



Quality Compressed Gas Products Since 1976

Product Catalog

Leading manufacturer and supplier of compressed gas valves, relief devices, and fittings to the compressed gas tube trailer, and MEGC industries.

Western Valve, Inc. | 806)622-3180 | Fax (806)622-3188 | www.westernvalveinc.com
P.O. Box 2446, Amarillo, TX 79105 | 6701 W McCormick Rd, Amarillo, TX 79118



**Quality Management
System Certification**

Western Valve, Inc.

ISO 9001:2015

Cert # 24-00006

Our mission at Western Valve, Inc. is to supply our customers the compressed gas industry with prime products and services at competitive prices. Western Valve strives to be an innovator by utilizing the latest CNC equipment and technologies. With state of the art equipment, highly skilled technicians, and strict quality procedures, Western Valve has earned a reputation as a trusted vendor for some of the worlds largest global gas suppliers. Our vigilant team of in-house compliance and design experts are here to make sure every Western Valve device is engineered and built to withstand the unique challenges of an ever-changing world.

Western Valve, Inc. is “family owned” and has been in the business of supplying compressed gas valves, pressure relief devices, and related items of the highest quality to the compressed gas tube trailer and ISO MEGC industries since 1976.



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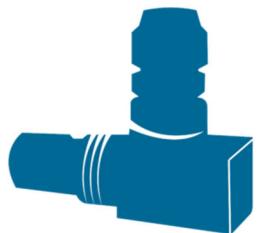
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SECTION 1

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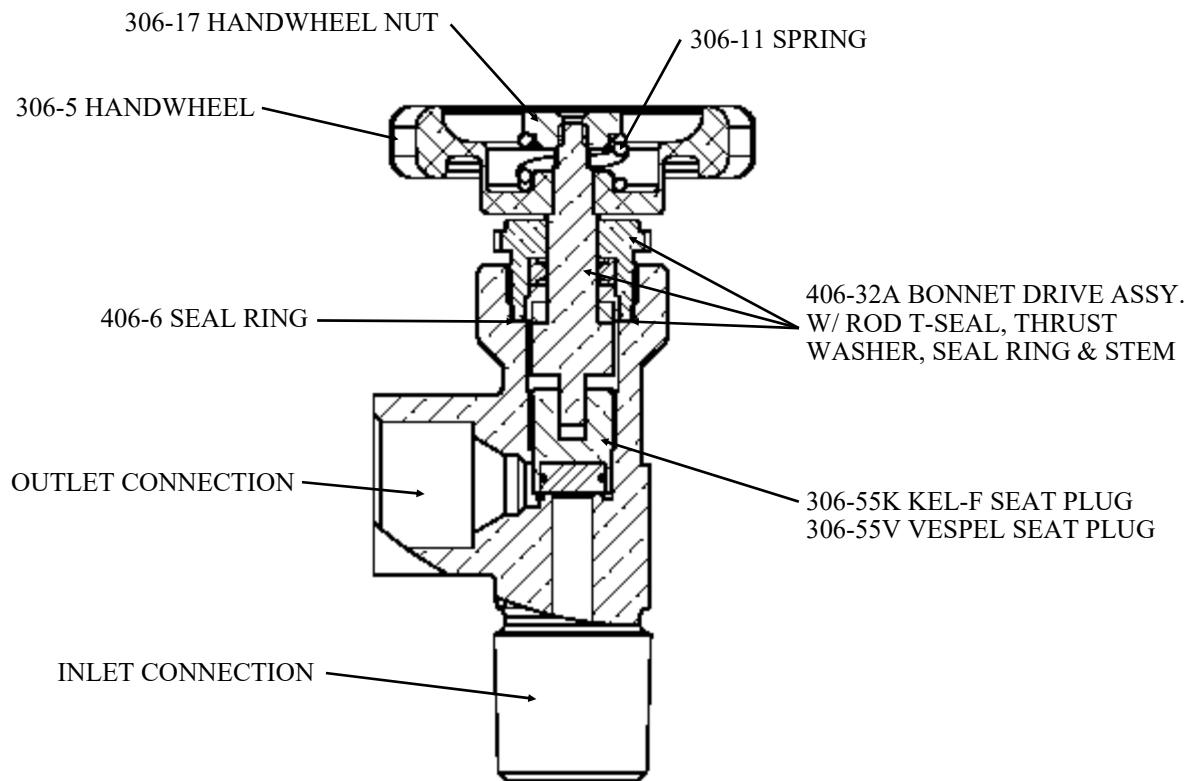
13N SERIES COMPRESSED GAS JUMBO TUBE VALVE

The 13N series high flow valve is constructed from a rugged forged brass body and brass components. This design offers low torque operational features and excellent seal features which include a Rod T-Seal, Teflon coated stainless steel seal ring, and Nylatron thrust washer. The Rod T-Seal consists of a low temperature Fluorocarbon seal with 2 Teflon back up rings. These back up rings assist in keeping contaminants away from the sealing line. The valve body has a pressure rating of 6000 psi. The seat plug is available with the standard Kel-F material or Vespel material. CGA connections not listed below are available upon request.



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Part no.	C.G.A. Connection	Inlet Connection	Seat Material
13N580A	CGA580	1/2"NGT	Kel-F
13N580AV	CGA580	1/2"NGT	Vespel
13N580E	CGA580	3/4"NGT	Kel-F
13N580EV	CGA580	3/4"NGT	Vespel
13N580F	CGA580	1"NGT	Kel-F
13N580FV	CGA580	1"NGT	Vespel
13N350A	CGA350	1/2"NGT	Kel-F
13N350AV	CGA350	1/2"NGT	Vespel
13N350E	CGA350	3/4"NGT	Kel-F
13N350EV	CGA350	3/4"NGT	Vespel
13N350F	CGA350	1"NGT	Kel-F
13N350FV	CGA350	1"NGT	Vespel
13N540A	CGA540	1/2"NGT	Kel-F
13N540AV	CGA540	1/2"NGT	Vespel
13N540E	CGA540	3/4"NGT	Kel-F
13N540EV	CGA540	3/4"NGT	Vespel
13N540F	CGA540	1"NGT	Kel-F
13N540FV	CGA540	1"NGT	Vespel



SPECIFICATIONS:

Valve Body: Brass

Seat Plug—Brass w/ Kel-F or Vespel material

Bonnet—Brass

Rod T-Seal—Low temperature Fluorocarbon w/ Teflon back up rings

Thrust Washer—Nylatron

Seal Ring—Stainless steel w/ Teflon coating

Maximum valve body operating pressure—6000 PSI

Reference CGA publication V-1 for outlet pressure ratings where applicable.

Cv Factor 1.16

ASSEMBLY INSTRUCTIONS:

1. Apply Braycote 803 to 306-55 seat plug thread and place in body.
2. Screw the seat plug clockwise to the seated position.
3. Insert 406-6 seal ring in valve body.
4. Insert 406-32A bonnet assembly into the body while engaging the stem with the seat plug.
5. Screw the bonnet drive assembly clockwise to seated position.
6. Torque bonnet to 60 ft/lbs.
7. Install 306-5 handwheel, 306-11 spring and 306-17 nut.

Note: The bonnet assembly is pre-lubricated with Braycote 803. If additional lubrication is required

P13N SERIES COMPRESSED GAS JUMBO TUBE VALVE WITH SHEAR PROTECTION



The P13N series high flow valve is constructed from a rugged forged brass body and brass components. This design offers low torque operational features and excellent seal features which include a Rod T-Seal, Teflon coated stainless steel seal ring, and Nylatron thrust washer. The Rod T-Seal consists of a low temperature Fluorocarbon seal with 2 Teflon back up rings. These back up rings assist in keeping contaminants away from the sealing line. The valve body has a pressure rating of 6000 psi. The seat plug is available with the standard Kel-F material or Vespel material. The shear poppet device is constructed of brass. This device becomes functional in the event of a shear off at the inlet connection. CGA connections not listed below are available upon request.



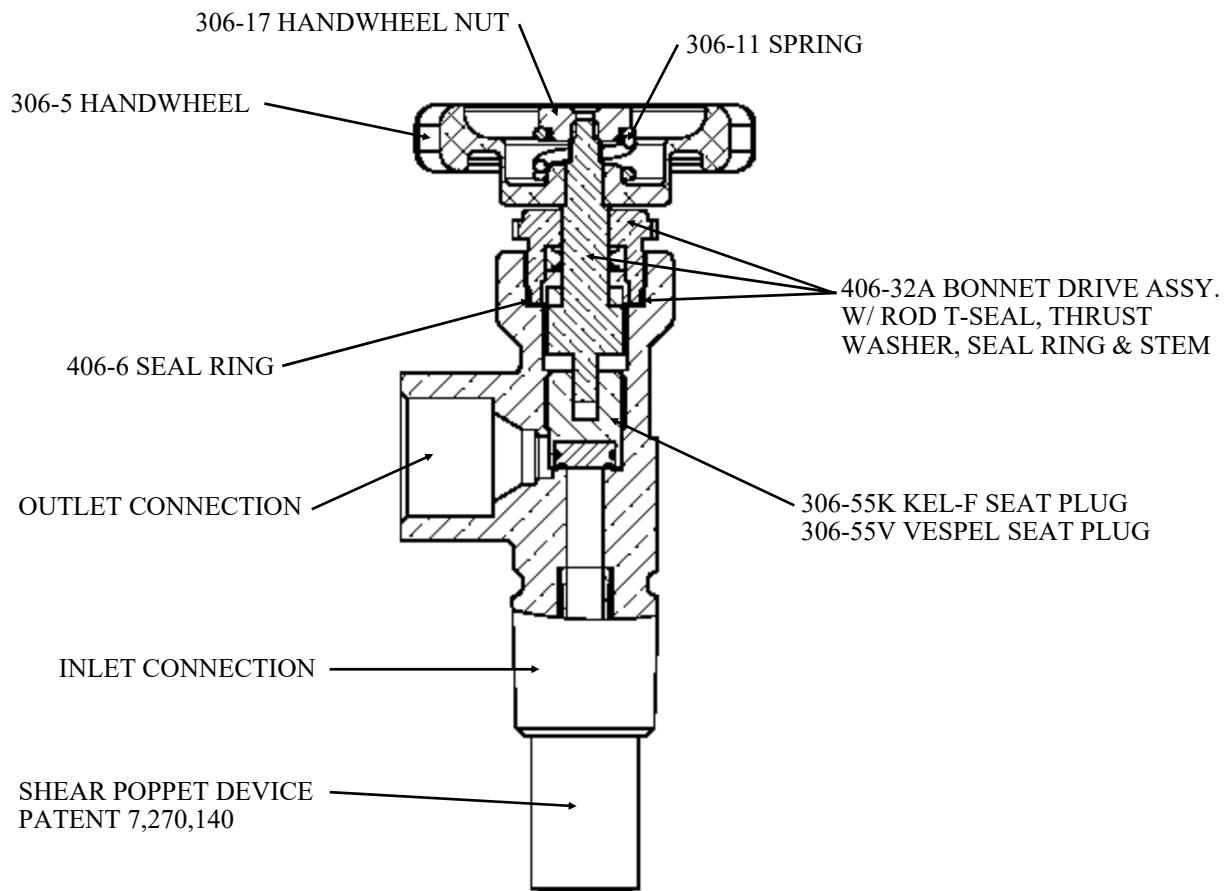
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Part no.	C.G.A. Connection	Inlet Connection	Seat Material
P13N580E	CGA580	3/4"NGT	Kel-F
P13N580EV	CGA580	3/4"NGT	Vespel
P13N580F	CGA580	1"NGT	Kel-F
P13N580FV	CGA580	1"NGT	Vespel
P13N350E	CGA350	3/4"NGT	Kel-F
P13N350EV	CGA350	3/4"NGT	Vespel
P13N350F	CGA350	1"NGT	Kel-F
P13N350FV	CGA350	1"NGT	Vespel
P13N540E	CGA540	3/4"NGT	Kel-F
P13N540EV	CGA540	3/4"NGT	Vespel
P13N540F	CGA540	1"NGT	Kel-F
P13N540FV	CGA540	1"NGT	Vespel

Notice: Western Valve Inc. recommends installing "Warning" decals on any equipment containing shear type relief devices and/or valves. Contact Western Valve for details.

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SPECIFICATIONS:

Valve Body: Brass

Seat Plug—Brass w/ Kel-F or Vespel material

Bonnet—Brass

Rod T-Seal—Low temperature Fluorocarbon w/ Teflon back up rings

Thrust Washer—Nylatron

Seal Ring—Stainless steel w/ Teflon coating

Shear Poppet—Brass components w/ Viton seal

Maximum valve body operating pressure—6000 PSI

Reference CGA publication V-1 for outlet pressure ratings where applicable.

ASSEMBLY INSTRUCTIONS:

1. Apply Braycote 803 to 306-55 seat plug thread and place in body.
2. Screw the seat plug clockwise to the seated position.
3. Insert 406-6 seal ring in valve body.
4. Insert 406-32A bonnet assembly into the body while engaging the stem with the seat plug.
5. Screw the bonnet drive assembly clockwise to seated position.
6. Torque bonnet to 60 ft/lbs.
7. Install 306-5 handwheel, 306-11 spring and 306-17 nut.

Note: The bonnet assembly is pre-lubricated with Braycote 803. If additional lubrication is



P1306N SERIES COMPRESSED GAS JUMBO TUBE VALVE WITH SHEAR PROTECTION

The P1306N series high flow pressure seal valve is constructed from a rugged forged brass body and brass components. The valve body has a pressure rating of 5000 psi. The seat plug is available with the standard Kel-F material or the more durable Vespel material and packed with a virgin Teflon back seat. The shear poppet device, connected to the inlet thread, is constructed of brass. This device becomes functional in the event of a shear off at the inlet connection. CGA connections not listed below are available upon request.

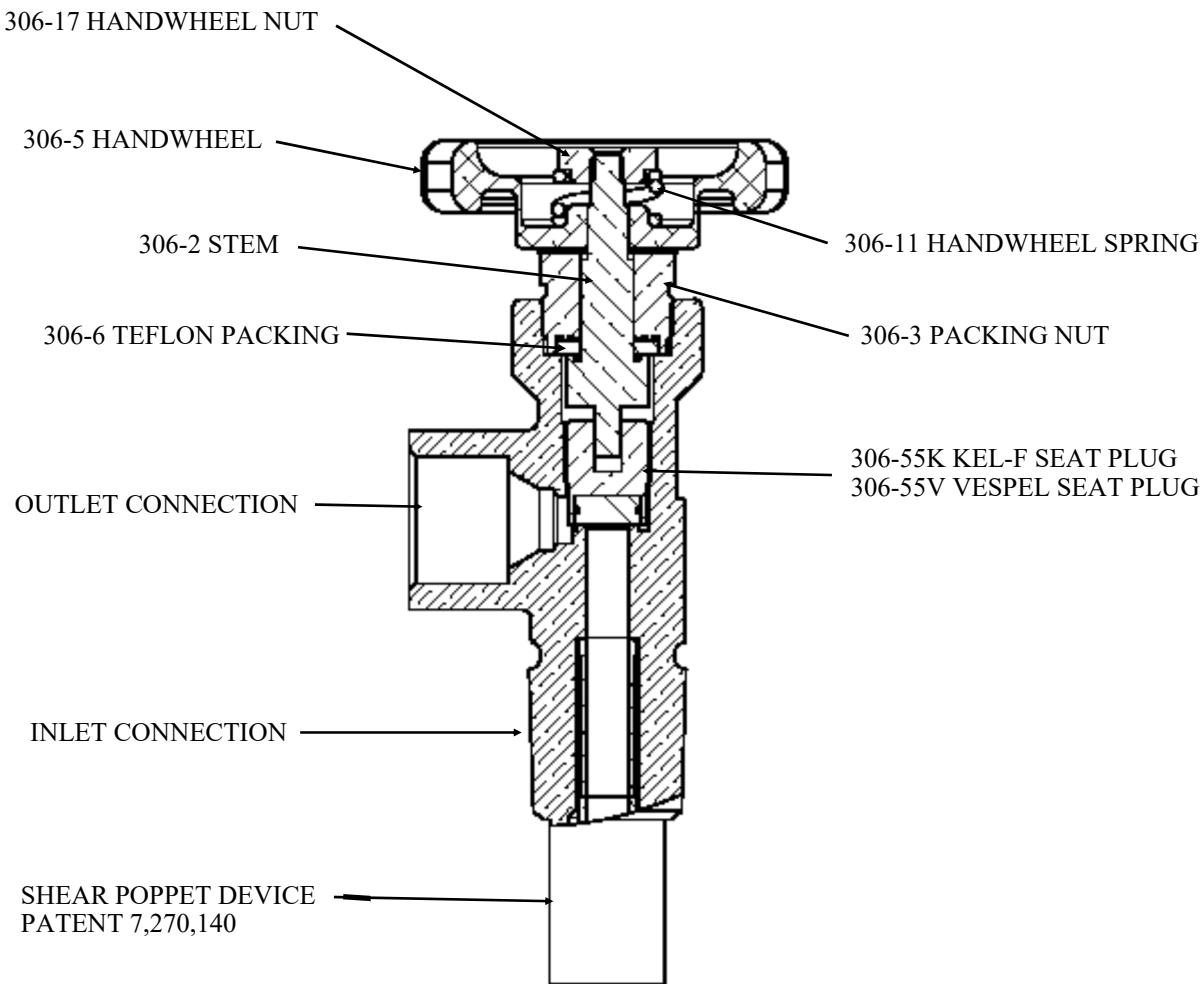


Patent 7,270,140

Part no.	C.G.A. Connection	Inlet Connection	Seat Material
P1306N32E	CGA580	3/4"NGT	Kel-F
P1306N32EV	CGA580	3/4"NGT	Vespel
P1306N32F	CGA580	1"NGT	Kel-F
P1306N32FV	CGA580	1"NGT	Vespel
P1306N23E	CGA350	3/4"NGT	Kel-F
P1306N23EV	CGA350	3/4"NGT	Vespel
P1306N23F	CGA350	1"NGT	Kel-F
P1306N23FV	CGA350	1"NGT	Vespel
P1306N30E	CGA440	3/4"NGT	Kel-F
P1306N30EV	CGA440	3/4"NGT	Vespel
P1306N30F	CGA440	1"NGT	Kel-F
P1306N30FV	CGA440	1"NGT	Vespel

Notice: Western Valve Inc. recommends installing "Warning" decals on any equipment containing shear type relief devices and/or valves. Contact Western Valve for details.

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SPECIFICATIONS:

Valve Body: Brass

Seat Plug—Brass w/ Kel-F or Vespel material

Stem—Brass

Packing Nut—Brass

Packing—PTFE Teflon

Thrust Washer—Plastic

Shear Poppet—Brass components w/ Viton seal

Maximum valve body operating pressure—5000 PSI

Reference CGA publication V-1 for outlet pressure ratings where applicable.

ASSEMBLY PROCEDURE:

1. Apply a small amount of Halocarbon 25-10M grease to one side of the seat plug thread and place in body.
2. Using the stem, screw the seat plug clockwise to seated position.
3. Insert the Teflon packing into the packing nut.
4. Screw the packing nut into the valve body and torque to 60 Ft/lbs.
5. Install thrust washer and handwheel.

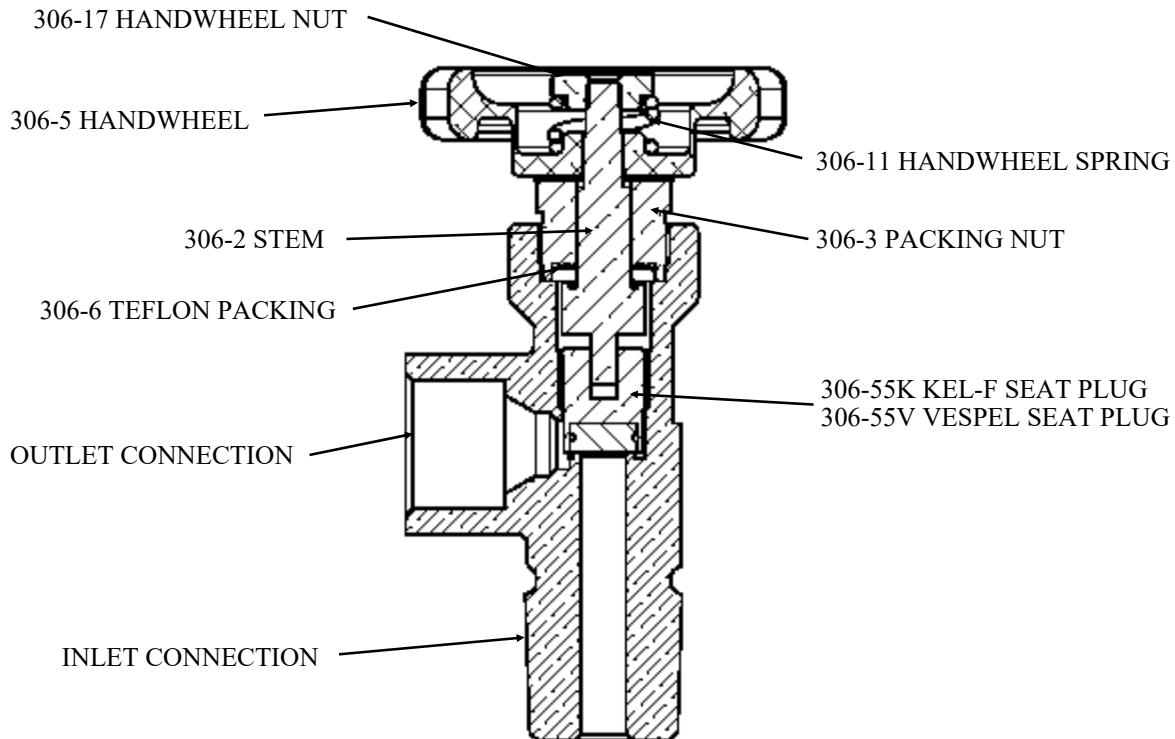


1306N SERIES COMPRESSED GAS JUMBO TUBE VALVE

The 1306N series high flow pressure seal valve is constructed from a rugged forged brass body and brass components. The valve body has a pressure rating of 5000 psi. This valve incorporates a Virgin Teflon packing back seal and is available with Kel-F or Vespel seat materials. CGA connections not listed below are available upon request.



Part no.	C.G.A. Connection	Inlet Connection	Seat Material
1306N32A	CGA580	1/2"NGT	Kel-F
1306N32AV	CGA580	1/2"NGT	Vespel
1306N32E	CGA580	3/4"NGT	Kel-F
1306N32EV	CGA580	3/4"NGT	Vespel
1306N32F	CGA580	1"NGT	Kel-F
1306N32FV	CGA580	1"NGT	Vespel
1306N23A	CGA350	1/2"NGT	Kel-F
1306N23AV	CGA350	1/2"NGT	Vespel
1306N23E	CGA350	3/4"NGT	Kel-F
1306N23EV	CGA350	3/4"NGT	Vespel
1306N23F	CGA350	1"NGT	Kel-F
1306N23FV	CGA350	1"NGT	Vespel
1306N30A	CGA540	1/2"NGT	Kel-F
1306N30AV	CGA540	1/2"NGT	Vespel
1306N30E	CGA540	3/4"NGT	Kel-F
1306N30EV	CGA540	3/4"NGT	Vespel
1306N30F	CGA540	1"NGT	Kel-F
1306N30FV	CGA540	1"NGT	Vespel



SPECIFICATIONS:

Valve Body: Brass

Seat Plug—Brass w/ Kel-F or Vespel material

Stem—Brass

Packing Nut—Brass

Packing—PTFE Teflon

Thrust Washer—Plastic

Maximum valve body operating pressure—5000 PSI

Reference CGA publication V-1 for outlet pressure ratings where applicable.

Cv Factor 1.16

ASSEMBLY INSTRUCTIONS:

1. Apply a small amount of Halocarbon 25-10M grease to one side of the seat plug thread and place in body.
2. Using the stem screw the seat plug clockwise to seated position.
3. Insert the Teflon packing into the packing nut.
4. Screw the packing nut into the valve body and torque to 60 Ft/lbs.
5. Install thrust washer and handwheel.
6. Turn valve to open position.
7. Install handwheel spring and nut.



12N SERIES COMPRESSED GAS SMALL TUBE VALVE

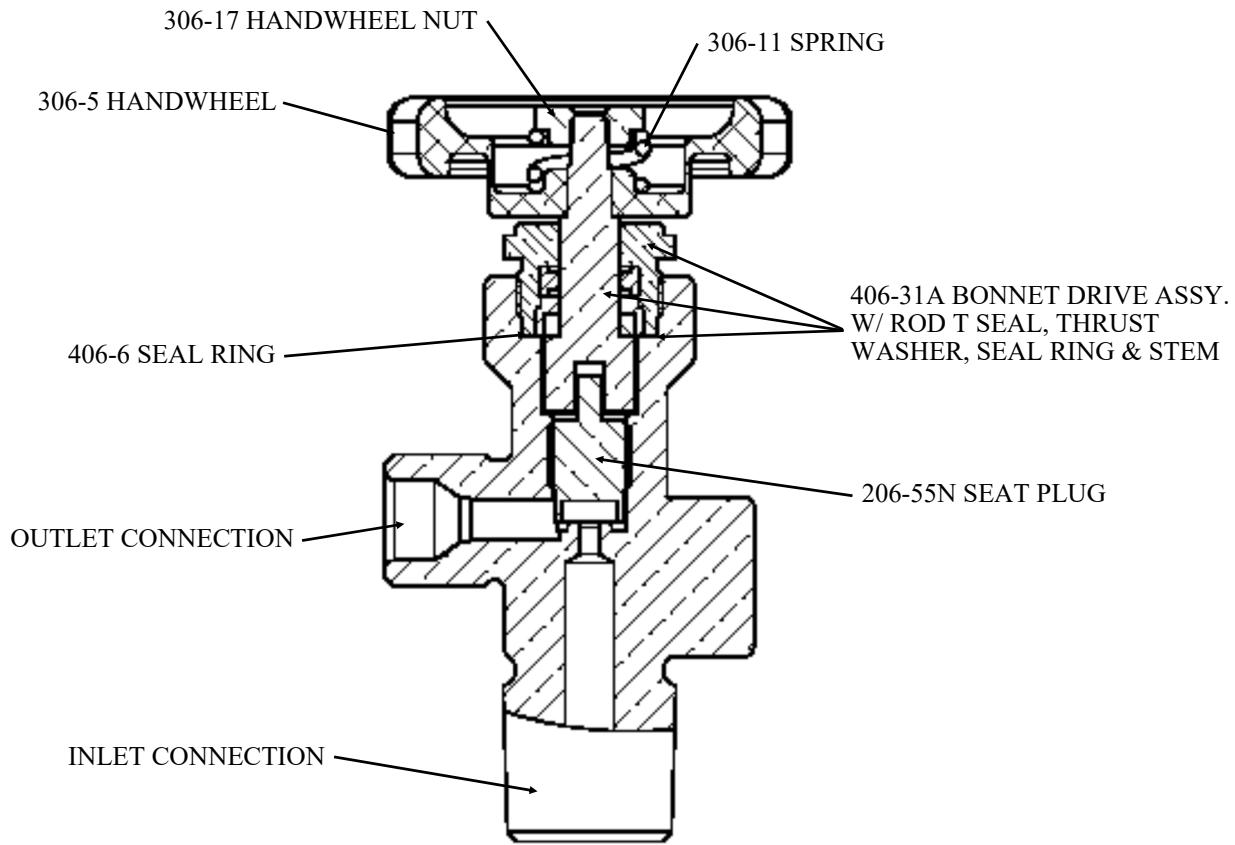
This rugged tube valve is constructed from a forged brass body. The valve body has a pressure rating of 6000 psi. This design offers low torque operational features and excellent seal features which include a Rod T-Seal, Teflon coated stainless steel seal ring, and Nylatron thrust washer. The Rod T-Seal consists of a low temperature Fluorocarbon seal with 2 Teflon back up rings. These back up rings assist in keeping contaminants away from sealing line. The outlet connections are manufactured in accordance with the Compressed Gas Association V-1 standard. These valves are also available with oversized 3/4"NGT inlets. CGA connections not listed below are available upon request.

