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Flow Control

CROSBY

Introduction

Crosby® Styles JOS-E and JBS-E spring-loaded pressure relief valves have been engineered to provide high quality over-pressure protection for air, gas, steam, vapor, liquid and two-phase applications in an exceptionally rugged, standardized design to the process and power industries.

Standard sizes are 1 D 2 to 8 T2 10 with inlet flange ratings of ANSI Cl 150, 300, 600, 900, 1500 and 2500. Standard outlet flanges are ANSI Cl 150 or Cl 300 depending on valve size or rating. Inlet and outlet center-to-face dimensions conform to API Standard 526, Flanged Steel Pressure Relief Valves.

Styles JOS-E and JBS-E pressure relief valves are manufactured in accordance with ASME Pressure Vessel Code, Section VIII and capacities are certified by the National Board of Boiler and Pressure Vessel Inspectors.

All Crosby pressure relief valve castings and forgings are procured to ASME/ASTM material specifications and are available in a number of material combinations such as Monel®, Hastelloy® and stainless steel. In addition, Styles JOS-E and JBS-E relief valves offer a number of special material combinations such as Titanium, Duplex Stainless Steel and Inconel®, and are available on application.

Dimensions of flanges conform to current ANSI Standards. All steel raised face flanges are spiral concentric serrated finish with 45 to 55 grooves per inch and a finish between 125 Ra and 200 Ra. Other flange facings, such as Ring Type Joint, are available on request.

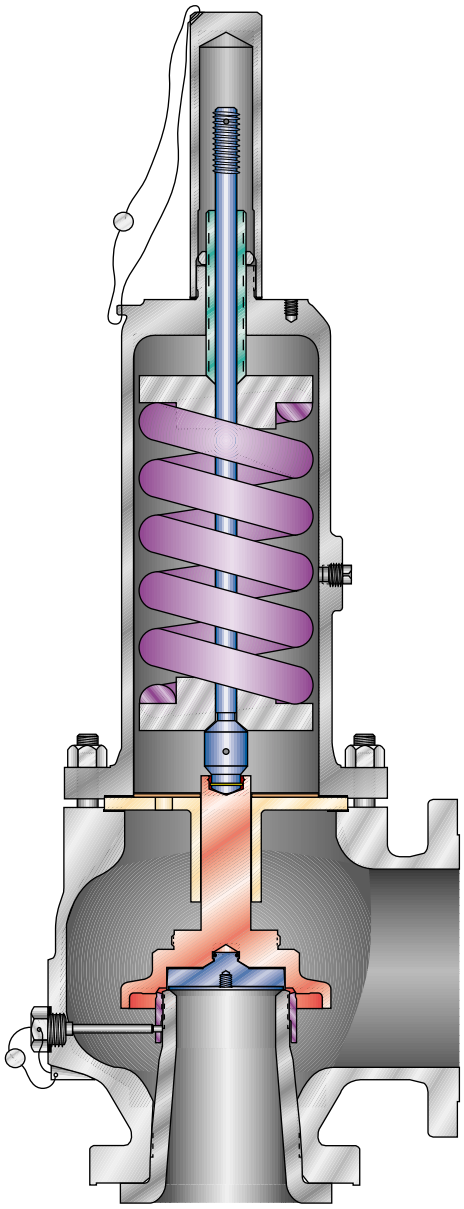
For information pertaining to sizing and selection, refer to the AGC SafetySize computer sizing program and Pressure Relief Valve Engineering Handbook (Technical Document No. TP-V300).

Notes

1. Monel® and Inconel® are registered trademarks of the International Nickel Company, Inc.
2. Hastelloy® is a registered trademark of Haynes International, Inc.

Technical Data

Sizes	:	1” D 2” to 8” T2 10”
Orifices	:	0.110 to 27.872 in2 [71 to 17981 mm2]
Inlet Ratings	:	ANSI Cl 150, 300, 600, 900, 1500, 2500
Temperature Range	:	-450°F to +1000°F [-268°C to +538°C]
Pressure Range	:	JOS-E and JLT-JOS-E: 15 to 6000 psig [1.03 to 413.79 barg] JBS-E and JLT-JBS-E: 25 to 6000 psig [1.72 to 413.79 barg]



Style JOS-E

Extended service life, reduced cost of ownership superior application versatility

- Improved, rugged nozzle ring design.
- Improved disc insert retention for ease of maintenance.
- Standard Inconel 625 bellows and flange material for superior corrosion resistance, longer service life and a wider range of applications.
- Universal disc holder allows for simple and cost-effective conversions from conventional to balanced bellows design.
- Standard threaded bellows design for ease of maintenance and conversion from conventional to balanced bellows design.
- Improved corrosion resistance with standard 316 stainless steel adjusting bolt locknut and nozzle ring set screw materials.
- Style JLT capacities certified on liquids and gas.
- Improved parts interchangeability - regardless of top construction.
- Field proven style JLT trim* for stable, non-chattering operation on liquid and gas service.
- Standard chrome steel spring for -75°f to +650°f [-28°c to +343°c].
- Easily converted to any type cap or lifting lever construction, liquid trim, soft-seat or balanced bellows configurations.
- Full compliance with ASME boiler and Pressure Vessel Code Section VIII and API Standards 526 and 527.

* Patented

These design improvements and material upgrades, combined with state-of-the-art manufacturing facilities, result in lower cost of ownership to end users and enhanced product availability from Crosby factories as well as Crosby's extensive network of pressure management centers[SM] .

