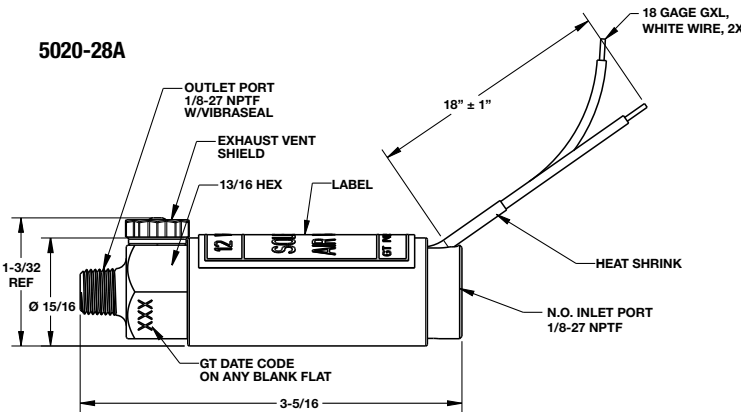
5020-25A



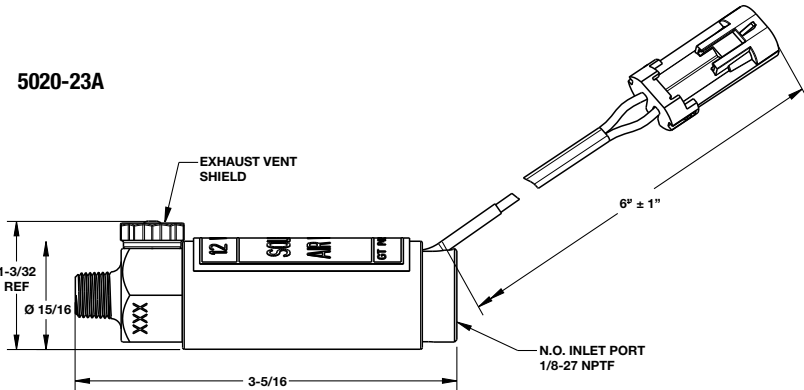
5020-21A



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

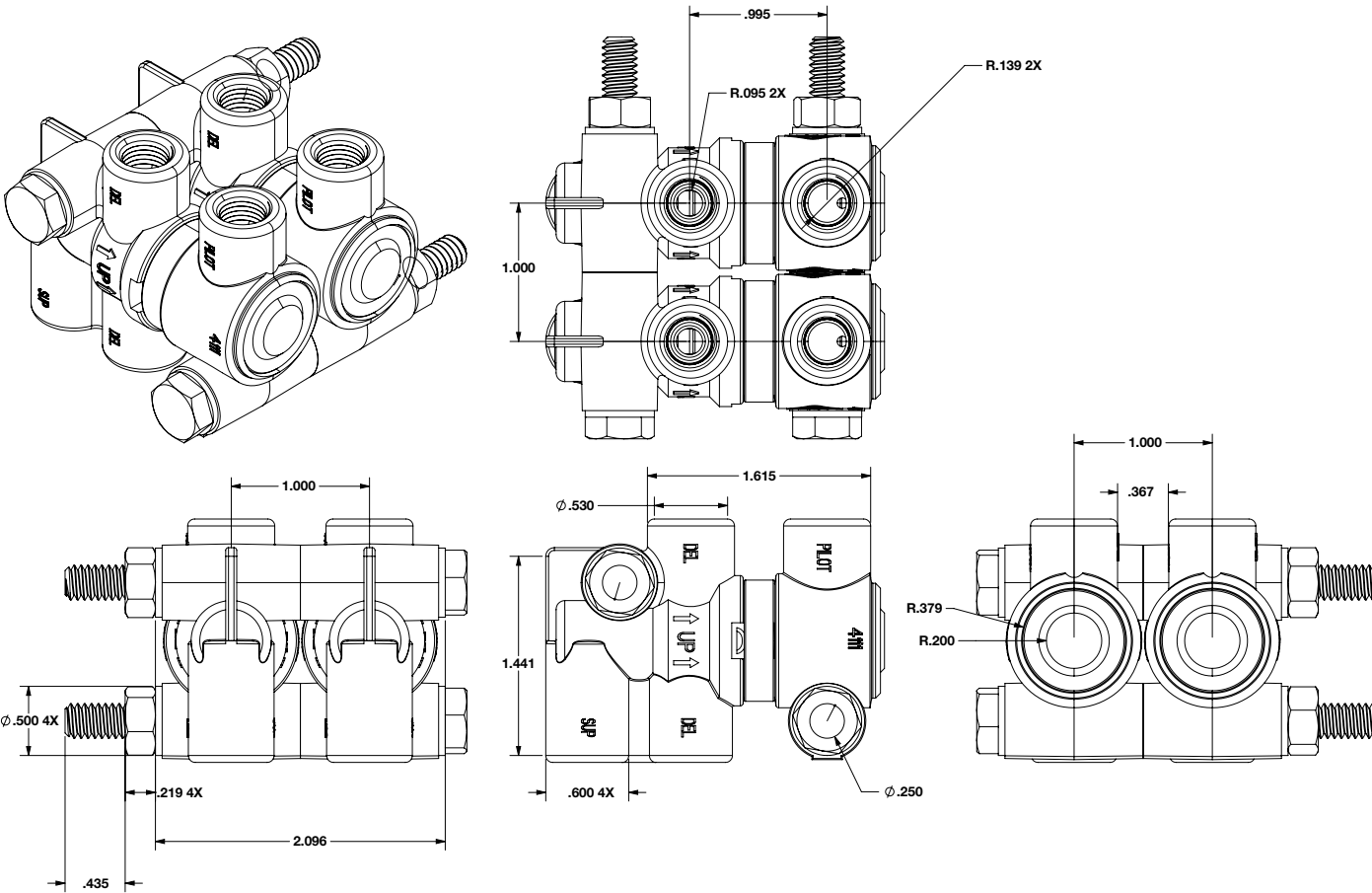
Die cast Zinc



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)

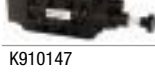
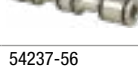
**Voltage:**  
12 VDC available upon request

## 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

NUGGET 200 SOLENOID & AIR ACTUATED SPOOL VALVE

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                | K41EA00                                                                             | KV21W2                                                                              | 54237-59                                                                            |
| 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                | K71DA00                                                                             | KV21W2                                                                              | 54237-56                                                                            |
| 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                | K71DA00                                                                              | KV21W2                                                                               | 54237-56                                                                             |
| K71EA00KV2KV22W2                                                                   | 24 VDC  | Cable grip | Locking         | 1.67    | 3/8            | 15 to150                | K71EA00                                                                              | KV21W2                                                                               | 54237-56                                                                             |

Connectors

| Part number                    | Code                                                                    |
|--------------------------------|-------------------------------------------------------------------------|
| 3-Pin Industrial Standard 22mm |                                                                         |
| -                              | 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 |

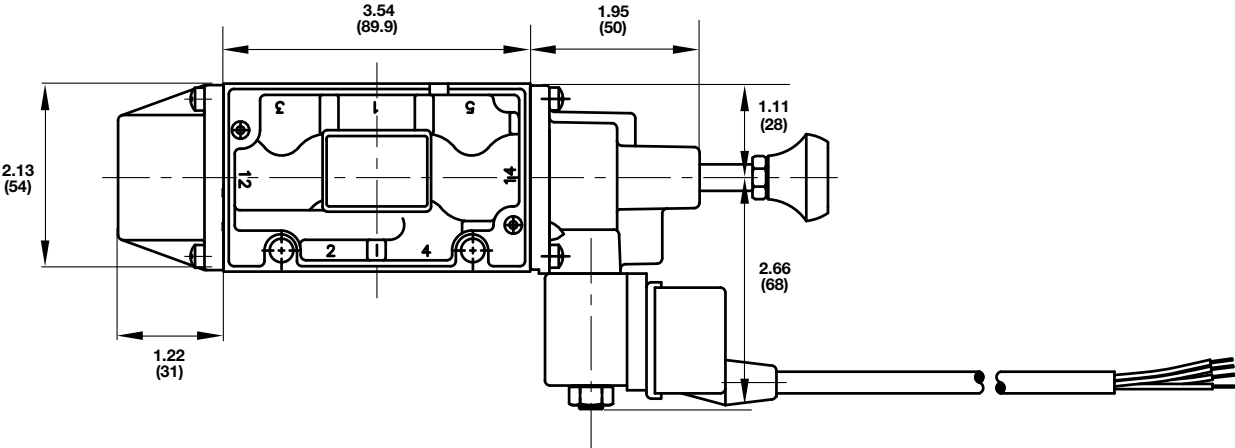
Solenoid Coils

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

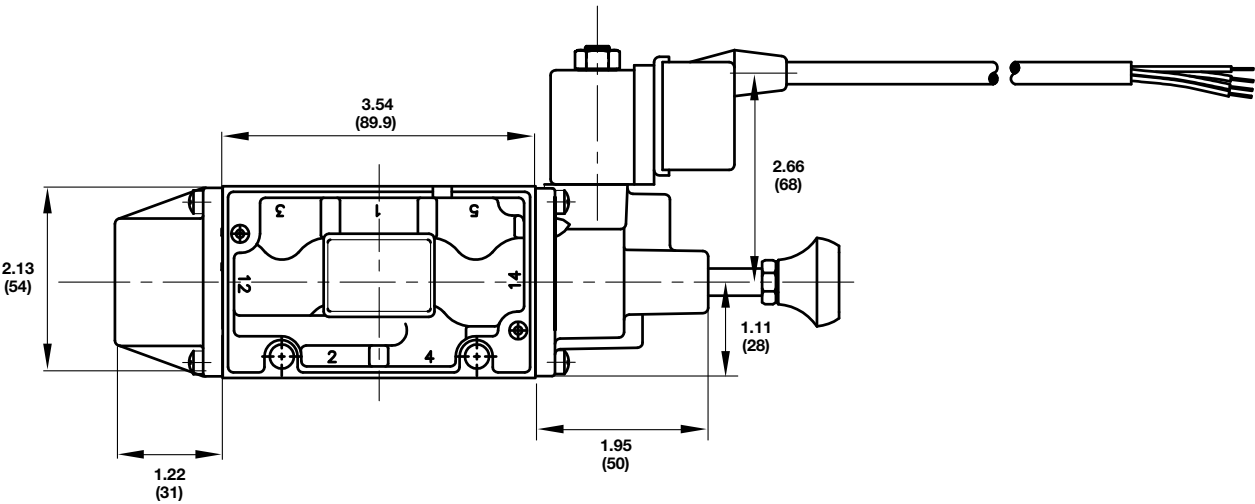
NUGGET 200 SOLENOID & AIR ACTUATED SPOOL VALVE

Specifications for Lift Axle Control Spool Valves

K910014

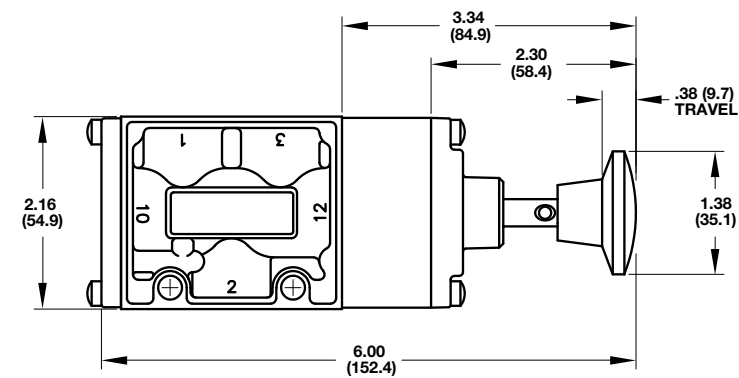


K910019

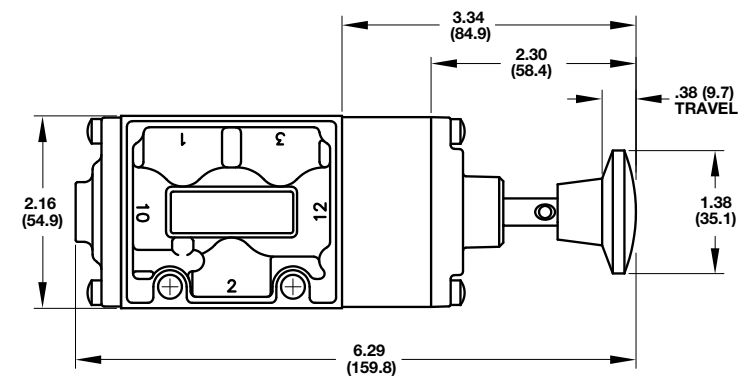


## NUGGET 200 SOLENOID &amp; AIR ACTUATED SPOOL VALVE

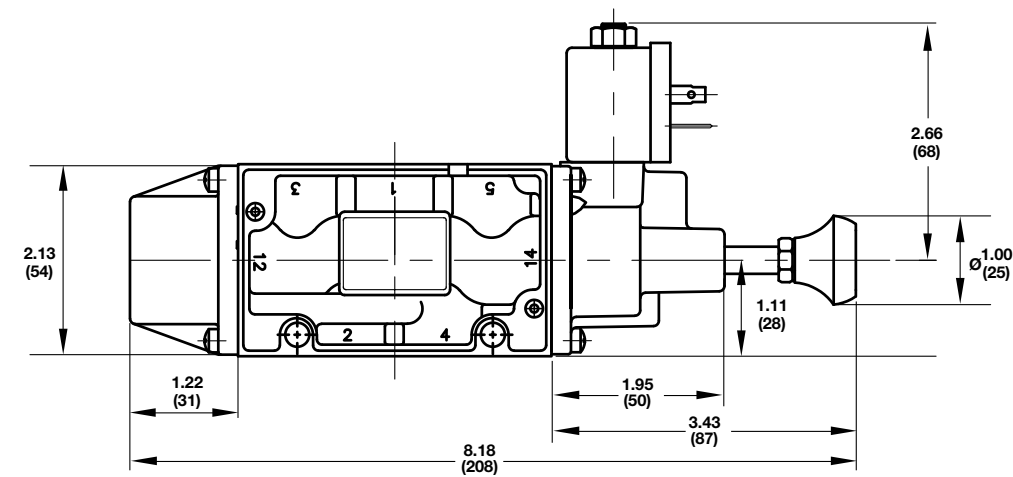
K910038



K910054

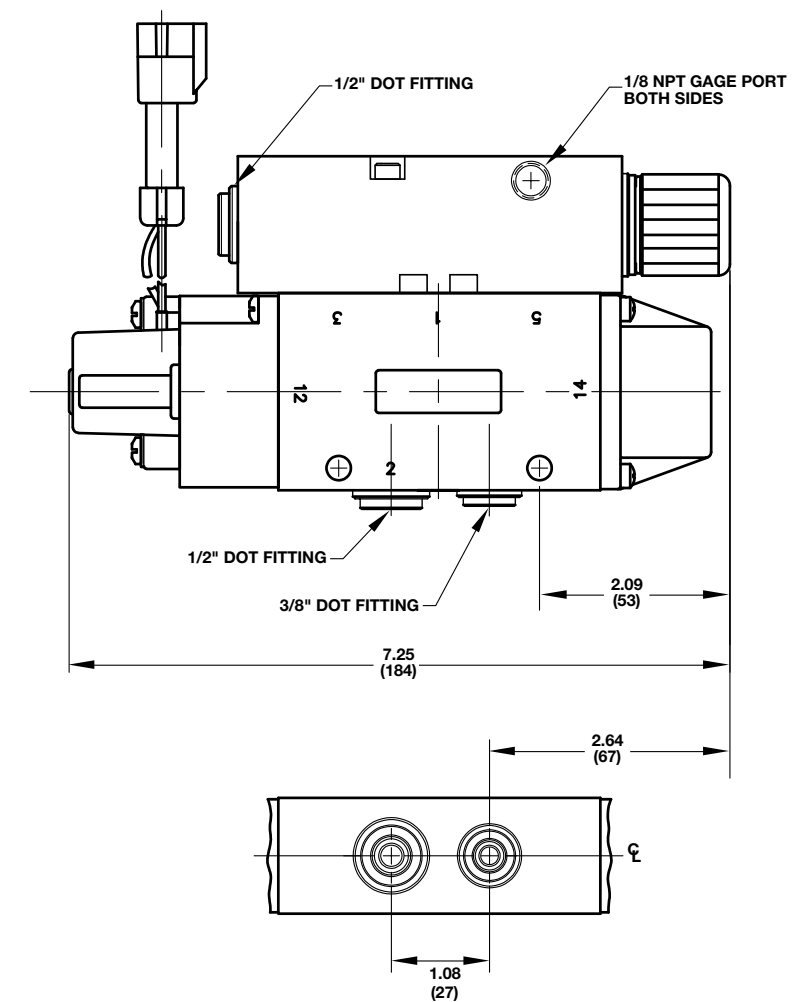
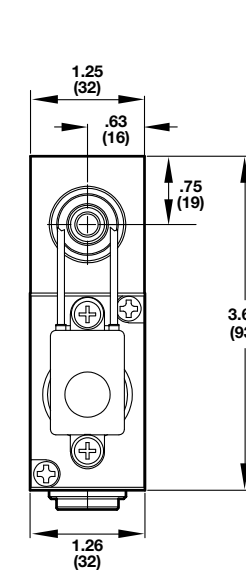


K910147, K910168



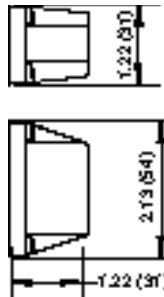
## NUGGET 200 SOLENOID &amp; AIR ACTUATED SPOOL VALVE

K990037

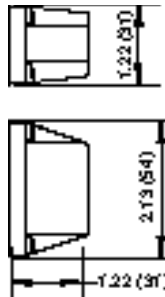


● Specifications for Standard Models

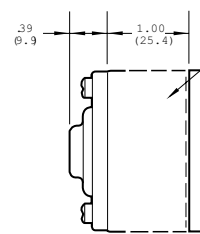
KS1 Spring Return & End Cap



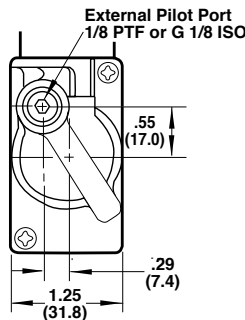
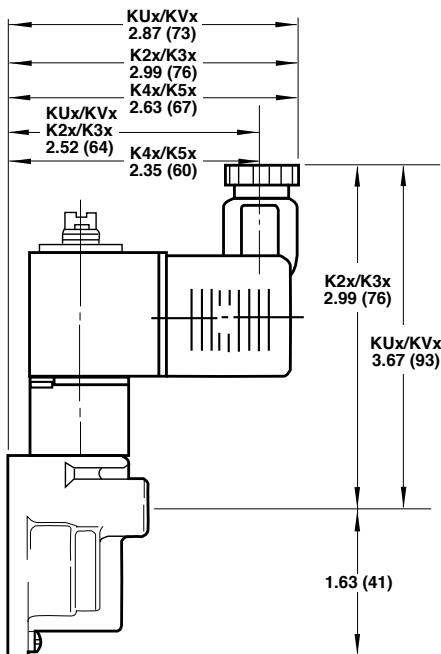
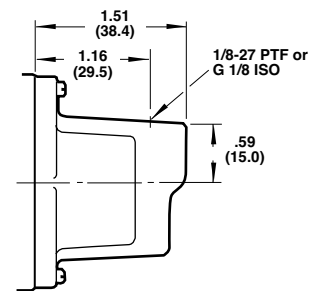
KS6 Spring Return