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CYLINDER VALVES			
Part No.	CGA Connection	Inlet Connection	CGA Designated Service
12N580A	CGA580	1/2"NGT	Helium, Nitrogen, Argon
12N580E	CGA580	3/4"NGT	Helium, Nitrogen, Argon
12N580ES	CGA580	3/4"SGT	Helium, Nitrogen, Argon
12N580F	CGA580	1"NGT	Helium, Nitrogen, Argon
12N540A	CGA540	1/2"NGT	Oxygen
12N540E	CGA540	3/4"NGT	Oxygen
12N540ES	CGA540	3/4"SGT	Oxygen
12N540F	CGA540	1"NGT	Oxygen
12N350A	CGA350	1/2"NGT	Hydrogen
12N350E	CGA350	3/4"NGT	Hydrogen
12N350-ES	CGA350	3/4"SGT	Hydrogen
12N350F	CGA350	1"NGT	Hydrogen

Notes: For valve with 3/4"NGT oversize inlet, add -2OS for 2 threads oversize or 4OS for 4 threads oversize to end of part number. Example: 12N580E-4OS



SPECIFICATIONS:

Valve Body—Brass

Seat Plug—Brass w/ Nylon seat

Bonnet—Brass

Rod T-Seal—Low temperature Fluorocarbon w/ Teflon back up rings

Thrust Washer—Nylatron

Seal Ring—Stainless steel w/ Teflon coating

Shear Poppet—Brass components w/ Viton seal

Maximum valve body operating pressure—6000 PSI

Reference CGA publication V-1 for outlet pressure ratings where applicable.

ASSEMBLY INSTRUCTIONS:

1. Apply Braycote 803 to 206-55N seat plug thread and place in body.
2. Screw the seat plug clockwise to the seated position.
3. Insert 406-6 seal ring in valve body.
4. Insert 406-31A bonnet assembly into the body while engaging the stem with the seat plug.
5. Screw the bonnet drive assembly clockwise to seated position.
6. Torque bonnet to 60 ft/lbs.
7. Install 306-5 handwheel, 306-11 spring, and 306-17 nut.

Note: The bonnet assembly is pre-lubricated with Braycote 803. If additional lubrication



P12N SERIES COMPRESSED GAS SMALL TUBE VALVE WITH SHEAR PROTECTION

This rugged tube valve is constructed from a forged brass body. The valve body has a pressure rating of 6000 psi. This design offers low torque operational features and excellent seal features which include a Rod T-Seal, Teflon coated stainless steel seal ring, and Nylatron thrust washer. The Rod T-Seal consists of a low temperature Fluorocarbon seal with 2 Teflon back up rings. These back up rings assist in keeping contaminants away from sealing line. The outlet connections are manufactured in accordance with the Compressed Gas Association V-1 standard. A shear poppet is incorporated in the design which prevents the uncontrolled release of gas in the event of a shear off at the inlet connection. These valves are also available with oversized 3/4"NGT inlets. CGA connections not listed below are available upon request.



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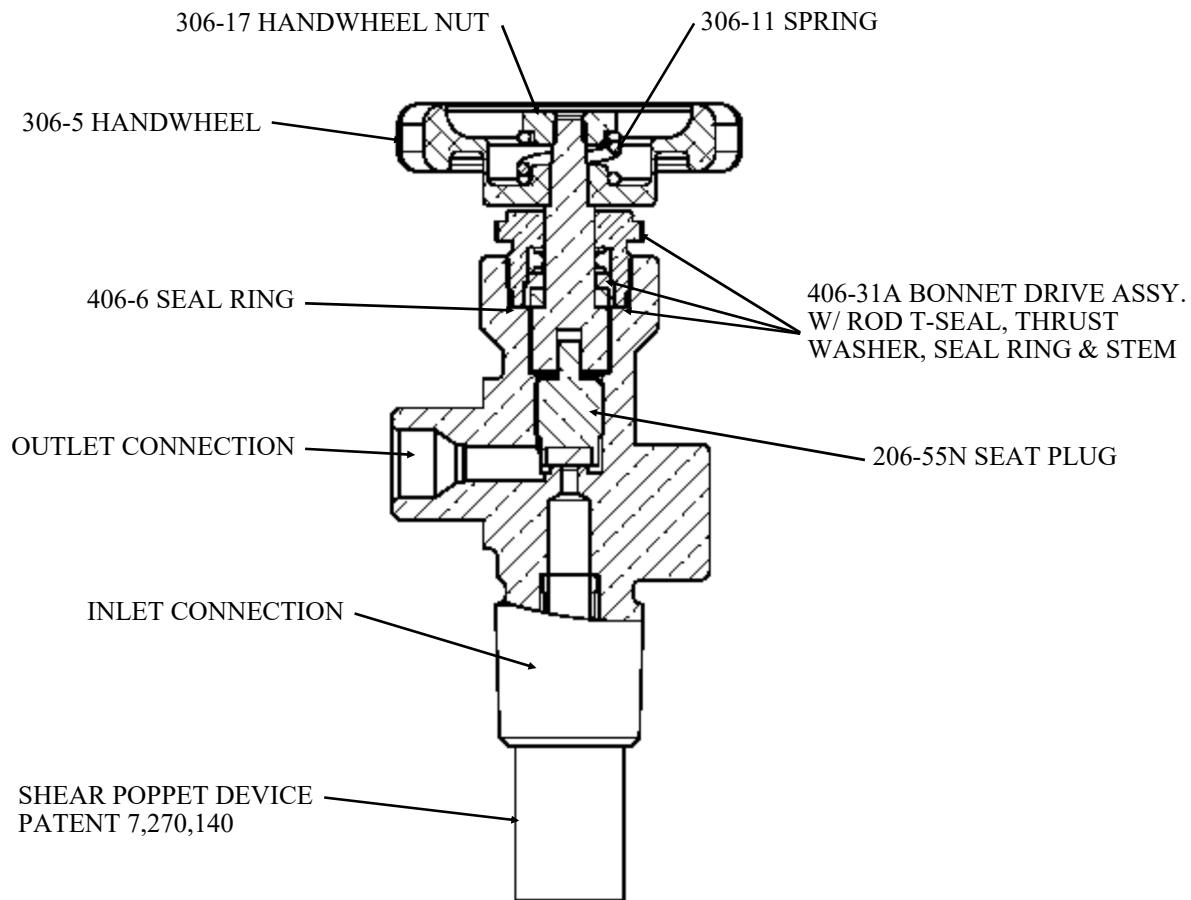
Patent 7,270,140

CYLINDER VALVES			
Part No.	CGA Connection	Inlet Connection	CGA Designated Service
P12N580E	CGA580	3/4"NGT	Helium, Nitrogen, Argon
P12N580ES	CGA580	3/4"SGT	Helium, Nitrogen, Argon
P12N580F	CGA580	1"NGT	Helium, Nitrogen, Argon
P12N540E	CGA540	3/4"NGT	Oxygen
P12N540ES	CGA540	3/4"SGT	Oxygen
P12N540F	CGA540	1"NGT	Oxygen
P12N350E	CGA350	3/4"NGT	Hydrogen
P12N350-ES	CGA350	3/4"SGT	Hydrogen
P12N350F	CGA350	1"NGT	Hydrogen

Notes: For valve with 3/4"NGT oversize inlet, add -2OS for 2 threads oversize or 4OS for 4 threads oversize to end of part number. e.g. P12N580E-4OS.

Notice: Western Valve Inc. recommends installing "Warning" decals on any equipment containing shear type relief devices and/or valves. Contact Western Valve for details.

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SPECIFICATIONS:

Valve Body—Brass

Seat Plug—Brass w/ Nylon seat

Bonnet—Brass

Rod T-Seal—Low temperature Fluorocarbon w/ Teflon back up rings

Thrust Washer—Nylatron

Seal Ring—Stainless steel w/ Teflon coating

Shear Poppet—Brass components w/ Viton seal

Maximum valve body operating pressure—6000 PSI

Reference CGA publication V-1 for outlet pressure ratings where applicable.

ASSEMBLY INSTRUCTIONS:

1. Apply Braycote 803 to 206-55N seat plug thread and place in body.
2. Screw the seat plug clockwise to the seated position.
3. Insert 406-6 seal ring in valve body.
4. Insert 406-31A bonnet assembly into the body while engaging the stem with the seat plug.
5. Screw the bonnet drive assembly clockwise to seated position.
6. Torque bonnet to 60 ft/lbs.
7. Install 306-5 handwheel, 306-11 spring, and 306-17 nut.

12T SERIES COMPRESSED GAS SMALL TUBE VALVE



This rugged tube valve is constructed from a forged brass body. The valve body has a pressure rating of 6000 psi. This design offers low torque operational features and excellent seal features which include a Rod T-Seal, Teflon coated stainless steel seal ring, and Nylatron thrust washer. The Rod T-Seal consists of a low temperature Fluorocarbon seal with 2 Teflon back up rings. These back up rings assist in keeping contaminants away from sealing line. The outlet connections are manufactured in accordance with the Compressed Gas Association V-1 standard. These valves are available with the diffuser style or vent style relief devices which are manufactured in accordance with the CGA S-1.1 standard. Oversized 3/4"NGT inlet connections and CGA outlet connections not listed below are available upon request.

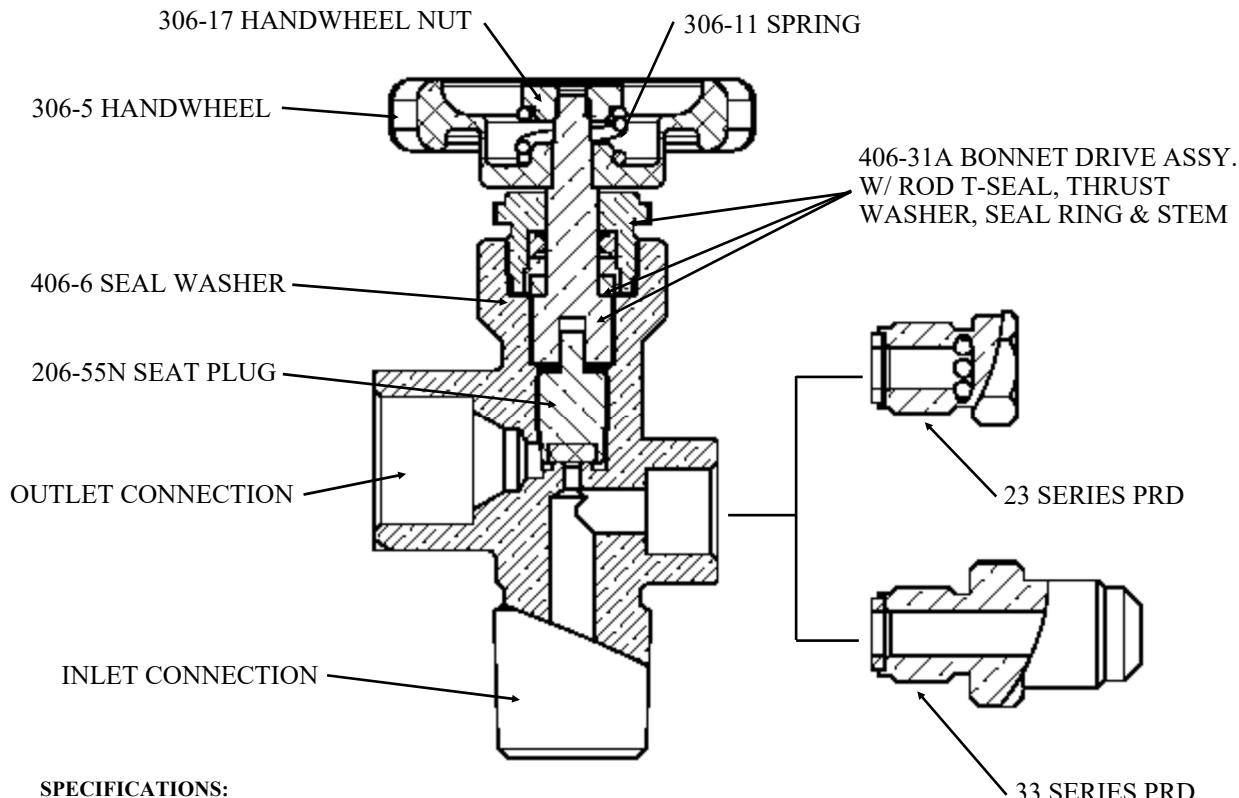


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TUBE VALVES			
Part No.	CGA Connection	Inlet Connection	CGA Designated Service
12T580E	CGA580	3/4"NGT	Helium, Nitrogen, Argon
12T580ES	CGA580	3/4"SGT	Helium, Nitrogen, Argon
12T580F	CGA580	1"NGT	Helium, Nitrogen, Argon
12T540E	CGA540	3/4"NGT	Oxygen
12T540ES	CGA540	3/4"SGT	Oxygen
12T540F	CGA540	1"NGT	Oxygen
12T350E	CGA350	3/4"NGT	Hydrogen
12T350ES	CGA350	3/4"SGT	Hydrogen
12T350F	CGA350	1"NGT	Hydrogen
PRESSURE RELIEF DEVICES			
Diffuser Style Relief Device		Vent Style Relief Device 1/2" SAE Flare	
Part No.	Fusemetal	Part No.	Fusemetal
23-*	None	33-*	None
23H-*	165 F	33H-*	165 F
23J-*	212 F	33J-*	212 F
NOTE: (*) = Disc code Add disc code to end of part no. Example: 33J-C			
FRANGIBLE RUPTURE DISC CODE			
Letter Code	Burst Range	Letter Code	Burst Range
A	3300-3775	N	1750-2000
C	3600-4000	P	4500-5000
G	6200-6900	Q	3000-3360
J	5000-5500	R	5500-6000
L	2700-3000	Z	8000-8333

Notes: For valve with pressure relief device (PRD), add PRD part number and disc code to end of valve number. e.g. 12T580E-23C. For valve with 3/4"NGT oversize inlet, add -2OS for 2 threads oversize or 4OS for 4 threads oversize to end of part number. e.g. 12T580E-33C-4OS.

Notice: Western Valve Inc. recommends installing "Warning" decals on any equipment containing shear type relief devices and/or valves. Contact Western Valve for details.



SPECIFICATIONS:

Valve Body: Brass

Seat Plug—Brass w/ Nylon seat

Bonnet—Brass

Rod T-Seal—Low temperature Fluorocarbon w/ Teflon back up rings

Thrust Washer—Nylatron

Seal Ring—Stainless steel w/ Teflon coating

Shear Poppet—Brass components w/ Viton seal

Maximum valve body operating pressure—6000 PSI

Reference CGA publication V-1 for outlet pressure ratings where applicable.

ASSEMBLY INSTRUCTIONS:

1. Apply Braycote 803 to 206-55N seat plug thread and place in body.
2. Screw the seat plug clockwise to the seated position.
3. Insert 406-6 seal ring in valve body.
4. Insert 406-31A bonnet assembly into the body while engaging the stem with the seat plug.
5. Screw the bonnet drive assembly clockwise to seated position.
6. Torque bonnet to 60 ft/lbs.
7. Install 306-5 handwheel, 306-11 spring, and 306-17 nut.

Note: The bonnet assembly is pre-lubricated with Braycote 803. If additional lubrication is required

PRD INSTALLATION PROCEDURE:

1. Apply a small amount of Halocarbon 25-10M grease or compatible grease to copper washer on 23 or 33 series PRD (PRESSURE RELIEF DEVICE)
2. Screw PRD into body hand tight.
3. Torque PRD assembly to 40 ft/lbs.

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P12T SERIES COMPRESSED GAS SMALL TUBE VALVE WITH SHEAR PROTECTION

This rugged tube valve is constructed from a forged brass body. The valve body has a pressure rating of 6000 psi. This design offers low torque operational features and excellent seal features which include a Rod T-Seal, Teflon coated stainless steel seal ring, and Nylatron thrust washer. The Rod T-Seal consists of a low temperature Fluorocarbon seal with 2 Teflon back up rings. These back up rings assist in keeping contaminants away from sealing line. The outlet connections are manufactured in accordance with the Compressed Gas Association V-1 standard. These valves are available with the diffuser style or vent style relief devices which are manufactured in accordance with the CGA S-1.1 standard. A shear poppet is incorporated in the design which prevents the uncontrolled release of gas in the event of a shear off at the inlet connection. Oversized 3/4"NGT inlet connections and CGA connections not listed below are available upon request.



Patent 7,270,140

ISO 10297 Approved

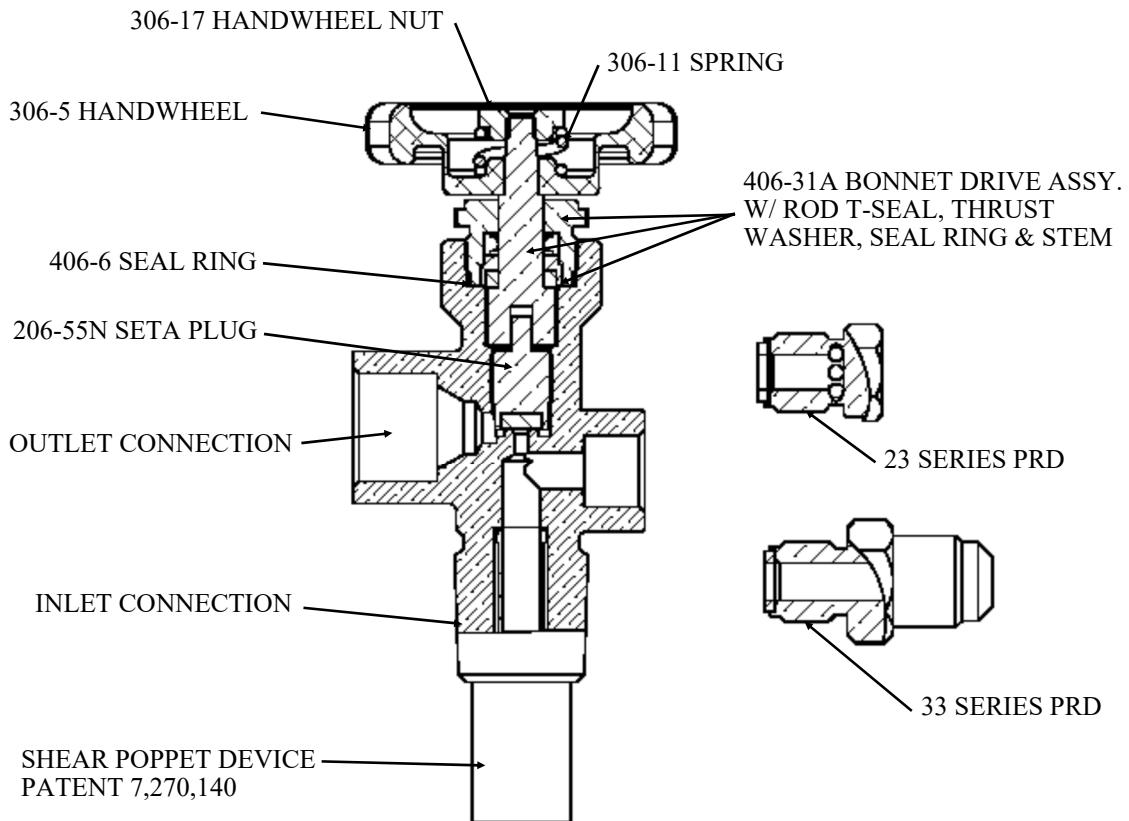
TUBE VALVES			
Part No.	CGA Connection	Inlet Connection	CGA Designated Service
P12T580E	CGA580	3/4"NGT	Helium, Nitrogen, Argon
P12T580ES	CGA580	3/4"SGT	Helium, Nitrogen, Argon
P12T580F	CGA580	1"NGT	Helium, Nitrogen, Argon
P12T540E	CGA540	3/4"NGT	Oxygen
P12T540ES	CGA540	3/4"SGT	Oxygen
P12T540F	CGA540	1"NGT	Oxygen
P12T350E	CGA350	3/4"NGT	Hydrogen
P12T350ES	CGA350	3/4"-14SGT	Hydrogen
P12T350F	CGA350	1"NGT	Hydrogen
PRESSURE RELIEF DEVICES			
Diffuser Style Relief Device		Vent Style Relief Device 1/2" SAE Flare	
Part No.	Fusemetal	Part No.	Fusemetal
23-*	None	33-*	None
23H-*	165 F	33H-*	165 F
23J-*	212 F	33J-*	212 F

NOTE: (*) = Disc code Add disc code to end of part no. Example: 33J-C

FRANGIBLE RUPTURE DISC CODE			
Letter Code	Burst Range	Letter Code	Burst Range
A	3300-3775	N	1750-2000
C	3600-4000	P	4500-5000
G	6200-6900	Q	3000-3360
J	5000-5500	R	5500-6000
L	2700-3000	Z	8000-8333

Notes: For valve with pressure relief device (PRD), add PRD part number and disc code to end of valve number. e.g. P12T580E-23C. For valve with 3/4"NGT oversize inlet, add -2OS for 2 threads oversize or 4OS for 4 threads oversize to end of part number. e.g. P12T580E-33C-4OS

Notice: Western Valve Inc. recommends installing "Warning" decals on any equipment containing shear type relief devices and/or valves. Contact Western Valve for details.



SPECIFICATIONS:

Valve Body: Brass

Seat Plug—Brass w/ Nylon seat

Bonnet—Brass

Rod T-Seal—Low temperature Fluorocarbon w/ Teflon back up rings

Thrust Washer—Nylatron

Seal Ring—Stainless steel w/ Teflon coating

Shear Poppet—Brass components w/ Viton seal

Maximum valve body operating pressure—6000 PSI

Reference CGA publication V-1 for outlet pressure ratings where applicable.

ASSEMBLY INSTRUCTIONS:

1. Apply Braycote 803 to 206-55N seat plug thread and place in body.
2. Screw the seat plug clockwise to the seated position.
3. Insert 406-6 seal ring in valve body.
4. Insert 406-31A bonnet assembly into the body while engaging the stem with the seat plug.
5. Screw the bonnet drive assembly clockwise to seated position.
6. Torque bonnet to 60 ft/lbs.
7. Install 306-5 handwheel, 306-11 spring, and 306-17 nut.

Note: The bonnet assembly is pre-lubricated with Braycote 803. If additional lubrication is required

use Braycote 803. Halocarbon is not an acceptable lubricant for the Rod T-Seal.

PRD INSTALLATION PROCEDURE:

1. Apply a small amount of Halocarbon 25-10M grease or compatible grease to copper washer on 23 or 33 series PRD (PRESSURE RELIEF DEVICE)
2. Screw PRD into body hand tight.
3. Torque PRD assembly to 45 ft/lbs.

P1100 SERIES COMPRESSED GAS SMALL TUBE VALVE



This rugged pressure seal tube valve is constructed from a forged brass body. The valve body has a pressure rating of 5000 psi. An external tang on the seat plug in conjunction with a virgin Teflon back seat allows for smooth operation of the valve. The outlet connections are manufactured in accordance with the Compressed Gas Association V-1 standard. The PPD's (pressure relief devices) are available in diffuser style or vent type and designed with the rupture disc recessed inside the body. This gives some protection from an uncontrolled release in the event the PRD is sheared off. Also incorporated in the design is our shear poppet, which prevents the uncontrolled release of gas if the valve is sheared off at the inlet. These valves are also available with oversized 3/4"NGT inlets.



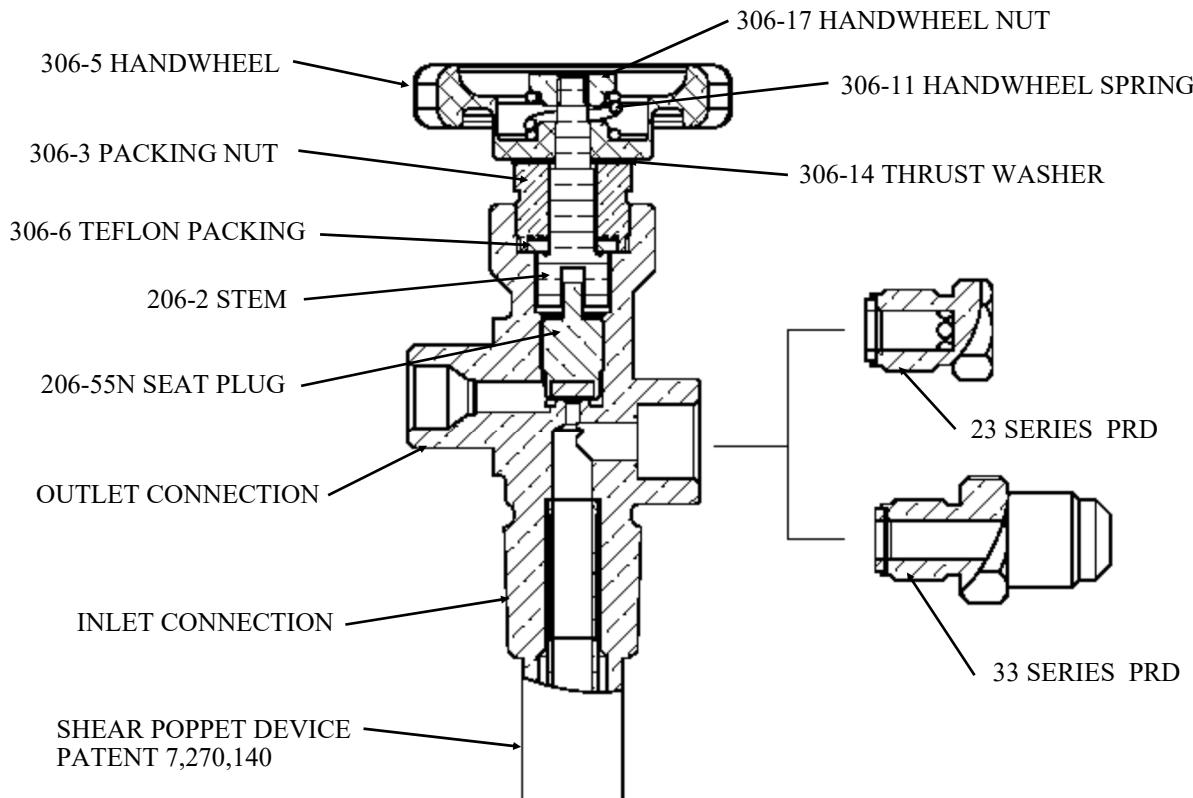
TUBE VALVES			
Part No.	CGA Connection	Inlet Connection	CGA Designated Service
P1158	CGA580	3/4"-14NGT	Helium, Nitrogen, Argon
P1158-SGT	CGA580	3/4"-14SGT	Helium, Nitrogen, Argon
P1158F	CGA580	1"11-1/2NGT	Helium, Nitrogen, Argon
P1154	CGA540	3/4"-14NGT	Oxygen
P1154-SGT	CGA540	3/4"-14SGT	Oxygen
P1154F	CGA540	1"11-1/2NGT	Oxygen
P1135	CGA350	3/4"-14NGT	Hydrogen
P1135-SGT	CGA350	3/4"-14SGT	Hydrogen
P1135F	CGA350	1"11-1/2NGT	Hydrogen
PRESSURE RELIEF DEVICES			
Diffuser Cap		1/2" SAE Flare Cap	
Part No.	Fusemetal	Part No.	Fusemetal
23-*	None	33-*	None
23H-*	165 F	33H-*	165 F
23J-*	212 F	33J-*	212 F
NOTE: (*) = Disc code Add disc code to end of part no. Example: 33J-C			
FRANGIBLE RUPTURE DISC CODE			
Letter Code	Burst Range	Letter Code	Burst Range
A	3300-3775	N	1750-2000
C	3600-4000	P	4500-5000
G	6200-6900	Q	3000-3360
J	5000-5500	R	5500-6000
L	2700-3000	Z	8000-8333

Notes: For valve with PRD (pressure relief device), add PRD part number and disc code to end of valve number. Example: P1158-33J-C

For valve with oversize 3/4" inlets, add -2OS for 2 threads oversize or -4OS for 4 threads oversize to end of part number. Example: P1158-33C-2OS

Notice: Western Valve Inc. recommends installing "Warning" decals on any equipment containing shear type relief devices and/or valves. Contact Western Valve for details.

Western Valve, Inc. | 806)622-3180 | Fax (806)622-3188 | www.westernvalveinc.com
P.O. Box 2446, Amarillo, TX 79105 | 6701 W McCormick Rd, Amarillo, TX 79118



SPECIFICATIONS:

Valve Body: Brass

Seat Plug—Brass w/ Nylon seat

Packing Nut—Brass

Packing—PTEF Teflon

Thrust Washer—Plastic

Shear Poppet—Brass components w/ Viton seal

Maximum valve body operating pressure—5000 PSI

Reference CGA publication V-1 for outlet pressure ratings where applicable.

VALVE ASSEMBLY PROCEDURE:

1. Apply a small amount of Halocarbon 25-10M grease to one side of the seat plug thread and place in body.
2. Using the stem, screw the seat plug clockwise to seated position.
3. Insert the Teflon packing into the packing nut.
4. Screw the packing nut into the valve body and torque to 60 Ft/lbs.
5. Install thrust washer and handwheel.
6. Turn valve to open position.
7. Install handwheel spring and nut.