Valve Styles

JOS-E	JLT-JOS-E
JBS-E	JLT-JBS-E
JBS-BP-E	JLT-JBS-BP-E
JOS-H-E	

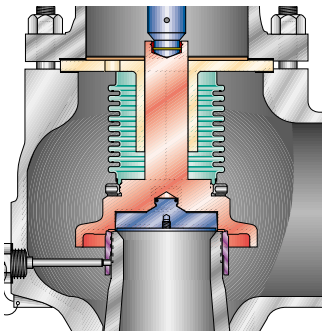


Figure 1

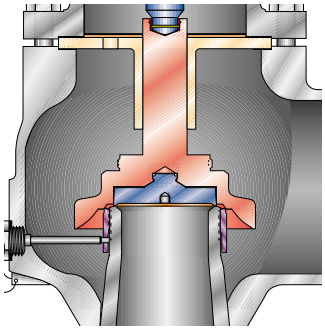


Figure 2

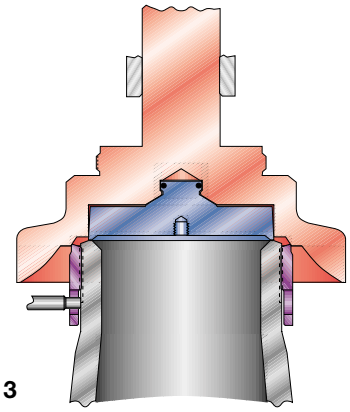


Figure 3

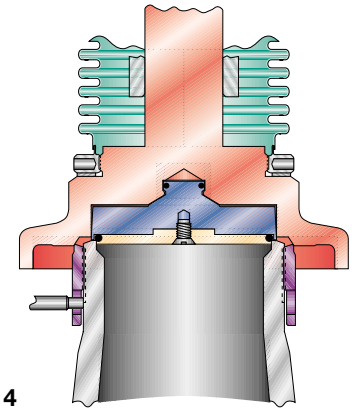


Figure 4

Notes

1. Reg. U.S. Patent Office for DuPont's fluoroelastomer.
2. EPR = Ethylene Propylene Rubber.
3. TFE = Tetrafluoroethylene.
4. Reg. U.S. Patent Office for DuPont's perfluoroelastomer parts.
5. Registered Trademark of Greene, Tweed & Co.
6. Registered Trademark of Asahi Glass Company, Ltd.

Styles JOS-E and JBS-E product features

Bellows and top flange

Crosby Styles JBS-E and JLT-JBS-E balanced bellows pressure relief valves provide optimum valve performance when the developed back pressure in exhaust systems or discharge manifolds becomes excessive.

All standard JBS-E and JLT-JBS-E relief valves feature a standard bellows and top flange (Figure 1) manufactured from Inconel alloy 625 which is a fatigue-resistant material and provides improved corrosion resistance compared to 316L stainless steel bellows. Inconel® alloy 625 is highly resistant to pitting, crevice corrosion and intergranular attack. The standardization of Inconel® Alloy 625 bellows and top flange provides a higher degree of corrosion resistance without the premium extra charge usually associated with Inconel® bellows.

Ease of maintenance and component interchangeability

The disc insert retention, disc holder and nozzle ring of the JOS-E and JBS-E have been re-engineered to improve maintenance, minimize spare parts and provide more component part interchangeability. (Figure 2)

The disc insert is inserted into the disc holder with a retention clip which is compressed as it passes through the smallest diameter in the disc holder recess and then returns to its normal shape once it has passed through. With the retention clip in its original shape, the disc insert is held securely in place.

A "universal" disc holder allows for simple and cost effective conversions from conventional to balanced bellows design as well as cost-effective bellows replacement. The bellows threads on to the disc holder with a tailpiece and gasket.

The new nozzle ring encloses the adjustment slot at the bottom of the ring giving a more rugged, durable design.

Chrome steel spring

Standard chrome steel spring material for applications with inlet temperatures up to 650°F [343°C].

Dual Certification

Crosby patented Style JLT (Figure 3) pressure relief valves offer a significant increase in capacity at 10% overpressure resulting in the economic use of a smaller valve as well as a reduction in inlet and discharge piping costs. The JLT trim is a field-proven patented design providing stable, non-chattering operation for liquid service.

The JLT design is also capacity certified on gas and vapor service and can be applied in two-phase flow applications. The JLT design is a logical choice for applications where the process fluid may be a liquid or a gas depending on the overpressure condition.

Bellows Convertibility

The Crosby flanged, spring operated pressure relief valve is designed and manufactured as a conventional valve and a balanced bellows valve. The conversion from conventional Styles JOS-E or JLT-JOS-E in 1 D 2 through 8 T2 10 requires only the addition of a bellows assembly and bellows tail-piece gasket. No other parts are necessary since all other parts are completely interchangeable.

Seat Design

Styles JOS-E and JBS-E relief valves are available with flat metal-to-metal seats or soft seats. The JOS-E and JBS-E two-piece disc holder/disc insert construction provides thermal balancing assuring maximum seat tightness, and meets the requirements of API Standard 527, Seat Tightness of Pressure Relief Valves.

Where system operating conditions permit, soft seat or elastomer seat construction is available as an option. The Crosby O-ring soft seat (Figure 4) is a two-seat design, with a metal-to-metal seat located downstream of the soft seat. The O-ring is the primary seal. The secondary flat metal-to-metal seat controls the compression of the O-ring and also serves as a secondary seal should the O-ring be damaged.

Standard O-ring materials include Viton®[1], BUNA-N, EPR[2], TFE[3], Silicone Rubber and Kalrez[4]. Pressure and temperature limits of each material are shown on page 11. Other soft seat materials such as Chemraz[5] and Aflas[6] are available on application.

Cap, Lifting Lever and Spindle Interchangeability

All Crosby JOS-E and JBS-E relief valves use a threaded spindle and drilled and tapped bonnet which permits easy cap or lifting lever conversions, with maximum standardization and interchangeability of parts. In addition, standard cap and lifting lever designs can be used with in-line test devices.

Crosby Styles JOS-E and JLT-JOS-E are the standard conventional relief valve designs for applications when the discharge is to the atmosphere or when the discharge is to a low pressure exhaust system designed to contain the process fluid. Valves subject to flashing fluids may require a balanced bellows type valve (see page 6).

This exceptionally rugged design features a high guiding surface ratio, corrosion resistant trim, upgraded materials of construction and several other design improvements to ensure ease of maintenance as well as a greater degree of parts interchangeability.