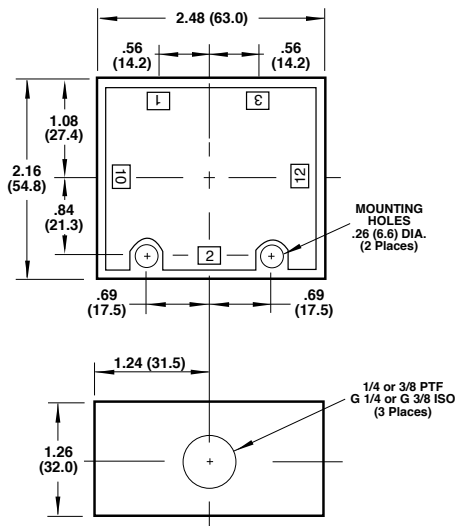
KC0 End Cap



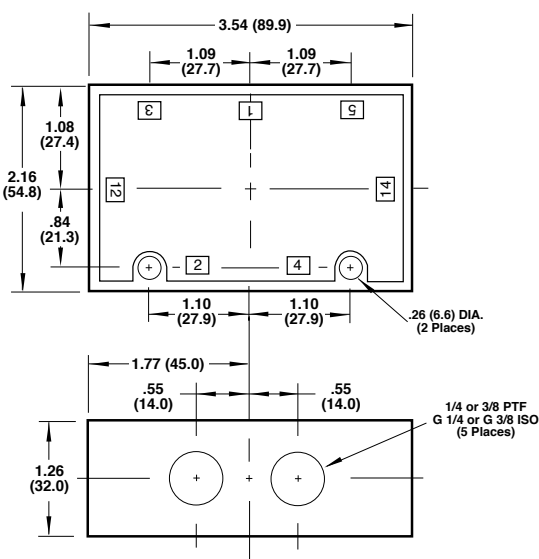
KA2



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

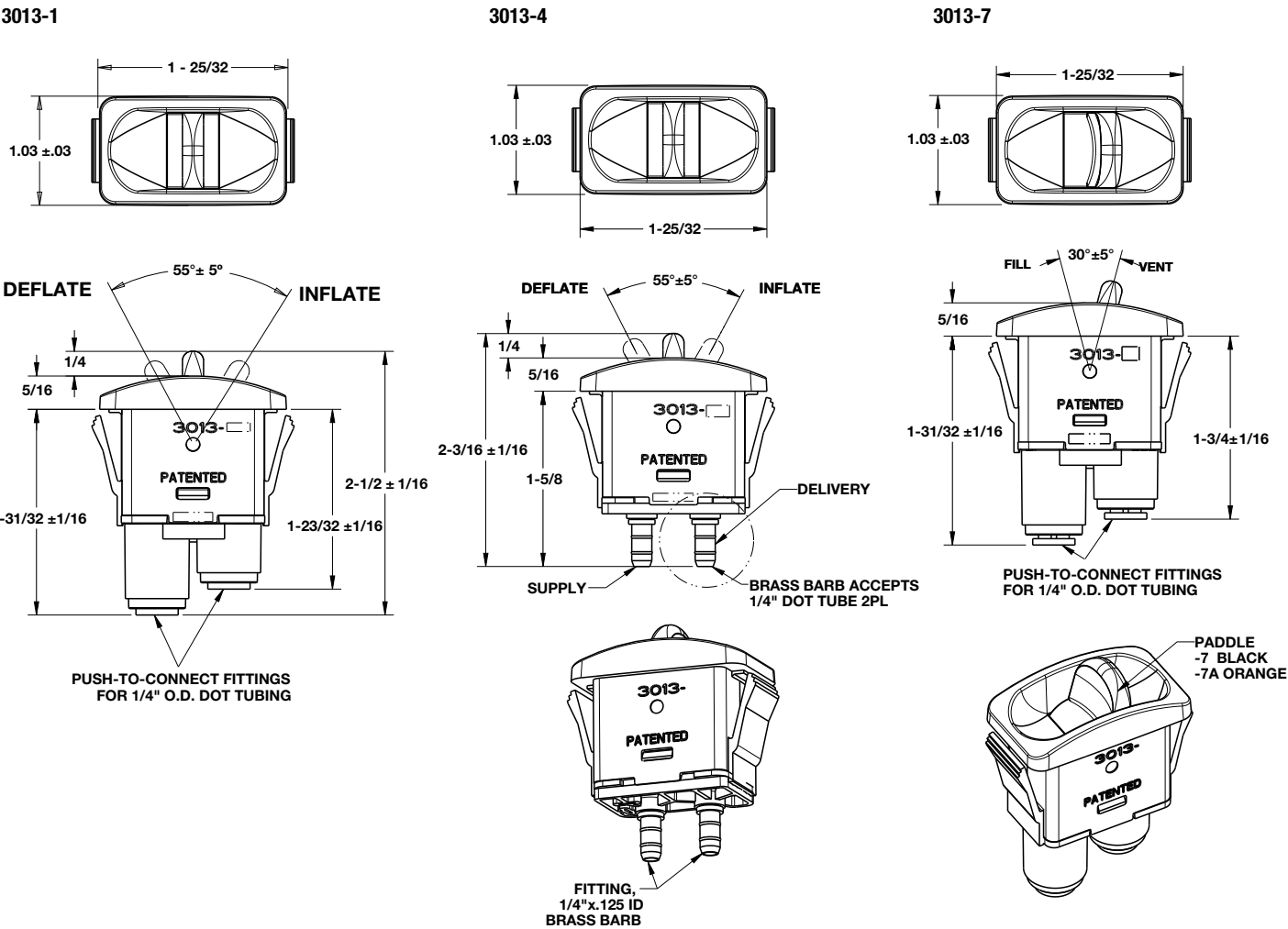
**Material**  
Black Thermoplastic



## 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



# 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

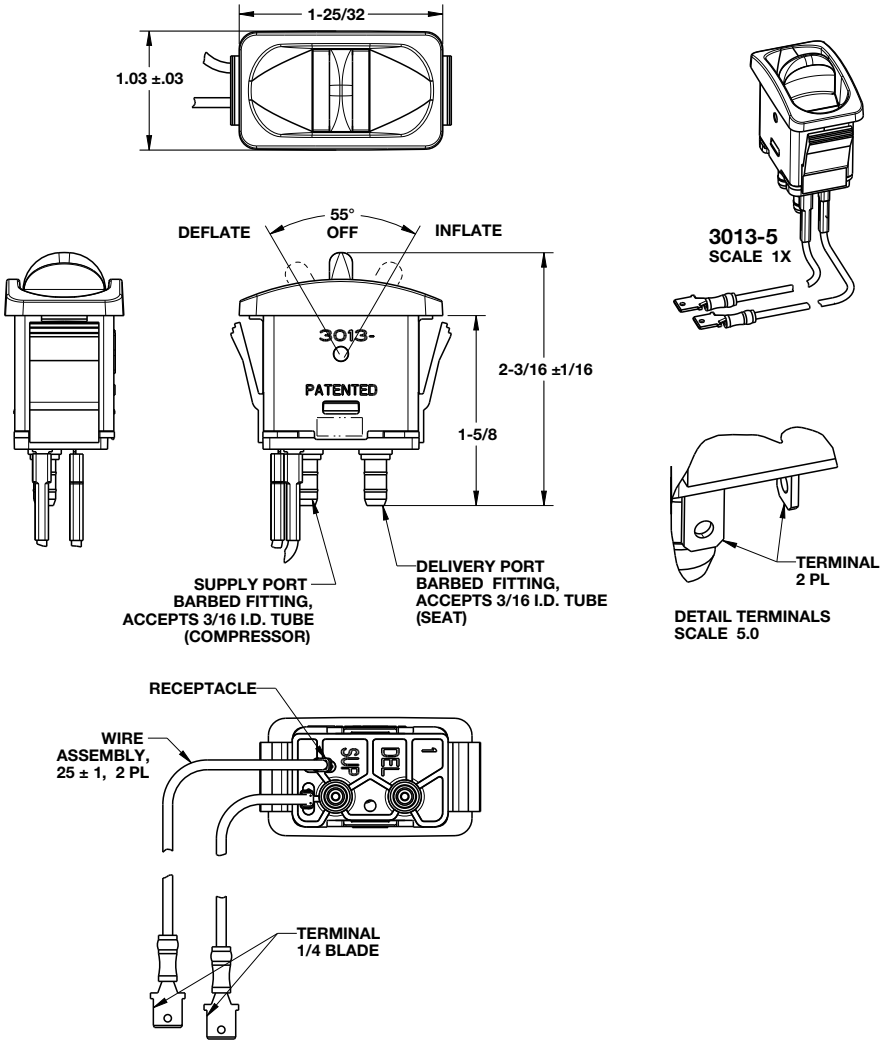
**Electrical connection:**  
Wire assembly, terminal 1/4" blades



## 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



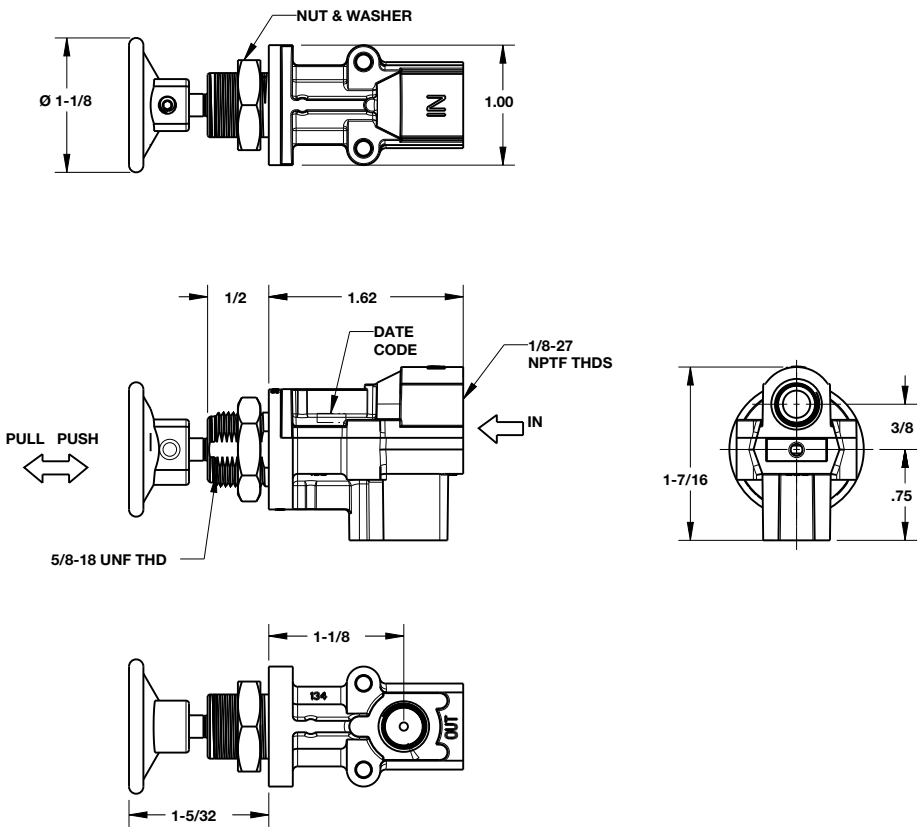
## Models

| 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

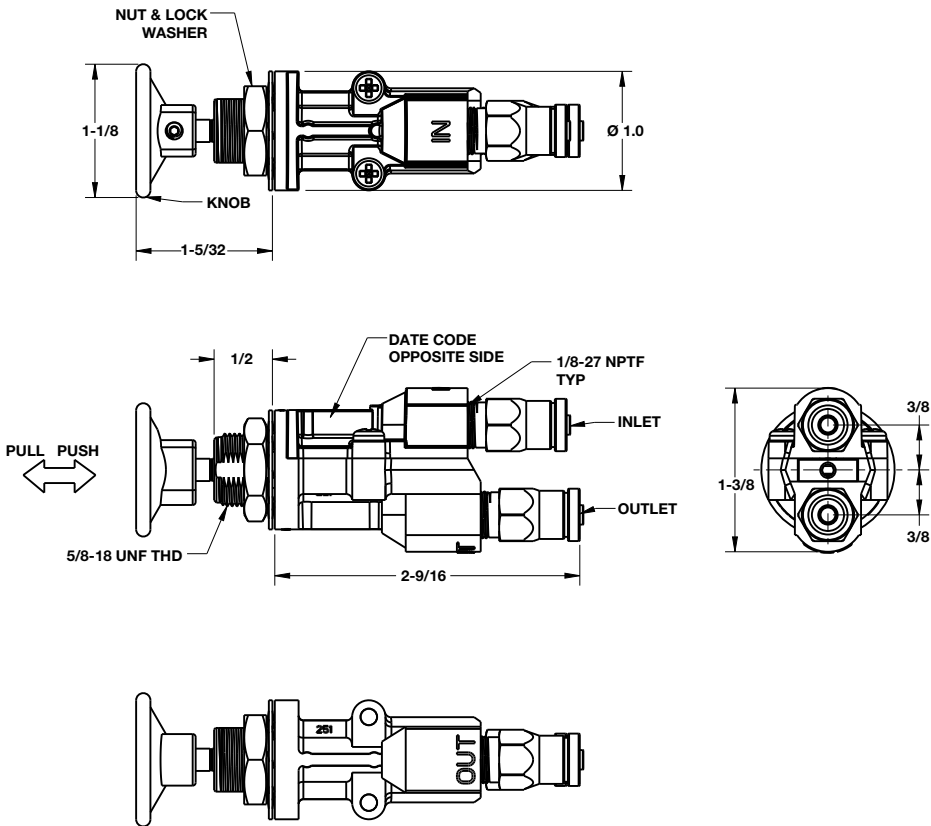
**Leakage:**  
Valve cannot leak to outlet port in OFF position



## 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

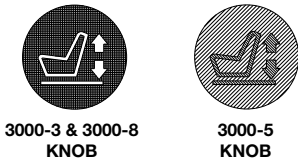
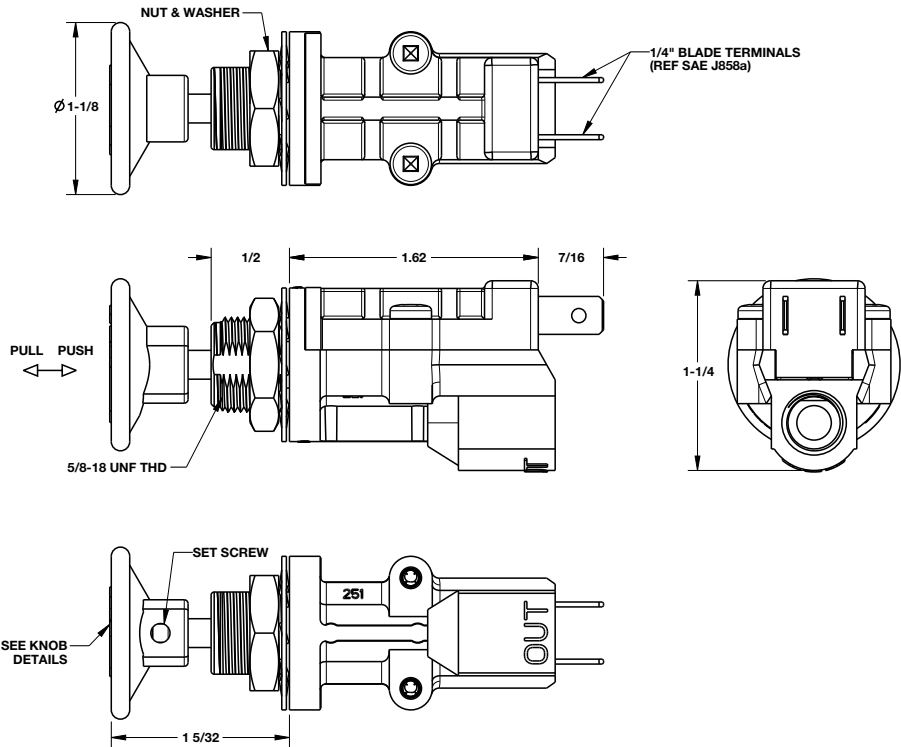
**Port Size:**  
NPTF 1/8" -27



## 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



# 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

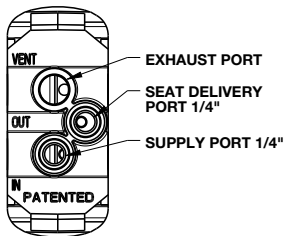
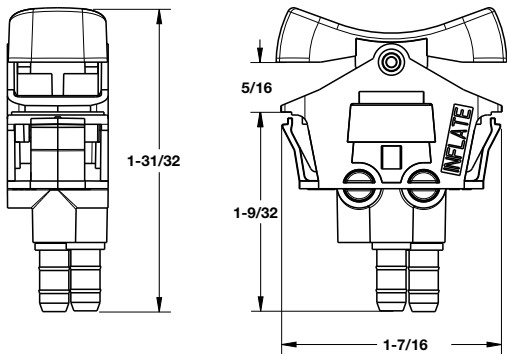
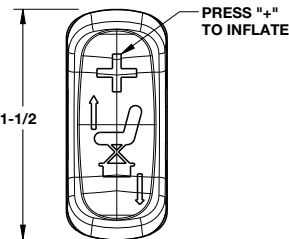


## Models

| 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"     |

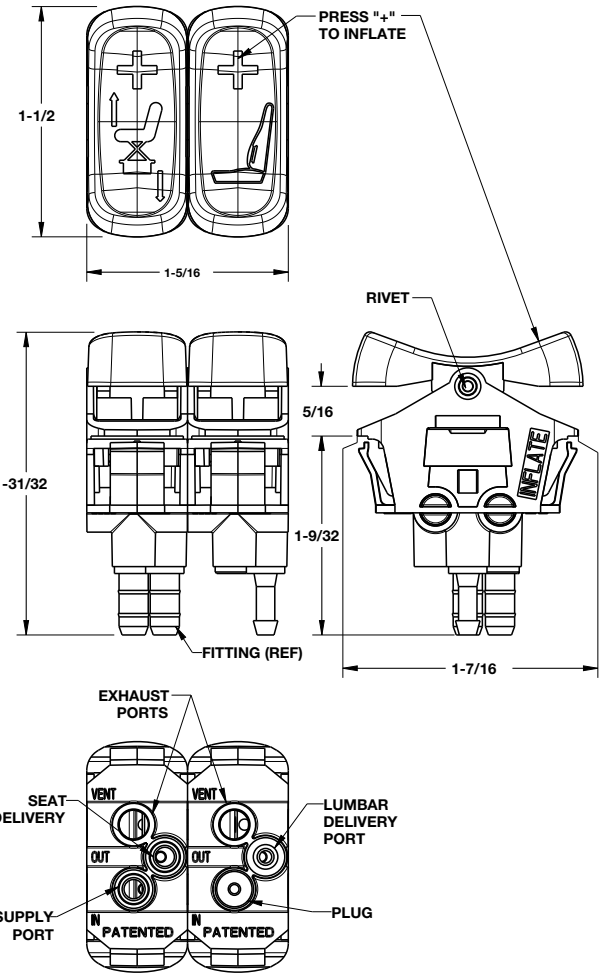
## Specifications

3020-6

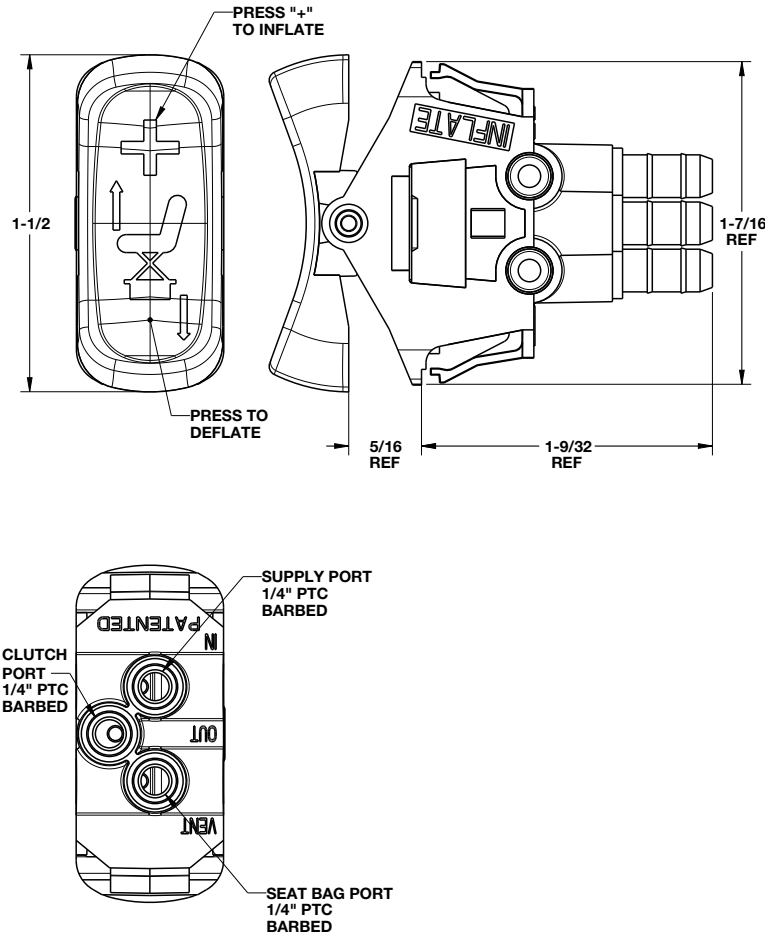


SEAT ROCKER VALVES  
3020 Series

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

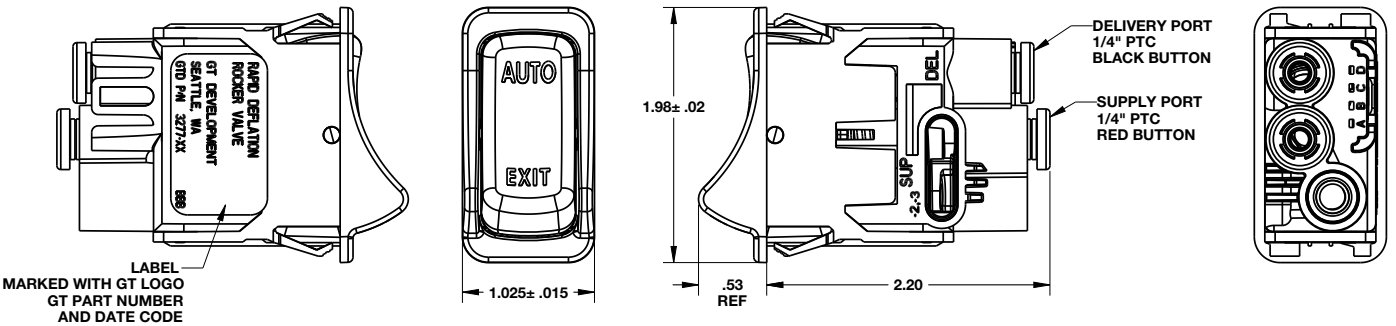
Nylon, glass filled



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

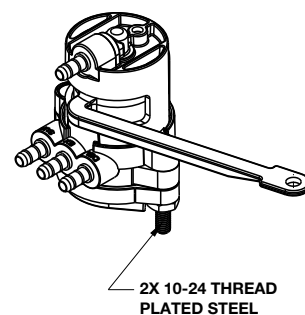
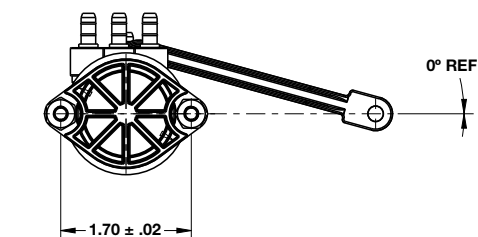
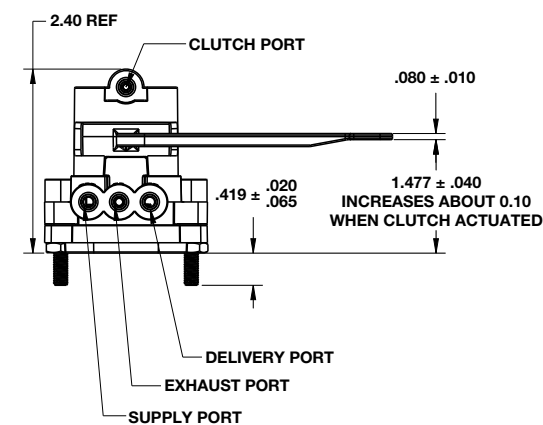
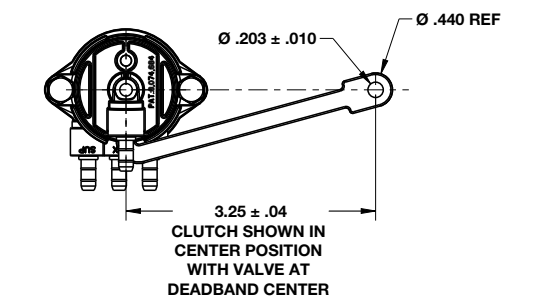
**Tube O/D:**  
1/4"