PRD INSTALLATION PROCEDURE:

1. Apply a small amount of Halocarbon 25-10M grease or compatible grease to copper washer on 23 or 33 series PRD (pressure relief device).
2. Screw PRD into body hand tight.
3. Torque PRD assembly to 45 ft/lbs.



P1100N SERIES COMPRESSED GAS SMALL TUBE VALVE WITH SHEAR PROTECTION

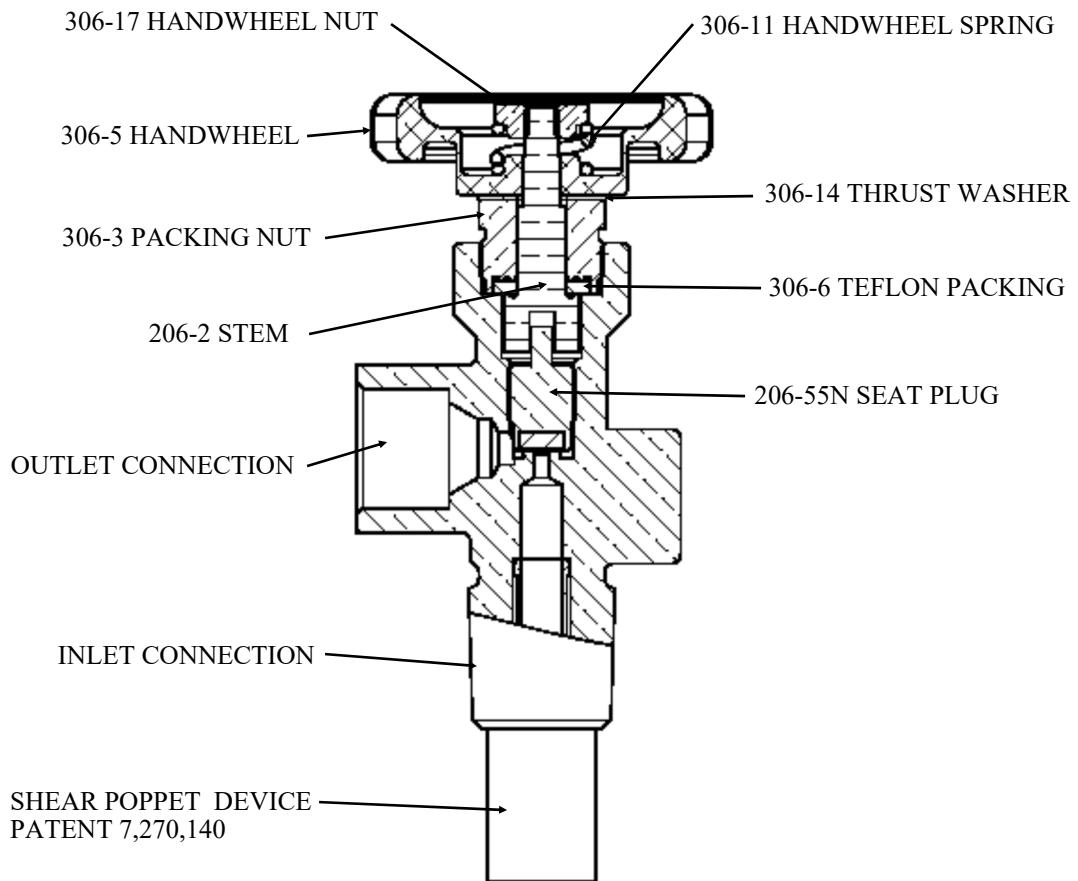
This rugged pressure seal tube valve is constructed from a forged brass body. The valve body has a pressure rating of 5000 psi. An external tang on the seat plug in conjunction with a virgin Teflon back seat allows for smooth operation of the valve. The outlet connections are manufactured in accordance with the Compressed Gas Association V-1 standard. A shear poppet is incorporated in the design which prevents the uncontrolled release of gas if the valve is sheared off at the inlet. These valves are also available with oversized 3/4"NGT inlets.



CYLINDER VALVES			
Part No.	CGA Connection	Inlet Connection	CGA Designated Service
P1158N	CGA580	3/4"NGT	Helium, Nitrogen, Argon
P1158N-SGT	CGA580	3/4"SGT	Helium, Nitrogen, Argon
P1158NF	CGA580	1"NGT	Helium, Nitrogen, Argon
P1154N	CGA540	3/4"NGT	Oxygen
P1154N-SGT	CGA540	3/4"SGT	Oxygen
P1154NF	CGA540	1"NGT	Oxygen
P1135N	CGA350	3/4"NGT	Hydrogen
P1135N-SGT	CGA350	3/4"SGT	Hydrogen
P1135NF	CGA350	1"NGT	Hydrogen

Notes: For valve with 3/4"NGT oversize inlet, add -2OS for 2 threads oversize or 4OS for 4 threads oversize to end of part number. Example: P1135N-4OS

Notice: Western Valve Inc. recommends installing "Warning" decals on any equipment containing shear type relief devices and/or valves. Contact Western Valve for details.



SPECIFICATIONS:

Valve Body: Brass

Seat Plug—Brass w/ Nylon seat

Packing Nut—Brass

Packing—PTEF Teflon

Thrust Washer—Plastic

Shear Poppet—Brass components w/ Viton seal

Maximum valve body operating pressure—5000 PSI

Reference CGA publication V-1 for outlet pressure ratings where applicable.

VALVE ASSEMBLY PROCEDURE:

1. Apply a small amount of Halocarbon 25-10M grease to one side of the seat plug thread and place in body.
2. Using the stem, screw the seat plug clockwise to seated position.
3. Insert the Teflon packing into the packing nut.
4. Screw the packing nut into the valve body and torque to 60 Ft/lbs.
5. Install thrust washer and handwheel.
6. Turn valve to open position.
7. Install handwheel spring and nut.

1200 SERIES COMPRESSED GAS SMALL TUBE VALVE



This rugged pressure seal tube valve is constructed from forged brass. The valve body has a pressure rating of 5000 PSI. An external tang on the seat plug in conjunction with a virgin Teflon back seat allows for smooth operation of the valve. The seat plug contains a nylon soft seat for low torque sealing. The outlet connections are manufactured in accordance with the Compressed Gas Association V-1 standard. Besides the standard connections offered below other inlet and outlet connections are available upon request.

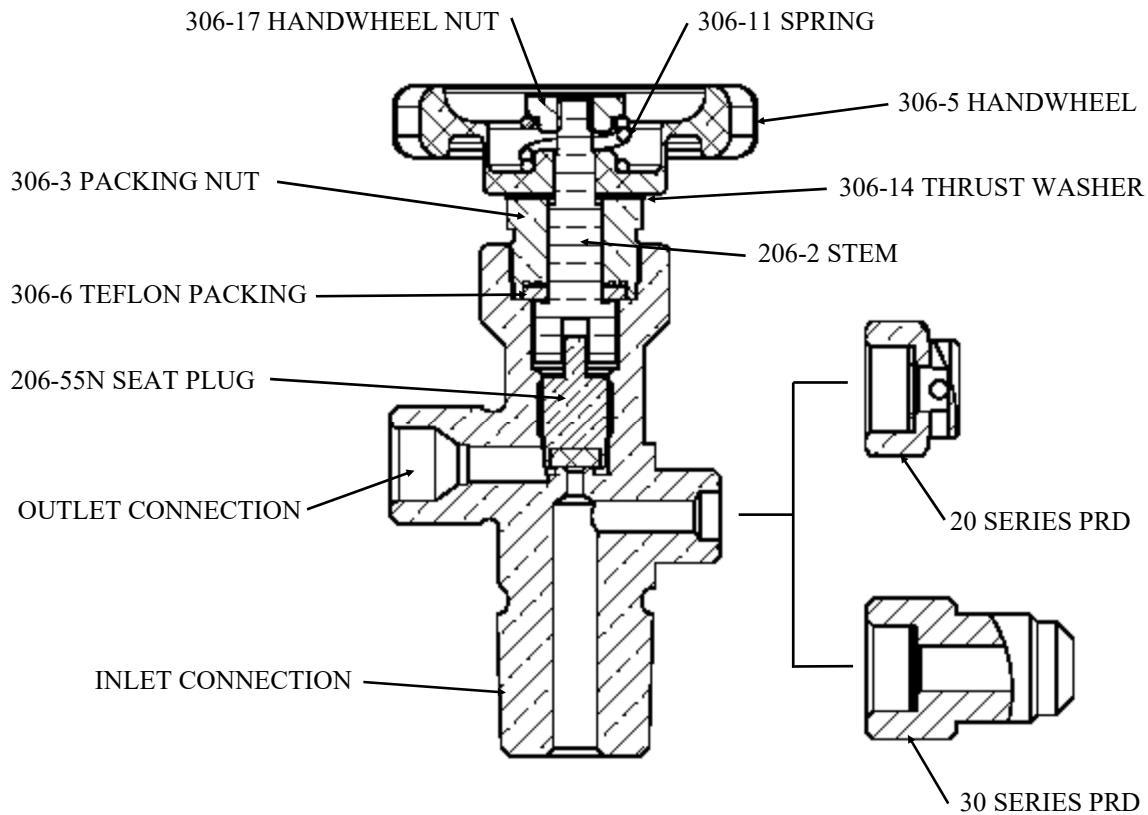


CYLINDER VALVES			
Part no.	CGA Connection	Inlet Connection	Service
1258	CGA580	3/4"-14NGT	Helium, Nitrogen, Argon
1258-SGT	CGA580	3/4"-14SGT	Helium, Nitrogen, Argon
1258F	CGA580	1"11-1/2NGT	Helium, Nitrogen, Argon
1254	CGA540	3/4"-14NGT	Oxygen
1254-SGT	CGA540	3/4"-14SGT	Oxygen
1254F	CGA540	1"11-1/2NGT	Oxygen
1235	CGA350	3/4"-14NGT	Hydrogen
1235-SGT	CGA350	3/4"-14SGT	Hydrogen
1235F	CGA350	1"11-1/2NGT	Hydrogen
RELIEF DEVICES			
Diffuser Cap		1/2" SAE Flare Cap	
Part No.	Fusemetal	Part No.	Fusemetal
20	NONE	30	NONE
21	165 F	31	165 F
22	212 F	32	212F
FRANGIBLE RUPTURE DISC CHART			
Letter Code	Burst Range	Letter Code	Burst Range
A	3300-3775	N	1750-2000
C	3600-4000	P	4500-5000
G	6200-6900	Q	3000-3360
J	5000-5500	R	5500-6000
L	2700-3000	Z	8000-8333

Notes: For valve with relief device add cap part number and disc code to end of valve number
 Example: 1258-20C

For valves with oversize 3/4"NGT inlets, add -2OS for 2 threads oversize or -4OS for 4 threads oversize to end of part number. Example 1258-30C-2OS

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 P.O. Box 2446, Amarillo, TX 79105 | 6701 W McCormick Rd, Amarillo, TX 79118**



SPECIFICATIONS:

Valve Body—Brass

Seat Plug—Brass w/ Nylon seat

Packing Nut—Brass

Packing—PTEF Teflon

Thrust Washer—Plastic

Shear Poppet—Brass components w/ Viton seal

Maximum valve body operating pressure—5000 PSI

Reference CGA publication V-1 for outlet pressure ratings where applicable.

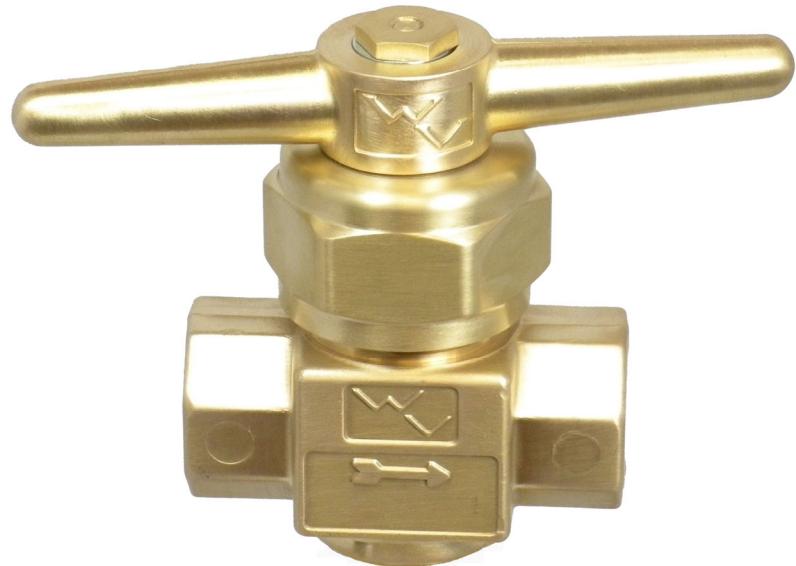
ASSEMBLY INSTRUCTIONS:

1. Apply a small amount of Halocarbon 25-10M grease to one side of the seat plug thread and place in body.
2. Using the stem screw the seat plug clockwise to seated position.
3. Insert the Teflon packing into the packing nut.
4. Screw the packing nut into the valve body and torque to 60 Ft/lbs.
5. Install thrust washer and handwheel.
6. Turn valve to open position.
7. Install handwheel spring and nut.



18R2 SERIES MASTER

Constructed from a forged brass body, this high flow master valve was designed to meet general compressed gas manifold requirements. This valve has a pressure rating of 5000 PSI at 70° F. The seat plug is manufactured from aluminum silicon bronze, and available with a choice of Kel-F or Vespel seat insert. This valve offers low torque operational features that include a low temperature Fluorocarbon Rod T-Seal, a Teflon coated stainless steel seal ring, and a Nylatron thrust washer. This design offers excellent seal capabilities for hot and cold temperatures.

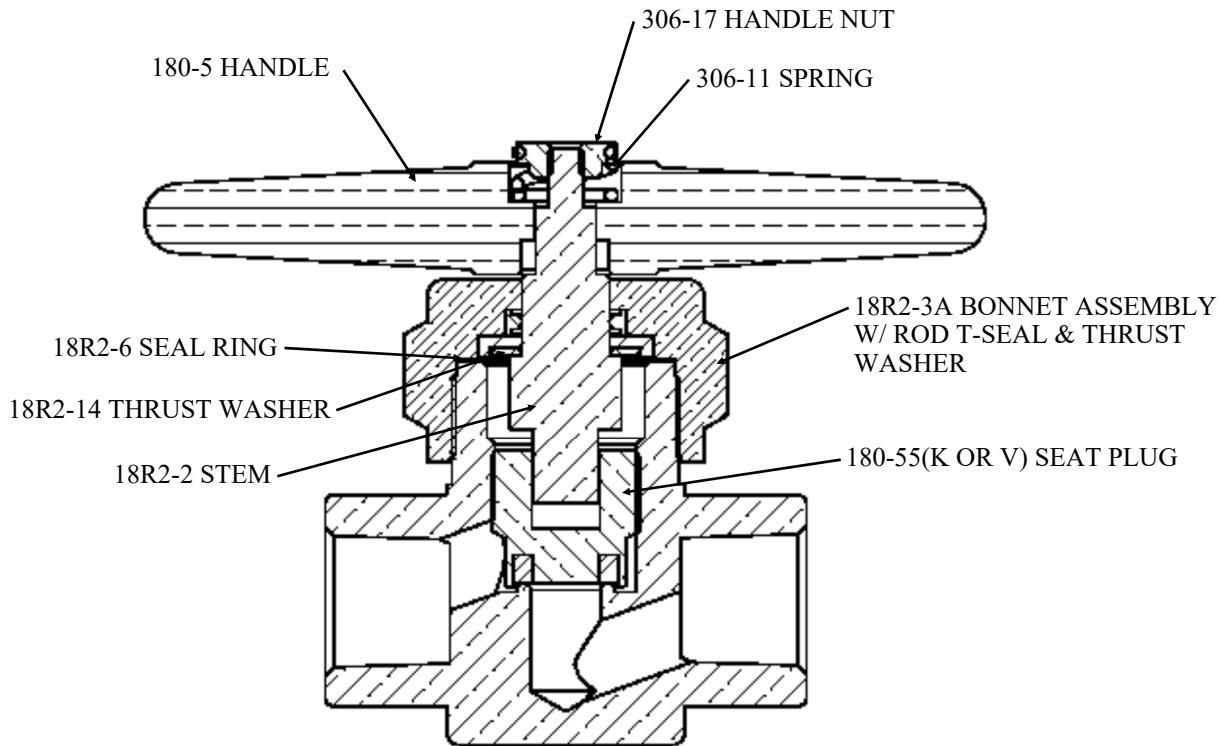


Part no.	Inlet Connection	Outlet Connection
18R2A	1/2"NPT	1/2"NPT
18R2AS	1/2" Pipe Socket Weld	1/2" Pipe Socket Weld
18R2ASA	1/2" Pipe Socket Weld	1/2"NPT
18R2E	3/4"NPT	3/4"NPT
18R2ES	3/4" Pipe Socket Weld	3/4" Pipe Socket Weld
18R2ESE	3/4" Pipe Socket Weld	3/4"NPT
18R2F	CGA 1340 1"-11 1/2NPS R.H. (Male)	CGA 1340 1"-11 1/2 NPS R.H. (Male)
18R2FL	CGA 1350 1"-11 1/2NPSL L.H. (Male)	CGA 1350 1"-11 1/2NPSL L.H. (Male)

NOTES:

1. For Vespel seat insert add "V" to end of part no. Example: 18R2A becomes 18R2AV
2. Buna-N seals are required for CNG and Methane gas applications. Add BN to end of part number to designate Buna-N. e.g. 18R2E-BN

CAUTION: This valve is not for acetylene or MAPP gas service.



SPECIFICATIONS:

Valve Body: Brass

Seat Plug—Aluminum Silicon Bronze w/ Kel-F or Vespel seat

Bonnet—Brass

Stem—Brass

Rod T-Seal—VG109 Fluorocarbon w/ Teflon back-up rings

Thrust Washer—Nylatron

Seal Ring—Teflon coated stainless steel

Maximum valve body operating pressure—5000 PSI @ 70°F

Cv factor-3.1

ASSEMBLY INSTRUCTIONS:

1. Apply Braycote 803 grease to the 180-55(K or V) seat plug thread and place in body.
2. Using the 18R2-2 stem, screw the seat plug clockwise to seated position.
3. Place 18R2-6 seal washer on top valve body sealing surface.
4. Place the 18R2-14 thrust washer into groove of 18R2-3A bonnet.
5. Screw 18R2-3A bonnet assembly over valve body clockwise to seated position.
6. Torque 18R2-3A bonnet to 190 Ft/lbs.
7. Install 180-5 handle, 306-11 spring, and 306-17 nut.

NOTE: The bonnet assembly is pre-lubed with Braycote 803. If additional lubrication is required use Braycote 803. Halocarbon is not an acceptable lubricant for the Rod T-Seal.



TGR-18R2 SERIES MASTER VALVE

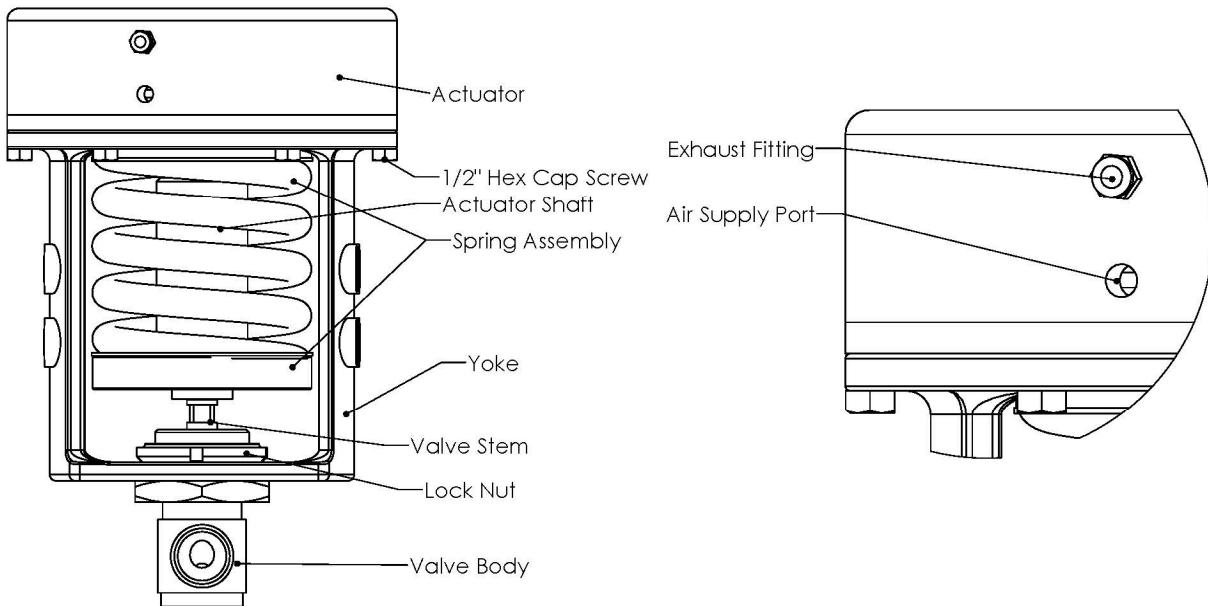
The Transfer Gas Remote (TiGR) system is a pneumatically controlled valve used for high pressure compressed gas applications. This is a normally closed valve which means it is in the closed position and can only be opened by means of an air supply to the actuator. The TiGR system allows the operator to open and close the valve from a remote distance giving operators protection from valve site dangers such as fires or uncontrolled releases of gases. This valve has a pressure rating of 4000 PSI at 70° F and manufactured out of stainless steel. The valve seat material is available in the standard Kel-F or optional Vespel. The valve seals consist of a low temperature Fluorocarbon Rod T-Seal backed with two Teflon rings, and a Teflon coated stainless steel seal washer.



Part no.	Valve Body	Inlet Connection	Outlet Connection
TGR-S18R2A	Stainless Steel	1/2" NPT	1/2" NPT
TGR-S18R2E	Stainless Steel	3/4" NPT	3/4" NPT
TGR-S18R2F	Stainless Steel	CGA1340 1" 11-1/2NPS-R.H.	CGA1340 1" 11-1/2NPS-R.H.
TGR-S18R2FL	Stainless Steel	CGA 1350 1" 11-1/2NPSL L.H.	CGA 1350 1" 11-1/2NPSL L.H.

NOTE: For Vespel seat insert add "V" to end of part no.
Example: TGR-S18R2A becomes TGR-18SR2AV

CAUTION: This valve is not for acetylene or MAPP gas service.



WARNING: While servicing, the valve body should not be subjected to any pressurized gas.



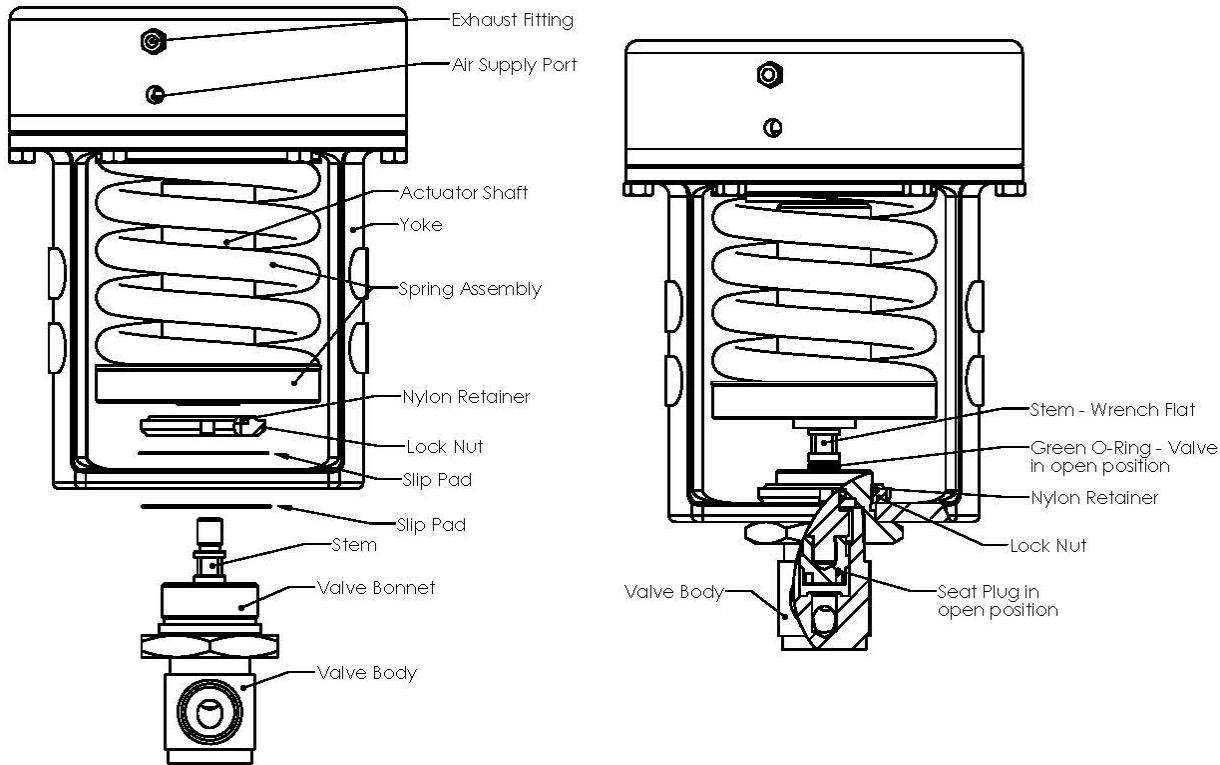
WARNING: The spring assembly is not serviceable, and attempting to service the spring assembly could result in serious injury or death.

Actuator Removal Instructions

1. Remove the six $\frac{1}{2}$ " hex head cap screws and lock washers that secure the yoke to the actuator.
2. Remove the exhaust fitting and attach an air supply (100PSI – 130PSI) to the exhaust port. The air supply line needs be flexible and have adequate slack to maneuver the actuator.
3. Activate the actuator through the exhaust port.
4. Rotate the actuator counter clockwise to unscrew the actuator from the yoke assembly.

Actuator Attachment Instructions

1. Attach an air supply (100PSI – 130PSI) to the exhaust port and activate the actuator. The air supply line needs to be flexible and have adequate slack to maneuver the actuator.
2. Screw the actuator clockwise onto the actuator shaft until seated.
3. Turn the actuator counter clockwise until the first available $\frac{1}{2}$ " cap screw holes line up.
4. Screw the $\frac{1}{2}$ " cap screws with lock washers through the yoke into the actuator hand tight.
5. Deactivate the actuator and remove air supply from exhaust port.
6. Tighten the $\frac{1}{2}$ " hex head cap screws in a uniform pattern to 20 ft/lbs.
7. Reinstall the exhaust fitting in exhaust port.



WARNING: While servicing, the valve body should not be subjected to any pressurized gas.



WARNING: The spring assembly is not serviceable, and attempting to service the spring assembly could result in serious injury or death.

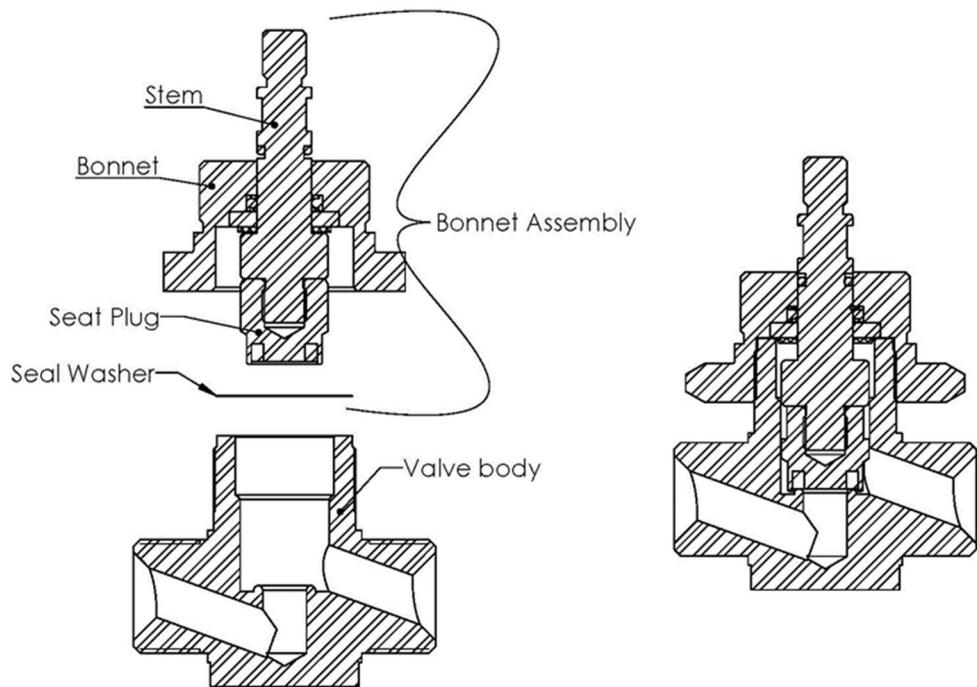
Valve Removal Instructions

1. Attach an air supply (100PSI – 130PSI) to the air supply port and activate the actuator.
2. Using a spanner wrench, turn the lock nut counter clockwise off the valve body.
3. Deactivate the actuator. The valve body should push out of the yoke approximately 3/8".
4. Using a 1/2" open end wrench, remove the valve body from the actuator shaft by turning the stem clockwise.