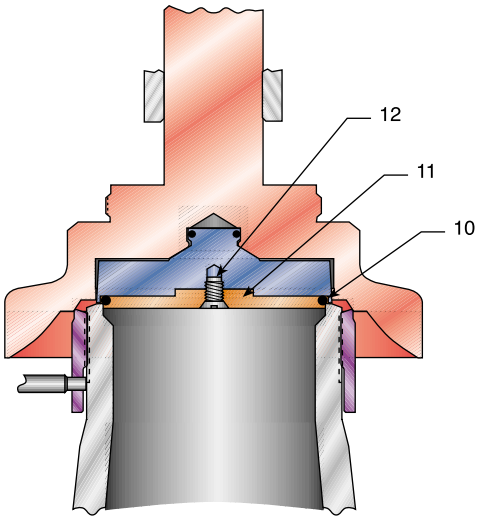
For liquid service applications, Style JLT-JOS-E relief valves provide stable operating performance using the widely industry recognized liquid trim design patented by Crosby. The disc holder in the liquid trim design has been engineered to allow the valve to achieve full lift at 10% overpressure without valve chatter.

Styles JOS-E and JLT-JOS-E standard materials of construction

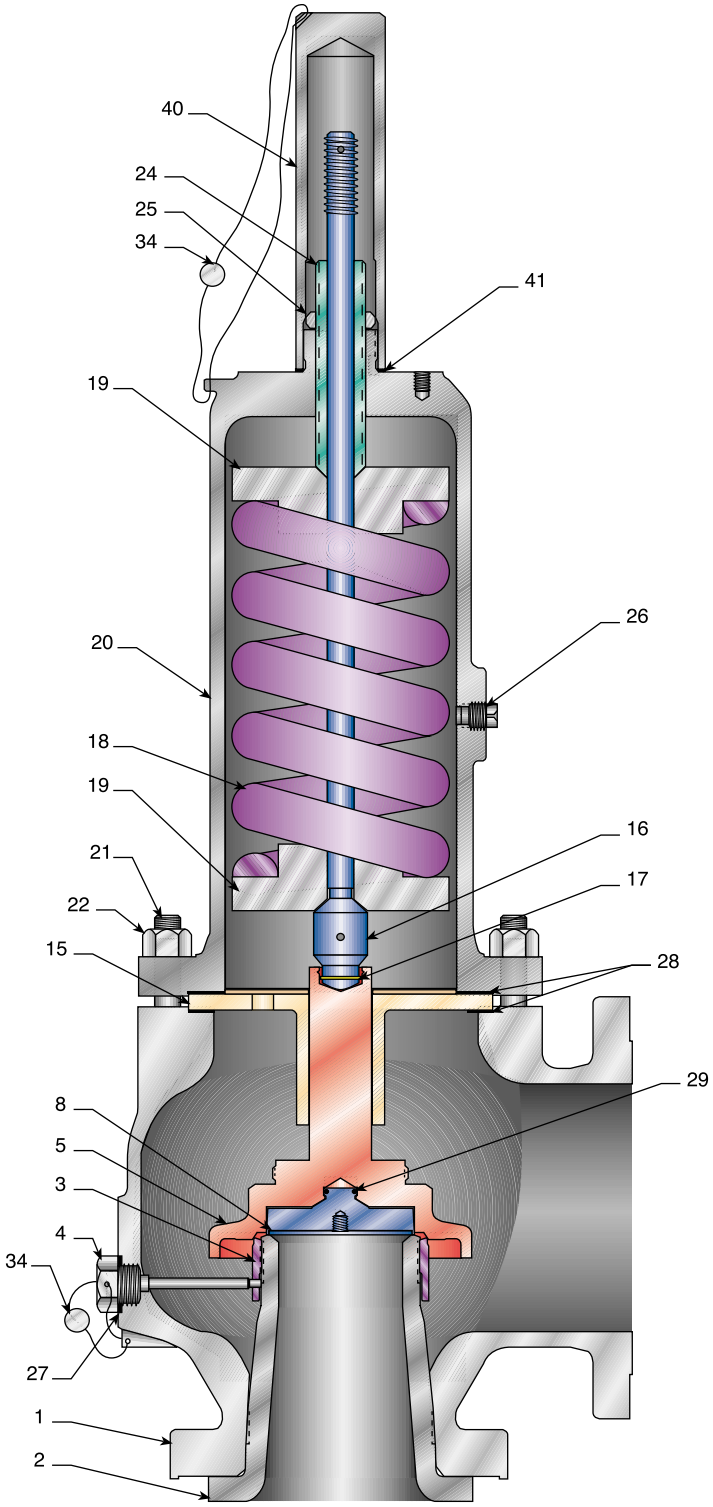
Ref. No.	Part Name	Standard Material
1	Body (JOS-E and JLT-JOS-E ( )5 and ( )6)	ASME SA216 GR. WCB
1	Body (JOS-E and JLT-JOS-E ( )7)	ASME SA217 GR. WC6
2	Nozzle	316 Stainless Steel
3	Nozzle Ring	316 Stainless Steel
4	Set Screw	316 Stainless Steel
5	Disc Holder	316L Stainless Steel
8	Disc Insert[1]	316 Stainless Steel
9	Retention Clip[2]	Inconel® X750
12	Retainer Screws	316 Stainless Steel
11	O-ring Retainer	316 Stainless Steel
10	O-ring[1]	Specify
15	Guide	ASTM A297 GR. HE SST
16	Spindle	416 Stainless Steel
17	Spindle Cotter Pin	Stainless Steel
18	Spring (JOS-E and JLT-JOS-E ( )5)	Chrome Steel[3]
18	Spring (JOS-E and JLT-JOS-E ( )6 and ( ) 7)	Alloy Steel [3,4]
19	Spring Washers	Carbon Steel
20	Bonnet (JOS-E and JLT-JOS-E ( )5 and ( )6)	ASME SA216 GR. WCB
20	Bonnet (JOS-E and JLT-JOS-E ( )7)	ASME SA217 GR. WC6
21	Bonnet Stud	ASME SA193 GR. B7
22	Bonnet Stud Nut	ASME SA194 CL 2H
24	Adjusting Bolt	316 Stainless Steel[5]
25	Adjusting Bolt Nut	316 Stainless Steel
26	Pipe Plug (Bonnet)	Carbon Steel
27	Set Screw Gasket[1]	Organic Fiber Non-Asbestos
28	Guide Gasket[1]	Organic Fiber Non-Asbestos
34	Seal and Wire	Lead and Stainless Steel
35	Seal Clip (Not Shown)	Stainless Steel
36	Nameplate (Not Shown)	Stainless Steel
40	Threaded Cap	Carbon Steel
41	Cap Gasket[1]	Organic Fiber Non-Asbestos

Notes

1. Recommended Spare Part.
2. Furnished with Disc Insert.
3. Corrosion resistant coating.
4. Crosby may upgrade to Inconel® X750.
5. Class 900#, 1500# and 2500# inlet ratings use 416 Stainless Steel.