## 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

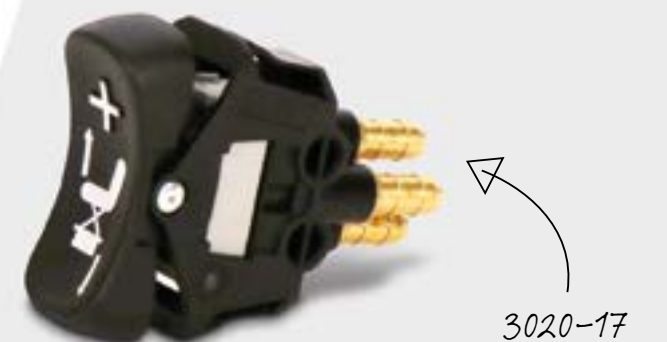
## Technical Data:

- > 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   |                                            |
|---------|--------------------------------------------|
| 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

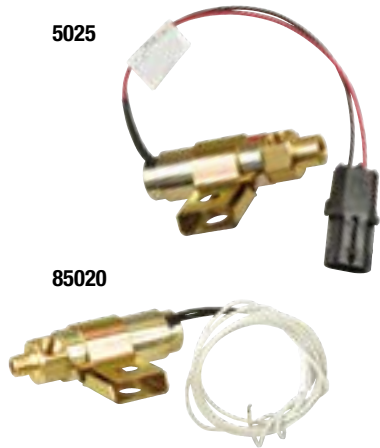
**Thread type:**  
1/8" NPTF

**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

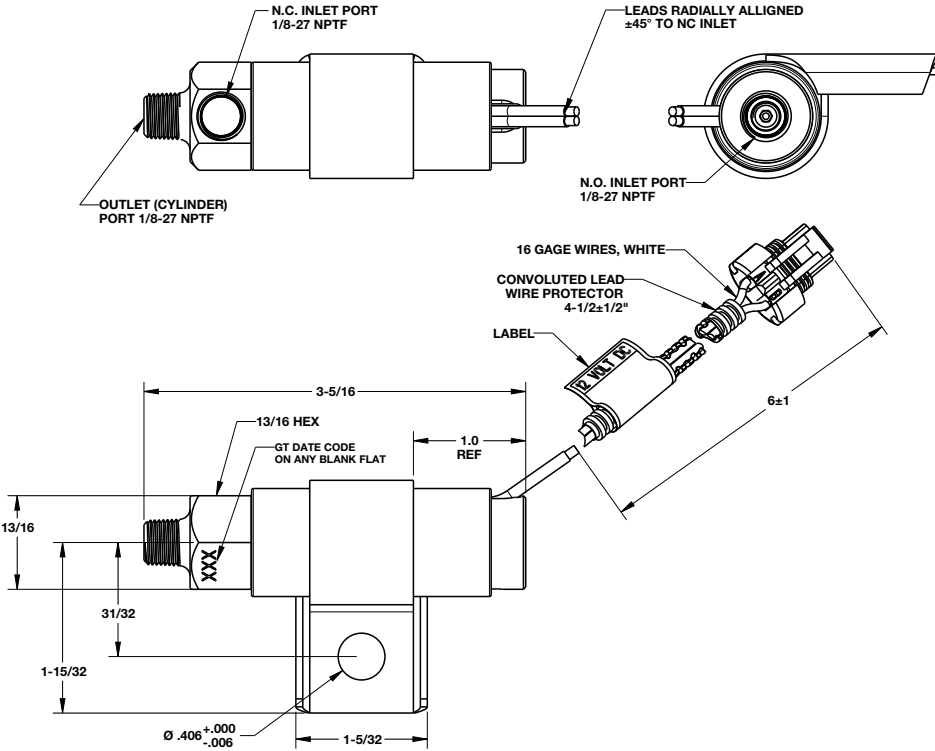
| Accessories | Description                                                                                                                |
|-------------|----------------------------------------------------------------------------------------------------------------------------|
| 5050        |  Commerical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

# SOLENOID VALVES

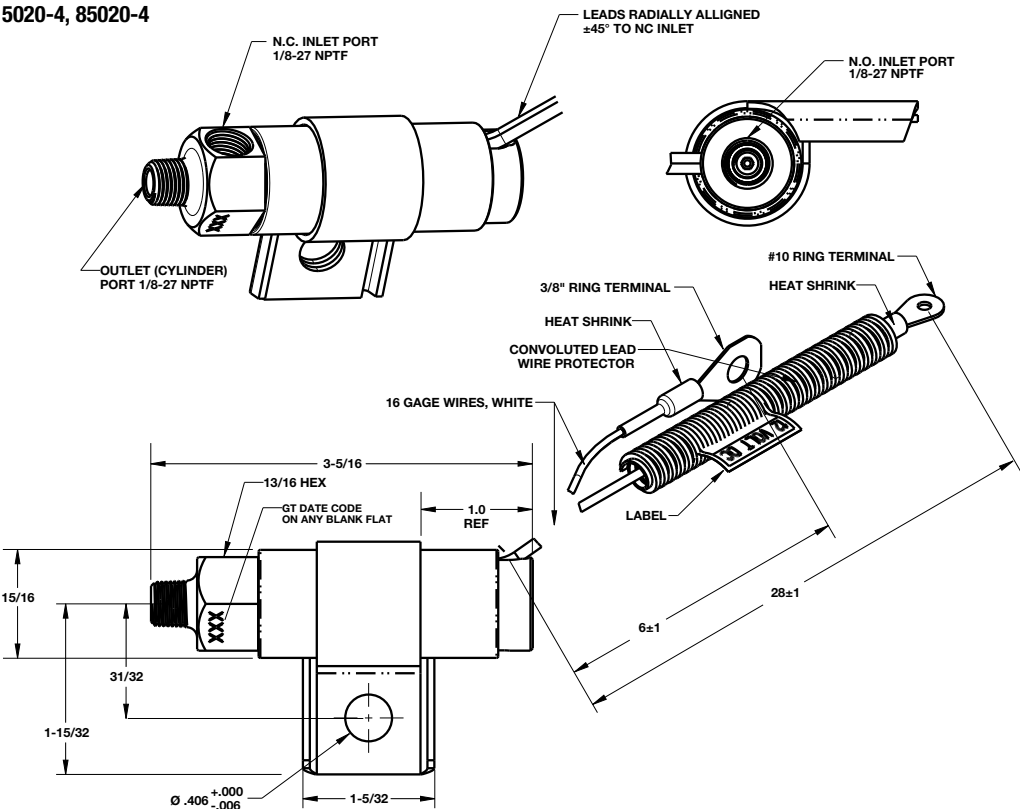
5020, 5022, 5023, 5025 & 85020 Series

## Specifications

5020-1, 85020-1

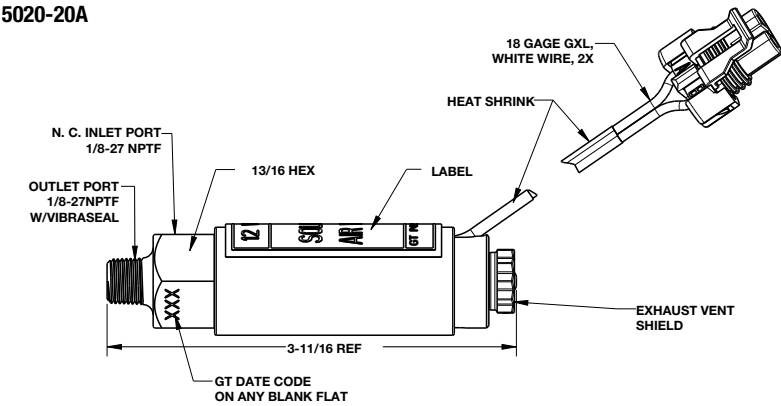


5020-4, 85020-4

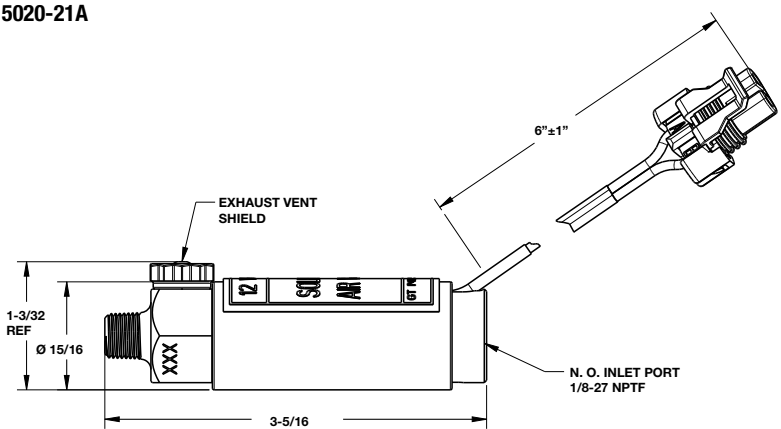


SOLENOID VALVES  
5020, 5022, 5023, 5025 & 85020 Series

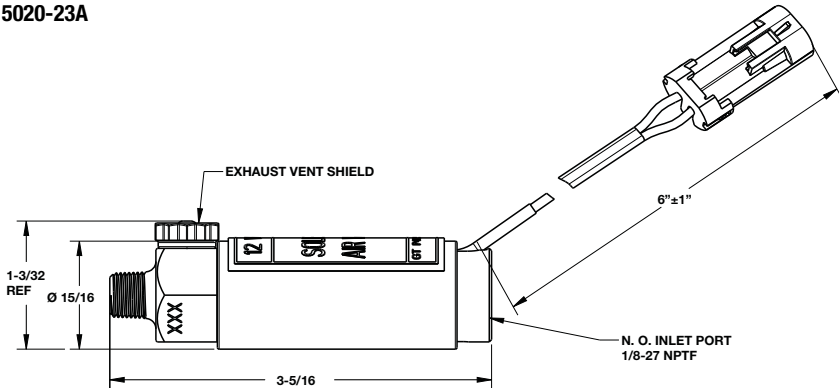
5020-20A



5020-21A

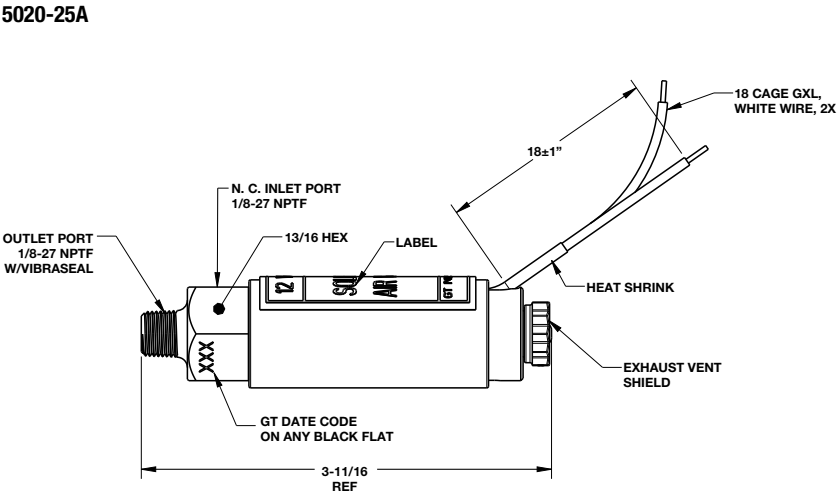


5020-23A

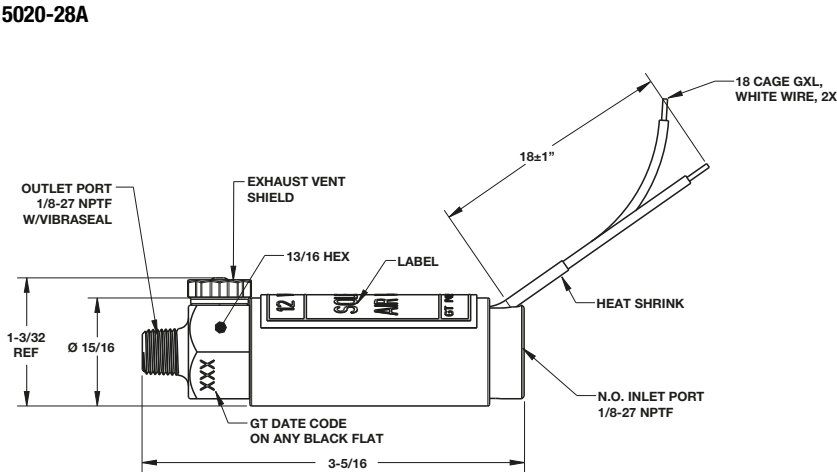


SOLENOID VALVES  
5020, 5022, 5023, 5025 & 85020 Series

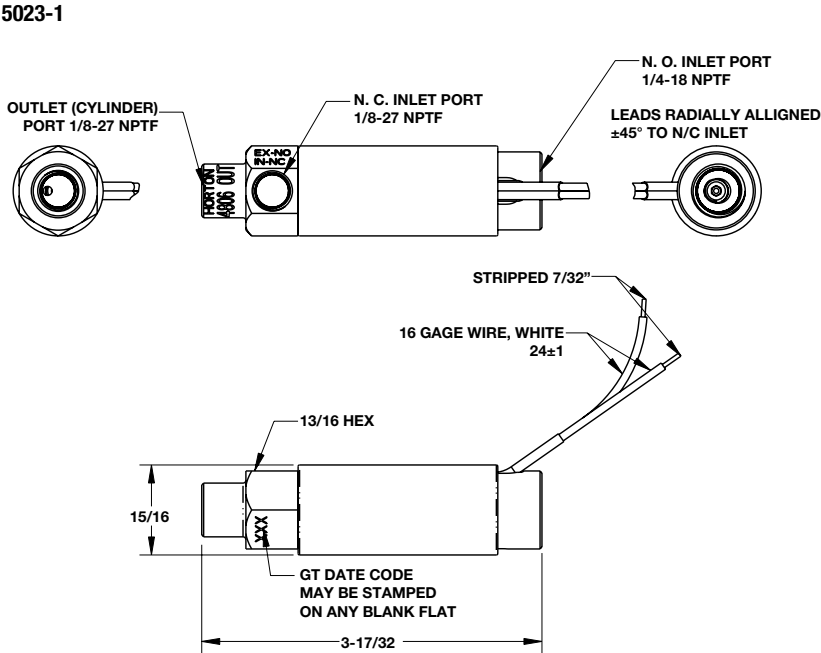
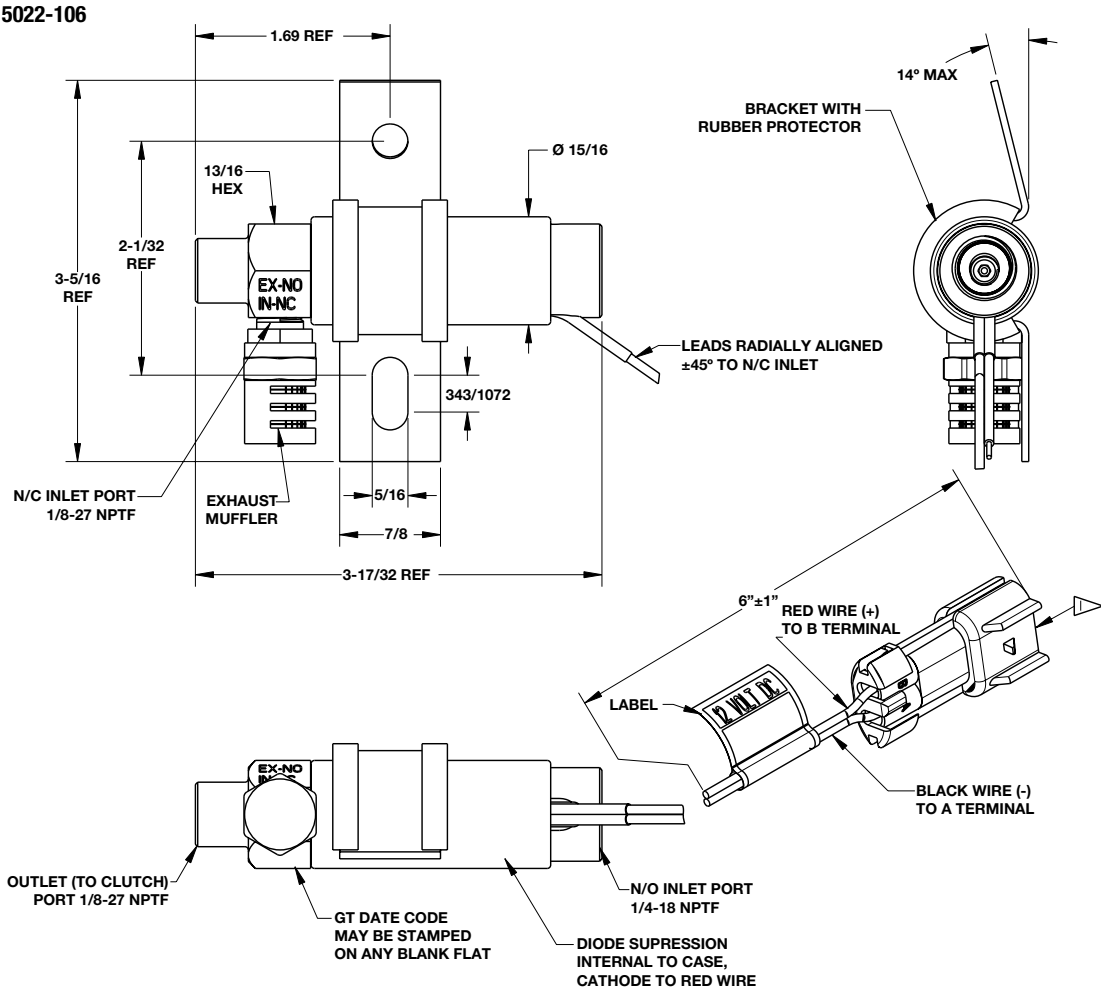
5020-25A



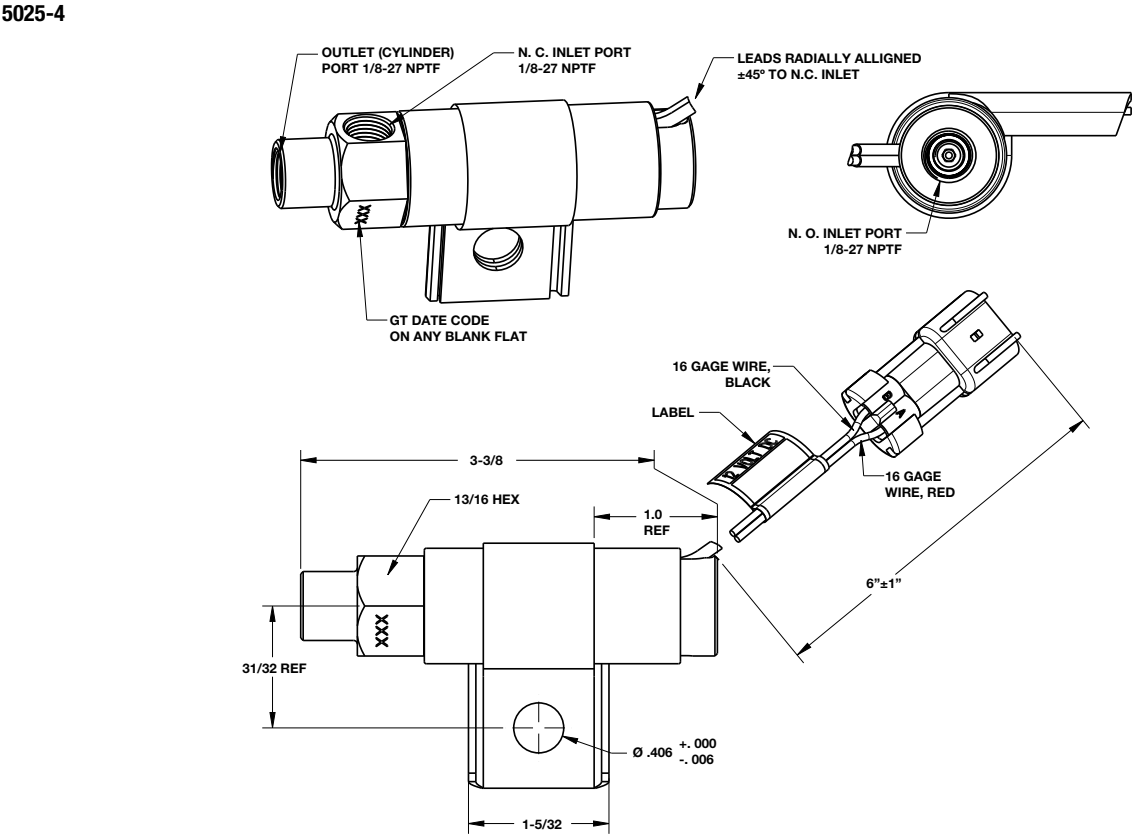
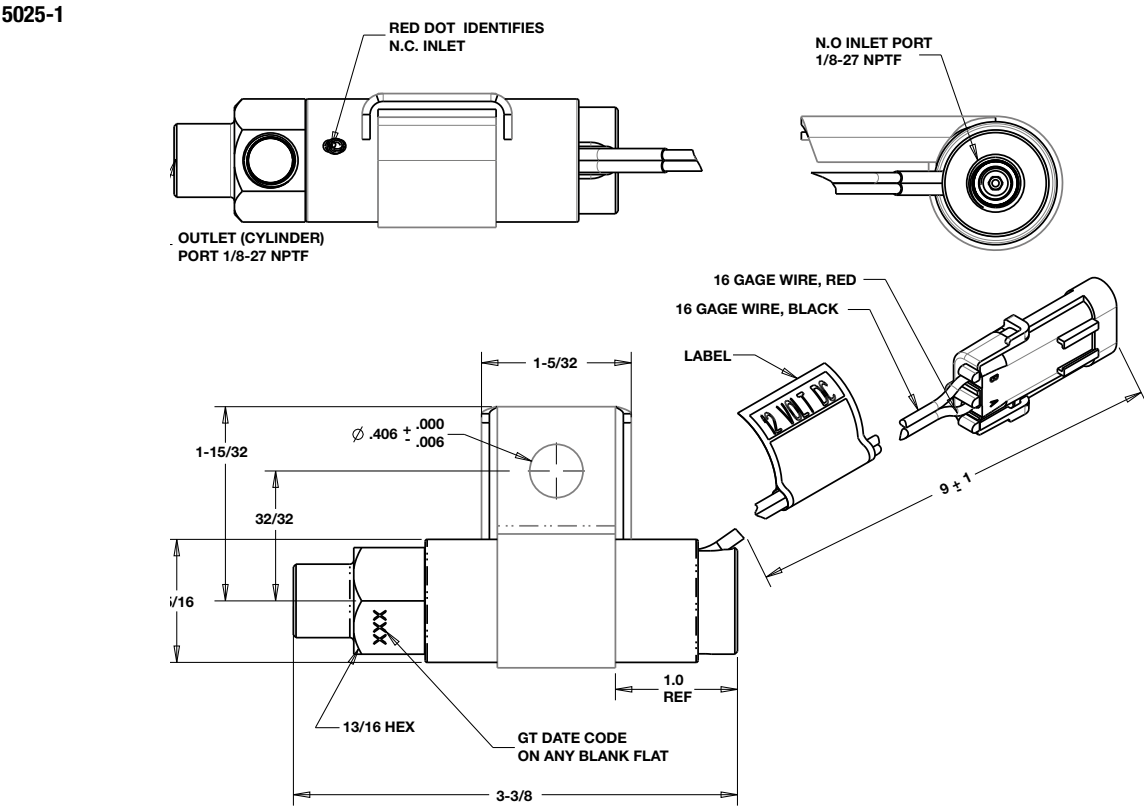
5020-28A