Valve Installation Instructions

1. To insure the valve assembly does not un-torque from bonnet during installation, secure the valve bonnet in a vice.
2. Attach an air supply (100PSI – 130PSI) to the air supply port and activate the actuator. The air supply line needs to be flexible and have adequate slack to maneuver the actuator.
3. Place slip pad over valve bonnet.
4. Place yoke assembly then slip pad then lock nut over valves stem / bonnet. The Nylon retainer portion of the lock nut should be towards spring assembly.
5. Screw the yoke assembly into the valve stem 2-3 turns.
6. Screw the locknut clockwise onto the valve body hand tight.
7. Using a 1/2" open end wrench, turn the stem counter clockwise into the yoke shaft until it bottoms out. Tighten to approximately 10 in/lbs.
8. Using a spanner wrench, tighten the locknut against the yoke and torque to approximately 50 ft/lbs.

Note: The valve assembly to yoke is not a rigid attachment. It is designed to have some rotational movement to prevent valve bonnet from losing torque in transit mode.



Valve Assembly Instructions

1. Bonnet assembly consist of seat plug, stem, seal washer, bonnet and bonnet components. Do not remove stem from bonnet assembly. Doing so could cause damage to the seals.
2. Insert seal washer into bonnet assembly.
3. Invert valve body and screw bonnet assembly onto valve body until hand tight.
4. Torque bonnet assembly to 250 ft/lbs.



SECTION 2

PAGE(S)	PART SERIES	DESCRIPTION
34-36	P8160X & P8161X Series	Jumbo (22" dia) Tube PRD w/ Poppet
37-39	9160 & 9161 Series	Jumbo (22" dia) Tube PRD
40-42	9160X & 9161X Series	Jumbo (22" dia) Tube PRD
43-46	9160X-2 & 9161X-3 Series	Jumbo (22" dia) Tube PRD
47-50	9163 Series	Jumbo (22" dia) Tube Internal PRD
51-54	9165 Series	Jumbo (22" dia) Tube Bullplug PRD
55	Rupture Disc Chart	Jumbo (22" dia) Tube Rupture Disc Chart
56-58	9176 Series	Jumbo (22" dia) Tube Bullplug Cluster PRD
59-60	9450 Series	Jumbo (22" dia) Tube Cluster PRD
61-62	9129 Series	Small (9-5/8") Tube Internal PRD
63-64	9120 Series	Small (9-5/8") Tube PRD
65-66	9130 Series	Small (9-5/8") Tube Angel PRD
67-68	9135 Series	Small (9-5/8") Tube Thermowell PRD
69-70	20 Series	Small (9-5/8") Tube PRD Diffuser Cap
71-72	30 Series	Small (9-5/8") Tube PRD Vent Cap

P8160X SERIES RELIEF DEVICES WITH SHEAR PROTECTION



The P8160X series relief device is constructed of brass and stainless steel. This device is designed for DOT 3T, 3AAX, and UN tubes and is available with "flare type", "weld type" vent tube connections or a diffuser style plug. The relief device is recessed inside the safety body for an added measure of safety. The shear poppet device is constructed of stainless steel and brass. This device becomes functional in the event of a shear off at the inlet connection. A wide variety of rupture discs are available to meet customer requirements.



Patent 7,270,140

Part no.	Inlet Thread	Outlet Thread	Fusemetal	Tube Connection	Membrane
P8160XK-*	1-1/2" 11-1/2NGT	NONE	NONE	1-1/8" FLARE	STANDARD
P8160XKF-*	1-1/2" 11-1/2NGT	NONE	NONE	1" FLARE	STANDARD
P8160XU-*	1-1/2" 11-1/2NGT	NONE	NONE	1-1/8" FLARE	RECESSED
P8160XUF-*	1-1/2" 11-1/2NGT	NONE	NONE	1" FLARE	RECESSED
P8160XU27-*	1-1/2" 11-1/2NGT	NONE	NONE	1-1/8" WELDED	RECESSED
P8160XU27F-*	1-1/2" 11-1/2NGT	NONE	NONE	1" WELDED	RECESSED
P8160X-20-*	1-1/2" 11-1/2NGT	NONE	NONE	DIFFUSER STYLE	NONE
P8160XKH-*	1-1/2" 11-1/2NGT	NONE	165	1-1/8" FLARE	NONE
P8160XKHF-*	1-1/2" 11-1/2NGT	NONE	165	1" FLARE	NONE
P8160XKJ-*	1-1/2" 11-1/2NGT	NONE	212	1-1/8" FLARE	NONE
P8160XKJF-*	1-1/2" 11-1/2NGT	NONE	212	1" FLARE	NONE
P8160X-27H-*	1-1/2" 11-1/2NGT	NONE	165	1-1/8" WELDED	NONE
P8160X-27HF-*	1-1/2" 11-1/2NGT	NONE	165	1" WELDED	NONE
P8160X-27J-*	1-1/2" 11-1/2NGT	NONE	212	1-1/8" WELDED	NONE
P8160X-27JF-*	1-1/2" 11-1/2NGT	NONE	212	1" WELDED	NONE
P8160X-20H-*	1-1/2" 11-1/2NGT	NONE	165	DIFFUSER STYLE	NONE
P8160X-20J-*	1-1/2" 11-1/2NGT	NONE	212	DIFFUSER STYLE	NONE

NOTES: (*) = Disc Code (See Disc Code Chart for Reference) Example: P8160XK-18C

Notice: Western Valve Inc. recommends installing "Warning" decals on any equipment containing shear type relief devices and/or valves. Contact Western Valve for details.

P8161X SERIES RELIEF DEVICES WITH SHEAR PROTECTION



The P8161X series relief device is constructed of brass and stainless steel. This device is designed for DOT 3T, 3AAX and UN tubes and is available with "flare type", "weld type" vent tube connections or a diffuser style plug. The relief device is recessed inside the safety body for an added measure of safety. The shear poppet device is constructed of stainless steel and brass. This device becomes functional in the event of a shear off at the inlet connection. A wide variety of rupture discs are available to meet customer requirements.

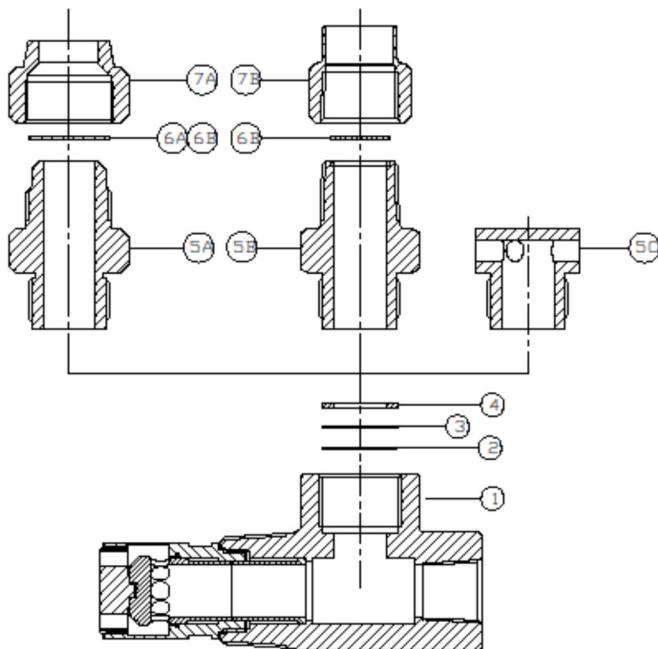


Patent 7,270,140

Part no.	Inlet Thread	Outlet Thread	Fusemetal	Tube Connection	Membrane
P8161XK-*	1-1/2" -11-1/2NGT	3/4" -14NGT	NONE	1-1/8" FLARE	STANDARD
P8161XKF-*	1-1/2" 11-1/2NGT	3/4" -14NGT	NONE	1" FLARE	STANDARD
P8161XU-*	1-1/2" 11-1/2NGT	3/4" -14NGT	NONE	1-1/8" FLARE	RECESSED
P8161XUUF-*	1-1/2" 11-1/2NGT	3/4" -14NGT	NONE	1" FLARE	RECESSED
P8161XU27-*	1-1/2" 11-1/2NGT	3/4" -14NGT	NONE	1-1/8" WELDED	RECESSED
P8161XU27F-*	1-1/2" 11-1/2NGT	3/4" -14NGT	NONE	1" WELDED	RECESSED
P8161X-20-*	1-1/2" 11-1/2NGT	3/4" -14NGT	NONE	DIFFUSER STYLE	NONE
P8161XKH-*	1-1/2" 11-1/2NGT	3/4" -14NGT	165	1-1/8" FLARE	NONE
P8161XKHF-*	1-1/2" 11-1/2NGT	3/4" -14NGT	165	1" FLARE	NONE
P8161XKJ-*	1-1/2" 11-1/2NGT	3/4" -14NGT	212	1-1/8" FLARE	NONE
P8161XKJF-*	1-1/2" 11-1/2NGT	3/4" -14NGT	212	1" FLARE	NONE
P8161X-27H-*	1-1/2" 11-1/2NGT	3/4" -14NGT	165	1-1/8" WELDED	NONE
P8161X-27HF-*	1-1/2" 11-1/2NGT	3/4" -14NGT	165	1" WELDED	NONE
P8161X-27J-*	1-1/2" 11-1/2NGT	3/4" -14NGT	212	1-1/8" WELDED	NONE
P8161X-27JF-*	1-1.2" 11-1/2NGT	3/4" -14NGT	212	1" WELDED	NONE
P8161X-20H-*	1-1/2" 11-1/2NGT	3/4" -14NGT	165	DIFFUSER STYLE	NONE
P8161X-20J-*	1-1/2" 11-1/2NGT	3/4" -14NGT	212	DIFFUSER STYLE	NONE

NOTES: (*) = Disc Code (See Disc Code Chart for Reference) Example: P8161XK-18C

Notice: Western Valve Inc. recommends installing "Warning" decals on any equipment containing shear type relief devices and/or valves. Contact Western Valve for details.



ITEM NO.	PART NO.	DESCRIPTION
1	P8161X-1	RELIEF DEVICE BODY 1-1/2"NGT INLET X 3/4"NGT OUTLET
	P8160X-1	RELIEF DEVICE BODY 1-1/2"NGT INLET X BLANK OUTLET
2	9146-6C	COPPER WASHER
3	9146-*	RUPTURE DISC NOTE: “*” = DISC CODE (See Disc Code Chart for Reference)
4	9146-24H	SHEAR RING
5A	9146-30K	STANDARD ADAPTER
	9146-30U	RECESSED ADAPTER
5B	9146-27U	1" NPT STYLE ADAPTER FOR WELD ON VENT TUBE
5C	9146-21	DIFFUSER PLUG
	NOTE: FOR FUSEBACKED ADAPTERS ADD “H” OR “J” TO END OF PART NO. “H” = 165 FUSEMETAL “J” = 212 FUSEMETAL EXAMPLE 9146-30KJ	
6A	9160-83	WEATHER MEMBRANE FOR 9146-30K ADAPTER
6B	9160-83F	WEATHER MEMBRANE FOR 9146-30U & 9146-27U ADAPTERS
7A	9146-29	1-1/8" FLARE NUT FOR 9146-30K & 9146-30U ADAPTERS
	9146-29F	1" FLARE NUT FOR 9146-30K & 9146-30U ADAPTERS
7B	9146-28	1-1/8" WELD ON VENT TUBE NUT FOR 9146-27U ADAPTER
	9146-28F	1" WELD ON VENT TUBE NUT FOR 9146-27U ADAPTER

ASSEMBLY INSTRUCTIONS:

1. Apply a small amount of Halocarbon 25-10M grease or compatible grease to 9146-6C copper washer and insert into relief device body.
2. Insert rupture disc into relief device body letter code up.
3. Lightly lubricate 9146-24H shear ring with Halocarbon 25-10M grease or compatible grease and place in relief device body.
4. Screw adapter into relief device body.
5. Torque adapter to 250 Ft/lbs.

Notice: Western Valve Inc. recommends installing “Warning” decals on any equipment containing shear type relief devices and/or valves. Contact Western Valve for details.

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9160 SERIES RELIEF DEVICES



The 9160 series relief device is constructed of durable forged brass. This device is designed for use in 3T, 3AAX, and UN tubes. They are available with the standard adapter, recessed adapter, 1" NPT weld on vent tube style, or diffuser style cap. An optional 1" flare nut or vent tube nut is available in place of the standard 1-1/8" connection. A wide variety of rupture discs are available to meet customer requirements.



Part no.	Inlet Thread	Outlet Thread	Fusemetal	Tube Connection	Membrane
9160K-*	1" 11-1/2 NGT	NONE	NONE	1-1/8" FLARE	STANDARD
9160KF-*	1" 11-1/2 NGT	NONE	NONE	1" FLARE	STANDARD
9160U-*	1" 11-1/2 NGT	NONE	NONE	1-1/8" FLARE	RECESSED
9160UF-*	1" 11-1/2 NGT	NONE	NONE	1" FLARE	RECESSED
9160U26-*	1" 11-1/2 NGT	NONE	NONE	1-1/8" WELDED	RECESSED
9160U26F-*	1" 11-1/2 NGT	NONE	NONE	1" WELDED	RECESSED
9160-20-*	1" 11-1/2 NGT	NONE	NONE	DIFFUSER STYLE	NONE
9160KH-*	1" 11-1/2 NGT	NONE	165	1-1/8" FLARE	NONE
9160KHF-*	1" 11-1/2 NGT	NONE	165	1" FLARE	NONE
9160KJ-*	1" 11-1/2 NGT	NONE	212	1-1/8" FLARE	NONE
9160KJF-*	1" 11-1/2 NGT	NONE	212	1" FLARE	NONE
9160-26H-*	1" 11-1/2 NGT	NONE	165	1-1/8" WELDED	NONE
9160-26HF-*	1" 11-1/2 NGT	NONE	165	1" WELDED	NONE
9160-26J-*	1" 11-1/2 NGT	NONE	212	1-18" WELDED	NONE
9160-26JF-*	1" 11-1/2 NGT	NONE	212	1" WELDED	NONE
9160-20H-*	1" 11-1/2NGT	NONE	165	DIFFUSER STYLE	NONE
9160-20J-*	1" 11-1/2NGT	NONE	212	DIFFUSER STYLE	NONE

NOTES: “*” = Disc Code (See Disc Code Chart for References)

Example: 9160K-18C

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9161 SERIES RELIEF DEVICES



The 9161 series relief device is constructed of durable forged brass. This device is designed for use in 3T, 3AAX, and UN tubes. They are available with the standard adapter, recessed adapter, 1" NPT weld on vent tube style or diffuser style cap. An optional 1" flare nut or vent tube nut is available in place of the standard 1-1/8" connection. A wide variety of rupture discs are available to meet customer requirements.

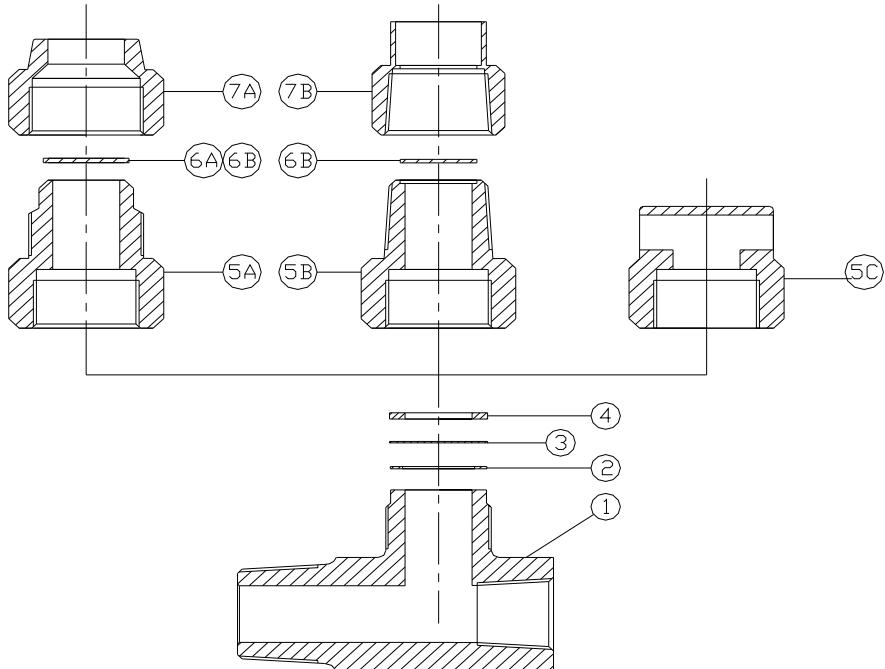


Part no.	Inlet Thread	Outlet Thread	Fusemetal	Tube Connection	Membrane
9161K-*	1" 11-1/2 NGT	3/4"-14NGT	NONE	1-1/8" FLARE	STANDARD
9161KF-*	1" 11-1/2 NGT	3/4"-14NGT	NONE	1" FLARE	STANDARD
9161U-*	1" 11-1/2 NGT	3/4"-14NGT	NONE	1-1/8" FLARE	RECESSED
9161UF-*	1" 11-1/2 NGT	3/4"-14NGT	NONE	1" FLARE	RECESSED
9161U26-*	1" 11-1/2 NGT	3/4"-14NGT	NONE	1-1/8" WELDED	RECESSED
9161U26F-*	1" 11-1/2 NGT	3/4"-14NGT	NONE	1" WELDED	RECESSED
9161-20-*	1" 11-1/2 NGT	3/4"-14NGT	NONE	DIFFUSER STYLE	NONE
9161KH-*	1" 11-1/2 NGT	3/4"-14NGT	165	1-1/8" FLARE	NONE
9161KHF-*	1" 11-1/2 NGT	3/4"-14NGT	165	1" FLARE	NONE
9161KJ-*	1" 11-1/2 NGT	3/4"-14NGT	212	1-1/8" FLARE	NONE
9161KJF-*	1" 11-1/2 NGT	3/4"-14NGT	212	1" FLARE	NONE
9161-26H-*	1" 11-1/2 NGT	3/4"-14NGT	165	1-1/8" WELDED	NONE
9161-26HF-*	1" 11-1/2 NGT	3/4"-14NGT	165	1" WELDED	NONE
9161-26J-*	1" 11-1/2 NGT	3/4"-14NGT	212	1-18" WELDED	NONE
9161-26JF-*	1" 11-1/2 NGT	3/4"-14NGT	212	1" WELDED	NONE
9161-20H-*	1" 11-1/2NGT	3/4"-14NGT	165	DIFFUSER STYLE	NONE
9161-20J-*	1" 11-1/2NGT	3/4"-14NGT	212	DIFFUSER STYLE	NONE

NOTES: “*” = Disc Code (See Disc Code Chart for References)

Example: 9161K-18C

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ITEM NO.	PART NO.	DESCRIPTION
1	9161-1	RELIEF DEVICE BODY 1"NGT INLET X 3/4"NGT OUTLET
	9160-1	RELIEF DEVICE BODY 1"NGT INLET X BLANK OUTLET
2	9146-6C	COPPER WASHER
3	9146-*	RUPTURE DISC NOTE: "*" = DISC CODE (See Disc Code Chart for Reference)
4	9146-24H	SHEAR RING
5A	9146-25K	STANDARD ADAPTER
	9146-25U	RECESSED ADAPTER
5B	9146-26U	1"NPT STYLE ADAPTER FOR WELD ON VENT TUBE
5C	9146-20	DIFFUSER CAP
	NOTE: FOR FUSEBACKED ADAPTERS ADD "H" OR "J" TO END OF PART NO. "H" = 165 FUSEMETAL "J" = 212 FUSEMETAL EXAMPLE 9146-25KJ	
6A	9160-83	WEATHER MEMBRANE FOR 9146-25K ADAPTER
6B	9160-83F	WEATHER MEMBRANE FOR 9146-25U & 9146-26U ADAPTERS
7A	9146-29	1-1/8" FLARE NUT FOR 9146-25K & 9146-25U ADAPTERS
	9146-29F	1" FLARE NUT FOR 9146-25K AND 9146-25U ADAPTERS
7B	9146-28	1-1/8" WELD ON VENT TUBE NUT FOR 9146-26U ADAPTER
	9146-28F	1" WELD ON VENT TUBE NUT FOR 9146-26U ADAPTER

ASSEMBLY INSTRUCTIONS:

1. Apply a small amount of Halocarbon 25-10M grease or compatible grease to 9146-24H shear ring and insert into adapter.
2. Insert rupture disc into adapter letter code down.
3. Lightly lubricate 9146-6C copper washer with Halocarbon 25-10M grease or compatible grease and place in adapter.
4. Invert the relief device body and screw on adapter assembly.
5. Torque adapter to 250 Ft/lbs.

9160X SERIES RELIEF DEVICES



The 9160X series relief device is constructed of durable forged brass. This device is designed for use in 3T, 3AAX, and UN tubes. These devices are available with the standard adapter, recessed adapter, 1" NPT weld on vent tube style, or diffuser style cap. An optional 1" flare nut or vent tube nut is available in place of the standard 1-1/8" connection. A wide variety of rupture discs are available to meet customer requirements.



Part no.	Inlet Thread	Outlet Thread	Fusemetal	Tube Connection	Membrane
9160XK-*	1-1/2"11-1/2 NGT	NONE	NONE	1-1/8" FLARE	STANDARD
9160XKF-*	1-1/2"11-1/2 NGT	NONE	NONE	1" FLARE	STANDARD
9160XU-*	1-1/2"11-1/2 NGT	NONE	NONE	1-1/8" FLARE	RECESSED
9160XUF-*	1-1/2"11-1/2 NGT	NONE	NONE	1" FLARE	RECESSED
9160XU26-*	1-1/2"11-1/2 NGT	NONE	NONE	1-1/8" WELDED	RECESSED
9160XU26F-*	1-1/2"11-1/2 NGT	NONE	NONE	1" WELDED	RECESSED
9160X-20-*	1-1/2"11-1/2 NGT	NONE	NONE	DIFFUSER STYLE	NONE
9160XKH-*	1-1/2"11-1/2 NGT	NONE	165	1-1/8" FLARE	NONE
9160XKHF-*	1-1/2"11-1/2 NGT	NONE	165	1" FLARE	NONE
9160XKJ-*	1-1/2"11-1/2 NGT	NONE	212	1-1/8" FLARE	NONE
9160XKJF-*	1-1/2"11-1/2 NGT	NONE	212	1" FLARE	NONE
9160X-26H-*	1-1/2"11-1/2 NGT	NONE	165	1-1/8" WELDED	NONE
9160X-26HF-*	1-1/2"11-1/2NGT	NONE	165	1" WELDED	NONE
9160X-26J-*	1-1/2"11-1/2NGT	NONE	212	1-1/8" WELDED	NONE
9160XK-26JF-*	1-1/2"11-1/2NGT	NONE	212	1" WELDED	NONE
9160X-20H-*	1-1/2"11-1/2NGT	NONE	165	DIFFUSER STYLE	NONE
9160X-20J-*	1-1/2"11-1/2NGT	NONE	212	DIFFUSER STYLE	NONE

NOTES: “*” = Disc Code (See Disc Code Chart for References)

Example: 9161XK-18C

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9161X SERIES RELIEF DEVICES



The 9161X series relief device is constructed of durable forged brass. This device is designed for use in 3T, 3AAX, and UN tubes. They are available with the standard adapter, recessed adapter, 1" NPT weld on vent tube style or diffuser style cap. An optional 1" flare nut or vent tube nut is available in place of the standard 1-1/8" connection. A wide variety of rupture discs are available to meet customer requirements.

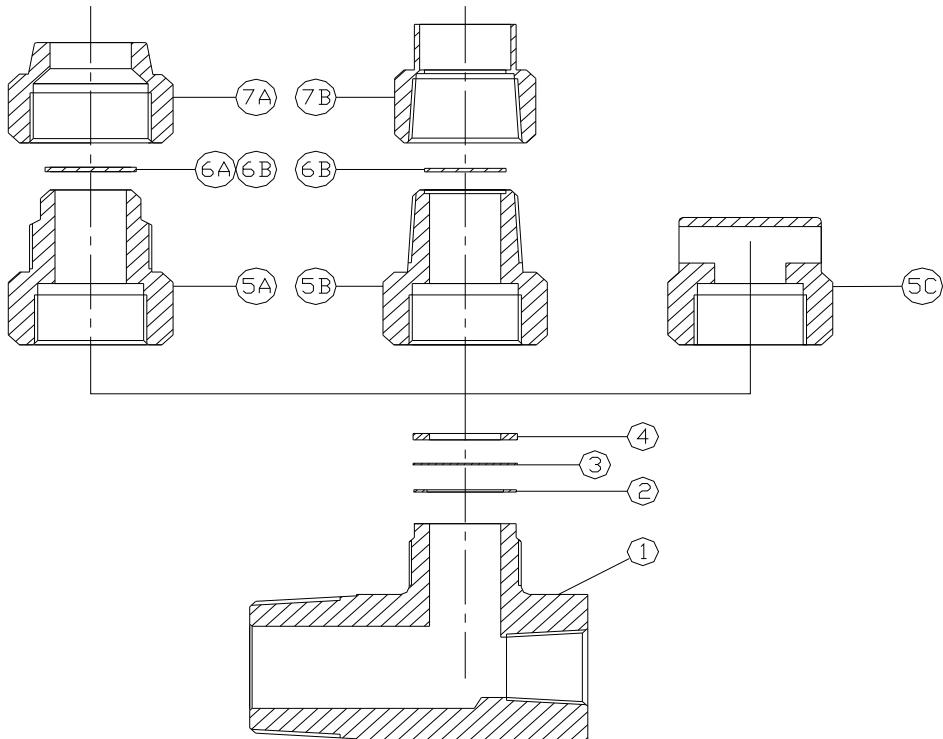


Part no.	Inlet Thread	Outlet Thread	Fusemetal	Tube Connection	Membrane
9161XK-*	1-1/2"11-1/2 NGT	3/4"-14NGT	NONE	1-1/8" FLARE	STANDARD
9161XKF-*	1-1/2"11-1/2 NGT	3/4"-14NGT	NONE	1" FLARE	STANDARD
9161XU-*	1-1/2"11-1/2 NGT	3/4"-14NGT	NONE	1-1/8" FLARE	RECESSED
9161XUF-*	1-1/2"11-1/2 NGT	3/4"-14NGT	NONE	1" FLARE	RECESSED
9161XU26-*	1-1/2"11-1/2 NGT	3/4"-14NGT	NONE	1-1/8" WELDED	RECESSED
9161XU26F-*	1-1/2"11-1/2 NGT	3/4"-14NGT	NONE	1" WELDED	RECESSED
9161X-20-*	1-1/2"11-1/2 NGT	3/4"-14NGT	NONE	DIFFUSER STYLE	NONE
9161XKH-*	1-1/2"11-1/2 NGT	3/4"-14NGT	165	1-1/8" FLARE	NONE
9161XKHF-*	1-1/2"11-1/2 NGT	3/4"-14NGT	165	1" FLARE	NONE
9161XKJ-*	1-1/2"11-1/2 NGT	3/4"-14NGT	212	1-1/8" FLARE	NONE
9161XKJF-*	1-1/2"11-1/2 NGT	3/4"-14NGT	212	1" FLARE	NONE
9161X-26H-*	1-1/2"11-1/2 NGT	3/4"-14NGT	165	1-1/8" WELDED	NONE
9161X-26HF-*	1-1/2"11-1/2NGT	3/4"-14NGT	165	1" WELDED	NONE
9161X-26J-*	1-1/2"11-1/2NGT	3/4"-14NGT	212	1-1/8" WELDED	NONE
9161XK-26JF-*	1-1/2"11-1/2NGT	3/4"-14NGT	212	1" WELDED	NONE
9161X-20H-*	1-1/2"11-1/2NGT	3/4"-14NGT	165	DIFFUSER STYLE	NONE
9161X-20J-*	1-1/2"11-1/2NGT	3/4"-14NGT	212	DIFFUSER STYLE	NONE

NOTES: “*” = Disc Code (See Disc Code Chart for References)

Example: 9161XK-18C

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ITEM NO.	PART NO.	DESCRIPTION
1	9161X-1	RELIEF DEVICE BODY
	9160X-1	RELIEF DEVICE BODY
2	9146-6C	COPPER WASHER
3	9146-*	RUPTURE DISC NOTE: “*” = DISC CODE (See Disc Code Chart for Reference)
4	9146-24H	SHEAR RING
5A	9146-25K	STANDARD ADAPTER
	9146-25U	RECESSED ADAPTER
5B	9146-26U	1" NPT STYLE ADAPTER
5C	9146-20	DIFFUSER CAP
	NOTE: FOR FUSEBACKED ADAPTERS ADD “H” OR “J” TO END OF PART NO. “H” = 165 FUSEMETAL “J” = 212 FUSEMETAL EXAMPLE 9146-25KJ	
6A	9160-83	WEATHER MEMBRANE FOR 9146-25K ADAPTER
6B	9160-83F	WEATHER MEMBRANE FOR 9146-25U & 9146-26U ADAPTERS
7A	9146-29	1-1/8" FLARE NUT FOR 9146-25K AND 9146-25U ADAPTERS
	9146-29F	1" FLARE NUT FOR 9146-25K AND 9146-25U ADAPTERS
7B	9146-28	1-1/8" WELD ON VENT TUBE NUT FOR 9146-26U ADAPTER
	9146-28F	1" WELD ON VENT TUBE NUT FOR 9146-26U ADAPTER

ASSEMBLY INSTRUCTIONS:

1. Apply a small amount of Halocarbon 25-10M grease or compatible grease to 9146-24H shear ring and insert into adapter.
2. Insert rupture disc into adapter letter code down.
3. Lightly lubricate 9146-6C copper washer with Halocarbon 25-10M grease or compatible grease and place in adapter.
4. Invert the relief device body and screw on adapter assembly.
5. Torque adapter to 250 Ft/lbs.