Style JLT-JOS-E
(with O-ring seat)



Style JOS-E
(with metal-to-metal seat)

Crosby Styles JBS-E and JLT-JBS-E are pressure relief valves incorporating a bellows which is balanced to minimize the effect of back pressure on the performance characteristics. The balanced bellows design offsets the effects of variable back pressure on valve set pressure. The balanced bellows valve can also handle applications involving high built-up back pressure.

Additionally, the bellows serves to isolate the guide, spindle, spring and other parts contained in the bonnet chamber from corrosive fluids or media such as a highly viscous fluid or slurry which could render the relief valve inoperative.

For liquid service applications, Crosby offers Style JLT-JBS-E relief valves.
The standard bellows assembly of the Crosby Style JBS-E and JLT-JBS-E threads onto the disc holder with a bellows tailpiece and gasket. A welded bellows attachment is available as an option.

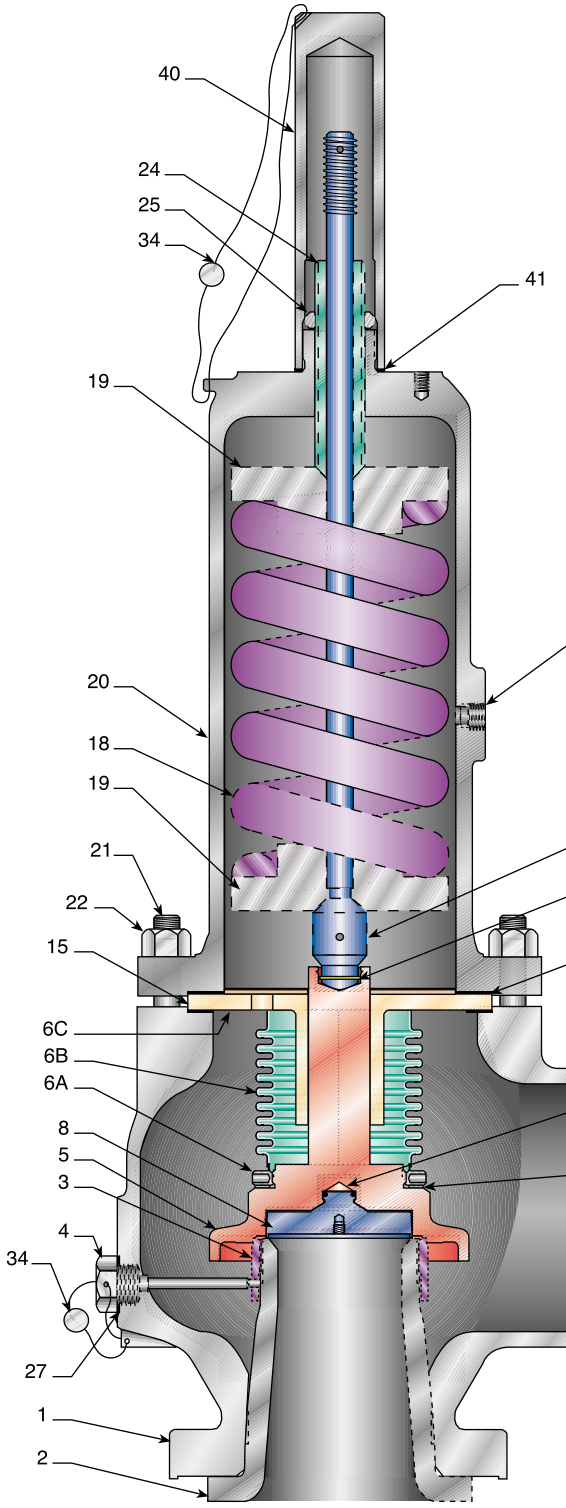
The JBS-E and JLT-JBS-E bellows and bellows flange are supplied in Inconel 625 as standard material for improved durability, corrosion resistance and service life.

Styles JBS-E and JLT-JBS-E standard materials of construction

Ref. No.	Part Name	Standard Material
1	Body (JBS-E and JLT-JBS-E ( )5 and ( )6)	ASME SA216 GR. WCB
1	Body (JBS-E and JLT-JBS-E ( )7)	ASME SA217 GR. WC6
2	Nozzle	316 Stainless Steel
3	Nozzle Ring	316 Stainless Steel
4	Set Screw	316 Stainless Steel
5	Disc Holder	316L Stainless Steel
6C	Bellows Flange[1] (not shown)	Inconel® 625
6B	Bellows[1] (not shown)	Inconel® 625
6A	Bellows Tailpiece[1] (not shown)	316L Stainless Steel
29	Tailpiece Gasket[2]	Organic Fiber Non-Asbestos
8	Disc Insert[2]	316 Stainless Steel
9	Retention Clip[3]	Inconel® X750
12	Retainer Screws (see page 5)	316 Stainless Steel
11	O-ring Retainer (see page 5)	316 Stainless Steel
10	O-ring[2] (see page 5)	Specify
15	Guide	ASTM A297 GR. HE SST
16	Spindle	416 Stainless Steel
17	Spindle Cotter Pin	Stainless Steel
18	Spring (JBS-E and JLT-JBS-E ( )5)	Chrome Steel[4]
18	Spring (JBS-E and JLT-JBS-E ( )6 and ( )7)	Alloy Steel[4,5]
19	Spring Washers	Carbon Steel
20	Bonnet (JBS-E and JLT-JBS-E ( )5 and ( )6)	ASME SA216 GR. WCB
20	Bonnet (JBS-E and JLT-JBS-E ( )7)	ASME SA217 GR. WC6
21	Bonnet Stud	ASME SA193 GR. B7
22	Bonnet Stud Nut	ASME SA194 CL 2H
24	Adjusting Bolt	316 Stainless Steel[6]
25	Adjusting Bolt Nut	316 Stainless Steel
27	Set Screw Gasket[1]	Organic Fiber Non-Asbestos
28	Guide Gasket[2]	Organic Fiber Non-Asbestos
34	Seal and Wire	Lead and Stainless Steel
35	Seal Clip (not shown)	Stainless Steel
26	Nameplate (not shown)	Stainless Steel
40	Threaded Cap	Carbon Steel
41	Cap Gasket[2]	Organic Fiber Non-Asbestos

Notes

1. Subassembly.
2. Recommended Spare Part.
3. Furnished with Disc Insert.
4. Corrosion resistant coating.
5. Crosby may upgrade to Inconel® X750.
6. Class 900#, 1500# and 2500# inlet ratings use 416 Stainless Steel.