SOLENOID VALVES  
5020, 5022, 5023, 5025 & 85020 Series



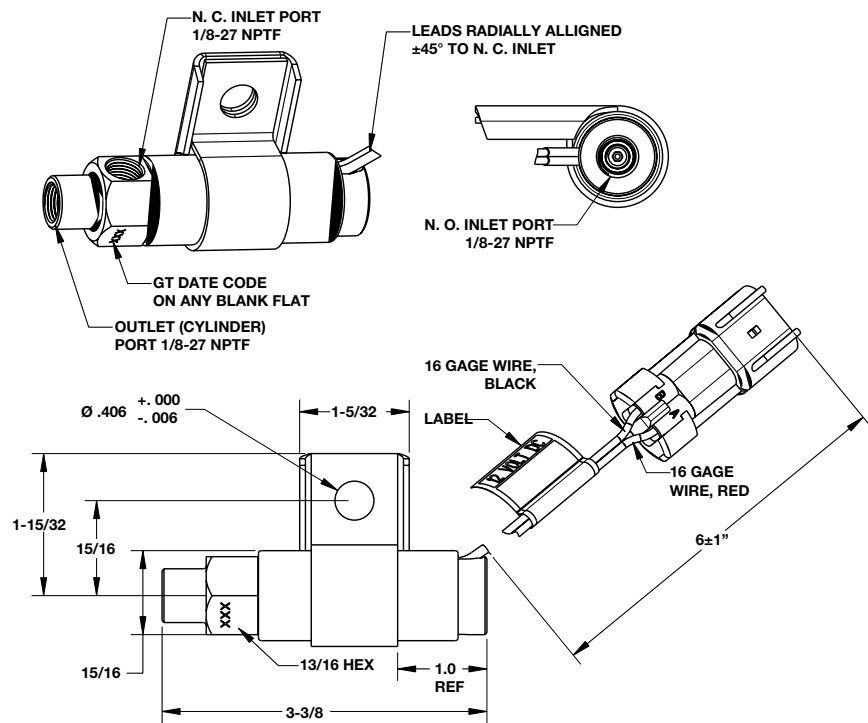
SOLENOID VALVES  
5020, 5022, 5023, 5025 & 85020 Series