9160X-2 SERIES RELIEF DEVICE

The 9160X-2 series relief device is constructed of durable forged brass. This device was designed to accommodate a valve in the side outlet of the body. These devices are designed for use in 3T, 3AAX, and UN tubes. They are available with the standard adapter, recessed adapter, 1" NPT weld on vent tube style or diffuser style cap. An optional 1" flare nut or vent tube nut is available in place of the standard 1-1/8" connection. A wide variety of rupture discs are available to meet customer requirements.

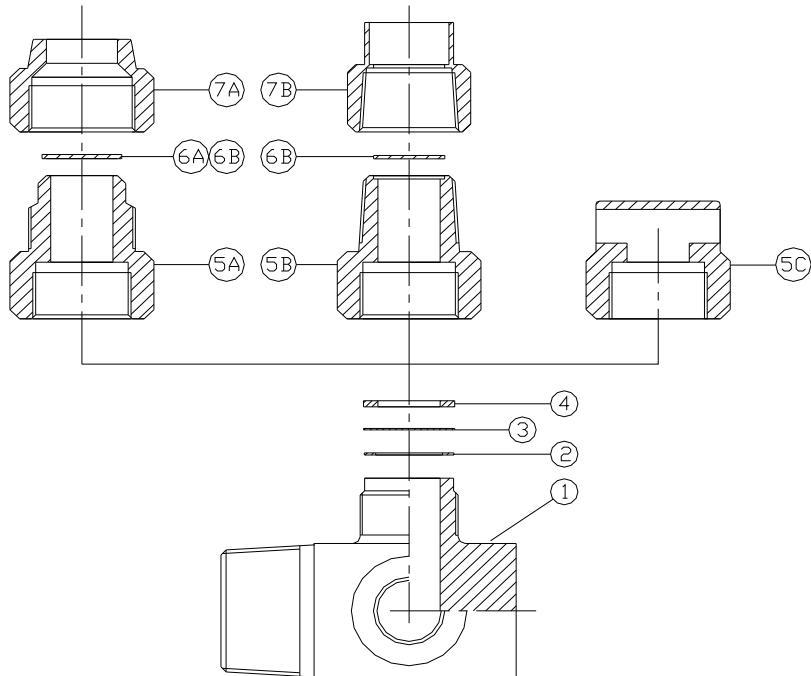


Part no.	Inlet Thread	Side Outlet		Fusemetal	Tube Connection	Membrane
9160XK-2L-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	NONE	1-1/8" FLARE	STANDARD
9160XKF-2L-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	NONE	1" FLARE	STANDARD
9160XK-2R-*	1-1/2"-11-1/2 NGT	3/4"-14 NGT	RIGHT	NONE	1-1/8" FLARE	STANDARD
9160XKF-2R-*	1-1/2"-11-1/2 NGT	3/4"-14 NGT	RIGHT	NONE	1" FLARE	STANDARD
9160XU-2L-*	1-1/2"-11-1/2 NGT	3/4"-14 NGT	LEFT	NONE	1-1/8" FLARE	RECESSED
9160XUF-2L-*	1-1/2"-11-1/2 NGT	3/4"-14 NGT	LEFT	NONE	1" FLARE	RECESSED
9160XU-2R-*	1-1/2"-11-1/2 NGT	3/4"-14 NGT	RIGHT	NONE	1-1/8" FLARE	RECESSED
9160XUF-2R-*	1-1/2"-11-1/2 NGT	3/4"-14 NGT	RIGHT	NONE	1" FLARE	RECESSED
9160XU26-2L-*	1-1/2"-11-1/2 NGT	3/4"-14 NGT	LEFT	NONE	1-1/8" WELDED	RECESSED
9160XU26F-2L-*	1-1/2"-11-1/2 NGT	3/4"-14 NGT	LEFT	NONE	1" WELDED	RECESSED
9160XU26-2R-*	1-1/2"-11-1/2 NGT	3/4"-14 NGT	RIGHT	NONE	1-1/8" WELDED	RECESSED
9160XU26F-2R-*	1-1/2"-11-1/2 NGT	3/4"-14 NGT	RIGHT	NONE	1" WELDED	RECESSED
9160X-20-2L-*	1-1/2"-11-1/2 NGT	3/4"-14 NGT	LEFT	NONE	DIFFUSER STYLE	NONE
9160X-20-2R-*	1-1/2"-11-1/2 NGT	3/4"-14 NGT	RIGHT	NONE	DIFFUSER STYLE	NONE
9160XKH-2L-*	1-1/2"-11-1/2 NGT	3/4"-14 NGT	LEFT	165	1-1/8" FLARE	NONE
9160XKHF-2L-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	165	1" FLARE	NONE
9160XKH-2R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	165	1-1/8" FLARE	NONE
9160XKHF-2R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	165	1" FLARE	NONE
9160XKJ-2L-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	212	1-1/8" FLARE	NONE
9160XKJF-2L-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	212	1" FLARE	NONE
9160XKJ-2R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	212	1-1/8" FLARE	NONE
9160XKJF-2R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	212	1" FLARE	NONE
9160X-26H-2L-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	165	1-1/8" WELDED	NONE
9160X-26HF-2L-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	165	1" WELDED	NONE
9160X-26H-2R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	165	1-1/8" WELDED	NONE
9160X-26HF-2R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	165	1" WELDED	NONE
9160X-26J-2L-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	212	1-1/8" WELDED	NONE
9160X-26JF-2L-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	212	1" WELDED	NONE
9160X-26J-2R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	212	1-1/8" WELDED	NONE
9160X-26JF-2R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	212	1" WELDED	NONE
9160X-20H-2L-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	165	DIFFUSER STYLE	NONE
9160X-20H-2R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	165	DIFFUSER STYLE	NONE
9160X-20J-2L-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	212	DIFFUSER STYLE	NONE
9160X-20J-2R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	212	DIFFUSER STYLE	NONE

NOTES: “*” = Disc Code (See Disc Code Chart for References)

Example: 9160XK-2L-18C

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ITEM NO.	PART NO.	DESCRIPTION
1	9160X-2-1	RELIEF DEVICE BODY
	960X-2R-1	RELIEF DEVICE BODY
2	9146-6C	COPPER WASHER
3	9146-*	RUPTURE DISC NOTE: "*" = DISC CODE (See Disc Code Chart for Reference)
4	9146-24H	SHEAR RING
5A	9146-25K	STANDARD ADAPTER
	9146-25U	RECESSED ADAPTER
5B	9146-26U	1" NPT STYLE ADAPTER FOR WELD ON VENT TUBE
5C	9146-20	DIFFUSER STYLE CAP
	NOTE: FOR FUSEBACKED ADAPTERS ADD "H" OR "J" TO END OF PART NO. "H" = 165 FUSEMETAL "J" = 212 FUSEMETAL EXAMPLE 9146-25KJ	
6A	9160-83	WEATHER MEMBRANE
6B	9160-83F	WEATHER MEMBRANE FOR 9146-25U & 9146-26U ADAPTERS
7A	9146-29	1-1/8" FLARE NUT FOR 9146-25K AND 9146-25U ADAPTERS
	9146-29F	1" FLARE NUT FOR 9146-25K AND 9146-25U ADAPTERS
7B	9146-28	1-1/8" WELD ON VENT TUBE NUT FOR 9146-26U ADAPTER
	9146-28F	1" WELD ON VENT TUBE NUT FOR 9146-26U ADAPTER

ASSEMBLY INSTRUCTIONS:

1. Apply a small amount of Halocarbon 25-10M grease or compatible grease to 9146-24H shear ring and insert into adapter.
2. Insert rupture disc into adapter letter code down.
3. Lightly lubricate 9146-6C copper washer with Halocarbon 25-10M grease or compatible grease and place in adapter.
4. Invert the relief device body and screw on adapter assembly.
5. Torque adapter to 250 Ft/lbs.

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9161X-3 SERIES RELIEF DEVICE

The 9161X-3 series relief device is constructed of durable forged brass. This device was designed with a 3/4"-14 NGT thread in the rear to accommodate a thermowell. A valve could then be installed in the side outlet. These are designed for use in 3T, 3AAX, and UN tubes. They are available with the standard adapter, recessed adapter, 1" NPT weld on vent tube style or diffuser style cap. An optional 1" flare nut or vent tube nut is available in place of the standard 1-1/8" connection. A wide variety of rupture discs are available to meet customer requirements.

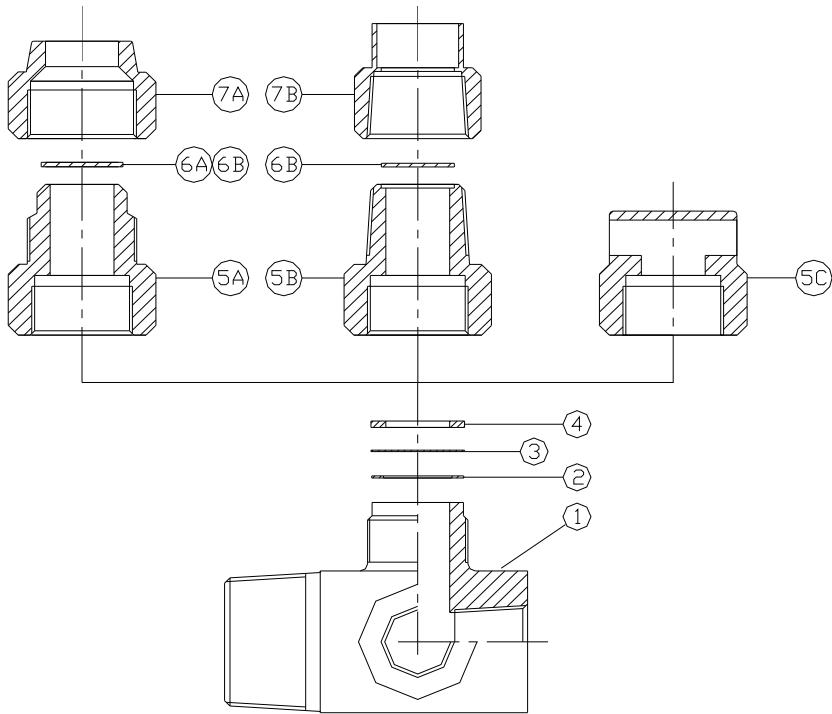


Part no.	Inlet Thread	Side Outlet	Fusemetal	Tube Connection	Membrane
9161XK-3-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	NONE	1-1/8" FLARE
9161XKF-3-*	1-1/2"11-1/2 NGT	3/4"-14NGT	LEFT	NONE	1" FLARE
9161XK-3R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	NONE	1-1/8" FLARE
9161XKF-3R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	NONE	1" FLARE
9161XU-3-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	NONE	1-1/8" FLARE
9161XUF-3-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	NONE	1" FLARE
9161XU-3R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	NONE	1-1/8" FLARE
9161XUF-3R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	NONE	1" FLARE
9161XU26-3-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	NONE	1-1/8" WELDED
9161XU26F-3-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	NONE	1" WELDED
9161XU26-3R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	NONE	1-1/8" WELDED
9161XU26F-3R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	NONE	1" WELDED
9161X-20-3-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	NONE	DIFFUSER STYLE
9161X-20-3R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	NONE	DIFFUSER STYLE
9161X-KH-3-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	165	1-1/8" FLARE
9161XKHF-3-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	165	1" FLARE
9161XKH-3R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	165	1-1/8" FLARE
9161XKHF-3R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	165	1" FLARE
9161XKJ-3-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	212	1-1/8" FLARE
9161XKJF-3-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	212	1" FLARE
9161XKJ-3R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	212	1-1/8" FLARE
9161XKJF-3R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	212	1" FLARE
9161X-26H-3-*	1-1/2"11-1/2 NGT	3/4"-14NGT	LEFT	165	1-1/8" WELDED
9161X-26HF-3-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	165	1" WELDED
9161X-26H-3R-*	1-1/2"11-1/2 NGT	3/4"-14NGT	RIGHT	165	1-1/8" WELDED
9161X-26HF-3R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	165	1" WELDED
9161X-26J-3-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	212	1-1/8" WELDED
9161X-26JF-3-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	212	1" WELDED
9161X-26J-3R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	212	1-1/8" WELDED
9161X-26JF-3R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	212	1" WELDED
9161X-20H-3-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	165	DIFFUSER STYLE
9161X-20H-3R-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	RIGHT	165	DIFFUSER STYLE
9161X-20J-3-*	1-1/2"11-1/2 NGT	3/4"-14 NGT	LEFT	212	DIFFUSER STYLE
9161X-20J-3R-*	1-1/2"11-1/2 NGT	3/4"-14NGT	RIGHT	212	DIFFUSER STYLE

NOTES: “**” = Disc Code (See Disc Code Chart for References)

Example: 9161XK-3-18C

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ITEM NO.	PART NO.	DESCRIPTION
1	9161X-3-1	RELIEF DEVICE BODY 1-1/2"NGT X 3/4"NGT X 3/4"NGT LEFT SIDE
	9161X-3R-1	RELIEF DEVICE BODY 1-1/2"NGT X 3/4"NGT X 3/4"NGT RIGHT SIDE
2	9146-6C	COPPER WASHER
3	9146-*	RUPTURE DISC NOTE: "*" = DISC CODE (See Disc Code Chart for Reference)
4	9146-24H	SHEAR RING
5A	9146-25K	STANDARD ADAPTER
	9146-25U	RECESSED ADAPTER
5B	9146-26U	1" NPT STYLE ADAPTER FOR WELD ON VENT TUBE
5C	9146-20	DIFFUSER CAP
	NOTE: FOR FUSEBACKED ADAPTERS ADD "H" OR "J" TO END OF PART NO. "H" = 165 FUSEMETAL "J" = 212 FUSEMETAL EXAMPLE 9146-25KJ	
6A	9160-83	WEATHER MEMBRANE
6B	9160-83F	WEATHER MEMBRANE FOR 9146-25U & 9146-26U ADAPTERS
7A	9146-29	1-1/8" FLARE NUT FOR 9146-25K & 9146-25U ADAPTERS
	9146-29F	1" FLARE NUT FOR 9146-25K & 9146-15U ADAPTERS
7B	9146-28	1-1/8" WELD ON VENT TUBE NUT FOR 9146-26U ADAPTER
	9146-28F	1" WELD ON VENT TUBE NUT FOR 9146-26U ADAPTER

ASSEMBLY INSTRUCTIONS:

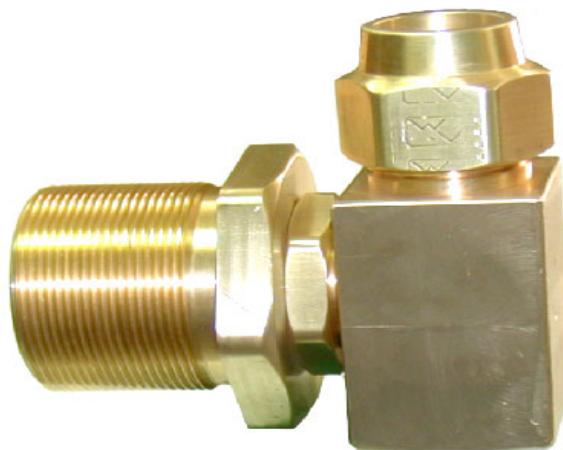
1. Apply a small amount of Halocarbon 25-10M grease or compatible grease to 9146-24H shear ring and insert into adapter.
2. Insert rupture disc into adapter letter code down.
3. Lightly lubricate 9146-6C copper washer with Halocarbon 25-10M grease or compatible grease and place in adapter.
4. Invert the relief device body and screw on adapter assembly.
5. Torque adapter to 250 Ft/lbs.

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9163 SERIES RELIEF DEVICE

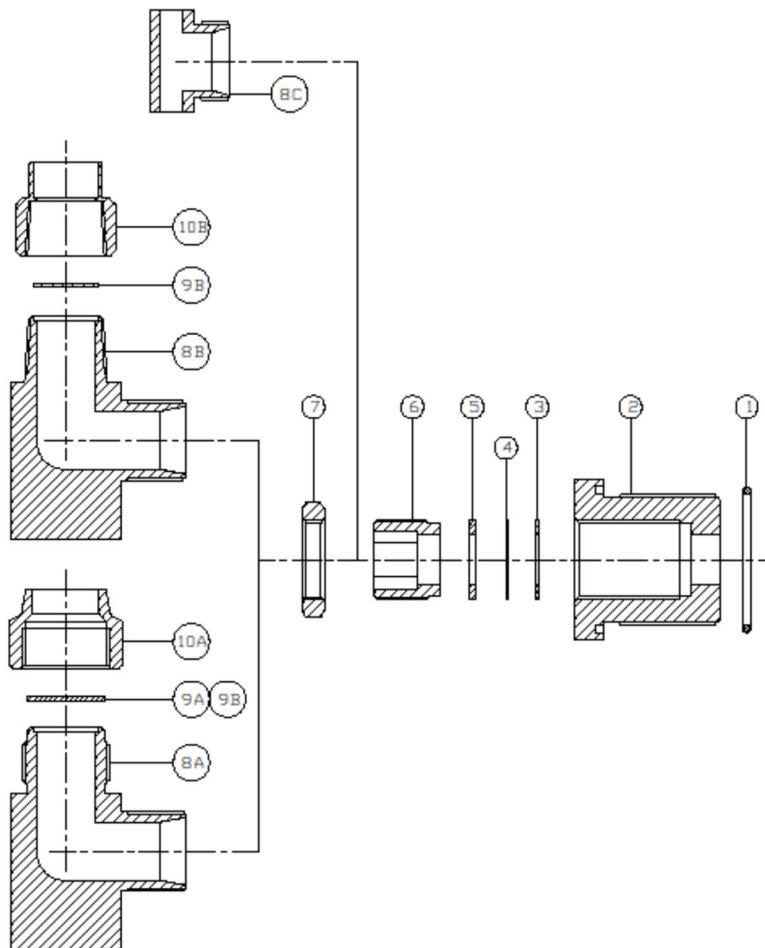
The 9163 series internal relief device is constructed of durable brass. This device is primarily used in the non-service end of trailers or modules. For added safety the rupture disc is recessed inside the tube. These devices are commonly used in 3T, 3AAX, and UN tubes. These devices are available with the standard elbow, recessed elbow, 1" NPT weld on vent tube style, or diffuser plug. This device comes standard with a 1-1/8" flare nut, or weld vent tube nut. A wide variety of rupture discs are available to meet customer requirements.



Part no.	Inlet Thread	Tube Connection	Membrane
9163K-*	2-1/4"-12UNF-2	1-1/8" FLARE	STANDARD
9163KF-*	2-1/4"-12UNF-2	1" FLARE	RECESSED
9163U-*	2-1/4"-12UNF-2	1-1/8" FLARE	RECESSED
9163UF-*	2-1/4"-12UNF-2	1" F;ARE	RECESSED
9163U95-*	2-1/4"-12UNF-2	1-1/8" WELDED	RECESSED
9163U95F-*	2-1/4"-12UNF-2	1" WELDED	RECESSED
9163-20-*	2-1/4"-12UNF-2	DIFFUSER STYLE	NONE

NOTES: “*” = Disc Code (See Disc Code Chart for References)

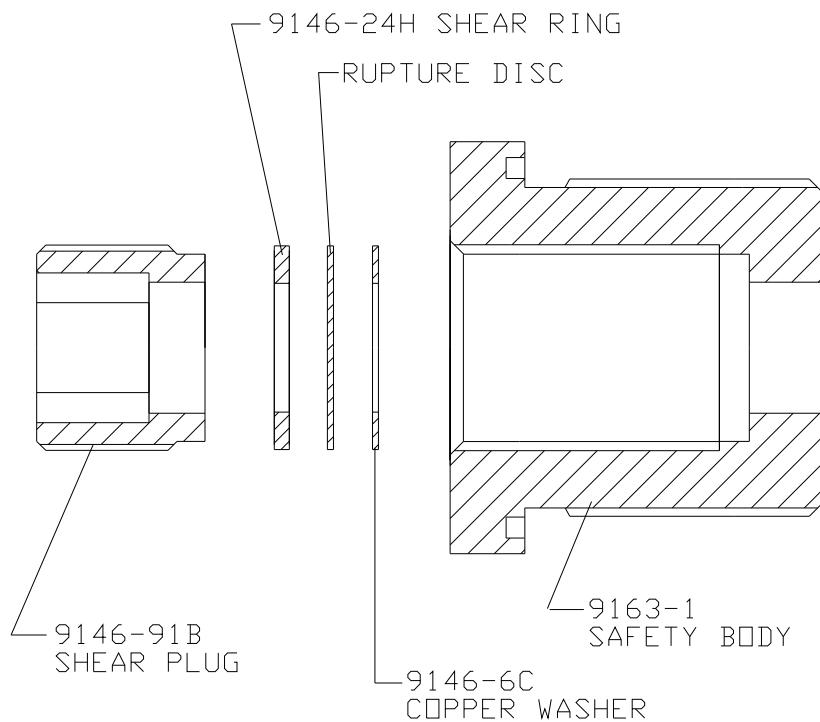
Example: 9163K-18C



ITEM NO.	PART NO.	DESCRIPTION
1	9146-96	“O” RING
2	9163-1	RELIEF DEVICE BODY
3	9146-6C	COPPER WASHER
4	9146-*	RUPTURE DISC (SEE DISC CHART)
5	9146-24H	SHEAR RING
6	9146-91B	SHEAR PLUG
7	9146-92	LOCK NUT
8A	9146-94U	ELBOW
8B	9146-95U	ELBOW W/ WELD ON VENT TUBE CONNECTION
8C	9146-20M	DIFFUSER PLUG
9A	9160-83	STANDARD WEATHER MEMBRANE
9B	9160-83U	RECESSED WEATHER MEMBRANE
10 A	9146-29	1-1/8" FLARE NUT FOR 9146-94U ELBOW
	9146-29F	1" FLARE NUT FOR 9146-94U ELBOW
10B	9146-28	1-1/8" WELD ON VENT TUBE NUT FOR 9146-95U ELBOW
	9146-28F	1" WELD ON VENT TUBE NUT FOR 9146-95U ELBOW

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ASSEMBLY PROCEDURE FOR 9163 SERIES RELIEF DEVICE



1. Lubricate 9146-6C copper washer using Halocarbon 25-10M grease or compatible grease.
2. Insert copper washer in 9163-1 body.
3. Insert rupture disc letter code up in 9163-1 body.
4. Lubricate 9146-24H shear ring using Halocarbon 25-10M grease or compatible grease.
5. Insert 9146-24H shear ring in 9163-1 body.
6. Screw 9146-91B shear plug in 9163-1 body.
7. Torque shear plug to 250 FT/LBS.

INSTALLATION PROCEDURE FOR 9163 SERIES RELIEF DEVICE

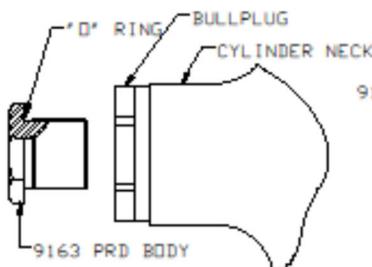


FIGURE 1

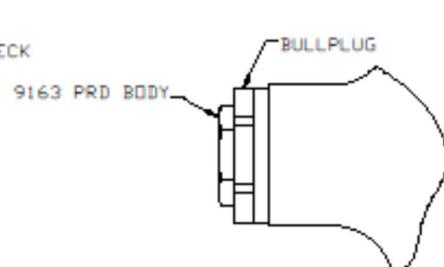


FIGURE 2



FIGURE 3

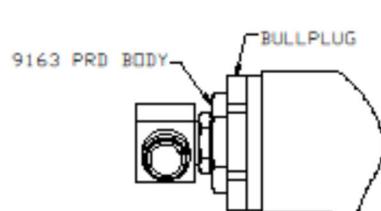


FIGURE 4

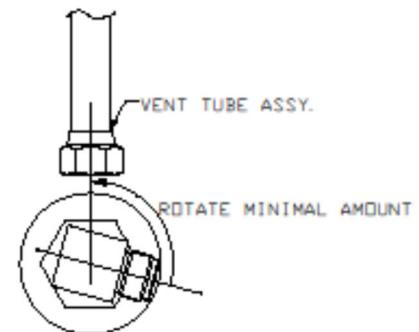


FIGURE 5

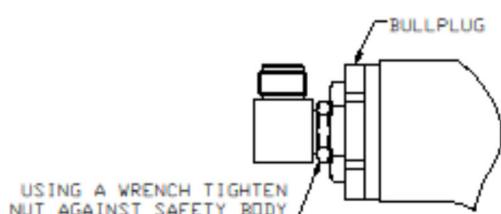


FIGURE 6

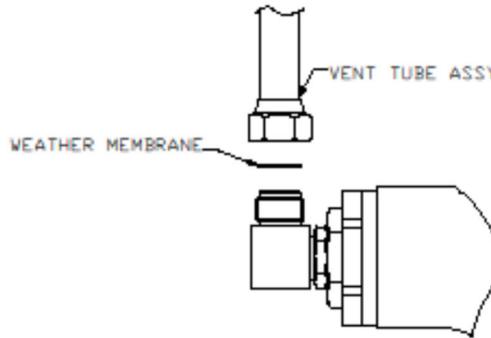


FIGURE 7

1. Lubricate 9146-96 "O" ring using Halocarbon 25-10M grease or compatible grease.
2. Install "O" ring in groove of 9163 body. SEE FIGURE 1
3. Screw 9163 body in bullplug. SEE FIGURE 2
4. Torque 9163 body to 250 FT/LBS.
5. Screw 9146-92 lock nut on elbow to last thread. SEE FIGURE 3
6. Screw elbow to face of 9163 body. SEE FIGURE 4
7. Back off elbow the minimal amount for vent tube alignment. **DO NOT EXCEED 1 TURN.** SEE FIGURE 5
8. Screw lock nut to face of 9163 body and torque to 100 FT/LBS. SEE FIGURE 6
9. Install membrane and vent tube assembly. SEE FIGURE 7

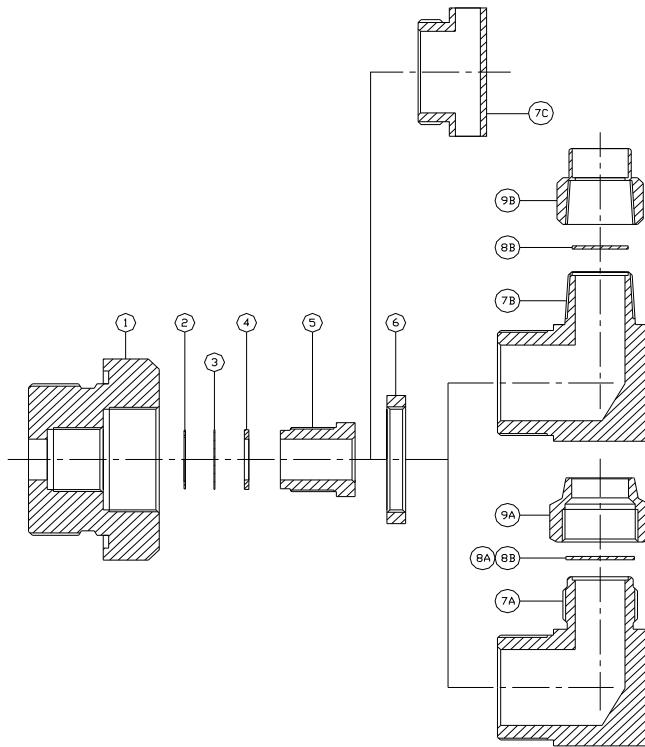
9165 SERIES BULLPLUG / RELIEF DEVICE

The 9165 series relief device is manufactured from 304L stainless steel. This internal device was designed for DOT 3T, 3AAX, and UN tubes for use in most compressed gas applications. To help reduce the possibility of shear off, the relief device is recessed inside the bullplug. With the bullplug / relief device being one unit, a leak point common with the typical relief device configuration is eliminated. The elbow can be installed and locked in place to the desired angle. This elbow comes standard with 1-1/8" flare connection, or a weld on vent tube connection is also available. Also available with a diffuser plug when vent tube applications are not desirable.