Note
This vent must remain open on JBS-E and JLT-JBS-E construction

Style JBS-E
(with metal-to-metal seat)

Styles JOS-E and JLT-JOS-E
Conventional pressure relief valves for sour gas service per NACE MR0175

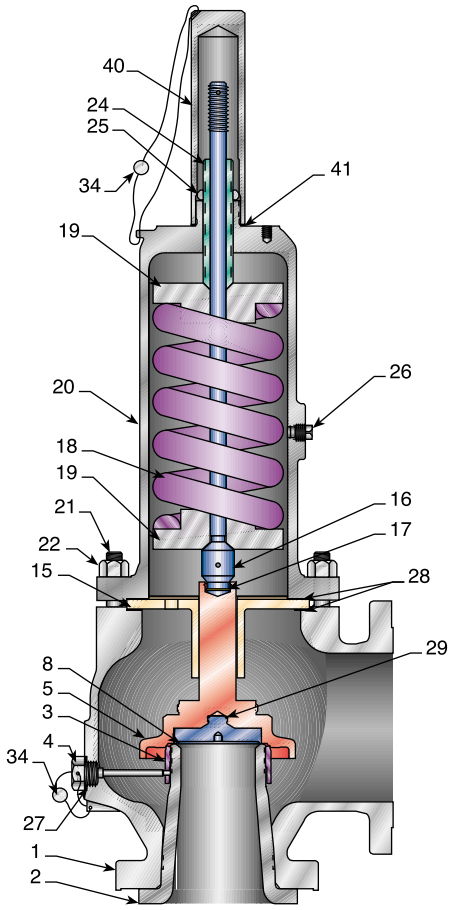
Level 1
For applications where compliance with NACE MR0175 is required for wetted parts in the primary (upstream) pressure zone of the pressure relief valve. Materials of construction for Level 1 can be found on page 4 and 5.

Level 2
For applications where compliance with NACE MR0175 is required for wetted parts in the primary (upstream) and secondary (downstream) pressure zones of the pressure relief valve.
While the materials recommended for the Crosby Style JOS-E and JLT-JOS-E sour gas valves are suitable for average service conditions, optional materials are available to provide additional resistance to corrosion beyond the minimum requirements of the standard.

Material specification

Ref No.	Part Name	Standard NACE Material Level 2
1	Body	ASME SA216 GR WCB
2	Nozzle	316 Stainless Steel
3	Nozzle Ring	316 Stainless Steel
4	Set Screw	316 Stainless Steel
5	Disc Holder	316L Stainless Steel
8	Disc Insert	316 Stainless Steel
9	Retention Clip	Inconel® X750
15	Guide	ASTM A297 GR. HE SST
16	Spindle	**316 Stainless Steel**
17	Spindle Cotter Pin	Stainless Steel
18	Spring	**Inconel® X750**
19	Spring Washer	**316 Stainless Steel**
20	Bonnet	ASME SA216 GR WCB
21	Bonnet Stud	Alloy Steel1
22	Bonnet Stud Nut	Alloy Steel1
24	Adjusting Bolt	**316 Stainless Steel**
25	Adjusting Bolt Nut	316 Stainless Steel
26	Pipe Plug (Bonnet)	Carbon Steel
27	Set Screw Gasket	Organic Fiber Non-Asbestos
28	Guide Gasket	Organic Fiber Non-Asbestos
34	Seal and Wire	Lead and Stainless Steel
35	Seal Clip (not shown)	Stainless Steel
40	Threaded Cap	Carbon Steel
41	Cap Gasket	Organic Fiber Non-Asbestos

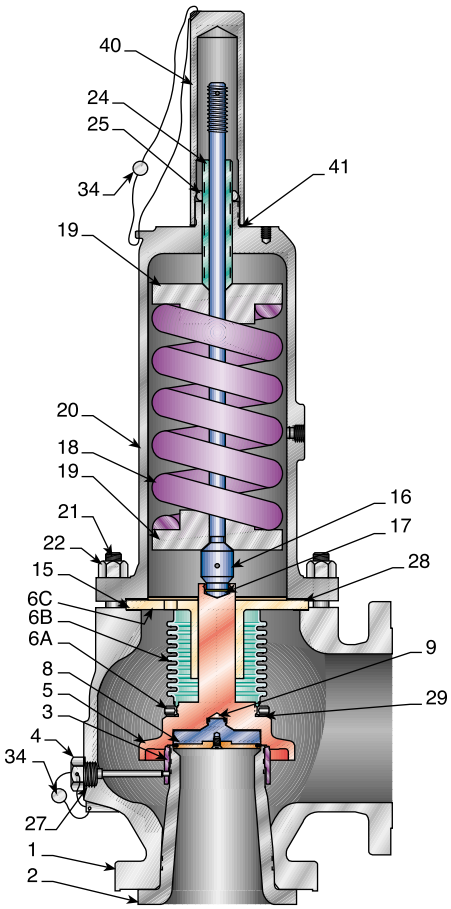
Bold materials indicate variation from standard product.



Style JOS-E

Notes

1. If Class I or II bolting is required, bonnet studs will be ASME A193 Gr B7M HRC-22 maximum and bonnet stud nuts will be ASME A194 Class 2HM HRC-22 maximum.