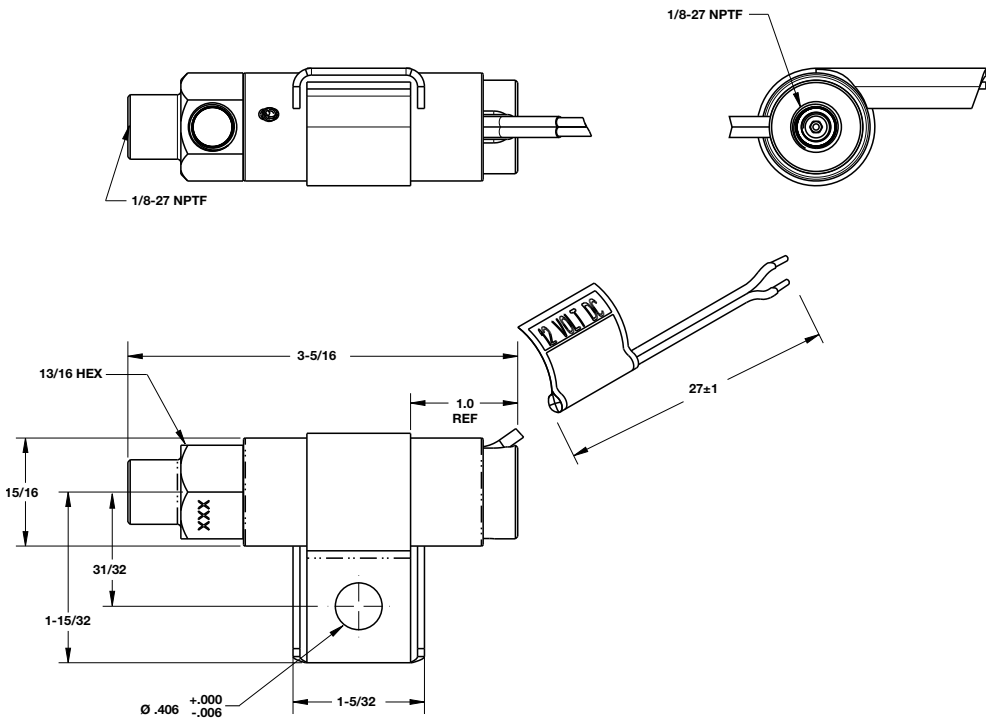


SOLENOID VALVES  
5020, 5022, 5023, 5025 & 85020 Series

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

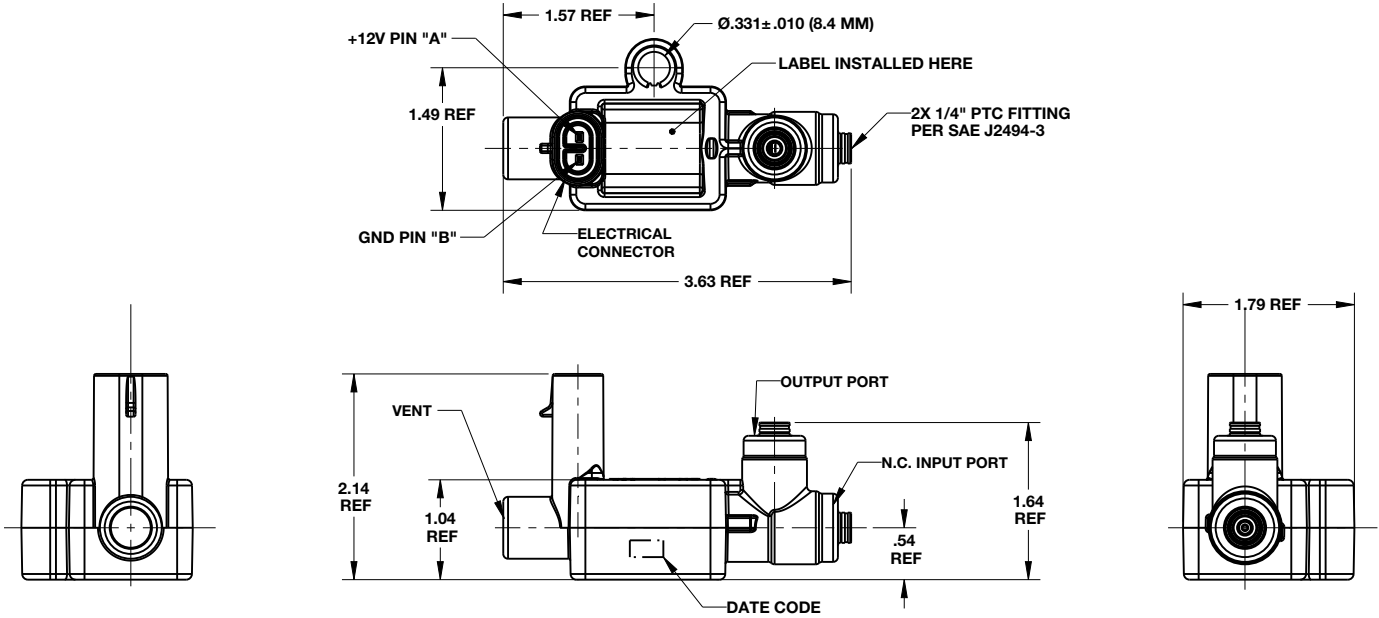


Models

| 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

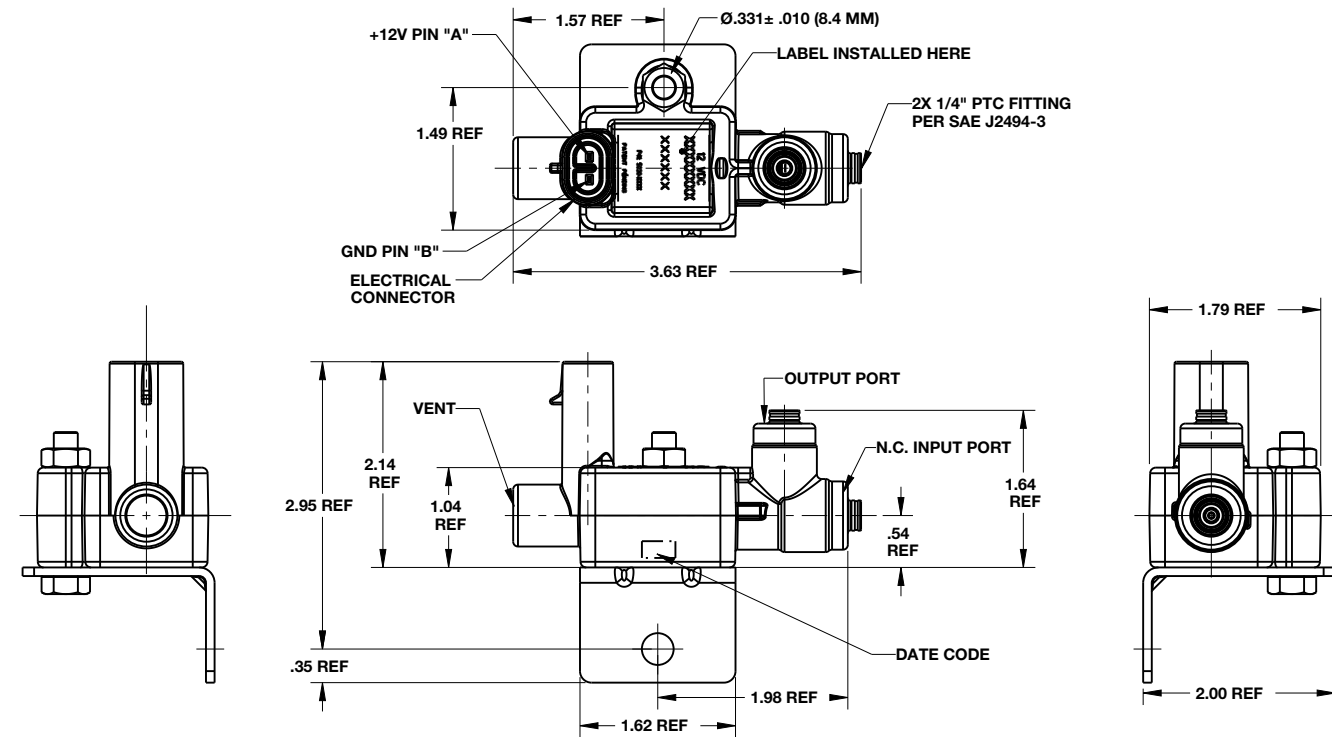
5030-111



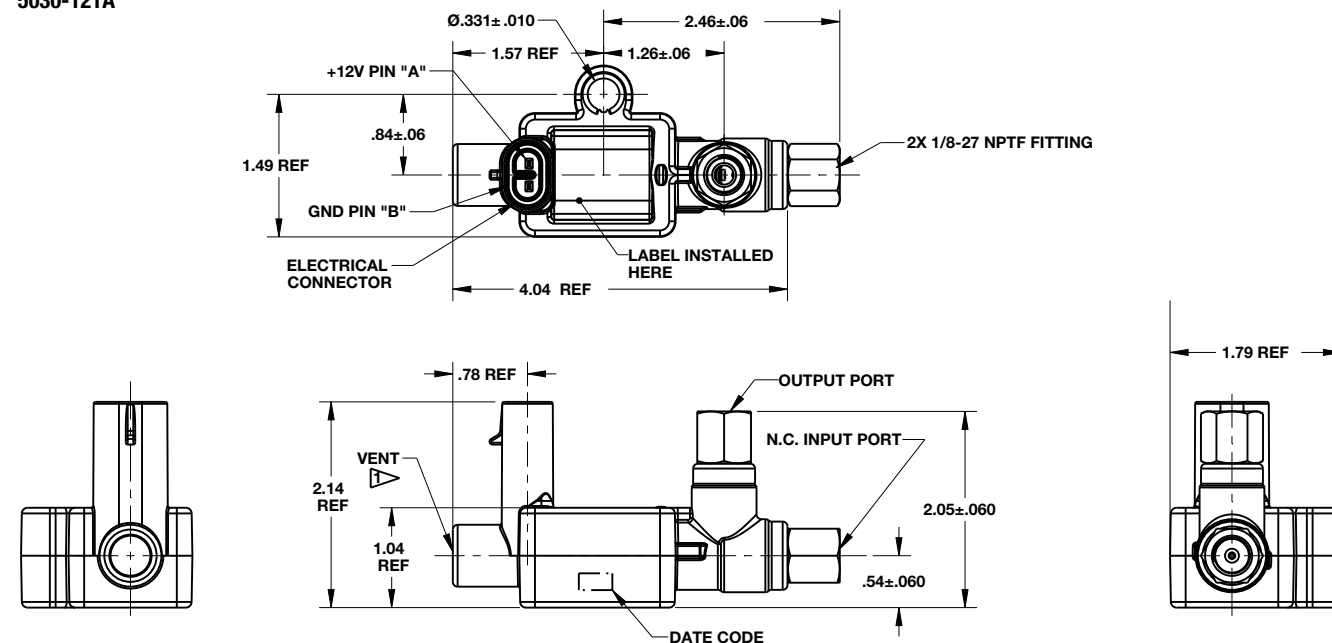
## SOLENOID VALVES

### 5030 Series

#### 5030-111-1



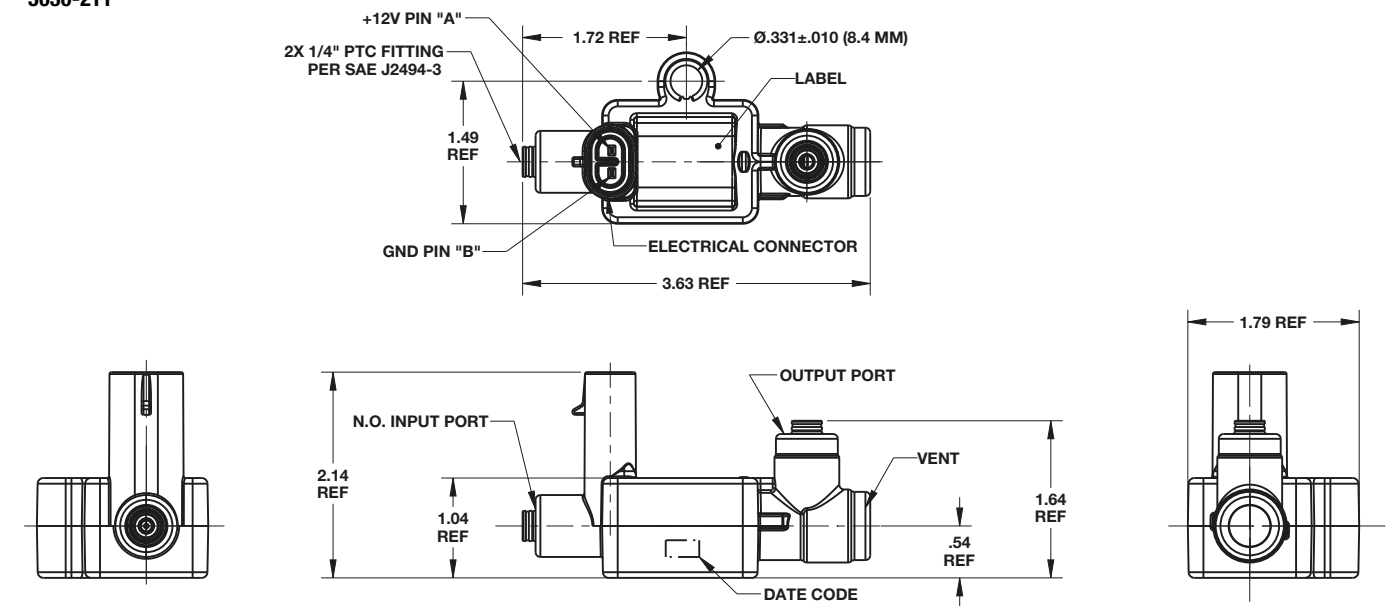
#### 5030-121A



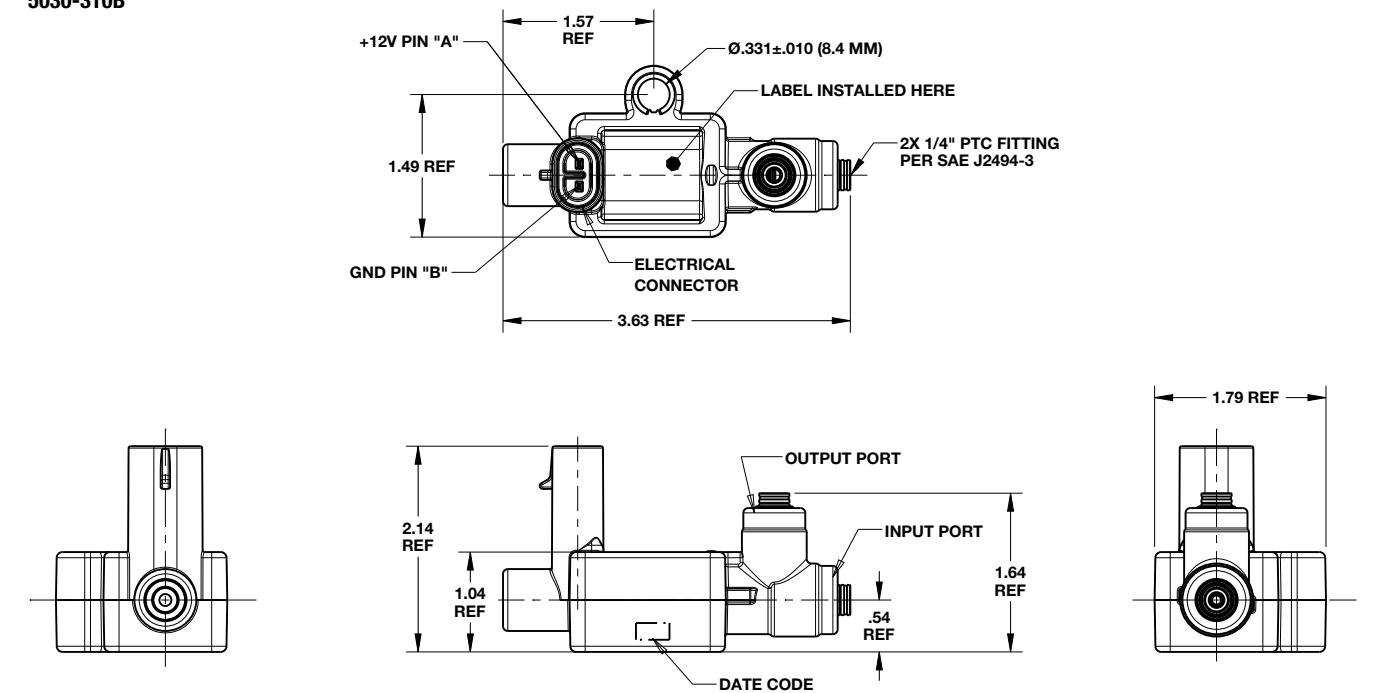
## SOLENOID VALVES

### 5030 Series

#### 5030-211



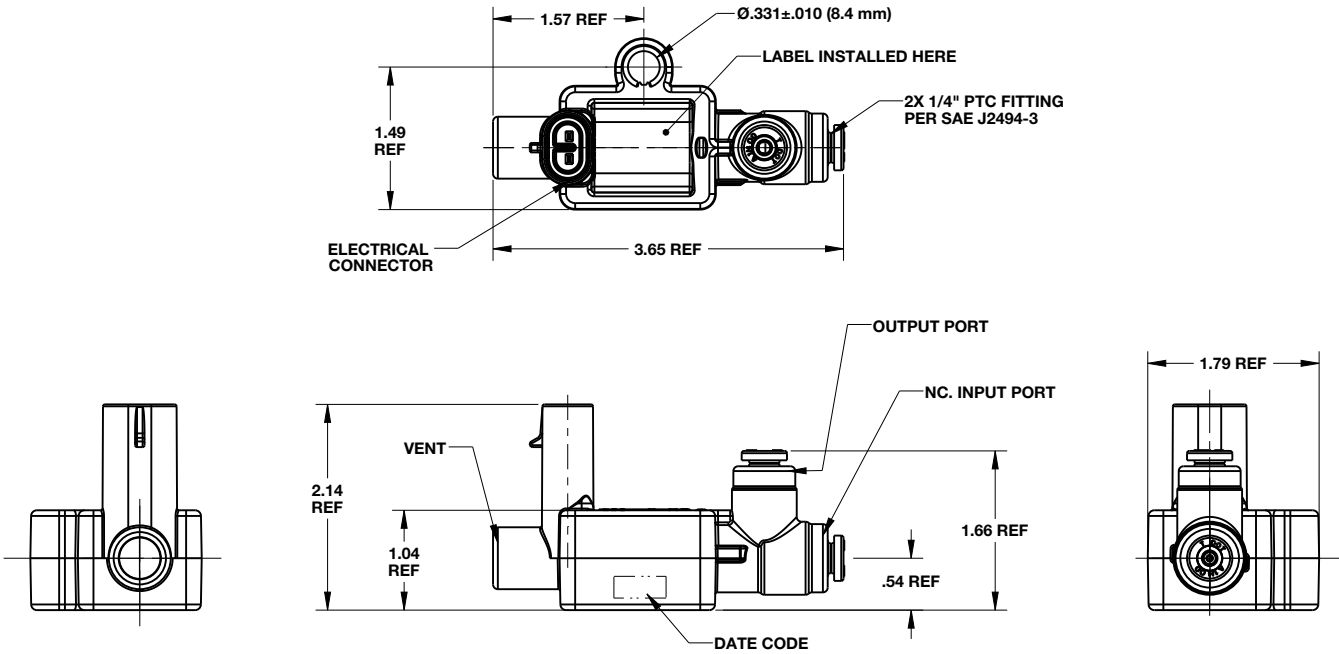
#### 5030-310B



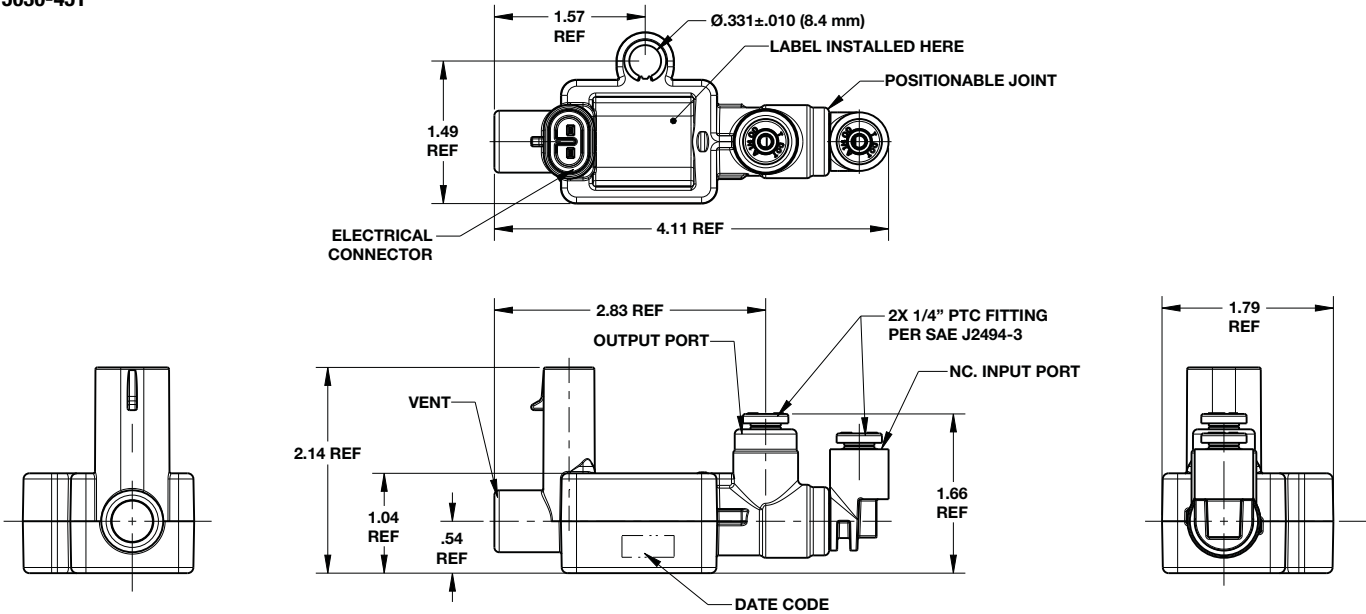
# SOLENOID VALVES

5030 Series

## 5030-411A



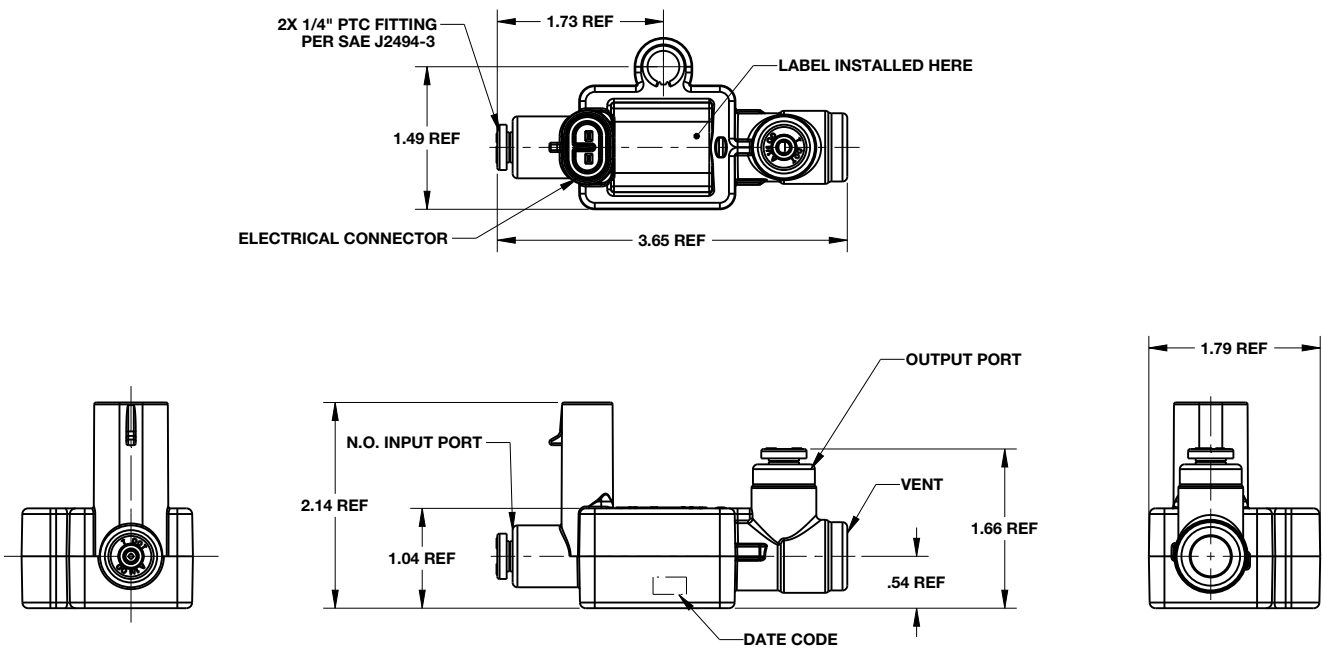
## 5030-451



# SOLENOID VALVES

5030 Series

## 5030-511A



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

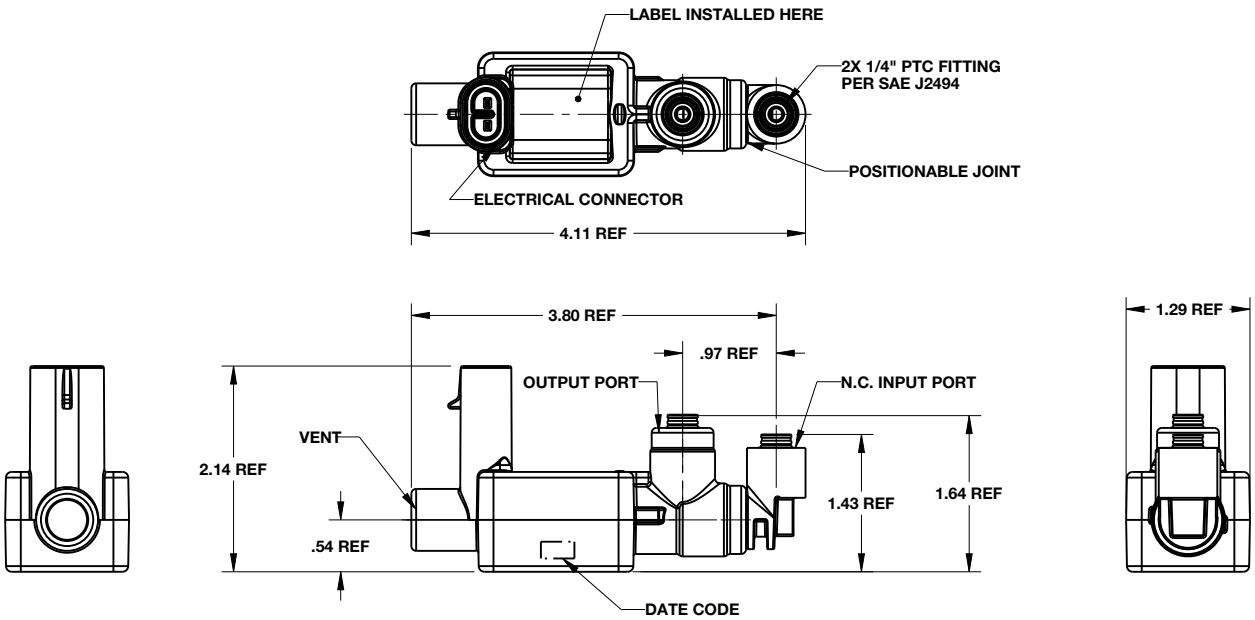
Nylon, glass filled



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 manifolding 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+C).  
Please consult factory for configurations using more than 8 stations.

End Plates

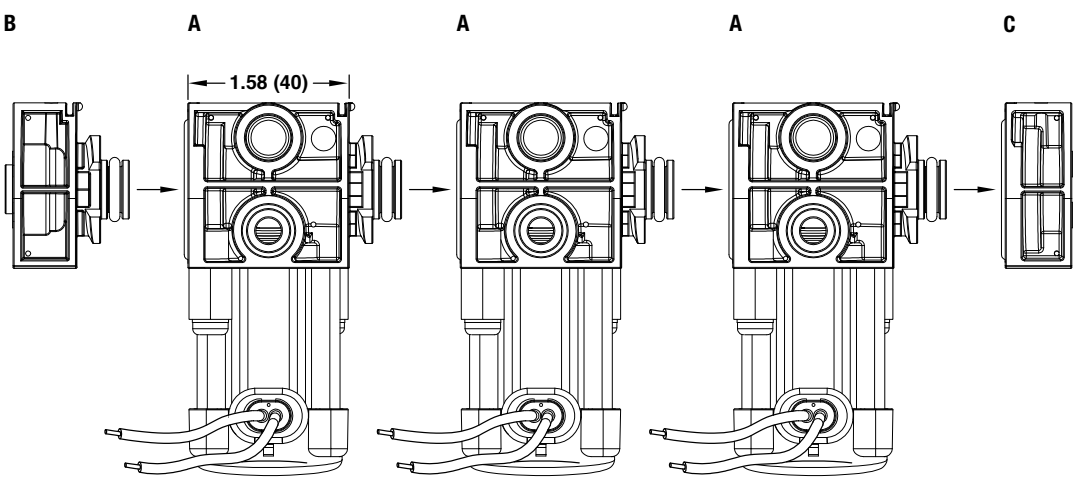
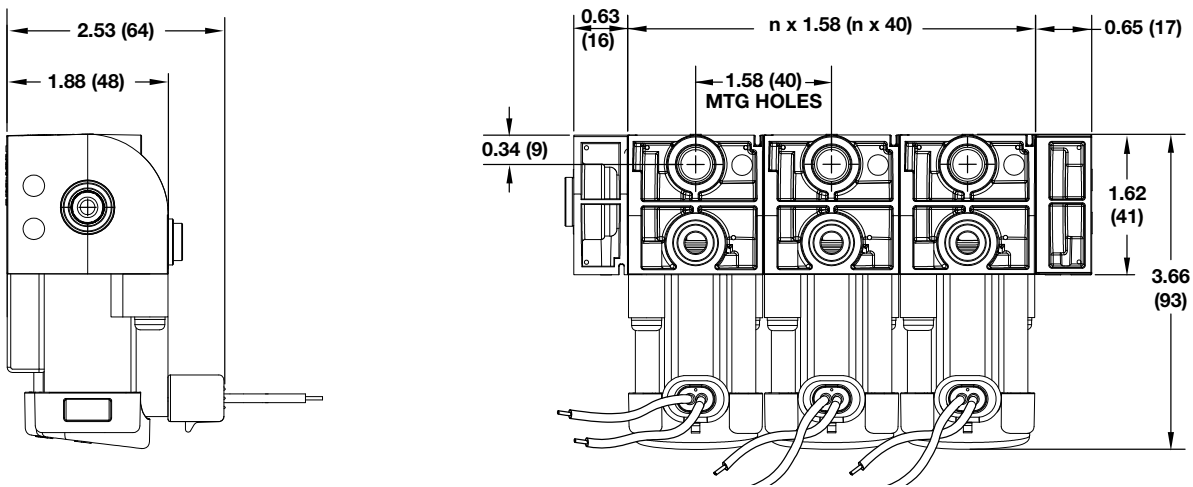
| Model   | Description                          | Position |
|---------|--------------------------------------|----------|
| 7202-70 | Inlet Left Hand End Plate (3/8" PIF) | B        |
| 7203-70 | Cap Right Hand End Plate             | C        |

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

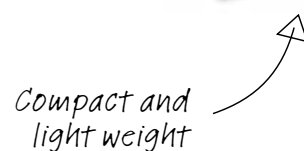
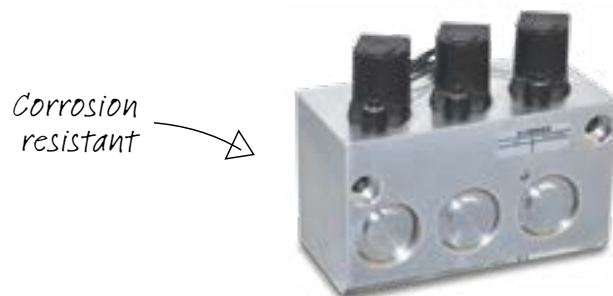
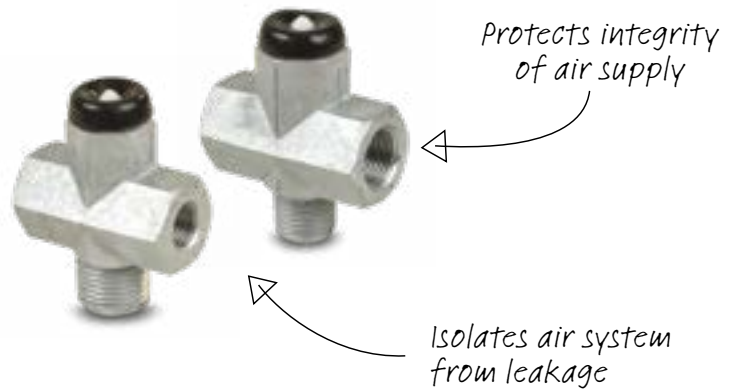
● Specifications





# 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

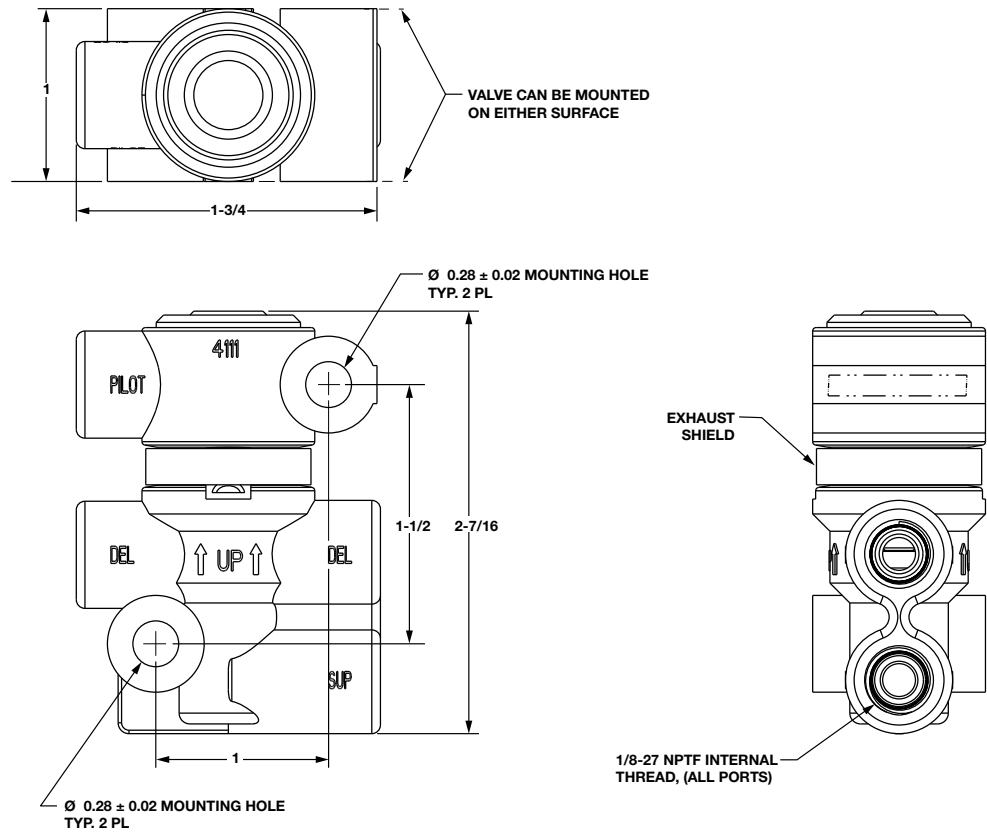
Die cast Zinc



## 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

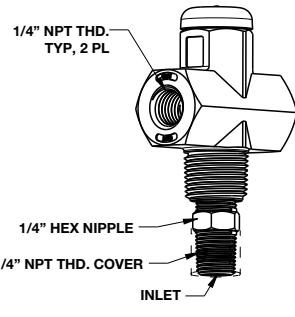
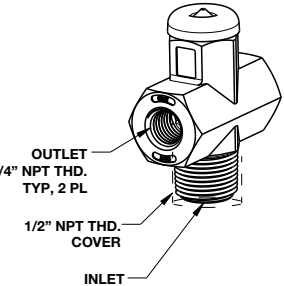
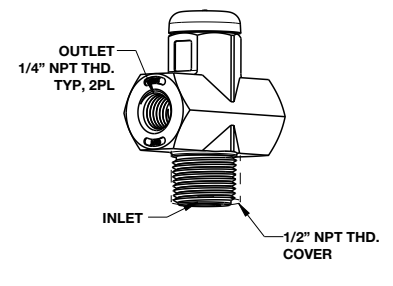
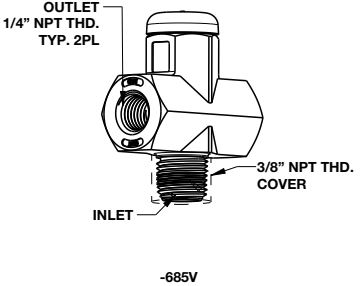
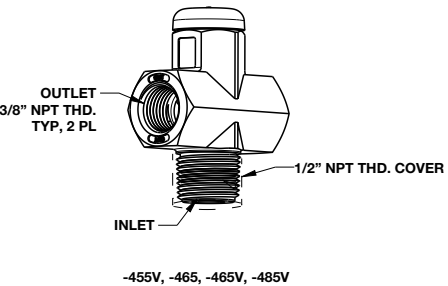
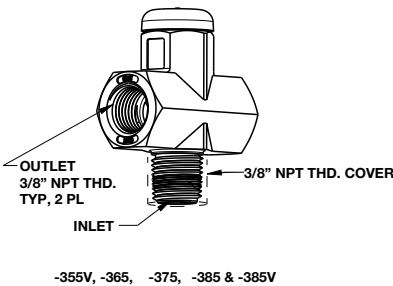
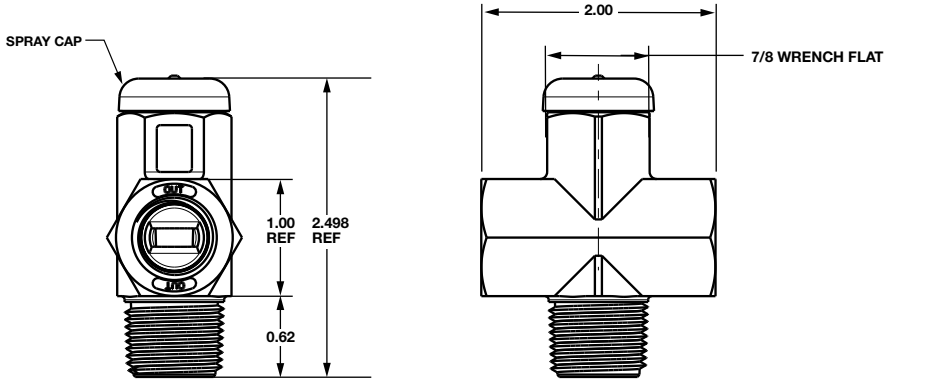


## Models

| 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.