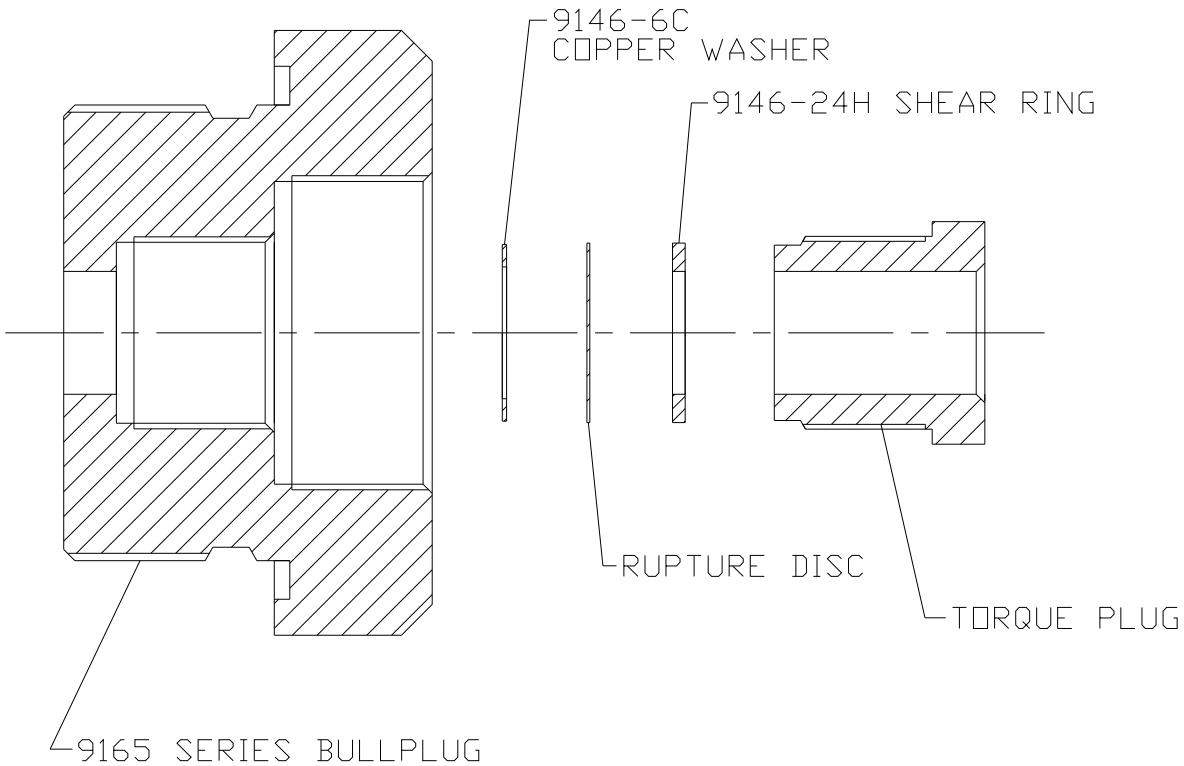
Part no.	Inlet Thread	Bullplug	Torque Plug	Fusemetal	Tube Connection	Membrane
9165K-*	3-1/4"-8UN	304L S.S.	BRASS	NONE	1-1/8" FLARE	STANDARD
9165SK-*	3-1/4"-8UN	304L S.S.	304L S.S.	NONE	1-1/8" FLARE	STANDARD
9165KF-*	3-1/4"-8UN	304L S.S.	BRASS	NONE	1" FLARE	STANDARD
9165SKF-*	3-1/4"-8UN	304L S.S.	304L S.S.	NONE	1" FLARE	STANDARD
9165KH-*	3-1/4"-8UN	304L S.S.	BRASS	165	1-1/8" FLARE	STANDARD
9165SKH-*	3-1/4"-8UN	304L S.S.	304L S.S.	165	1-1/8" FLARE	STANDARD
9165KHF-*	3-1/4"-8UN	304L S.S.	BRASS	165	1" FLARE	STANDARD
9165SKHF-*	3-1/4"-8UN	304L S.S.	304L S.S.	165	1" FLARE	STANDARD
9165KJ-*	3-1/4"-8UN	304L S.S.	BRASS	212	1-1/8" FLARE	STANDARD
9165SKJ-*	3-1/4"-8UN	304L S.S.	304L S.S.	212	1-1/8" FLARE	STANDARD
9165KJF-*	3-1/4"-8UN	304L S.S.	BRASS	212	1" FLARE	STANDARD
9165SKJF-*	3-1/4"-8UN	304L S.S.	304L S.S.	212	1" FLARE	STANDARD
9165U-*	3-1/4"-8UN	304L S.S.	BRASS	NONE	1-1/8" FLARE	RECESSED
9165SU-	3-1/4"-8UN	304L S.S.	304L S.S.	NONE	1-1/8" FLARE	RECESSED
9165UF-*	3-1/4"-8UN	304L S.S.	BRASS	NONE	1" FLARE	RECESSED
9165SUF-*	3-1/4"-8UN	304L S.S.	304L S.S.	NONE	1" FLARE	RECESSED
9165UH-*	3-1/4"-8UN	304L S.S.	BRASS	165	1-1/8" FLARE	RECESSED
9165SUH-*	3-1/4"-8UN	304L S.S.	304L S.S.	165	1-1/8" FLARE	RECESSED
9165UHF-*	3-1/4"-8UN	304L S.S.	BRASS	165	1" FLARE	RECESSED
9165SUHF-*	3-1/4"-8UN	304L S.S.	304L S.S.	165	1" FLARE	RECESSED
9165UJ-*	3-1/4"-8UN	304L S.S.	BRASS	212	1-1/8" FLARE	RECESSED
9165SUJ-*	3-1/4"-8UN	304L S.S.	304L S.S.	212	1-1/8" FLARE	RECESSED
9165UJF-*	3-1/4"-8UN	304L S.S.	BRASS	212	1" FLARE	RECESSED
9165SUJF-*	3-1/4"-8UN	304L S.S.	304L S.S.	212	1" FLARE	RECESSED
9165-96U-*	3-1/4"-8UN	304L S.S.	BRASS	NONE	1-1/8" WELDED	RECESSED
9165S-96U-*	3-1/4"-8UN	304L S.S.	304L S.S.	NONE	1-1/8" WELDED	RECESSED
9165-96UF-*	3-1/4"-8UN	304L S.S.	BRASS	NONE	1" WELDED	RECESSED
9165S-96UF-*	3-1/4"-8UN	304L S.S.	304L S.S.	NONE	1" WELDED	RECESSED
9165H-96U-*	3-1/4"-8UN	304L S.S.	BRASS	165	1-1/8" WELDED	RECESSED
9165SH-96U-*	3-1/4"-8UN	304L S.S.	304L S.S.	165	1-1/8" WELDED	RECESSED
9165H-96UF-*	3-1/4"-8UN	304L S.S.	BRASS	165	1" WELDED	RECESSED
9165SH-96UF-*	3-1/4"-8UN	304L S.S.	304L S.S.	165	1" WELDED	RECESSED
9165J-96U-*	3-1/4"-8UN	304L S.S.	BRASS	212	1-1/8" WELDED	RECESSED
9165SJ-96U-*	3-1/4"-8UN	304L S.S.	304L S.S.	212	1-1/8" WELDED	RECESSED
9165J-96UF-*	3-1/4"-8UN	304L S.S.	BRASS	212	1" WELDED	RECESSED
9165SJ-96UF-*	3-1/4"-8UN	304L S.S.	304L S.S.	212	1" WELDED	RECESSED
9165-20-*	3-1/4"-8UN	304L S.S.	BRASS	NONE	DIFFUSER STYLE	NONE
9165S-20-*	3-1/4"-8UN	304L S.S.	304L S.S.	NONE	DIFFUSER STYLE	NONE
9165-20H-*	3-1/4"-8UN	304L S.S.	BRASS	165	DIFFUSER STYLE	NONE
9165S-20H-*	3-1/4"-8UN	304L S.S.	304L S.S.	165	DIFFUSER STYLE	NONE
9165-20J-*	3-1/4"-8UN	304L S.S.	BRASS	212	DIFFUSER STYLE	NONE
9165S-20J-*	3-1/4"-8UN	304L S.S.	304L S.S.	212	DIFFUSER STYLE	NONE

NOTE: “*” = Disc Code (See Disc Code Chart for Reference) Example: 9165SH-96U-18C



ITEM NO.	PART NO.	DESCRIPTION
1	9165S-1	304L S.S. BULLPLUG RELIEF DEVICE BODY
2	9146-6C	COPPER WASHER
3	9146-*	RUPTURE DISC (SEE DISC CHART)
4	9146-24H	SHEAR RING
5	9146-88	BRASS TORQUE PLUG
	9146-88S	304L S.S. TORQUE PLUG
	9146-88H	BRASS TORQUE PLUG W/ 165 FUSEMETAL
	9146-88SH	304L S.S. TORQUE PLUG W/ 165 FUSEMETAL
	9146-88J	BRASS TORQUE PLUG W/ 212 FUSEMETAL
	9146-88SJ	304L S.S. TORQUE PLUG W/ 212 FUSEMETAL
6	9146-89	LOCK NUT
7A	9146-97U	ELBOW
7B	9146-96U	ELBOW W/ WELD ON VENT TUBE CONNECTION
7C	9165-20	DIFFUSER PLUG
8A	9160-83	STANDARD WEATHER MEMBRANE FOR 9146-97U ELBOW
8B	9160-83U	WEATHER MEMBRANE FOR 9146-97U & 9146-96U ELBOWS
9A	9146-29	1-1/8" FLARE NUT FOR 9146-97U ELBOW
	9146-29F	1" FLARE NUT FOR 9146-97U ELBOW
9B	9146-28	1-1/8" WELD ON VENT TUBE NUT FOR 9146-96U ELBOW
	9146-28F	1" WELD ON VENT TUBE NUT FOR 9146-96U ELBOW

ASSEMBLY PROCEDURE FOR 9165 SERIES RELIEF DEVICE



1. Lubricate 9146-6C copper washer using Halocarbon 25-10M grease or compatible grease.
2. Insert copper washer in 9165 series bullplug body.
3. Insert rupture disc letter code up in 9165 series bullplug body.
4. Lubricate 9146-24H shear ring using Halocarbon 25-10M grease or compatible grease.
5. Insert 9146-24H shear ring in 9165 body.
6. Screw torque plug in 9165 body.
7. Torque plug to 250 FT/LBS.

INSTALLATION PROCEDURE FOR 9165 SERIES RELIEF DEVICE

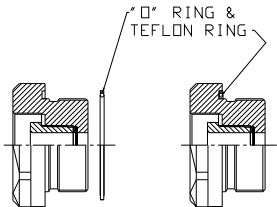


FIGURE 1

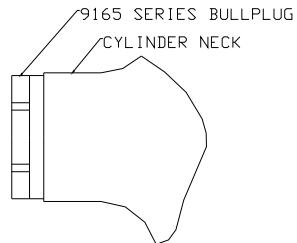


FIGURE 2

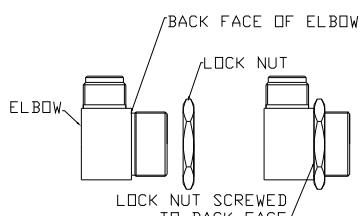


FIGURE 3

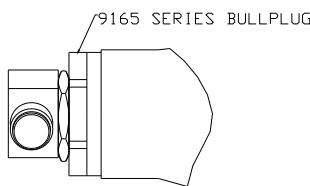


FIGURE 4

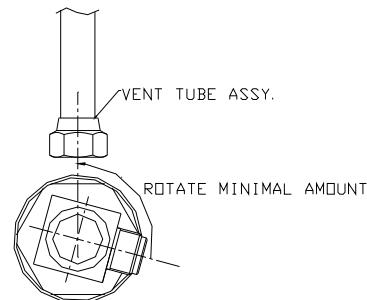


FIGURE 5

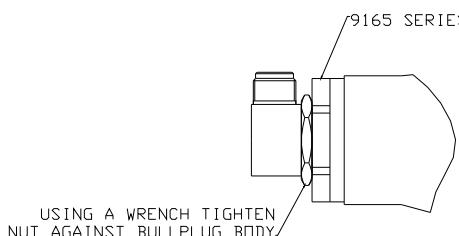


FIGURE 6

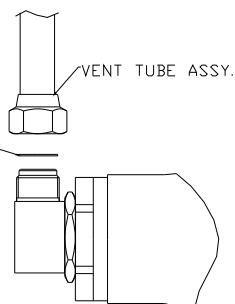


FIGURE 7

1. Lubricate "O" ring and Teflon back-up ring using Halocarbon 25-10M grease.
2. Install "O" ring and Teflon ring in groove of 9165 body. SEE FIGURE 1
3. Screw 9165 bullplug body in cylinder. SEE FIGURE 2
4. Torque 9165 bullplug body between 600 TO 1000 FT/LBS.
5. Screw lock nut on elbow to the back face of elbow. SEE FIGURE 3
6. Screw elbow to face of 9165 bullplug body. SEE FIGURE 4
7. Back off elbow the minimal amount for vent tube alignment. **DO NOT EXCEED 1 TURN.** SEE FIGURE 5
8. Screw lock nut to face of 9165 bullplug body and torque to 220 FT/LBS. SEE FIGURE 6
9. Install membrane and vent tube assembly. SEE FIGURE 7

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FRANGIBLE RUPTURE DISC FOR JUMBO TUBES

A wide range of rupture discs are stocked to meet the varying DOT and UN tube specifications. Manufactured from Carpenter 20cB3, each disc is marked with a number and letter code identifying the disc material and the rupture range. Each lot of discs manufactured must pass tests procedures outlined by S-1.1 pamphlet of the Compressed Gas Association. Other disc materials are available upon request. These discs should only be used in assemblies manufactured by Western Valve and are not approved for ASME applications.

Letter Code	DOT 3AAX & 3T Marked Service Pressure	UN Tube Marked Service Pressure	Rupture Range
9146-18N	1200-1412		1750-2000
9146-18D	1500-1679		2250-2500
9146-18E	1680-1799		2600-2800
9146-18L	1800-1976		2800-3000
9146-18H	1977-2094		2966-3295
9146-18I	2095-2219		3143-3492
9146-18A	2220-2339	2466-2599	3330-3700
9146-18B	2340-2399	2600-2665	3510-3900
9146-18C	2400-2471	2666-2745	3700-4000
9146-18Y	2472-2609	2746-2899	3708-4120
9146-18U	2610-2699	2900-2999	3915-4350
9146-18F	2700-2843	3000-3159	4050-4500
9146-18M	2844-2879	3160-3200	4266-4740
9146-18K	2880-2939	3200-3266	4320-4800
9146-18T	2940-2999	3267-3333	4410-4900
9146-18P	3000-3176	3334-3666	4500-5000
9146-18J	3300-3529		5000-5500
9146-18R	3600-3839		5500-6000
9146-18V	3840-4032		5760-6400
9146-18G	4140-4383		6210-6900
9146-18Z See Note	5760-6776		8640-9600
Note: "Z" disc requires a special body, adapter and shear ring			

9176 SERIES BULLPLUG / RELIEF DEVICE



The 9176 series bullplug/relief device is constructed of 1040 or 1045 carbon steel. This device was designed for DOT 3T tubes for use in HCl service. In addition to the standard 5 port relief device a 6 port device is also available for tubes over 34'4" long. For an added measure of safety, the relief devices are recessed inside the bullplug to reduce the possibility of shear off. The disc material is a platinum clad nickel and available in various burst ranges.



Part no.	Inlet Thread	Outlet Thread	Fusemetal	# of Ports
9176B-13*	3-1/4"-8UN	NONE	165	5
9176-13*	3-1/4"-8UN	3/4"NGT	165	5
9176F-13*	3-1/4"-8UN	1"NGT	165	5
9176BJ-13*	3-1/4"-8UN	NONE	212	5
9176J-13*	3-1/4"-8UN	3/4"NGT	212	5
9176FJ-13*	3-1/4"-8UN	1"NGT	212	5
9176B-6-13*	3-1/4"-8UN	NONE	165	6
9176-6-13*	3-1/4"-8UN	3/4"NGT	165	6
9176F-6-13*	3-1/4"-8UN	1"NGT	165	6
9176BJ-6-13*	3-1/4"-8UN	NONE	212	6
9176J-6-13*	3-1/4"-8UN	3/4"NGT	212	6
9176FJ-6-13*	3-1/4"-8UN	1"NGT	212	6

NOTE: “*” = Disc Code. Add disc suffix to end part number. Example: 9176-6-13C

AVAILABLE RUPTURE DISCS		
Part no.	DOT 3T Marked Service Pressure	Burst Range PSIG @ 160°F
9450-13L	1800-1976	2800-3000
9450-13H	1977-2094	2966-3295
9450-13A	2220-2339	3330-3700
9450-13C	2400-2609	3600-4000

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9176S SERIES BULLPLUG / RELIEF DEVICE



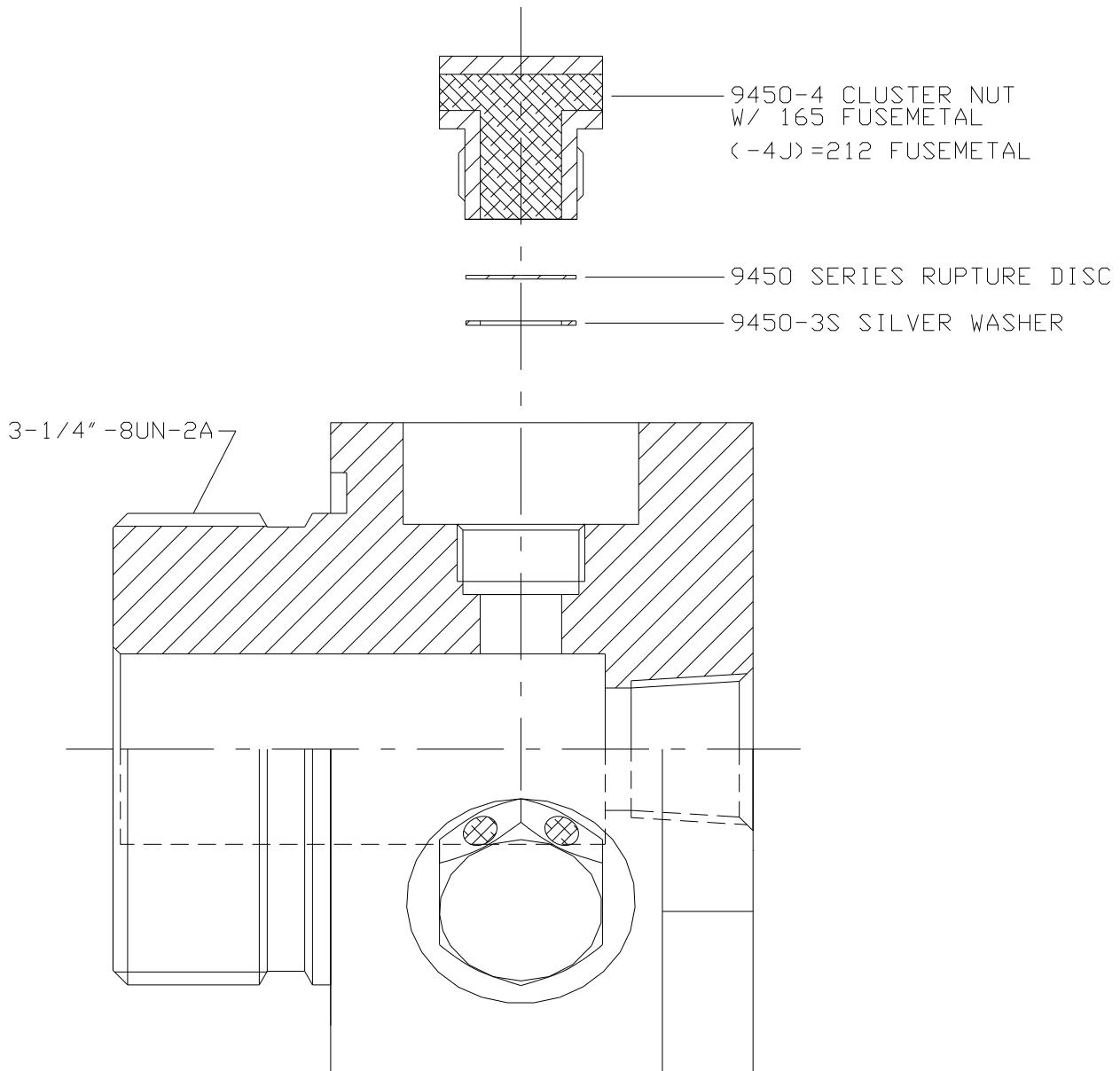
The 9176S series bullplug / relief device is constructed of 304L stainless steel for use in DOT 3T, 3AAX, and UN tubes. This device is available in 1, 3, or 6 port configurations. For an added measure of safety, the relief devices are recessed inside the bullplug to reduce the possibility of shear off.



Part no.	Inlet Thread	Outlet Thread	Fusemetal	# of Ports
9176S-1M-*	3-1/4"-8UN	3/4"-14NGT	NONE	1
9176SH 1M-*	3-1/4"-8UN	3/4"-14NGT	165	1
9176SJ-1M-*	3-1/4"-8UN	3/4"-14NGT	212	1
9176S-3-*	3-1/4"-8UN	3/4"-14NGT	NONE	3
9176SH-3-*	3-1/4"-8UN	3/4"-14NGT	165	3
9176SJ-3-*	3-1/4"-8UN	3/4"-14NGT	212	3
9176S-6-*	3-1/4"-8UN	3/4"-14NGT	NONE	6
9176SH-6-*	3-1/4"-8UN	3/4"-14NGT	165	6
9176SJ-6-*	3-1/4"-8UN	3/4"-14"NGT	212	6

NOTE: “*” = Disc code. Add disc suffix to end of part number . Example: 9176S-3-18C

AVAILABLE RUPTURE DISCS			
Part no.	Material	DOT 3T & 3AAX Marked Service Pressure	Burst Range PSIG @ 160°F
9450-13L	Platinum Clad Nickel	1800-1976	2800-3000
9450-13H	Platinum Clad Nickel	1977-2094	2966-3295
9450-13A	Platinum Clad Nickel	2220-2339	3330-3700
9450-13C	Platinum Clad Nickel	2400-2609	3600-4000
9450-18I	Carpenter 20Cb-3	2095-2219	3143-3492
9450-18B	Carpenter 20Cb-3	2340-2399	3510-3900
9450-18C	Carpenter 20Cb-3	2400-2609	3600-4000
9450-18K	Carpenter 20Cb-3	2880-2999	4320-4800



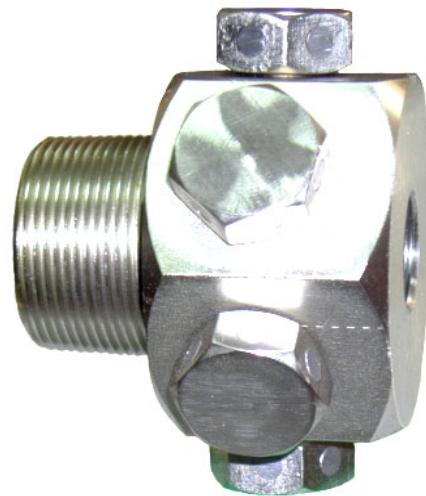
ASSEMBLY INSTRUCTIONS:

1. Insert 9450-3S washer into bullplug port.
2. Insert rupture disc into bullplug port letter code up.
3. Lightly lubricate seal face and thread of 9450-4 cluster nut with Braycote 803 lubricant or compatible lubricant.
4. Screw the cluster nut into the body and torque to 95 Ft/lbs.
5. Complete steps 1-4 for remainder of ports.



9450 SERIES RELIEF DEVICE

The 9450 series relief device is constructed of 4140 steel. This device was designed for DOT 3T tubes for use in hydrogen chloride service. In addition to the standard 5 port relief device a 6 port device is also available for tubes over 34'4" long. The disc material is a platinum clad nickel and available in various burst ranges.

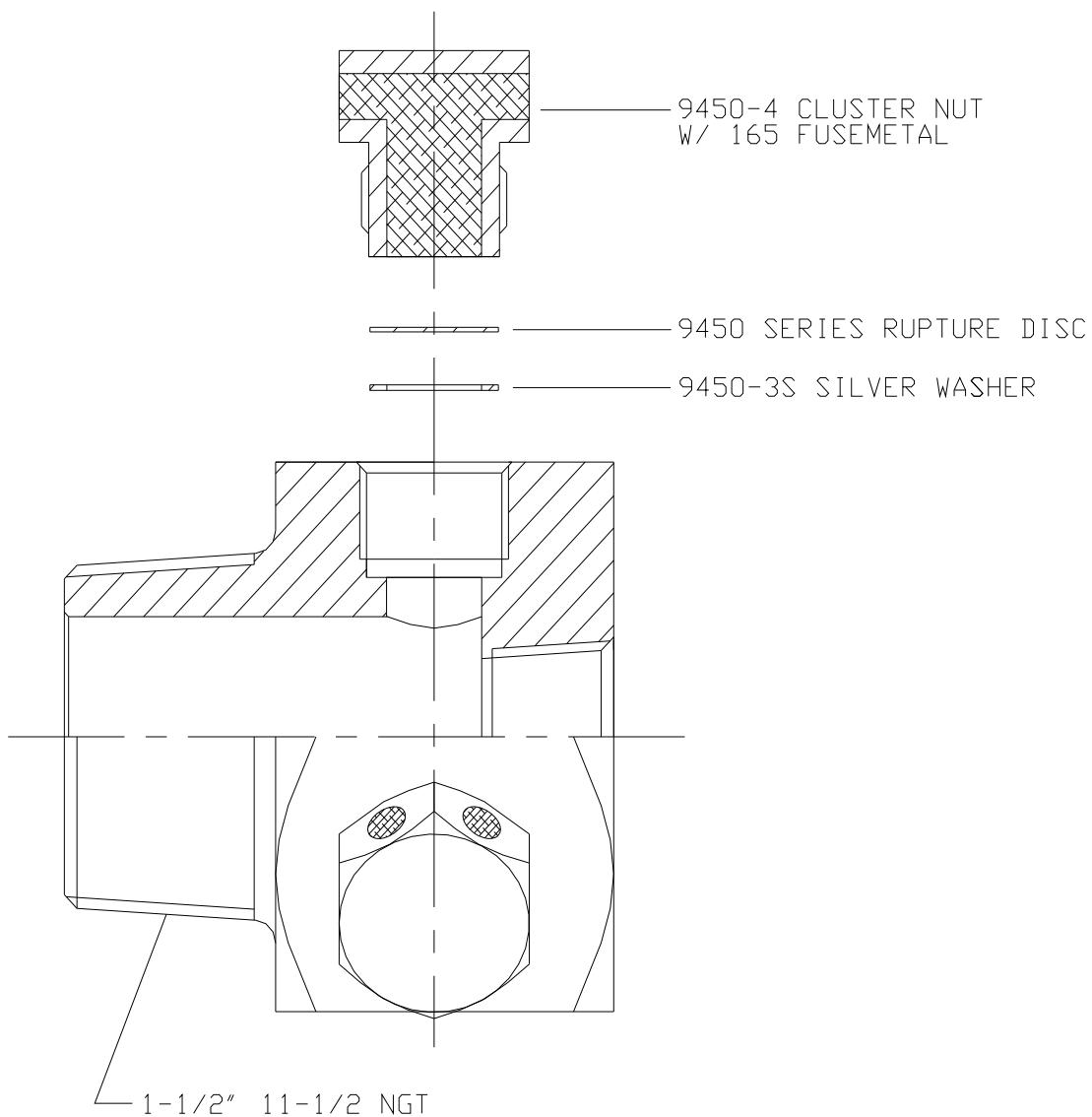


Part no.	Inlet Thread	Outlet Thread	Fusemetal	# of Ports
9451-*	1-1/2" 11-1/2NGT	NONE	165	5
9452-*	1-1/2" 11-1/2NGT	3/4"NGT	165	5
9453-*	1-1/2" 11-1/2NGT	1"NGT	165	5
9451-6-*	1-1/2" 11-1/2NGT	NONE	165	6
9452-6-*	1-1/2" 11-1/2NGT	3/4"NGT	165	6
9453-6-*	1-1/2" 11-1/2NGT	1"NGT	165	6

NOTE: “*” = Disc Code. Add disc suffix to end of part number. Example 9452-6-13C

AVAILABLE RUPTURE DISCS		
Part no.	DOT 3T Marked Service Pressure	Burst Range PSIG @ 160°F
9450-13L	1800-1976	2800-3000
9450-13H	1977-2094	2966-3295
9450-13A	2220-2339	3330-3700
9450-13C	2400-2609	3600-4000

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ASSEMBLY INSTRUCTIONS:

1. Insert 9450-3S washer into relief device body port.
2. Insert rupture disc into port, letter code up.
3. Lightly lubricate seal face and thread of 9450-4 cluster nut with Braycote 803 lubricant or compatible lubricant.
4. Screw the cluster nut into the body and torque to 95 Ft/lbs.
5. Complete steps 1-4 for remaining ports.