Style JBS-E (with bellows)

Styles JBS-E and JLT-JBS-E
Balanced bellows pressure relief valves for sour gas service per NACE MR0175

Level 1

For applications where compliance with NACE MR0175 is required for wetted parts in the primary (upstream) pressure zone of the pressure relief valve. Materials of construction for Level 1 can be found on page 6 and 7.

Level 2

For applications where compliance with NACE MR0175 is required for wetted parts in the primary (upstream) and secondary (downstream) pressure zones of the pressure relief valve. The Inconel® 625 bellows isolates the valve spring and other critical components above it from the process fluid.

While the materials recommended for the Crosby Style JBS-E and JLT-JBS-E sour gas valves are suitable for average service conditions, optional materials are available to provide additional resistance to corrosion beyond the minimum requirements of the standard.

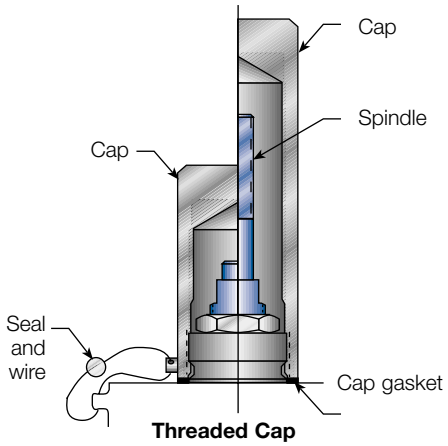
Material specification

Ref No.	Part Name	Standard NACE Material Level 2
1	Body	ASME SA216 GR. WCB
2	Nozzle	316 Stainless Steel
3	Nozzle Ring	316 Stainless Steel
4	Set Screw	316 Stainless Steel
6C	Bellows Flange[1]	Inconel® 625
6B	Bellows[1]	Inconel® 625
6A	Bellows Tailpiece[1]	316L Stainless Steel
29	Tailpiece Gasket	Organic Fiber Non-Asbestos
5	Disc Holder	316L Stainless Steel
8	Disc Insert	316 Stainless Steel
9	Retention Clip	Inconel® X750
15	Guide	ASTM A297 GR. HE SST
16	Spindle	416 Stainless Steel
17	Spindle Cotter Pin	Stainless Steel
18	Spring	**Chrome Steel-Aluminum Metallized**
19	Spring Washer	Steel
20	Bonnet	ASME SA216 GR. WCB
21	Bonnet Stud	Alloy Steel[2]
22	Bonnet Stud Nut	Steel[2]
24	Adjusting Bolt	316 Stainless Steel[3]
25	Adjusting Bolt Nut	316 Stainless Steel
27	Set Screw Gasket	Organic Fiber Non-Asbestos
28	Guide Gasket	Organic Fiber Non-Asbestos
34	Seal and Wire	Lead and Stainless Steel
35	Seal Clip (not shown)	Stainless Steel
40	Threaded Cap	Carbon Steel
41	Cap Gasket	Organic Fiber Non-Asbestos

Bold materials indicate variation from standard product.

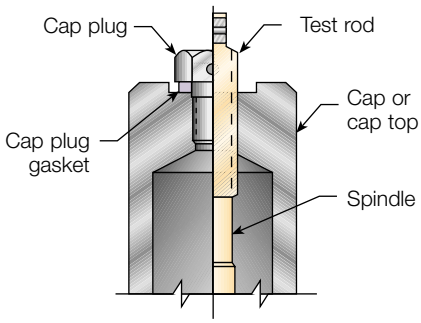
Notes

1. Subassembly.
2. If Class I or II bolting is required, bonnet studs will be ASME A193 Gr B7M HRC-22 maximum and bonnet stud nuts will be ASME A194 Class 2HM HRC-22 maximum.
3. Class 900#, 1500# and 2500# inlet ratings use 416 Stainless Steel.



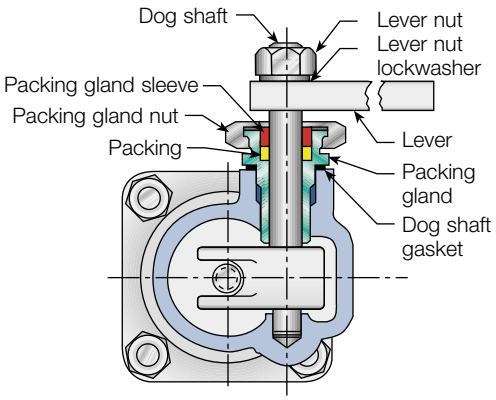
Threaded Cap

Type A | Type J (standard)



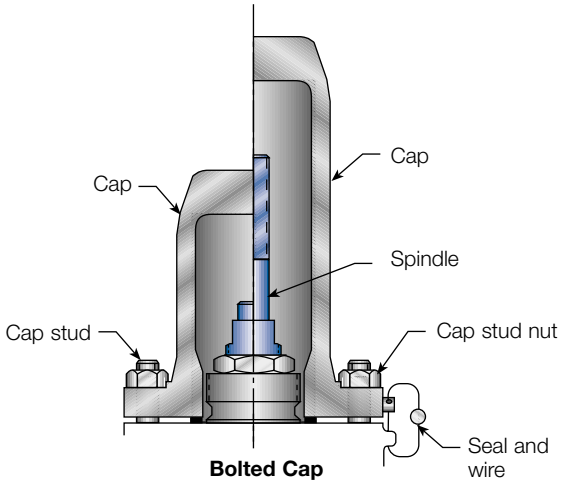
Cap test rod

Type B - Threaded cap
Type E - Packed lifting lever
Type H - Bolted cap
Type K - Threaded cap (standard)
Type M - Bolted cap (standard)



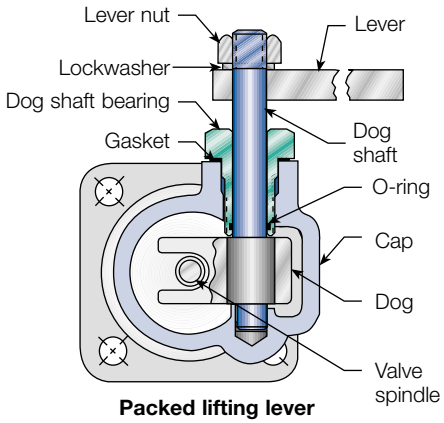
Packed lifting lever

Type D
(Top view of packing gland construction used for special materials)