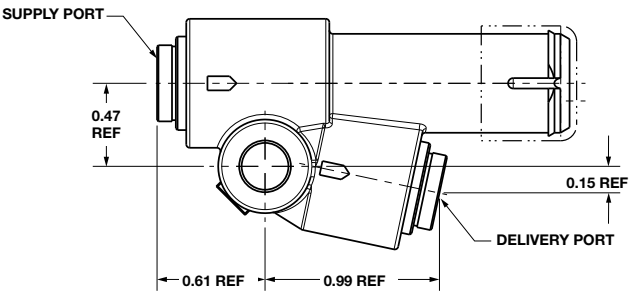
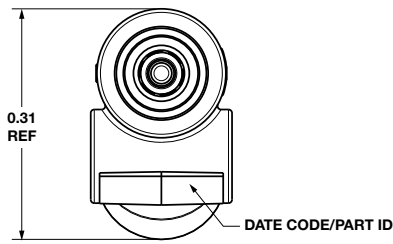
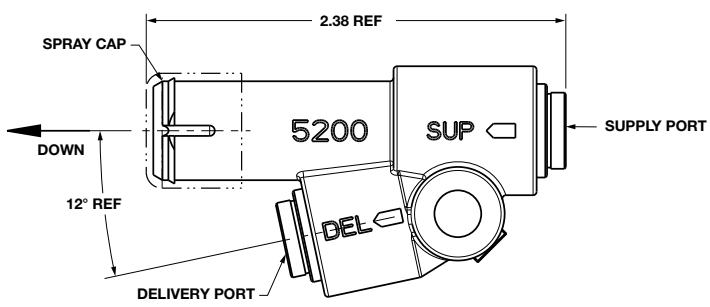
**Material**  
Thermoplastic body with  
Fluorosilicone seals



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 | -      |

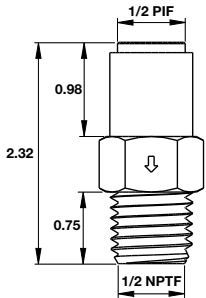
### Models - Double Check Valves

| 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

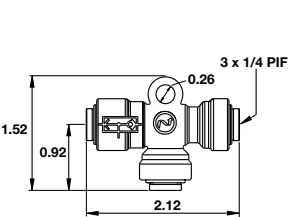
### SINGLE CHECK VALVES

95403701M

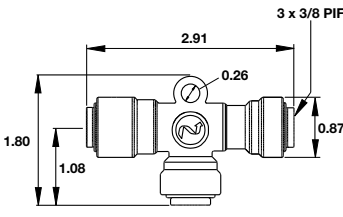


### DOUBLE CHECK VALVES

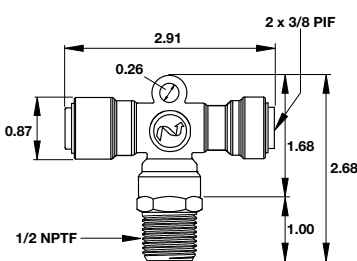
AI04000404074



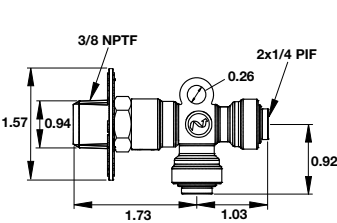
AI06000606074



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

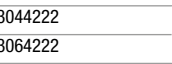
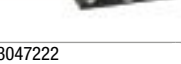
| Model No.                                                                             | Actuation                     | Port size<br>NPT | Flow Cv | Drawing no. | Thread<br>NPT | Tube size | Straight<br>fitting                                                                   | 90° swivel<br>elbow                                                                   | 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

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

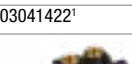
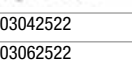
Models - 3/2 Manual valves

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

MANUAL AND MECHANICAL ACTUATED SPOOL VALVE

Super X

Models - 3/2 Manual valves

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

Models - 5/2 Manual valves

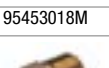
|                                                                                       |                   |               |         |             |            |           | Accessories                                                                           |                                      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

1 Normally closed



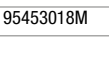
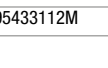
MANUAL AND MECHANICAL ACTUATED SPOOL VALVE  
Super X

Models - 5/2 Manual valves

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

Accessories

Models - 5/3 Manual valves

| Model no.                                                                           | Actuation          | Port size NPT | Flow Cv | Drawing no. | Thread NPT | Tube size | Straight fitting                                                                      | 90° swivel elbow                                                                      | Muffler                                                                               |
|-------------------------------------------------------------------------------------|--------------------|---------------|---------|-------------|------------|-----------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  | Lever/spring/lever | 1/8           | 0.34    | 21          | 1/8        | 1/4       |  |  |  |
| X33638223                                                                           | Lever/spring/lever | 1/4           | 0.98    | 22          | 1/4        | 3/8       |  |  |  |

3 All ports blocked

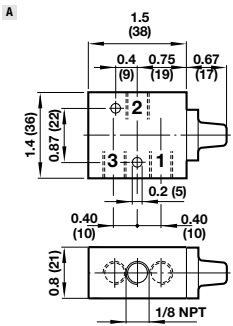
Accessories

MANUAL AND MECHANICAL ACTUATED SPOOL VALVE  
Super X

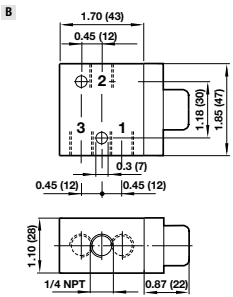
Specifications

VALVE BODIES

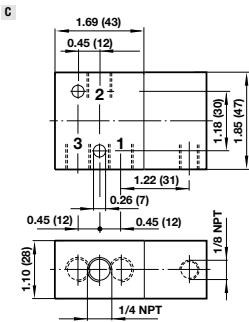
1/8, 3/2 Spring return, basic body



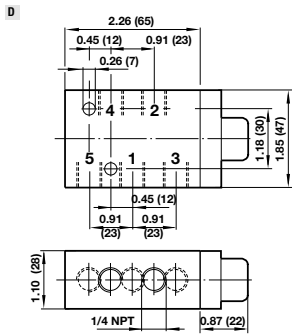
1/4, 3/2 Spring return, basic body



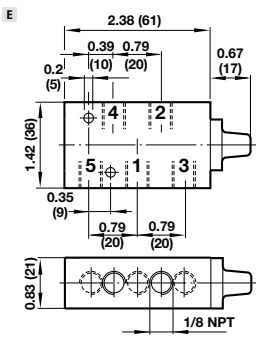
1/4, 3/2 Pilot return, basic body



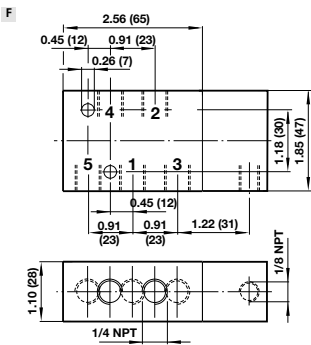
1/8, 5/2 Spring return, basic body



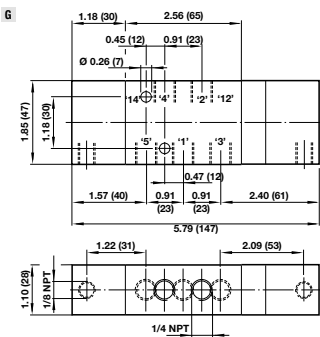
1/4 and 1/8, 5/2 Spring return, basic body



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

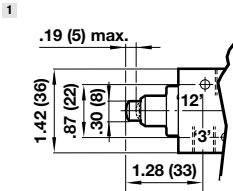


1/4, 5/3 Spring return, basic body

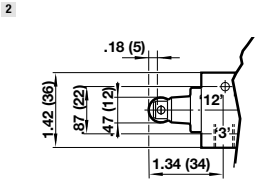


MECHANICAL VALVE ACTUATORS

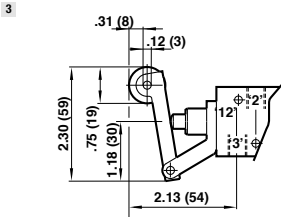
Plunger – 1/8 valves



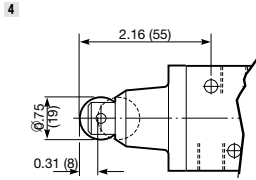
Roller – 1/8 valves



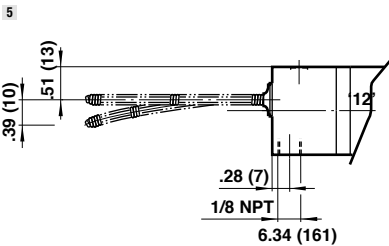
Roller lever – 1/8 valves



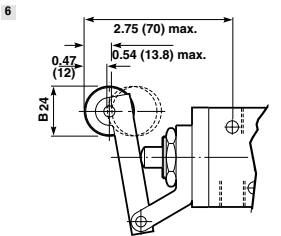
Roller – 1/4 valves



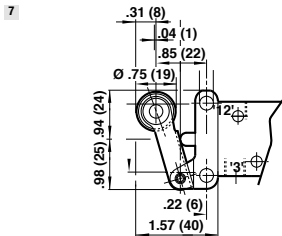
Antenna – 1/8 valves



Roller lever – 1/4 valves



Heavy duty roller lever – 1/8 valves

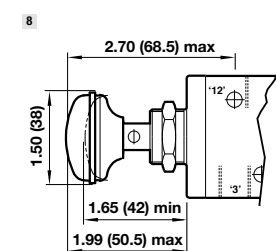


## MANUAL AND MECHANICAL ACTUATED SPOOL VALVE

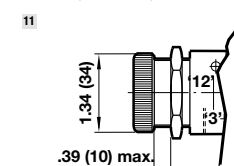
Super X

## MANUAL VALVE ACTUATORS

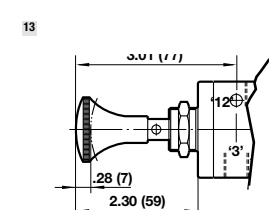
Button – 1/4 Valves



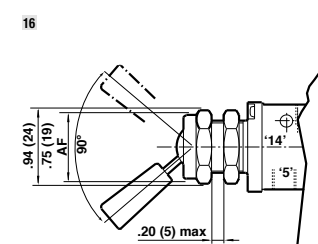
Button (shrouded) – 1/8 valves



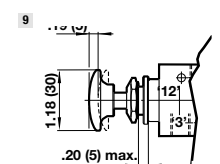
Knob – 1/4 and 1/8 valves



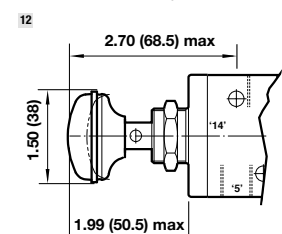
Lever operated lever return valve – 1/8 valves



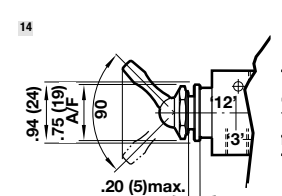
Button – 1/8 valves



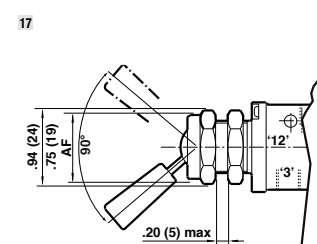
Button operated spring return valve – 1/4 valves



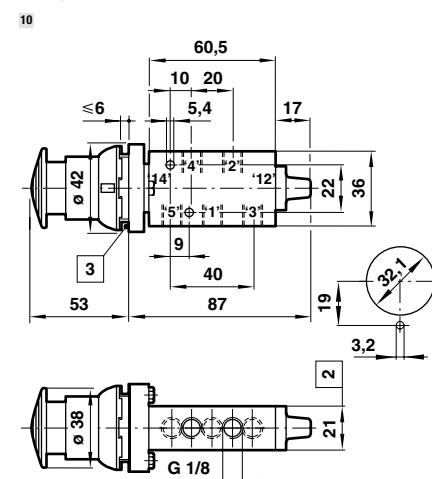
Lever operated spring return valve – 1/8 valves



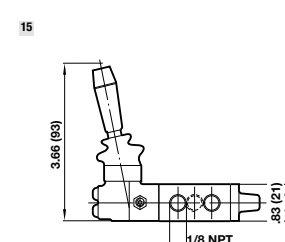
5/2 Lever operated lever return valve – 1/8 valves



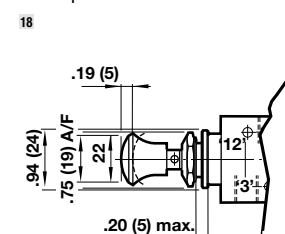
Emergency stop – 1/8 valves



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



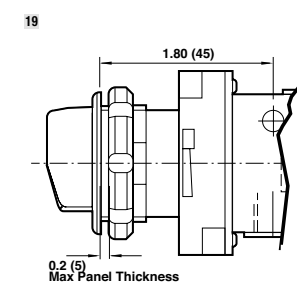
Knob operated knob return valve – 1/8 valves



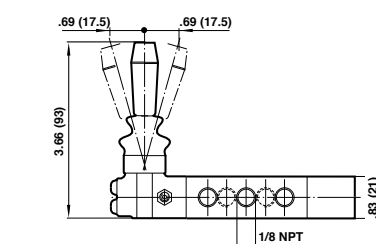
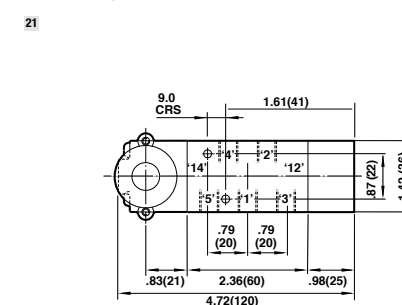
## MANUAL AND MECHANICAL ACTUATED SPOOL VALVE

Super X

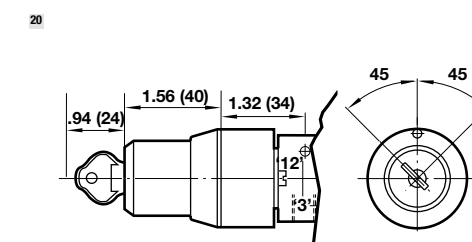
Rotary knob – 1/8 valves



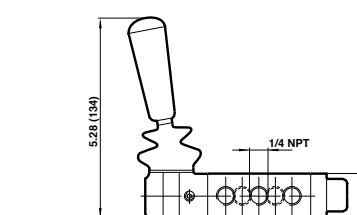
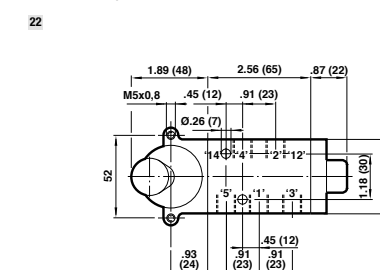
Lever/spring/lever – 1/8 valves



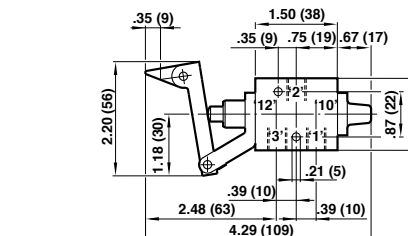
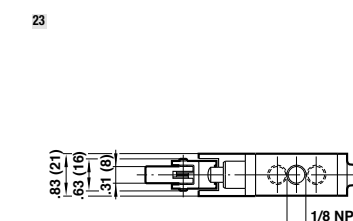
Key – 1/8 valves



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

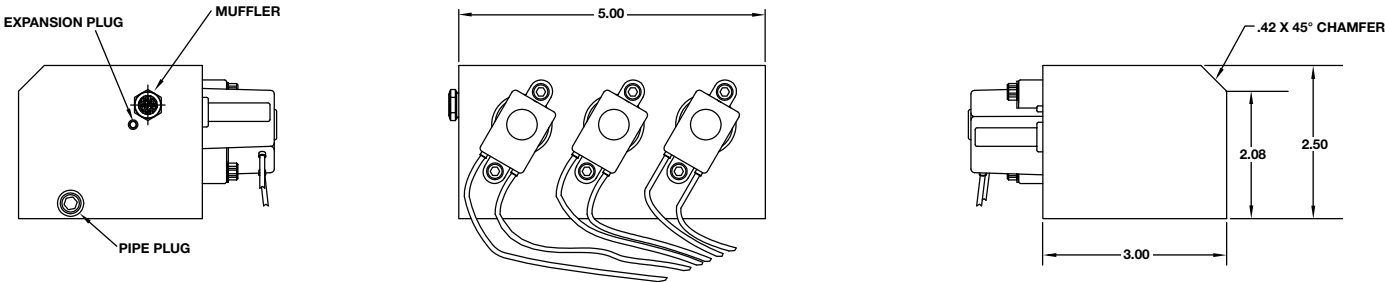
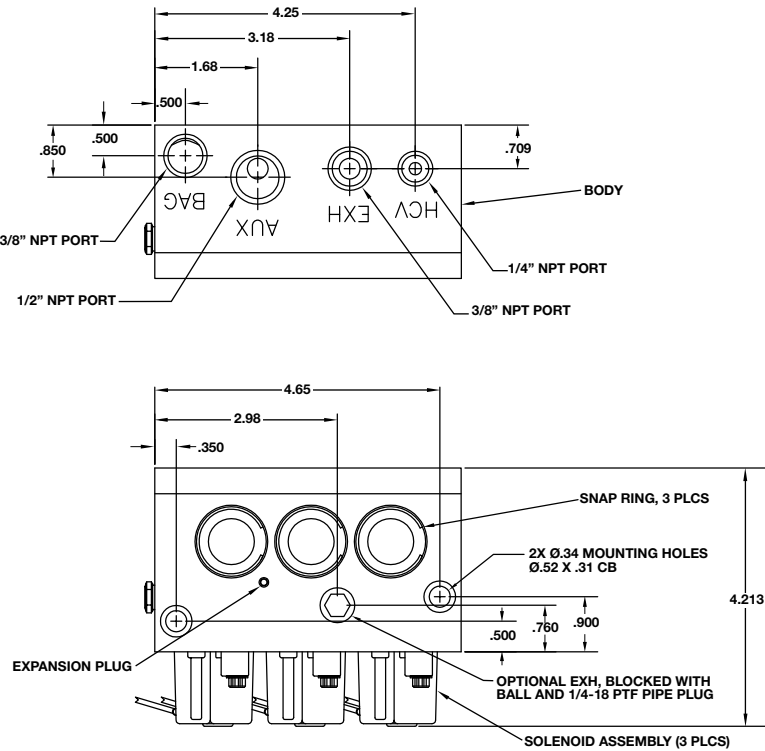
Body: Aluminum  
Elastomers: Carboxylated Nitrile



# KNEELING MANIFOLD

K990073 Series

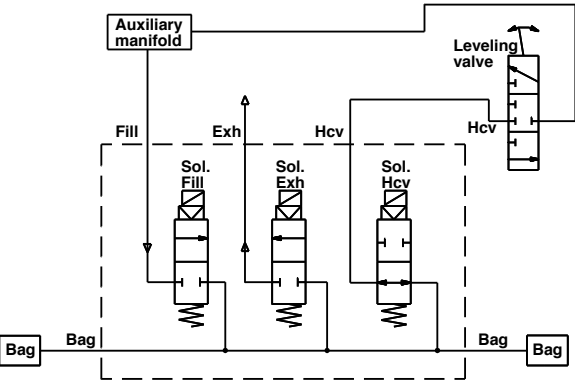
## Specifications



| Function                   | Port Size<br>HCV | 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 |

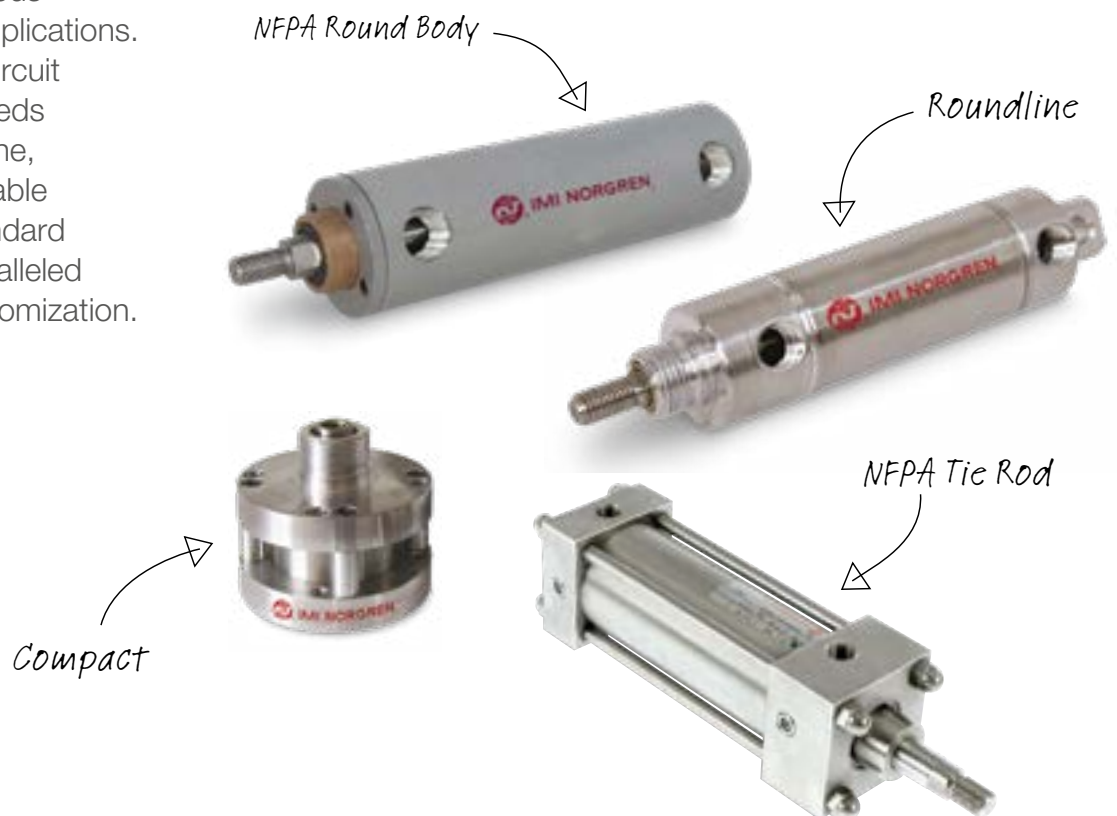
## Models

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



# 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 vareity of mounting options
- > Optional adjustable cushioning availalble