9129 SERIES COMPRESSED GAS RELIEF DEVICE



The 9129 series pressure relief device is constructed of rugged brass. These devices are available with diffuser style or vent style attachments. Typically, these devices are used on trailers or skid banks containing DOT 9-5/8" O.D. tubes. When installed, the rupture disc assembly is recessed inside the tube giving this device added protection in the event of a shear off. These devices are available with a variety of rupture discs and are available with or without fuselmetal to meet service requirements. This device is also available with oversized 3/4"NGT inlets.



Relief device w/ diffuser plug



Relief device w/ vent type elbow

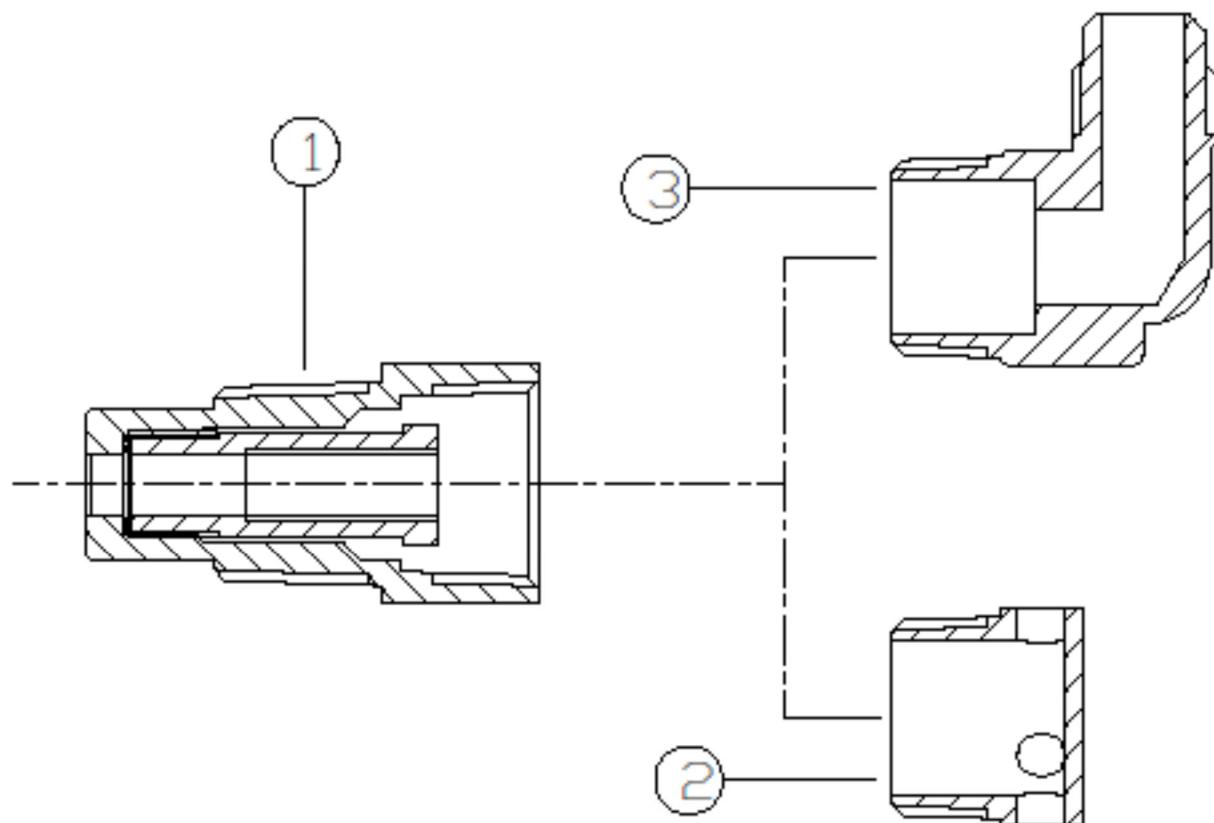
Part no.	Fuselmet	VENT STYLE	Inlet Connection
9129*-24	NONE	DIFFUSER PLUG	3/4"-14NGT
9129*-SGT-24	NONE	DIFFUSER PLUG	3/4"-14SGT
9129H*-24	165 F	DIFFUSER PLUG	3/4"-14NGT
9129H*-SGT-24	165 F	DIFFUSER PLUG	3/4"-14SGT
9129J*-24	212 F	DIFFUSER PLUG	3/4"-14NGT
9129J*-SGT-24	212 F	DIFFUSER PLUG	3/4"-14SGT
9129*-34	NONE	ELBOW 1/2" SAE Flare	3/4"-14NGT
9129*-SGT-34	NONE	ELBOW 1/2" SAE Flare	3/4"-14SGT
9129H*-34	165 F	ELBOW 1/2" SAE Flare	3/4"-14NGT
9129H*-SGT-34	165 F	ELBOW 1/2" SAE Flare	3/4"-14SGT
9129J*-34	212 F	ELBOW 1/2" SAE Flare	3/4"-14NGT
9129J*-SGT-34	212 F	ELBOW 1/2" SAE Flare	3/4"-14SGT

NOTES: (*) = Disc Code. Add disc code to part no. Example 9129C-24

For relief devices with oversize 3/4"NGT inlets, add -2OS for 2 threads oversize or -4OS for 4 threads oversize after rupture disc code. Example 9129C-4OS-34

FRANGIBLE RUPTURE DISC CHART			
Disc Code	Burst Range	Disc Code	Burst Range
A	3300-3775	N	1750-2000
C	3600-4000	P	4500-5000
G	6200-6900	Q	3000-3360
J	5000-5500	R	5500-6000
L	2700-3000	Z	8000-8333

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ITEM NO.	PART NO.	INLET CONNECTION	DESCRIPTION
1	9129*	3/4"-14NGT	RELIEF DEVICE W/O DIFFUSER PLUG OR ELBOW (*)=Disc Code, See chart on previous page, Example: 9129C
	9129*-SGT	3/4"-14SGT	RELIEF DEVICE W/O DIFFUSER PLUG OR ELBOW (*)= Disc Code, See chart on previous page, Example: 9129C-SGT
	9129H*	3/4"-14NGT	RELIEF DEVICE W/ 165 FUSEMETAL W/O DIFFUSER PLUG OR ELBOW (*)=Disc Code, See chart on previous page, Example: 9129HC
	9129H*-SGT	3/4"-14SGT	RELIEF DEVICE W/ 165 FUSEMETAL W/O DIFFUSER PLUG OR ELBOW (*)=Disc Code, See chart on previous page, Example: 9129HC-SGT
	9129J*	3/4"-14NGT	RELIEF DEVICE W/ 212 FUSEMETAL W/O DIFFISER PLUG OR ELBOW (*)=Disc Code, See chart on previous page, Example: 9129JC
	9129J*-SGT	3/4"-14SGT	RELIEF DEVICE W/ 212 FUSEMETAL W/O DIFFISER PLUG OR ELBOW (*)=Disc Code, See chart on previous page, Example: 9129JC-SGT
Note: For relief devices with 3/4"NGT oversized inlets, add -2OS for 2 threads oversize or -4OS for 4 threads oversize to end of part number. Example 9129JC-2OS			
2	9124-2		DIFFUSER PLUG
3	9134-2		ELBOW W/ 1/2" SAE VENT TUBE ATTACHMENT

9120 SERIES COMPRESSED GAS RELIEF DEVICE



Constructed of brass, the 9120 series diffuser style relief device is most commonly used on compressed gas tube trailers or skid banks containing the 9-5/8" O.D. tubes. This device was designed for services which do not require vent tube applications. A variety of rupture discs are available to meet customer requirements. The cap can be supplied with or without fusemetal depending on service requirements. This device is also available with 3/4"-14NGT oversized inlets.



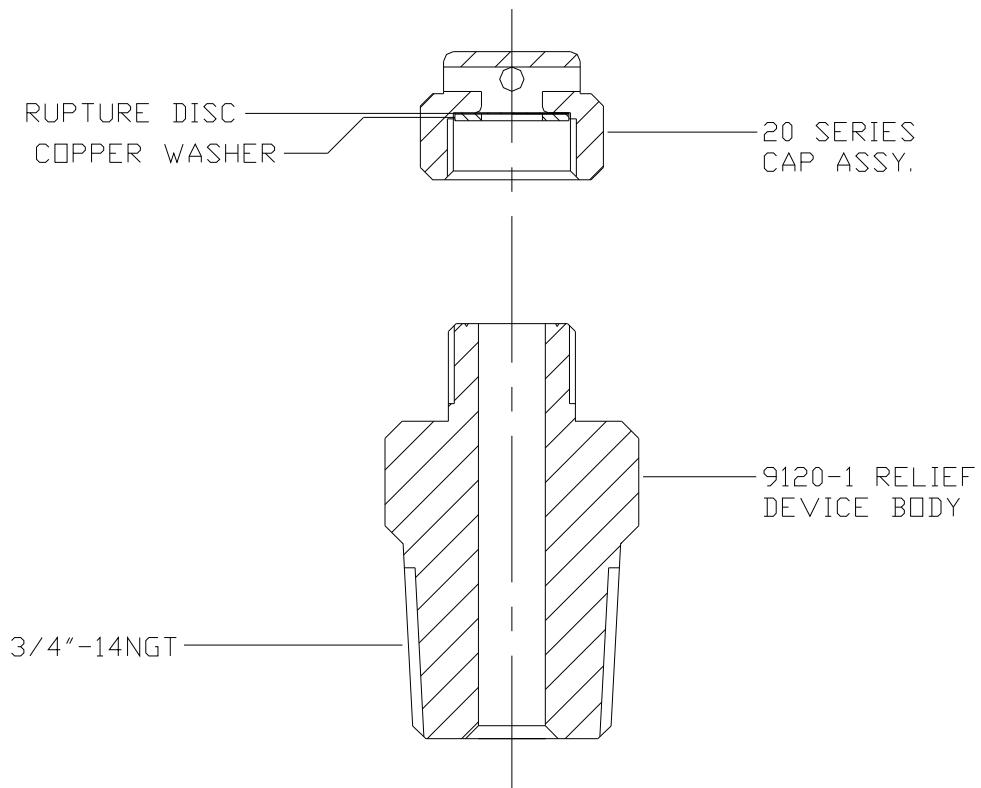
Part no.	Fusemetal	Inlet Connection
9120*	NONE	3/4"-14NGT
9120*-SGT	NONE	3/4"-14SGT
9121*	165 F	3/4"-14NGT
9121*-SGT	165 F	3/4"-14SGT
9122*	212 F	3/4"-14NGT
9122	212 F	3/4"-14NGT

NOTE: (*) = Disc Code. Add disc code to end of part no. Example 9120C

For relief devices with oversize 3/4"NGT inlets, add -2OS for 2 threads oversize or -4OS for

For 4 threads oversize to end of part number. Example 9120C-2OS

FRANGIBLE RUPTURE DISC CHART	
Disc Code	Burst Range
A	3300-3775
C	3600-4000
G	6200-6900
J	5000-5500
L	2700-3000
N	1750-2000
P	4500-5000
Q	3000-3360
R	5500-6000
Z	8000-8333



ASSEMBLY INSTRUCTIONS:

1. Apply a small amount of Halocarbon 25-10M grease or compatible grease to sealing surface of 9120-1 body.
2. Screw the cap assembly on the relief device hand tight.
3. Torque the cap assembly to 40-45 ft/lbs.

9130 SERIES COMPRESSED GAS RELIEF DEVICE



The 9130 series vent type relief device is constructed of forged brass. This angle device is commonly used on compressed gas tube trailers or skid banks containing the 9-5/8" O.D. tubes. Designed for vent tube applications, the relief device cap has a 1/2" SAE flare connection. A variety of rupture discs are available to meet customer requirements. The cap can be supplied with or without fuselmetal depending on service requirements. This device is also available with 3/4"-14NGT oversized inlets.

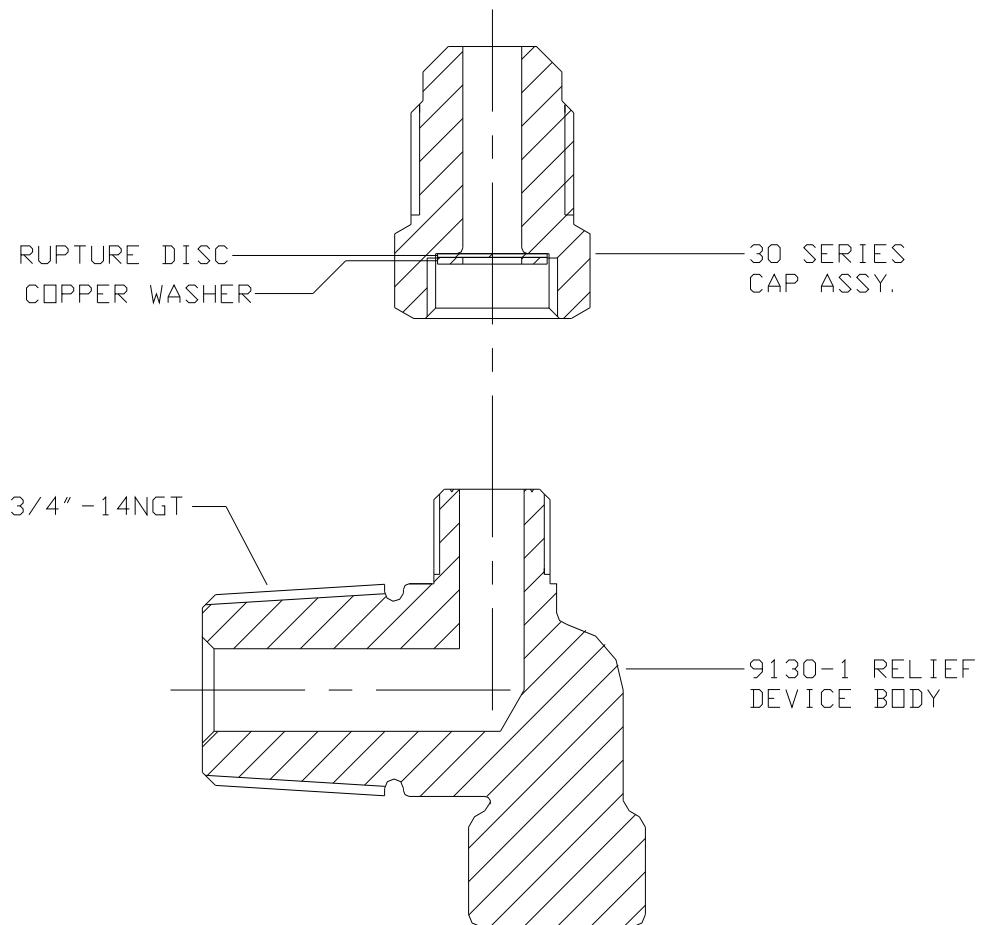


Part no.	Fuselmetal	Inlet Connection
9130*	NONE	3/4"-14NGT
9130*-SGT	NONE	3/4"-14SGT
9131*	165 F	3/4"-14NGT
9131*-SGT	165 F	3/4"-14SGT
9132*	212 F	3/4"-14NGT
9132*-SGT	212G	3/4"-14SGT

Notes: (*) = Disc Code. Add disc code to end of part no. Example 9130C

For relief devices with oversize 3/4"NGT threads, add -2OS for 2 threads oversize or -4OS for 4 threads oversize to end of part number. Example: 9130JC-4OS

FRANGIBLE RUPTURE DISC CHART	
Disc Code	Burst Range
A	3300-3775
C	3600-4000
G	6200-6900
J	5000-5500
L	2700-3000
N	1750-2000
P	4500-5000
Q	3000-3360
R	5500-6000
Z	8000-8333



ASSEMBLY INSTRUCTIONS:

1. Apply a small amount of Halocarbon 25-10M grease or compatible grease to sealing surface of 9130 -1 body.
2. Screw the cap assembly on the relief device hand tight.
3. Torque the cap assembly to 40-45 ft/lbs.

9135 SERIES THERMOWELL RELIEF DEVICE



Constructed of forged brass, the 9135 series thermowell relief device was designed to accommodate a 12" thermometer as well as a relief device. This device is typically used on compressed gas tube trailers or skid banks containing the 9-5/8" O.D. tubes. This device comes standard with a diffuser style or vent style relief device depending on service requirements. A variety of rupture discs are available to meet customer needs. This device is available with 3/4"-14NGT oversized inlets.



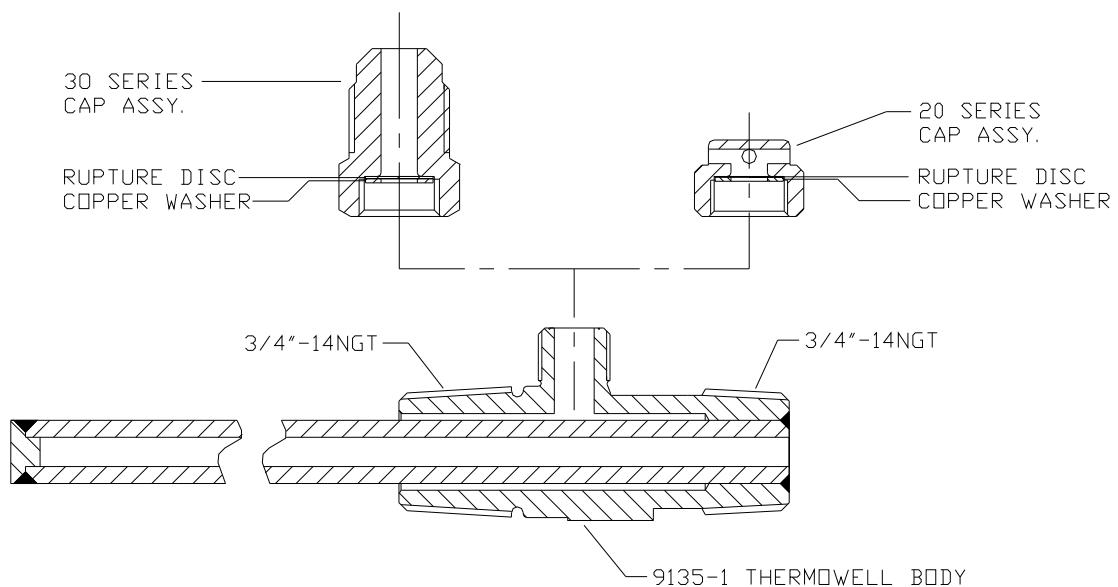
Part no.	Fusemetal	Vent Style	Inlet Connection
9135*	NONE	DIFFUSER	3/4"-14NGT
9135*-SGT	NONE	DIFFUSER	3/4"-14SGT
9136*	165 F	DIFFUSER	3/4"-14NGT
9136*-SGT	165 F	DIFFUSER	3/4"-14SFT
9136J*	212 F	DIFFUSER	3/4"-14NGT
9136J*-SGT	212 F	DIFFUSER	3/4"-14SGT
9137*	NONE	1/2" SAE FLARE	3/4"-14NGT
9137*-SGT	NONE	1/2" SAE FLARE	3/4"-14SGT
9138*	165 F	1.2" SAE FLARE	3/4"-14NGT
9138*-SGT	165F	1/2" SAE FLARE	3/4"-14SGT
9139*	212 F	1/2" SAE FLARE	3/4"-14NGT
9139*-SGT	212 F	1/2" SAE FLARE	3/4"-14SGT

NOTE: (*) = Disc Code. Add disc code to end of part no. Example 9139C

For devices with oversize 3/4"NGT threads, add -2OS for 2 threads oversize or -4OS for 4 threads oversize to end of part number. Example: 9139C-4OS

FRANGIBLE RUPTURE DISC CHART			
Disc Code	Burst Range	Disc Code	Burst Range
A	3300-3775	N	1750-2000
C	3600-4000	P	4500-5000
G	6200-6900	Q	3000-3360
J	5000-5500	R	5500-6000
L	2700-3000	Z	8000-8333

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ASSEMBLY INSTRUCTIONS:

1. Apply a small amount of Halocarbon 25-10M grease or compatible grease to sealing surface of 9135-1 body.
2. Screw the cap assembly on the relief device hand tight.
3. Torque the cap assembly to 45 ft/lbs.



20 SERIES DIFFUSER STYLE RELIEF DEVICE

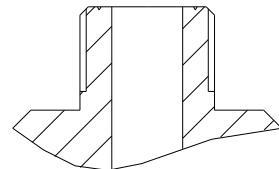
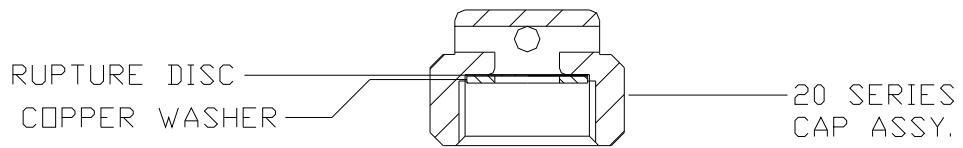
Constructed of brass, the 20 series diffuser style relief device is used in conjunction with the 1200 series valve and/or the 9120 series relief device. This relief device is commonly used on 9-5/8" O.D. compressed gas tubes, or cylinders. A variety of rupture discs are available to meet customer requirements. The device can be supplied with or without fuselmetel depending on service requirements.



Part no.	Fuselmetal
20*	NONE
21*	165 F
22*	212 F

NOTE: (*) = Disc Code. Add disc code to end of part no. Example 20C

FRANGIBLE RUPTURE DISC CHART	
Disc Code	Burst Range
A	3300-3775
C	3600-4000
G	6200-6900
J	5000-5500
L	2700-3000
N	1750-2000
P	4500-5000
Q	3000-3360
R	5500-6000
Z	8000-8333



ASSEMBLY INSTRUCTIONS:

1. Apply a small amount of Halocarbon 25-10M grease or compatible grease to sealing surface of relief device body.
2. Screw the cap assembly on the relief device hand tight.
3. Torque the cap assembly to 40-45 ft/lbs.



30 SERIES VENT TYPE RELIEF DEVICE

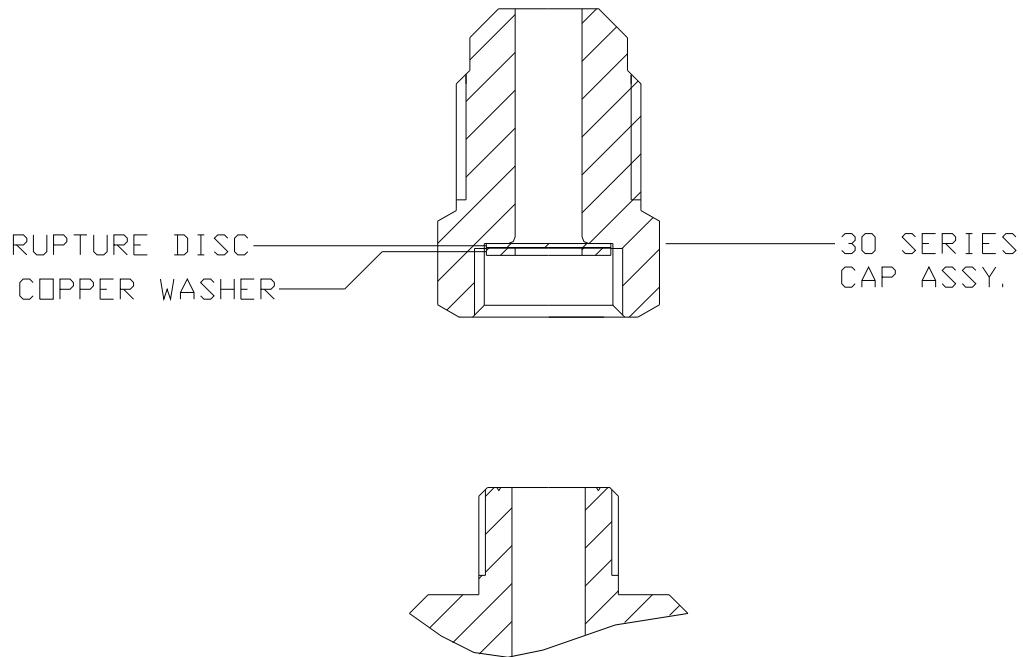
Constructed of brass, the 30 series vent type relief device is used in conjunction with the 1200 series valve and/or the 9130 series relief device body. This relief device is commonly used on 9-5/8" O.D. compressed gas tubes. The relief device cap has a 1/2" SAE flare connection for vent tube application. A variety of rupture discs are available to meet customer requirements. The cap can be supplied with or without fuselmetal depending on service requirements.



Part no.	Fuselmetal
30*	NONE
31*	165 F
32*	212 F

NOTE: (*) = Disc Code. Add disc code to end of part no. Example 30C

FRANGIBLE RUPTURE DISC CHART	
Disc Code	Burst Range
A	3300-3775
C	3600-4000
G	6200-6900
J	5000-5500
L	2700-3000
N	1750-2000
P	4500-5000
Q	3000-3360
R	5500-6000
Z	8000-8333



ASSEMBLY INSTRUCTIONS:

1. Apply a small amount of Halocarbon 25-10M grease or compatible grease to sealing surface of relief device body.
2. Screw the cap assembly on the relief device hand tight.
3. Torque the cap assembly to 40-45 ft/lbs.



SECTION 3

PAGE(S)	PART SERIES	DESCRIPTION
74-75	Bullplug PED's	Bullplug Pressure Evacuation Device
	Small Tube PED's	Small Tube Pressure Evacuation Device
	COPV PED's	Composite Overwrapped Pressure Vessel Pressure Evacuation Device

PRESSURE EVACUATION DEVICE



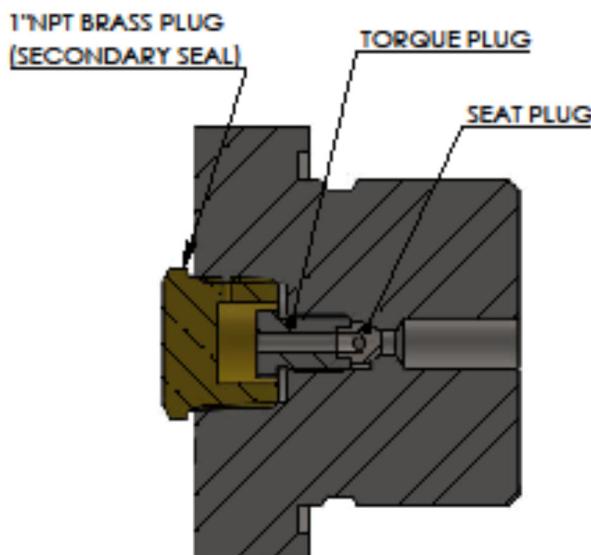
The Western Valve Pressure Evacuation Device is a system developed to safely evacuate a tube in an emergency situation. This device is specifically designed for tube trailers, MEGC, or other tube containers where pressure relief devices are not required in the front tube inlet port.