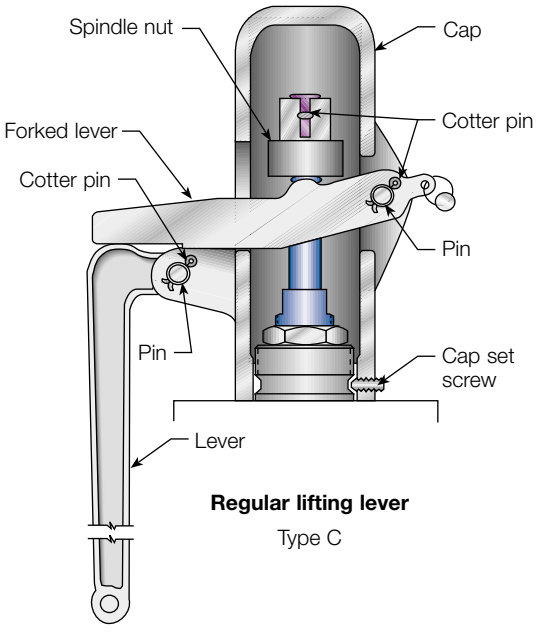
Bolted Cap

Type G | Type L (standard)



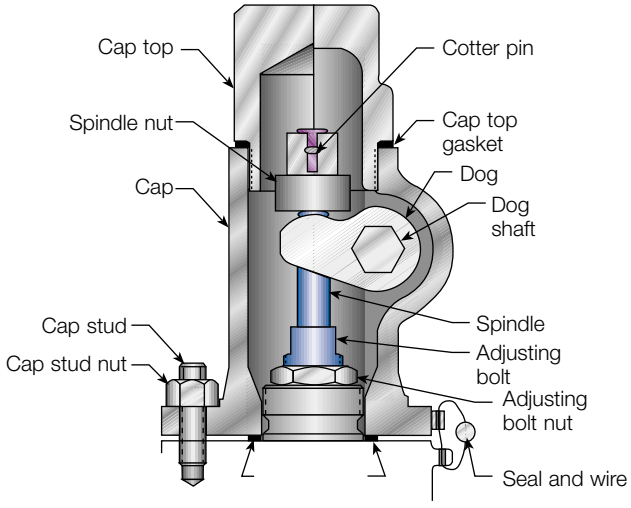
Packed lifting lever

Type D
(Top view)



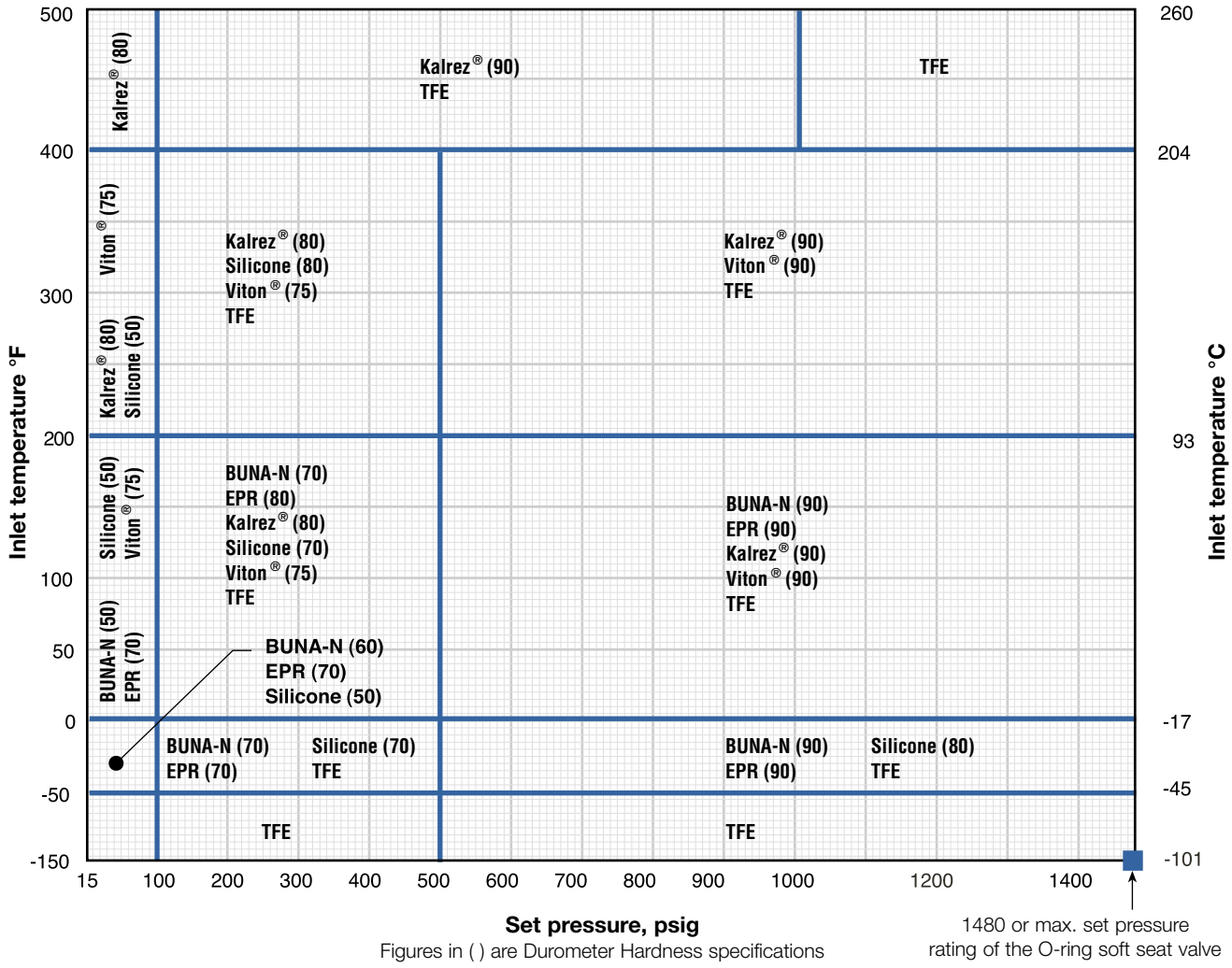
Regular lifting lever

Type C



Packed lifting lever

Type D



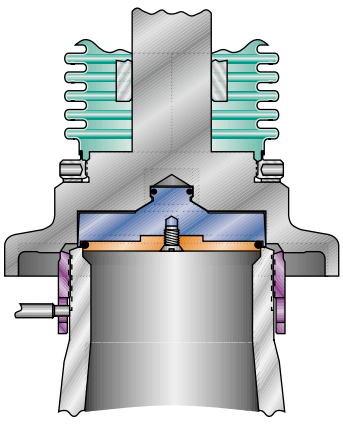
Figures in ( ) are Durometer Hardness specifications