### Extruded Body (aluminum)

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

## ● Other Fuel Products

|                                             |                                                  |
|---------------------------------------------|--------------------------------------------------|
| <b>Return Flow Splitter<br/>2252 Series</b> | <b>Linegard® Breakaway<br/>Valves<br/>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           |

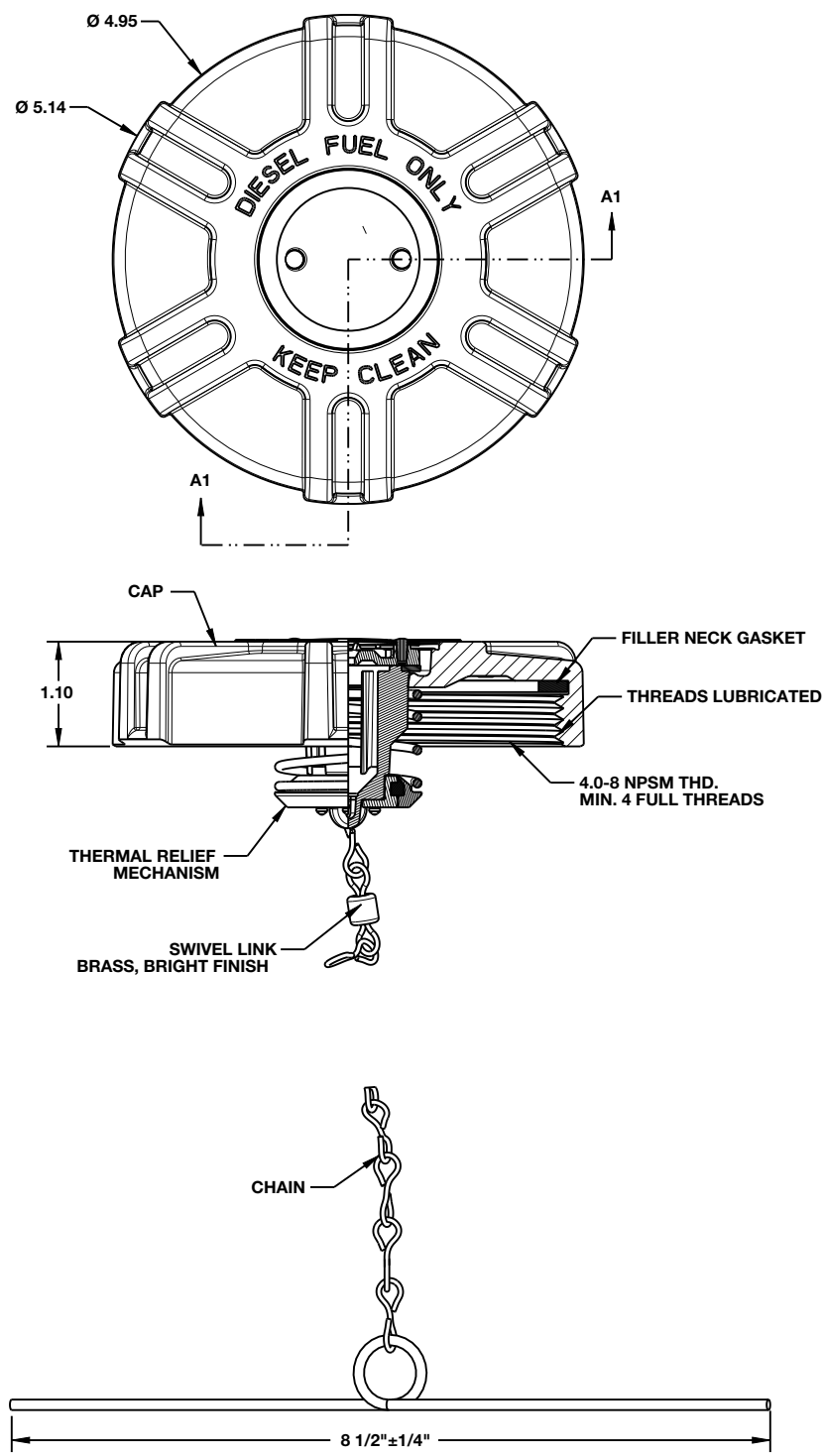
### Other Caps

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

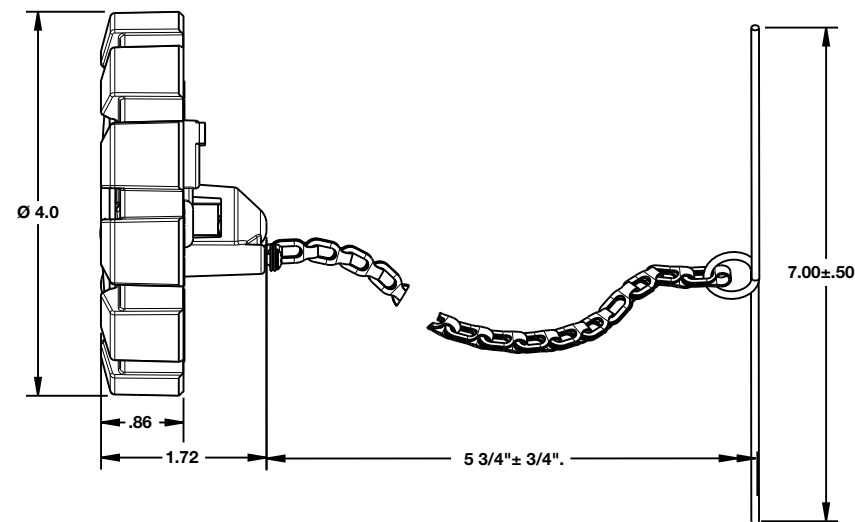
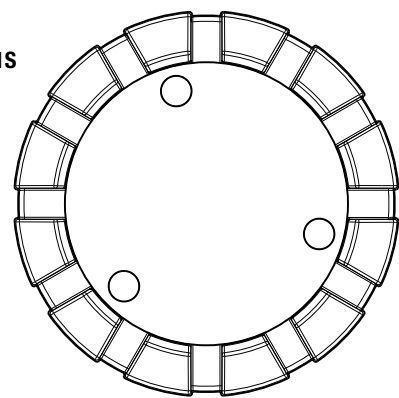
## FUEL TANK CAPS

## Specifications

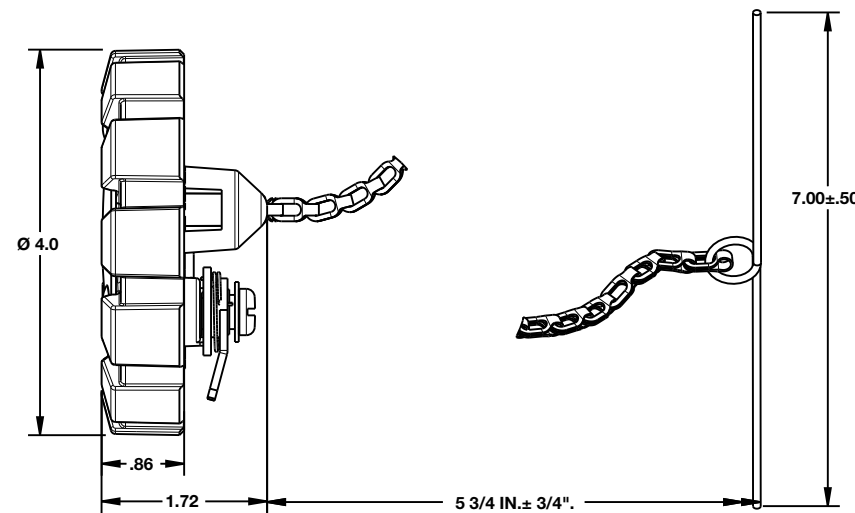
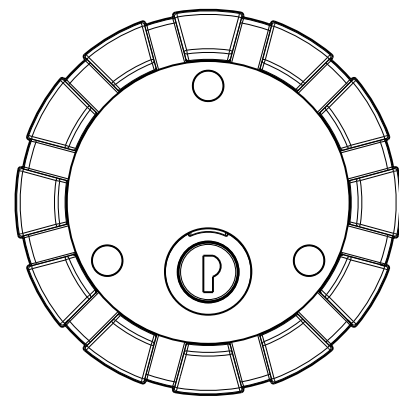
①  
2011-1, 2011-1C



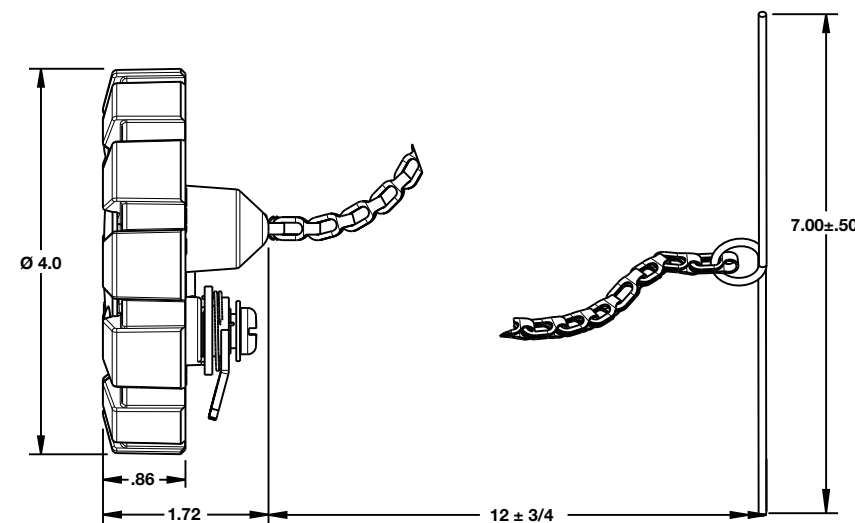
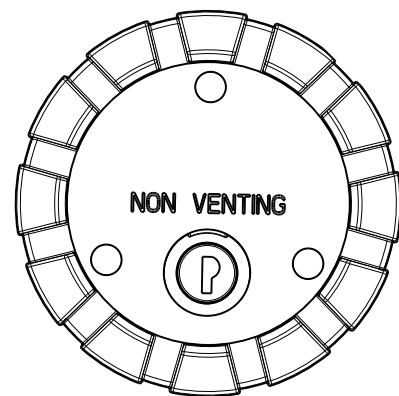
②  
249-1S



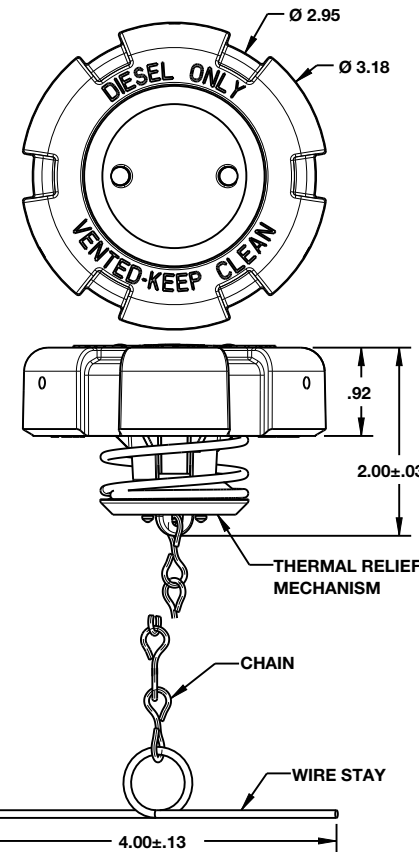
③  
249-3S



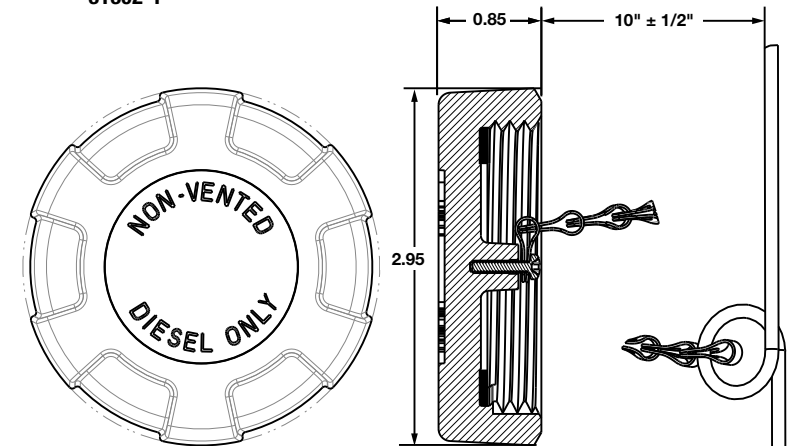
④  
249-5P



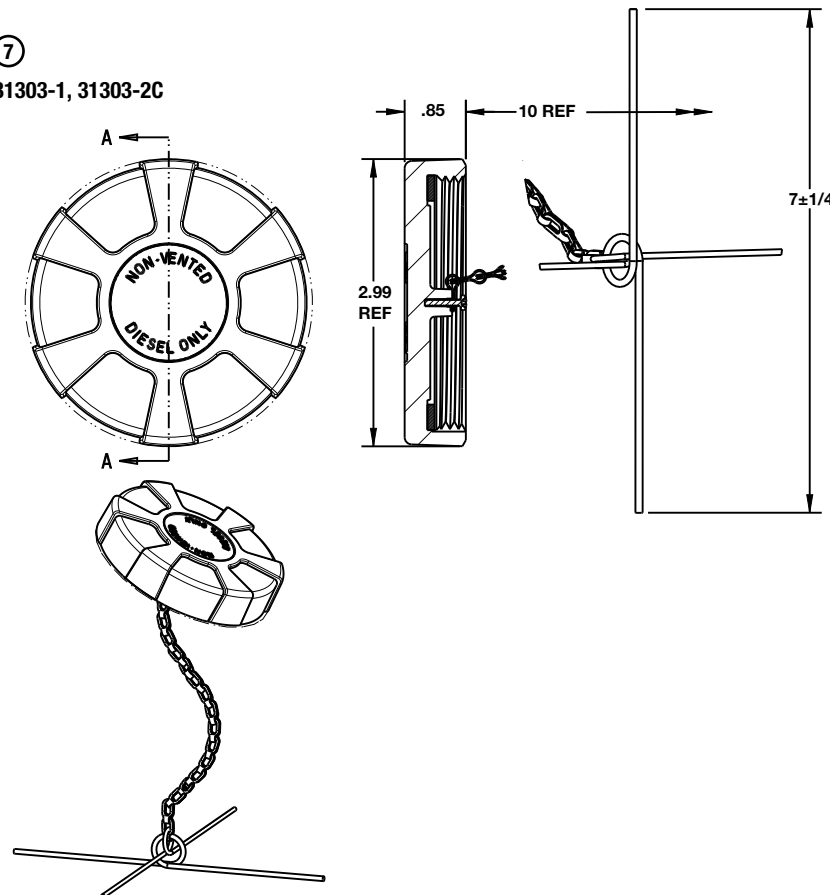
⑤  
253-2



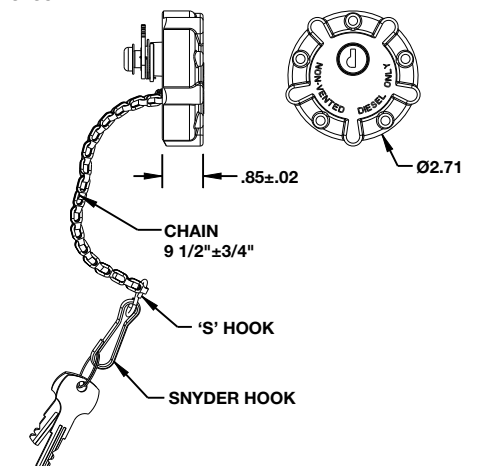
⑥  
31302-1



⑦  
31303-1, 31303-2C

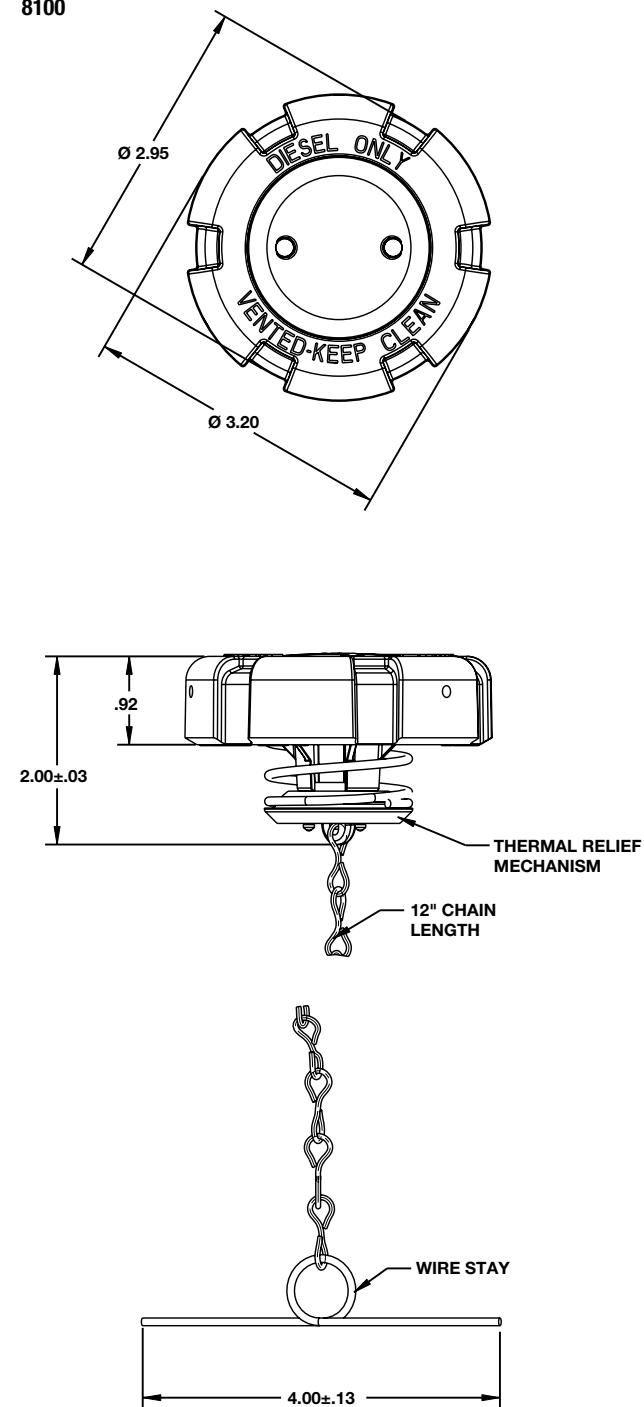


⑧  
31307-1

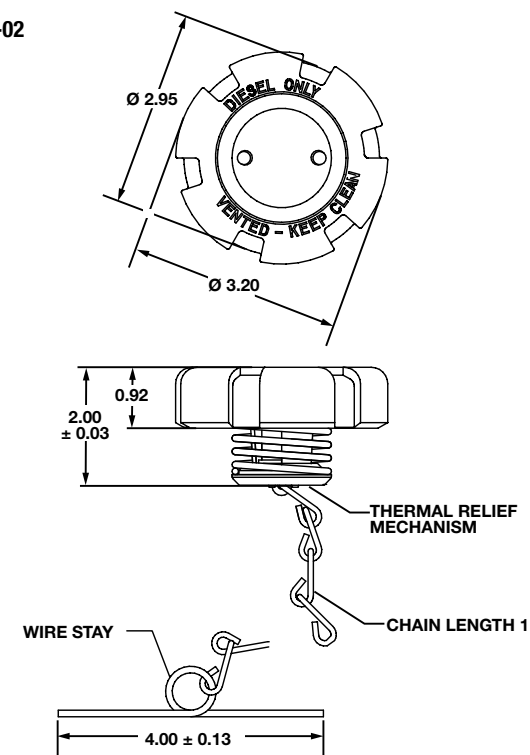




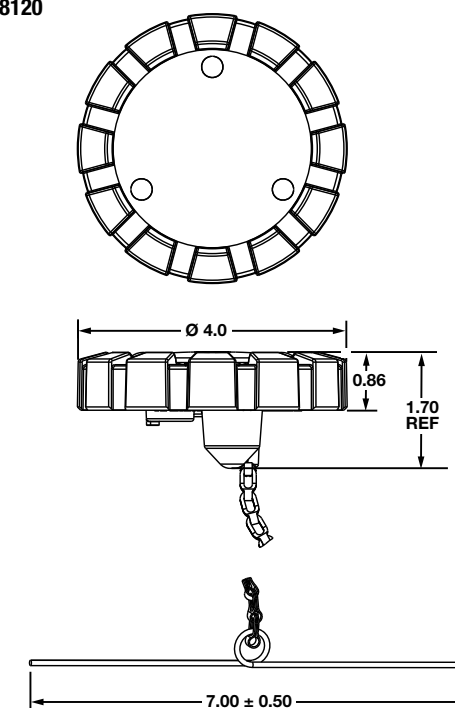
⑨  
8100



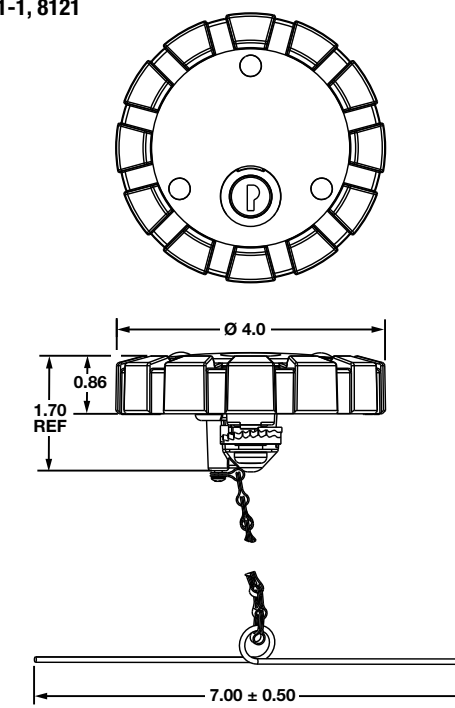
⑩  
8103, 8105-02



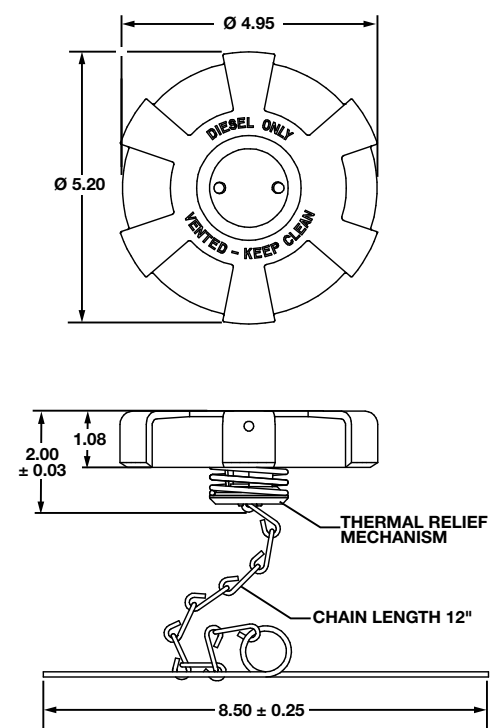
⑪  
8110, 8110-1, 8120



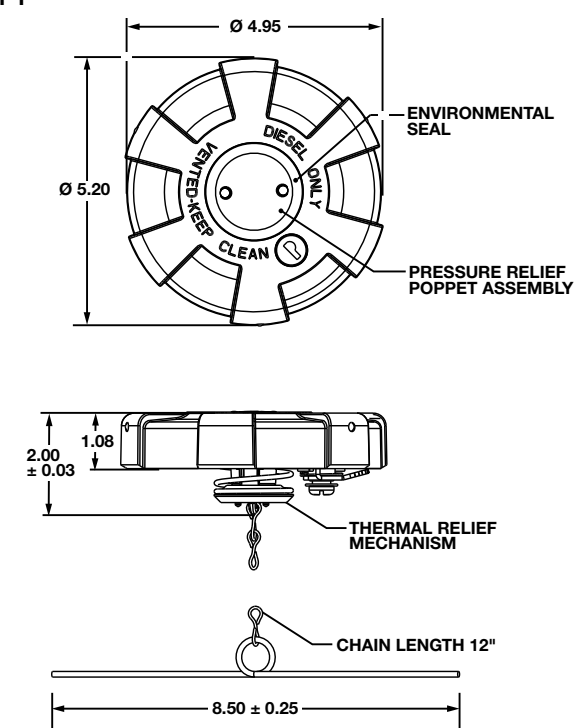
⑫  
8111, 8111-1, 8121



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:                  | Hex size: |
| 1/4-18 NPTF                   | 7/8"      |
| 1/2-14 NPTF                   | 9/16"     |
| 1-1/4 PTF                     | 1/2"      |
|                               | 1.0"      |
| Overflow hose diameter:       | 25.4 mm   |
| 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 |           |