The Pressure Evacuation Device allows the user to evacuate pressure off a tube in an emergency. This device is designed using a durable metal to metal

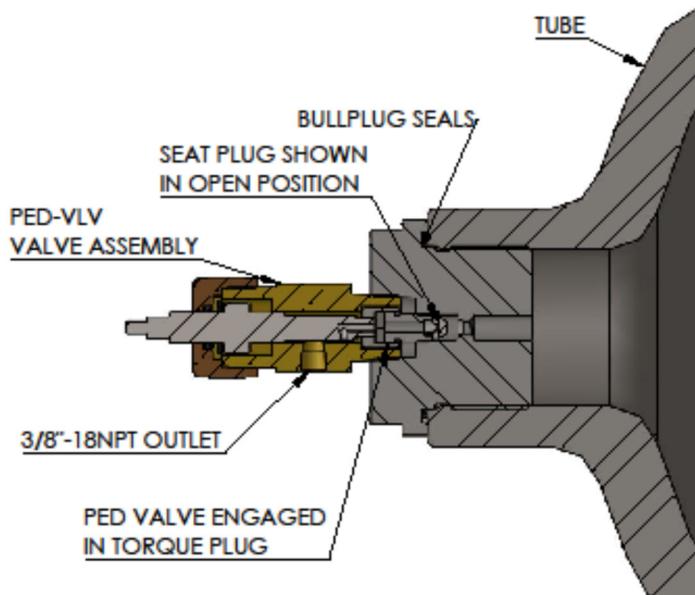
seat configuration which eliminates all soft seals. Should a pressure evacuation event arise, the user attaches a valve apparatus to the plug. This valve engages to the torque plug in the device. Once evacuation lines are safely hooked up, the user is ready to open the system allowing pressure to evacuate the tube.

Application:

- Small tubes with 3/4"NGT, 3/4"SGT, and 1"NGT inlets
- Jumbo tubes with 2-3/4"-8UN, 3-1/4"-8UN, and 3-1/2"-8UN inlets
- COPV thread sizes
- Working pressures up to 8250 psi



Patent No: US 11,835,181 B2



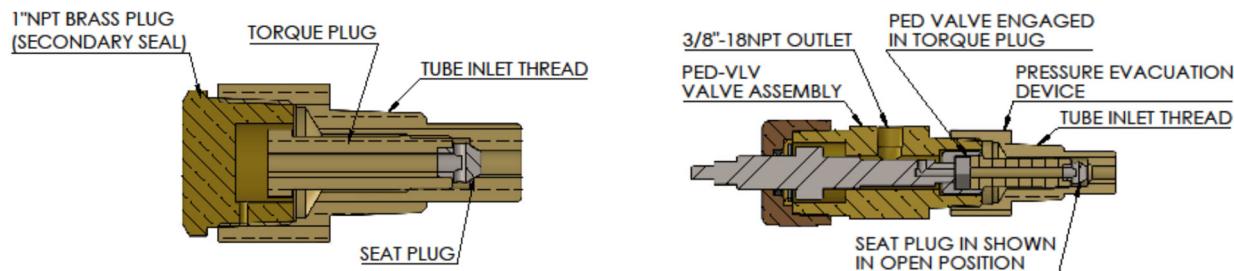
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Pressure Evacuation Device For DOT and UN Tubes

Part No.	Tube Thread	Material	Pressure Rating
9146-111S-PED	3-1/4"-8UN-2A	Stainless steel	5000 PSI
9146-148S-PED	3-1/2"-8UN-2A	Stainless steel	5000 PSI
9146-143S-PED	3-1/2"-8UN-2A (ENRIC STYLE GROOVE)	Stainless steel	5000 PSI
9146-109S-PED	2-3/4"-8UN-2A	Stainless steel	5000 PSI
PED-VLV	Pressure evacuation valve for above plugs		

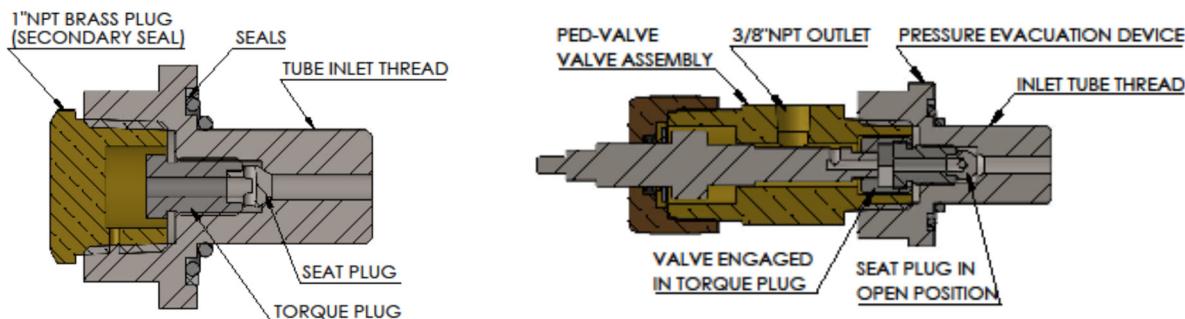
Pressure Evacuation Device for DOT 9-5/8" Diameter Tubes

Part No.	Tube Thread	Material	Pressure Rating
9133	3/4"-14NGT	Brass	6000 PSI
9133-SGT	3/4"-14SGT	Brass	6000 PSI
PED-VLV	Pressure evacuation valve for above plugs		



Pressure Evacuation Device for COPV'S

Part No.	Tube Thread	Material	Pressure Rating
S9133-U18	1-1/8"-12UN-2A	Stainless steel	8250 PSI
PED-VLV	Pressure evacuation valve for above plug		



SECTION 4

PAGE	PART SERIES	DESCRIPTION
77	DOT 3T & 3AAX 3-1/4"	3-1/4"-8UN Bullplugs
78	ASME 2-3/4" Bullplugs	2-3/4"-8UN Bullplugs



END PLUGS FOR DOT 3AAX & 3T TUBES

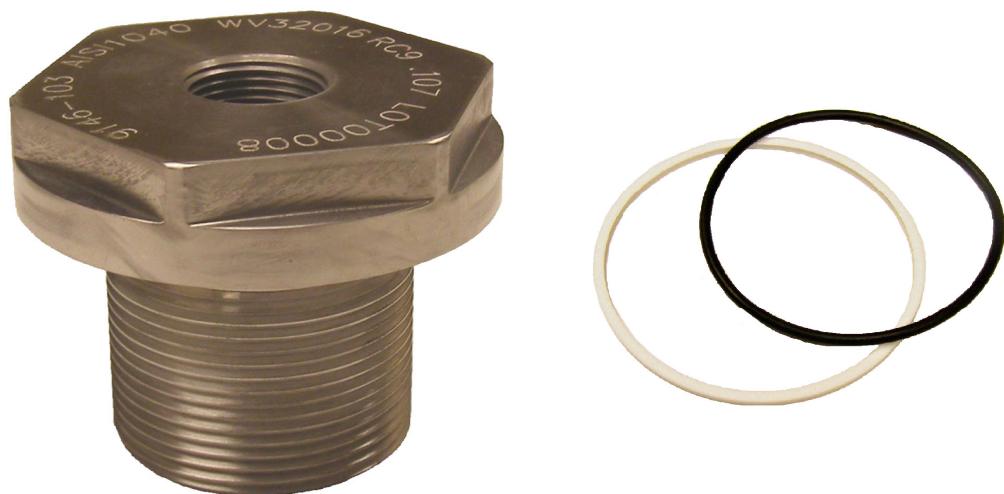


Part no.	Material	External Thread Size	Inlet
9146-111	1045 Carbon Steel	3-1/4"-8UN-2A	Blank
9146-111S	304L Stainless Steel	3-1/4"-8UN-2A	Blank
9146-101	1045 Carbon Steel	3-1/4"-8UN-2A	3/4"-14NGT
9146-101S	304L Stainless Steel	3-1/4"-8UN-2A	3/4"-14NGT
9146-100	1045 Carbon Steel	3-1/4"-8UN-2A	1" 11-1/2NGT
9146-100S	304L Stainless Steel	3-1/4"-8UN-2A	1" 11-1/2NGT
9146-99	1045 Carbon Steel	3-1/4"-8UN-2A	1-1/2" 11-1/2NGT
9146-99S	304L Stainless Steel	3-1/4"-8UN-2A	1-1/2" 11-1/2NGT
9146-98	1045 Carbon Steel	3-1/4"-8UN-2A	2-1/4"-12UN-2B
End Plug Seals			
Part no.	Material		
9146-97-1VA090	Fluorocarbon (Viton) 90 Durometer		
9146-97-1VG109	VG109 Fluorocarbon Low Temperature 90 Durometer		
9146-97-2	Virgin Teflon		

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END PLUGS FOR ASME TUBES



Part no.	Material	External Thread Size	Inlet
9146-109	1045 Carbon Steel	2-3/4"-8UN-3A	Blank
9146-115	1045 Carbon Steel	2-3/4"-8UN-3A	1/2"-14NGT
9146-102	1045 Carbon Steel	2-3/4"-8UN-3A	3/4"-14NGT
9146-103	1045 Carbon Steel	2-3/4"-8UN-3A	1" 11-1/2NGT
9146-104	1045 Carbon Steel	2-3/4"-8UN-3A	1-1/2" 11-1/2NGT
End Plug Seals			
Part no.	Material		
9146-97-3	Fluorocarbon (Viton) 90 Durometer		
9146-97-4	Virgin Teflon		

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SECTION 5

PAGE	PART SERIES	DESCRIPTION
80	CGA 1340	Fill Connections
81	CGA 1350	Fill Connections
82	CGA 1440	Fill Connections
83	CGA 1450	Fill Connections
84	CGA 1540	Fill Connections
85	CGA 1550	Fill Connections
86	CGA V-6	CO ₂ Liquid Fill Adapter
87	CGA V-1	Nuts & Nipples
88	Pipe Caps	Manifold Pipe Caps

CGA 1340 FILL CONNECTION



The CGA 1340 brass fittings are manufactured in accordance with the Compressed Gas Association V-10 standard. This connection is rated at 3500 psig for the following services: Argon, Helium, Krypton, Neon, Nitrogen, Xenon, and Tetrafluoromethane (R14)



750-1NPS FILL CONNECTION



1NPS-4 UNION NUT



1NPS-4DC DUST CAP



1NPS-4DP DUST PLUG



WV12-3-14 UNION NIPPLE



WV12-3-840 UNION NIPPLE



WV12-3 BLIND NIPPLE

FILL CONNECTION UNIONS			
Part no.	Material	Inlet	Outlet
500-1NPS-14	BRASS	1/2"-14 NPT	1/2"-14 NPT
750-1NPS-14	BRASS	3/4"-14 NPT	1/2"-14 NPT
500-1NPS-840	BRASS	1/2"-14 NPT	1/2" MALE PIPE—NO THREADS
750-1NPS-840	BRASS	3/4"-14 NPT	1/2" MALE PIPE—NO THREADS
COMPONENTS			
Part no.	Material	Description	Connection
500-1NPS	BRASS	FILL CONNECTION	1/2"-14NPT x CGA1340
750-1NPS	BRASS	FILL CONNECTION	3/4"-14NPT x CGA1340
750FNGT-1NPS	BRASS	FILL CONNECTION	3/4"-14NPT FEMALE x CGA1340
1NPS-4	BRASS	NUT	CGA1340 1" 11-1/2NPSM
1NPS-4DC	BRASS	DUST CAP	CGA1340 1" 11-1/2NPSM
1NPS-4DP	BRASS	DUST PLUG	CGA1340 1" 11-1/2NPSM
WV12-3-14	BRASS	NIPPLE	1/2"-14NPT
WV12-3-840	BRASS	NIPPLE	1/2" MALE PIPE—NO THREADS
WV12-3	BRASS	BLIND NIPPLE	NONE

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CGA 1350 FILL CONNECTION



The CGA 1350 brass fittings are manufactured in accordance with the Compressed Gas Association V-10 standard. This connection is rated at 3500 psig for the following services: Ethane, Ethylene, Hydrogen, Methane, and Natural Gas.



1NPSL-4DC DUST CAP

1NPSL-4DP DUST PLUG



750-1NPSL FILL CONNECTION



1NPSL-4 UNION NUT



WV12-3-14 UNION NIPPLE



WV12-3-840 UNION NIPPLE



WV12-3 BLIND NIPPLE

FILL CONNECTION UNIONS			
Part no.	Material	Inlet	Outlet
500-1NPSL-14	BRASS	1/2"-14 NPT	1/2"-14 NPT
750-1NPSL-14	BRASS	3/4"-14 NPT	1/2"-14 NPT
500-1NPSL-840	BRASS	1/2"-14 NPT	1/2" MALE PIPE-NO THREADS
750-1NPSL-840	BRASS	3/4"-14 NPT	1/2" MALE PIPE-NO THREADS
COMPONENTS			
Part no.	Material	Description	Connection
500-1NPSL	BRASS	FILL CONNECTION	1/2"-14NPT x CGA1350
750-1NPSL	BRASS	FILL CONNECTION	3/4"-14NPT x CGA1350
750FNGT-1NPSL	BRASS	FILL CONNECTION	3/4"-14NPT FEMALE x CGA1350
1NPSL-4	BRASS	NUT	CGA1350 1" 11-1/2NPSML
1NPSL-4DC	BRASS	DUST CAP	CGA1350 1" 11-1/2NPSML
1NPSL-4DP	BRASS	DUST PLUG	CGA1350 1" 11-1/2NPSML
WV12-3-14	BRASS	NIPPLE	1/2"-14NPT
WV12-3-840	BRASS	NIPPLE	1/2" MALE PIPE-NO THREADS
WV12-3	BRASS	BLIND NIPPLE	NONE

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CGA 1440 FILL CONNECTION



The CGA 1440 brass fittings are manufactured in accordance with the Compressed Gas Association V-10 standard. This connection is rated at 3500 psig for Breathing Air service.



750-1437UN FILL CONNECTION

1437UN-4 UNION NUT



1437UN-4DC DUST CAP



1437UN-4DP DUST PLUG



WV12-3-14 UNION NIPPLE



WV12-3-840 UNION NIPPLE



WV12-3 BLIND NIPPLE

FILL CONNECTION UNIONS			
Part no.	Material	Inlet	Outlet
500-1437UN-14	BRASS	1/2"-14 NPT	1/2"-14 NPT
750-1437UN-14	BRASS	3/4"-14 NPT	1/2"-14 NPT
500-1437UN-840	BRASS	1/2"-14 NPT	1/2" MALE PIPE-NO THREADS
750-1437UN-840	BRASS	3/4"-14 NPT	1/2" MALE PIPE-NO THREADS
COMPONENTS			
Part no.	Material	Description	Connection
500-1437UN	BRASS	FILL CONNECTION	1/2"-14NPT x CGA1440
750-1437UN	BRASS	FILL CONNECTION	3/4"-14NPT x CGA1440
750FNGT-1437UN	BRASS	FILL CONNECTION	3/4"-14NPT FEMALE x CGA1440
1437UN-4	BRASS	NUT	CGA1440 1-7/16"-12UN
1437UN-4DC	BRASS	DUST CAP	CGA1440 1-7/16"-12UN
1437UN-4DP	BRASS	DUST PLUG	CGA1440 1-7/16"-12UN
WV12-3-14	BRASS	NIPPLE	1/2"-14NPT
WV12-3-840	BRASS	NIPPLE	1/2" MALE PIPE-NO THREADS
WV12-3	BRASS	BLIND NIPPLE	NONE

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CGA 1450 FILL CONNECTION



The CGA 1450 brass fittings are manufactured in accordance with the Compressed Gas Association V-10 standard. This connection is rated at 3500 psig for Air service.



750-1437UNL FILL CONNECTION



1437UNL-4 UNION NUT



1437UNL-4DC DUST CAP



1437UNL-4DP DUST PLUG



WV12-3-14 UNION NIPPLE



WV12-3-840 UNION NIPPLE



WV12-3 BLIND NIPPLE

FILL CONNECTION UNIONS			
Part no.	Material	Inlet	Outlet
500-1437UNL-14	BRASS	1/2"-14 NPT	1/2"-14 NPT
750-1437UNL-14	BRASS	3/4"-14 NPT	1/2"-14 NPT
500-1437UNL-840	BRASS	1/2"-14 NPT	1/2" MALE PIPE-NO THREADS
750-1437UNL-840	BRASS	3/4"-14 NPT	1/2" MALE PIPE-NO THREADS
COMPONENTS			
Part no.	Material	Description	Connection
500-1437UNL	BRASS	FILL CONNECTION	1/2"-14NPT x CGA1450
750-1437UNL	BRASS	FILL CONNECTION	3/4"-14NPT x CGA1450
750FNGT-1437UNL	BRASS	FILL CONNECTION	3/4"-14NPT FEMALE x CGA1450
1437UNL-4	BRASS	NUT	CGA1450 1-7/16"-12UNL
1437UNL-4DC	BRASS	DUST CAP	CGA1450 1-7/16"-12UNL
1437UNL-4DP	BRASS	DUST PLUG	CGA1450 1-7/16"-12UNL
WV12-3-14	BRASS	NIPPLE	1/2"-14NPT
WV12-3-840	BRASS	NIPPLE	1/2" MALE PIPE-NO THREADS
WV12-3	BRASS	BLIND NIPPLE	NONE

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CGA 1540 FILL CONNECTION



The CGA 1540 brass fittings are manufactured in accordance with the Compressed Gas Association V-10 standard. This connection is rated at 3000 psig for Oxygen service.



750-1250NPS FILL CONNECTION



1250NPS-4 UNION NUT



1250NPS-4DC DUST CAP

1250NPS-4DP DUST PLUG



WV12-3-14 UNION NIPPLE



WV12-3-840 UNION NIPPLE



WV12-3 BLIND NIPPLE

FILL CONNECTION UNIONS			
Part no.	Material	Inlet	Outlet
500-1250NPS-14	BRASS	1/2"-14 NPT	1/2"-14 NPT
750-1250NPS-14	BRASS	3/4"-14 NPT	1/2"-14 NPT
500-1250NPS-840	BRASS	1/2"-14 NPT	1/2" MALE PIPE-NO THREADS
750-1250NPS-840	BRASS	3/4"-14 NPT	1/2" MALE PIPE-NO THREADS
COMPONENTS			
Part no.	Material	Description	Connection
500-1250NPS	BRASS	FILL CONNECTION	1/2"-14NPT x CGA1540
750-1250NPS	BRASS	FILL CONNECTION	3/4"-14NPT x CGA1540
750FNGT-1250NPS	BRASS	FILL CONNECTION	3/4"-14NPT FEMALE x CGA1540
1250NPS-4	BRASS	NUT	CGA1540 1-1/4"11-1/2NPSM
1250NPS-4DC	BRASS	DUST CAP	CGA1540 1-1/4" 11-1/2NPSM
1250NPS-4DP	BRASS	DUST PLUG	CGA1540 1-1/4" 11-1/2NPSM
WV12-3-14	BRASS	NIPPLE	1/2"-14NPT
WV12-3-840	BRASS	NIPPLE	1/2" MALE PIPE-NO THREADS
WV12-3	BRASS	BLIND NIPPLE	NONE

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CGA 1550 FILL CONNECTION



The CGA 1550 brass fittings are manufactured in accordance with the Compressed Gas Association V-10 standard. This connection is rated at 3500 psig for Carbon Monoxide service.



750-1250NPSL FILL CONNECTION



1250NPSL-4DC DUST CAP



1250NPSL-4DP DUST PLUG



WV12-3-14 UNION NIPPLE



WV12-3-840 UNION NIPPLE

1250NPSL-4 UNION NUT



WV12-3 BLIND NIPPLE

FILL CONNECTION UNIONS			
Part no.	Material	Inlet	Outlet
500-1250NPSL-14	BRASS	1/2"-14 NPT	1/2"-14 NPT
750-1250NPSL-14	BRASS	3/4"-14 NPT	1/2"-14 NPT
500-1250NPSL-840	BRASS	1/2"-14 NPT	1/2" MALE PIPE-NO THREADS
750-1250NPSL-840	BRASS	3/4"-14 NPT	1/2" MALE PIPE-NO THREADS
COMPONENTS			
Part no.	Material	Description	Connection
500-1250NPSL	BRASS	FILL CONNECTION	1/2"-14NPT x CGA1550
750-1250NPSL	BRASS	FILL CONNECTION	3/4"-14NPT x CGA1550
750FNGT-1250NPSL	BRASS	FILL CONNECITON	3/4"-14NPT FEMALE x CGA1550
1250NPSL-4	BRASS	NUT	CGA1550 1-1/4" 11-1/2NPSML
1250NPSL-4DC	BRASS	DUST CAP	CGA1550 1-1/4" 11-1/2NPSML
1250NPSL-4DP	BRASS	DUST PLUG	CGA1550 1-1/4" 11-1/2NPSML
WV12-3-14	BRASS	NIPPLE	1/2"-14NPT
WV12-3-840	BRASS	NIPPLE	1/2" MALE PIPE-NO THREADS
WV12-3	BRASS	BLIND NIPPLE	NONE

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CARBON DIOXIDE CRYOGENIC LIQUID FILL ADAPTER



These CGA V-6 Cryogenic fill connections incorporate a shuttle valve in the body of the fill adapter. This shuttle valve becomes functional in the event of a break off at the fill connection nut. These connections are available in three sizes, CGA CO₂-10, CO₂-15, and CO₂-20, and are compatible with standard associated nuts and head pieces.



BLC02-10-SV

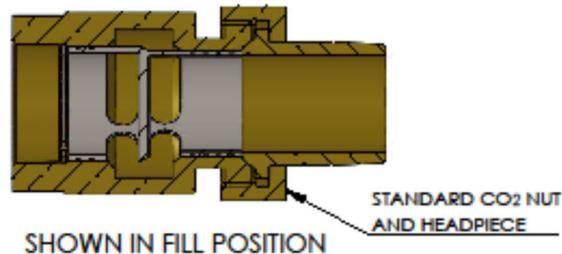


BLC02-15-SV

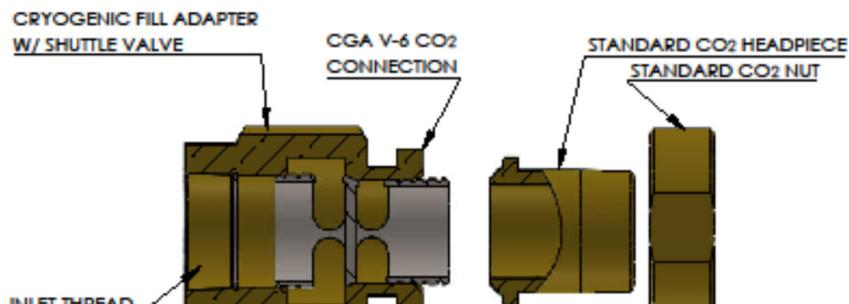


BLC02-20-SV

FILL CONNECTION UNIONS			
Part no.	Material	Inlet	Outlet
BLC02-10-SV	BRASS	1" NPT (FEMALE)	CO ₂ -10 1.687-6 ACME-2G-RH-EXT
BLC02-15-SV	BRASS	1-1/2" NPT (FEMALE)	CO ₂ -15 2.250-6 ACME-2G-RH-EXT
BLC02-20-SV	BRASS	2" NPT (FEMALE)	CO ₂ -20 3.187-6 ACME-2G-RH-EXT



SHOWN IN FILL POSITION



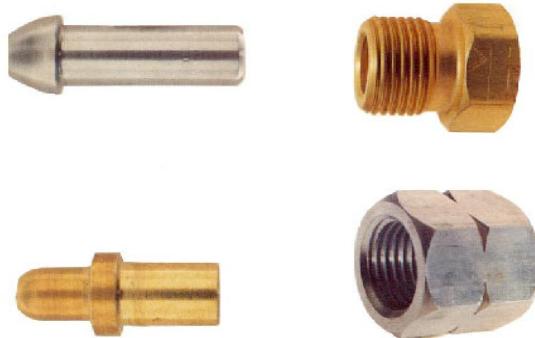
SHOWN IN CLOSED POSITION

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COMPRESSED GAS V-1 NUTS & NIPPLES

The compressed gas nuts and nipples are constructed of either brass or 304L stainless steel. These fittings are manufactured in accordance with the Compressed Gas Association V-1 standard. Other connections not listed below are available upon request.



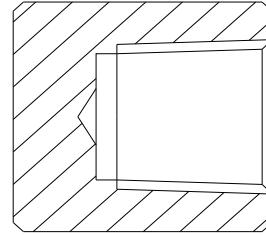
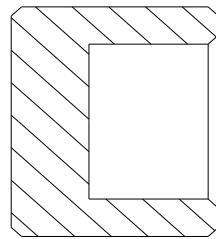
COMPRESSED GAS NIPPLES			
Part no.	Material	CGA Connection	Tubing Connection
350(*)-3-312	(*)=MATERIAL (B)=BRASS (S)=STAINLESS	CGA350	5/16" TUBE SOCKET
350(*)-3-375		CGA350	3/8" TUBE SOCKET
350(*)-3-14		CGA350	1/4"NPT
540(*)-3-312	(*)=MATERIAL (B)=BRASS (S)=STAINLESS	CGA540	5/16" TUBE SOCKET
540(*)-3-375		CGA540	3/8" TUBE SOCKET
540(*)-3-14		CGA540	1/4"NPT
580(*)-3-312	(*)=MATERIAL (B)=BRASS (S)=STAINLESS	CGA580	5/16" TUBE SOCKET
580(*)-3-375		CGA580	3/8" TUBE SOCKET
580(*)-3-14		CGA580	1/4"NPT
COMPRESSED GAS NUTS			
Part no.	Material	CGA Connection	
350B-4	BRASS	CGA350	
350S-4	STAINLESS STEEL	CGA350	
540B-4	BRASS	CGA540	
540S-4	STAINLESS STEEL	CGA540	
580B-4	BRASS	CGA580	
580S-4	STAINLESS STEEL	CGA580	

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PIPE CAPS

Our pipe caps are manufactured from your choice of brass or 304L stainless steel. These fittings have a pressure rating of 3000 PSI. Other sizes not listed below are available upon request.



Part no.	Material	Connection
B500SW	BRASS	1/2" PIPE S.W.
S500SW	304L STAINLESS STEEL	1/2" PIPE S.W.
B500E	BRASS	1/2"-14 NPT
S500E	304L STAINLESS STEEL	1/2"-14 NPT
B750SW	BRASS	3/4" PIPE S.W.
S750SW	304L STAINLESS STEEL	3/4" PIPE S.W.
B750E	BRASS	3/4"-14 NPT
S750E	304L STAINLESS STEEL	3/4"-14 NPT



SECTION 6

PAGE	PART SERIES	DESCRIPTION
90	Flanges	For DOT 3T, 3AAX, and UN Tubes
90	Tube Collars	For DOT 3T, 3AAX, and UN Tubes
91	Tube Nuts	For 9-5/8" O.D. Tubes
91	Vent Tube Caps	Vent Tube Caps—1-1/8", 1" and 1/2"



FLANGES FOR DOT 3AAX & 3T TUBES



Part no.	Material	Thread Size
4500-FLANGE	A105	4-1/2"-8UN
4750-FLANGE	A105	4-3/4"-8UN
5500-FLANGE	A105	5-1/2"-8UN

TUBE COLLARS FOR DOT 3AAX & 3T TUBES



Part no.	Material	External Thread Size	Internal Thread Size
4500-TUBECOLLAR	A106	5-1/2"-8UN	4-1/2"-8UN
4750-TUBECOLLAR-2	A106	5-1/2"-8UN	4-3/4"-8UN



TUBE NUTS FOR DOT 3A & 3AA TUBES



Part no.	Material	Thread Size
2UN-CYLNUT	1018 C.S.	2"-10UNS
2NPS-CYLNUT	1018 C.S.	2" 11-1/2NPSM
2125UN-CYLNUT	1018 C.S.	2-1/8"-10UN

VENT CAPS FOR VENT TUBES



Part no.	Material	Size
500SS VT-CP	304L S.S.	1/2"
1000SS VT-CP	304L S.S.	1"
1125SS VT-CP	304L S.S.	1-1/8"

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