Maximum set pressure limits

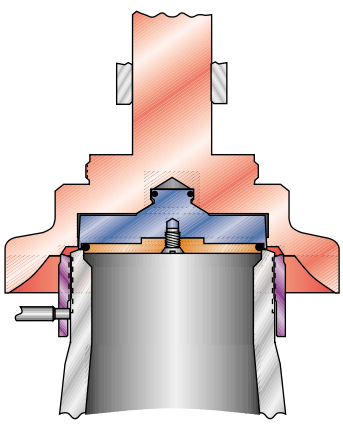
Orifice	Maximum Set Pressure psig	barg
D	1480	102
E	1480	102
F	1480	102
G	1480	102
H	1480	102
J	1480	102
K	1480	102
L	1000	68.9
M	1100	75.8
N	1000	68.9
P	1000	68.9
Q	600	41.3
R	300	20.6
T	300	20.6
T2	300	20.6

Notes

- EPR = Ethylene Propylene Rubber
  TFE = Tetrafluoroethylene
- Other soft seat materials are available on request. For O-ring seats below -150°F [-101°C] consult Crosby. For steam service, metal-to-metal seats are recommended consult Crosby if soft seats are required.



JBS-E O-Ring Soft Seat



JLT-JOS-E O-Ring Soft Seat

Size Inlet x Orifice x Outlet	Style	Pressure/Temperature Inlet Flange Range Ratings[3]	Seat Type	Material Variations[4]	Caps and Lifting Levers (Type)
1" D 2" thru 8" T2 10"[5]	**JOS-E** Conventional **JBS-E** With bellows **JLT-JOS-E** Conventional with liquid trim[1] **JLT-JBS-E** Bellows with liquid trim[1] **JBS-BP-E** Bellows with back pressure balancing piston **JLT-JBS-BP-E** Bellows with liquid trim and back pressure balancing piston[1] **JOS-H-E** Conventional JOS with open bonnet for ASME Code Section VIII steam service to +800°F [+427°C][2]	1 - Cl 150 Flange 2 - Cl 300 Flange (A) 3 - Cl 300 Flange 4 - Cl 600 Flange (B) 5 - Cl 900 Flange 6 - Cl 1500 Flange 7 - Cl 2500 Flange Note (A) - Lightweight Cl.300 flange per API-RP-526 Note (B) - Except "T" orifice is Cl.300 flange 2 - -450°F to -76°F [-268°C to -60°C] 4 - -75°F to -21°F [-59°C to -30°C] 5*- -20°F to +650F [-29°C to +343°C] 6 - +651°F to +800°F [+344°C to +427°C] 7 - +801°F to +1000°F [+428°C to +538°C] * Except for Style JOS-H-E with open bonnet, chrome steel spring may be used to +800°F [+427C°]	None - Metal "OR" - O-Ring When ordering soft seats, specify material.	None - Standard Materials S - All 316 St. St. S4 - All 316 St. St. except body, bonnet, cap and spring M - All Monel with Monel or Inconel spring M1 - Monel nozzle and disc insert M4 - All Monel except body, bonnet, cap, spring and washers M5 - All Monel except spring and washers H - All Hastelloy C H1 - Hastelloy C nozzle and disc insert H4 - All Hastelloy C except body, bonnet, cap, spring and washers H5 - All Hastelloy C except spring and washers N2 - NACE Level 2 JOS-E = Inconel X750 spring, 316 St. St. washers, spindle and adjusting bolt JBS-E = Aluminum Metallized Spring	Type J - (Standard) threaded cap Type K - Threaded cap with test rod Type C - Regular lifting lever[6] Type D - Packed lifting lever[6] Type E - Packed lifting lever with test rod[6] Type L - Bolted cap Type M - Bolted cap with test rod **Optional Caps for Height Restricted Applications** Type A - Threaded cap Type B - Threaded cap with test rod Type G - Bolted cap Type H - Bolted cap with test rod

Available options

- Welded bellows attachment
- Flange facings such as ring type joint
- Sour gas service materials and certifications
- Special Cl 300 outlets (where not standard)
- Special Teflon®* (FEP) bellows coating
- Special spring coatings or plating
- Block bodies
- Bonnet and cap inside painting or plastic coating
- Bug screens
- Special materials not cataloged
- Flanges to international standards
- Special flanges
- Stellited nozzle and disc insert
- Special casting or machined surface tests
- Special cleaning
- Special painting or coatings
- Special testing
- Steam jacketed bodies
- Supplementary loading

* Reg. U.S. Patent Office for DuPont's fluorocarbon resins.

Notes

1. Style designations "JLT-JOS-E", "JLT-JBS-E", or "JLT-JBS-BP-E" signify Styles JOS-E, JBS-E or JBS-BP-E with liquid trim for liquid service.
2. Upper temperature limit is +800°F [+427°C] for Style JOS-H-E open bonnet valve for ASME Code Section VIII steam service.
3. See pages 14 - 43 in Catalog 310 for appropriate maximum set pressures and temperatures.
4. See pages 12 - 13 in Catalog 310 for complete listings of materials of construction.
5. Larger sizes are available. Ask for Catalog No. 307.
6. ASME Code Section VIII rules require that pressure relief valves for water service over +140°F [+60°C], steam and air shall have a lifting device.