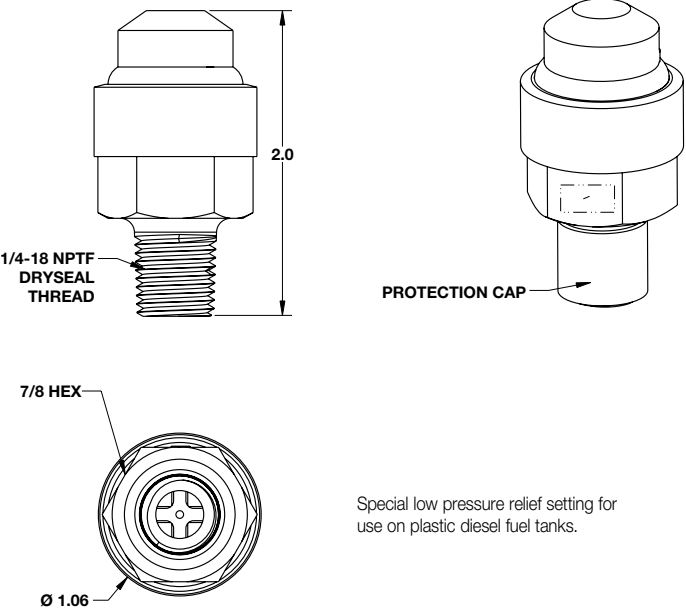
Models

| 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.

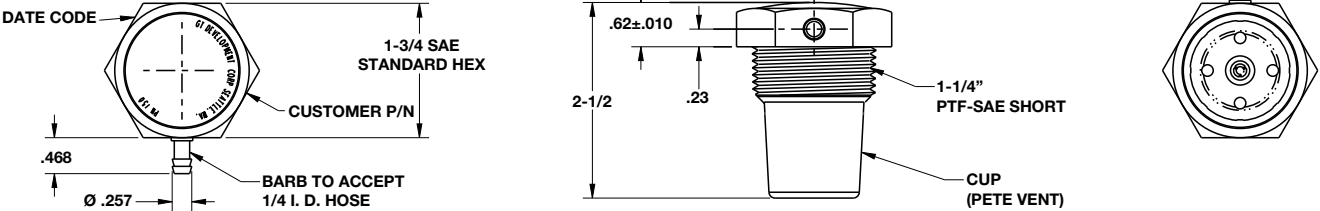
Specifications

139-1

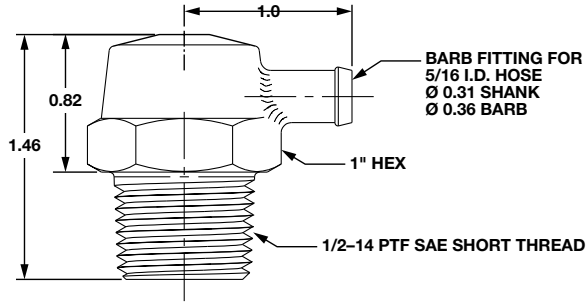


FUEL TANK VENT  
201 SERIES & 2115-1

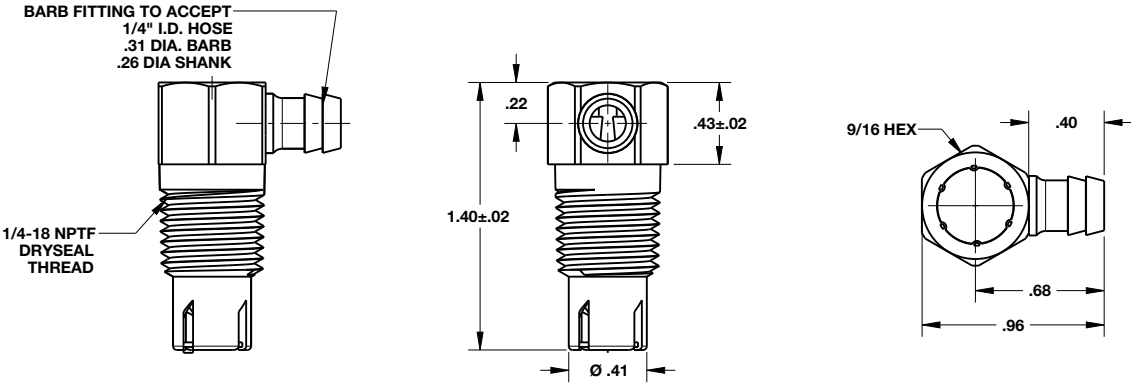
150-5



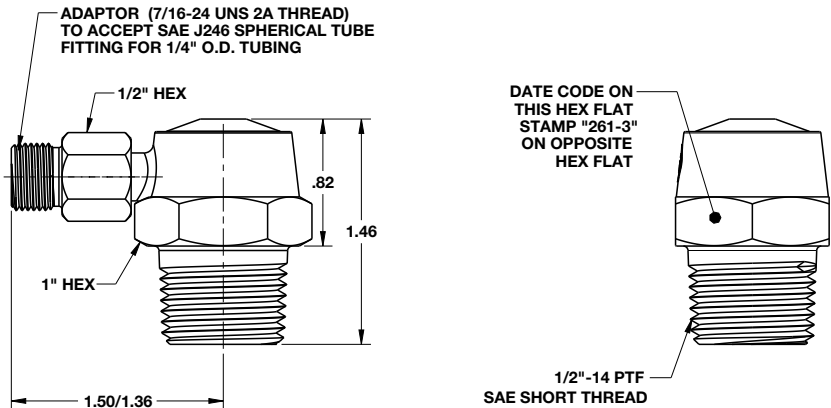
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218-1

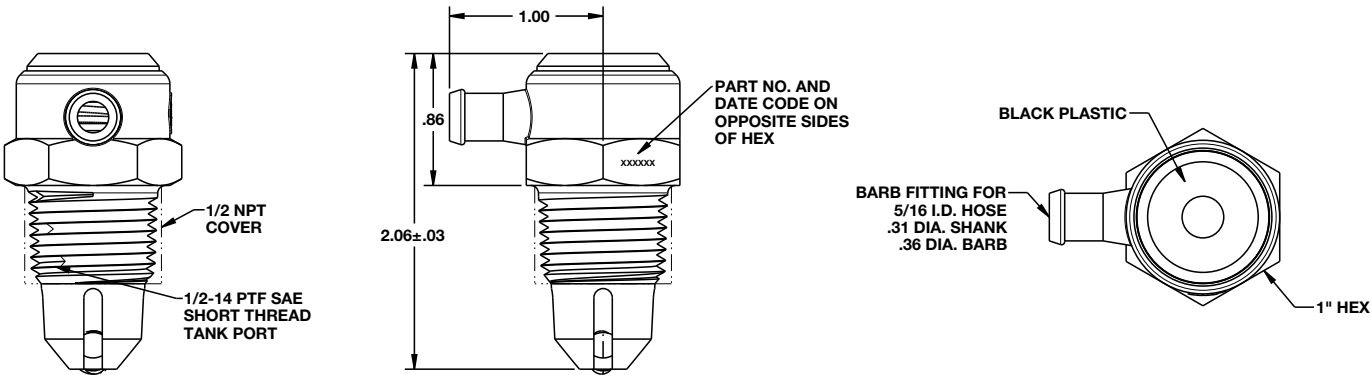


261-3

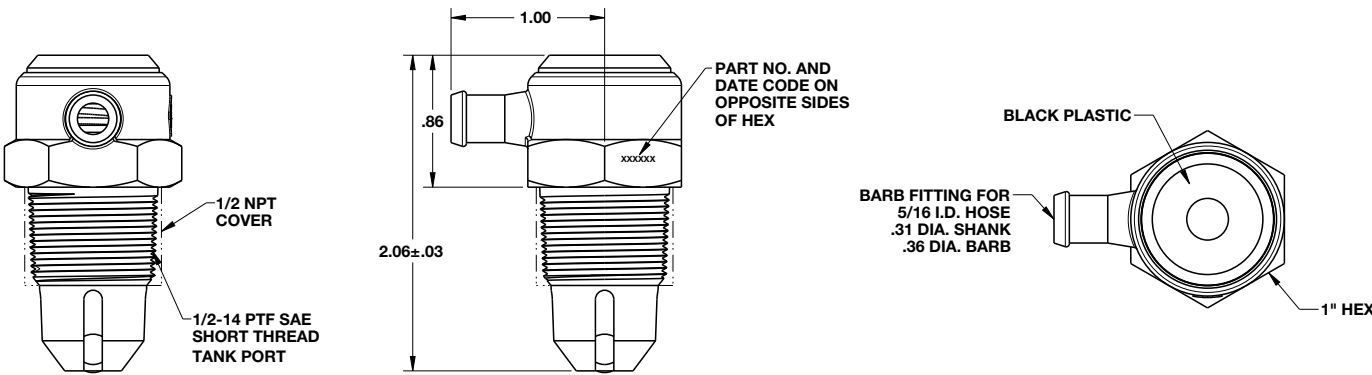


FUEL TANK VENT  
201 SERIES & 2115-1

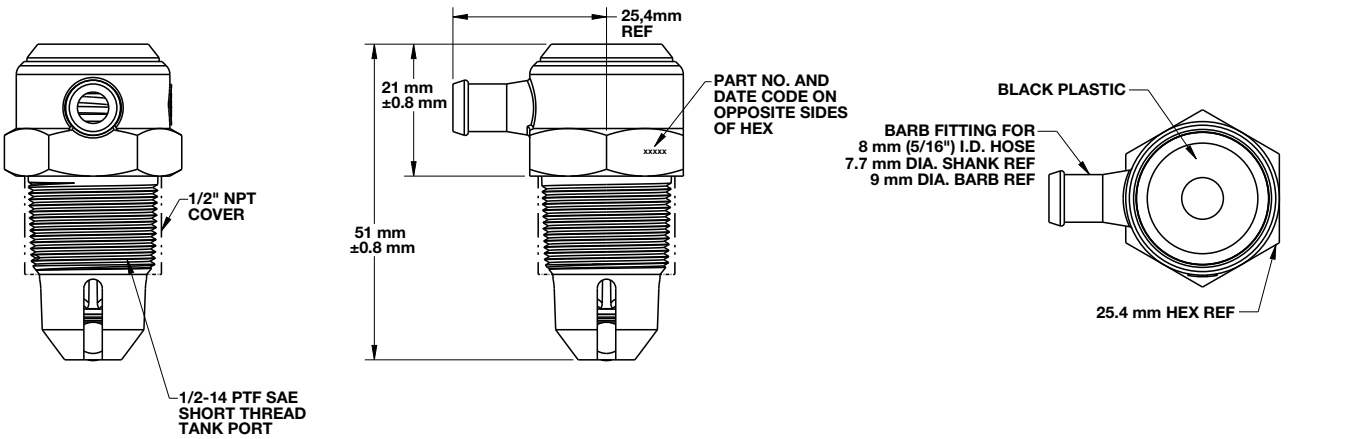
2115-01



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

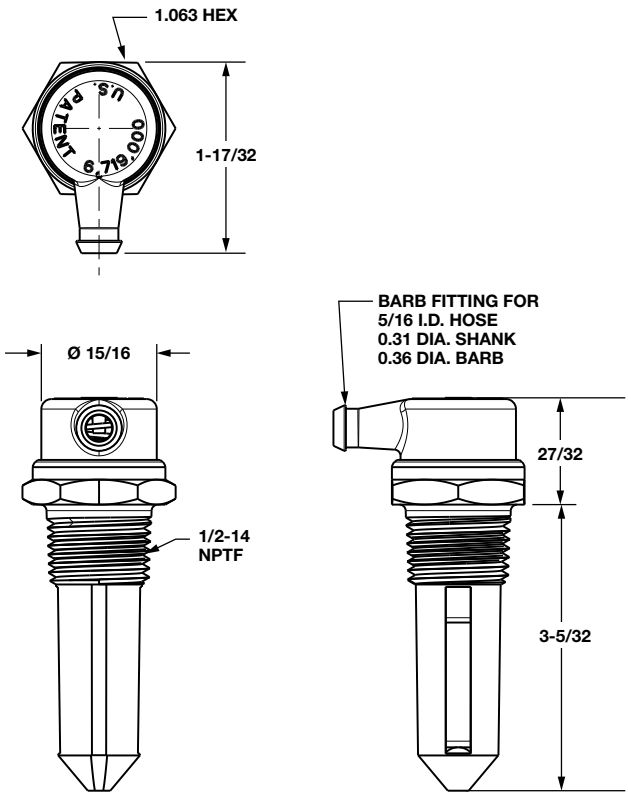
Hex size:  
1.063"



Models

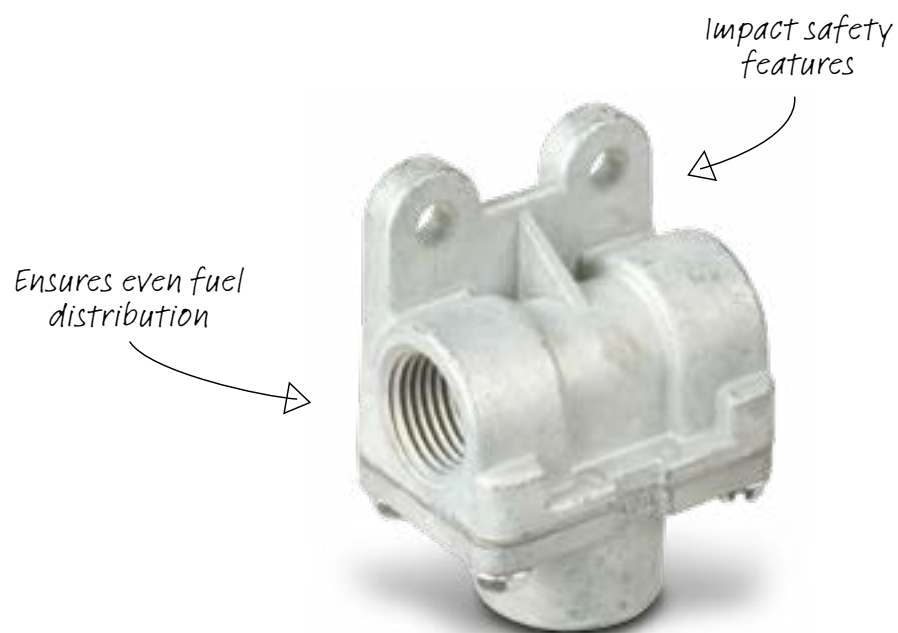
| Model    | Description                           | Thread         | Diesel/Gas | Thermal Relief | Pressure Relief |
|----------|---------------------------------------|----------------|------------|----------------|-----------------|
| 2989-11  | High Flow Fuel Tank Vent              | 1/2" - 14 NPTF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

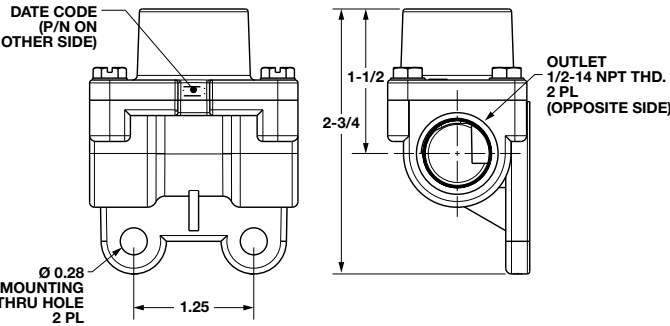
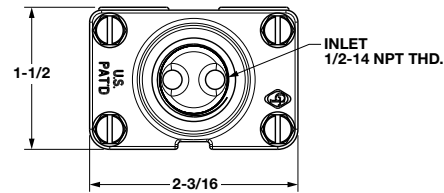


## Models

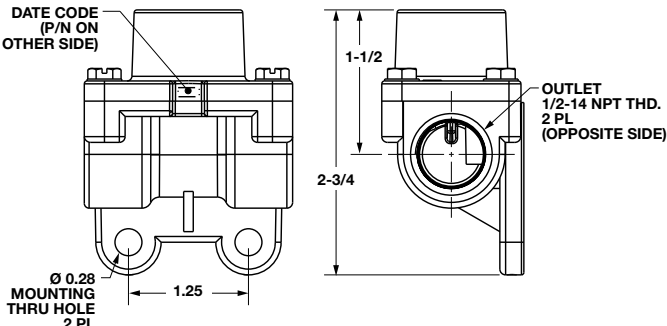
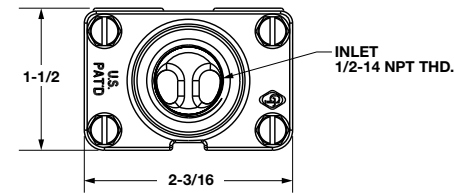
| Model    | Port Size | Thread type | Flow     | Packaged   |
|----------|-----------|-------------|----------|------------|
| 2252-1   | 1/2"-14   | NPT         | Standard | Bulk       |
| 2252-1D  | 1/2"-14   | NPT         | Standard | Individual |
| A2252-2  | 1/2"-14   | NPT         | High     |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

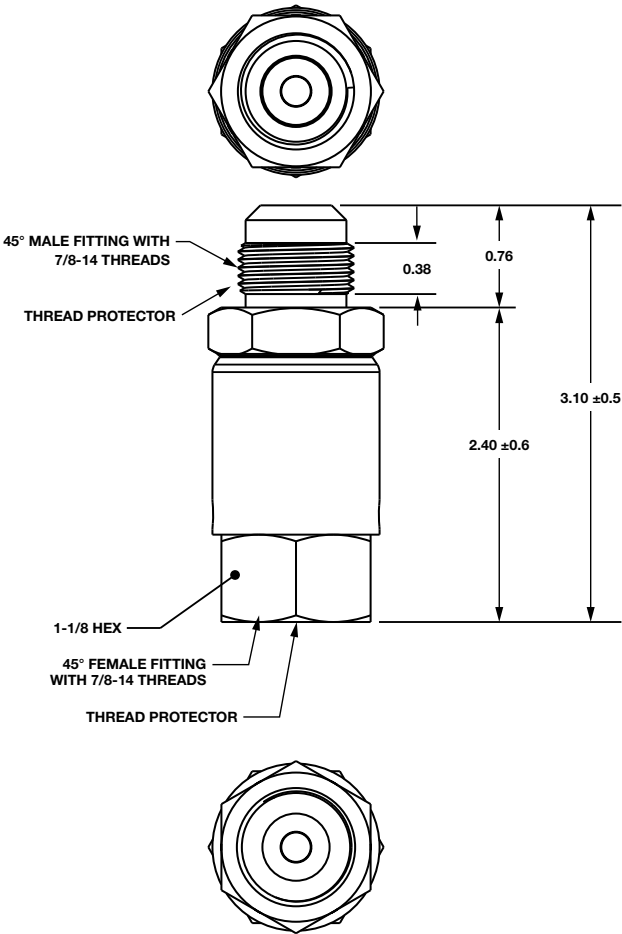
**Port size:**  
Male end: 7/8"-14 NPT  
Female end: 7/8"-14 NPT



## 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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