



CROSBY OMNI-TRIM® DIRECT SPRING PRESSURE RELIEF VALVES

Reliable and economical overpressure protection for thermal relief and many more applications



FEATURES

- ASME/NB certified capacities for air, water and steam.
- Full compliance with all major global pressure relief standards including ASME Section VIII and XIII (UV Designator), API 527, EN4126, PED/CE and numerous other standards.
- Series 900 uses single trim design for liquid, gas, and vapor services.
- Highly customizable to meet most applications.
- Interchangeable parts to reduce maintenance costs.
- Full nozzle configuration.
- Simple and reliable design.
- Easy maintenance.
- Soft seat options for superior seat tightness.
- BP balanced piston option to offset the effects of variable back pressure.

GENERAL APPLICATION

The Crosby OMNI-TRIM pressure relief valve is the proven solution for overpressure protection and/or thermal relief applications on air, gas, vapor, liquid and steam. Its simple design makes it ideal for refineries, chemical and petrochemical plants, power plant auxiliary systems and pulp and paper mills.

TECHNICAL DATA

| | |
|--------------------|--|
| Sizes: | 1/2" x 1" to 2" x 2" and 1 1/2" x 2 1/2" (DN 15 x 25 to 50 x 50 and 40 x 65) |
| Orifices: | 0.074 to 0.503 in ² (47.7 to 325 mm ²) |
| Connections: | NPT, flanged, male socket weld |
| Temperature range: | -450 to +750°F (-268 to +399°C) |
| Set pressures: | 5 to 5000 psig (0.34 to 345 barg) |
| Steam limit: | 1000 psig (69 barg) |
| Codes: | ASME Section VIII and XIII (UV Designator) and ASME Section III (NV Designator) |

CROSBY OMNI-TRIM®

DIRECT SPRING PRESSURE RELIEF VALVES

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MODELS OVERVIEW

Series 900 OMNI-TRIM

Series 900 OMNI-TRIM pressure relief valves provide overpressure protection on air, gas, vapor, liquid thermal relief and steam service. Maximum fixed blowdown is typically 20% or less. Standardization of components in the OMNI-TRIM provides easy assembly, durability, ease of maintenance and lower inventory costs. The design and wide array of options provide maximum versatility and premium performance.

Sizes: ½" x 1" to 2" x 2" and 1½" x 2½"
 Orifices: 0.074 to 0.503 in²
 (47.74 to 324.5 mm²)
 Connections: NPT, flanged, male socket weld
 Temperature range: -450 to +750°F (-268 to +399°C)
 Set pressures: 5 to 5000 psig
 (0.34 to 344.83 barg)
 Steam limit: 1000 psig
 Code: ASME Section VIII and XIII
 (UV Designator) and ASME
 Section III (NV Designator)
 (15 psig and above)

Series BP OMNI-TRIM®

Series BP OMNI-TRIM® pressure relief valve is a piston, single trim designed valve for gas, vapor and liquid applications involving variable back pressure. Full nozzle design with O-ring seat as standard.

Sizes: ¾" x 1" and 1" x 1"
 Orifices: 0.074 and 0.110 in²
 (47.74 and 71 mm²)
 Connections: NPT, flanged
 Temperature range: -20 to +400°F (-28 to +204°C)
 Set pressures: 50 to 1500 psig
 (3.45 to 103.44 barg)
 Code: ASME Section VIII and XIII
 (UV Designator) and ASME
 Section III (NV Designator)

CROSBY OMNI-TRIM®

SERIES 900 FIXED BLOWDOWN OMNI-TRIM PRESSURE RELIEF VALVE

PRODUCT OVERVIEW

Series 900 OMNI-TRIM pressure relief valves provide overpressure protection on air, gas, vapor, liquid thermal relief and steam service. Maximum fixed blowdown is typically 20% or less. Standardization of components in the OMNI-TRIM provides easy assembly, durability, ease of maintenance and lower inventory costs. The design and wide array of options provide maximum versatility and premium performance.

ASME code requirements

The valves are manufactured to ASME Boiler and Pressure Vessel Code, ASME Section VIII and XIII (UV Designator) for pressures of 15 psig (1.03 barg) and above and can also be manufactured to ASME Section III (NV Designator) for nuclear-related applications.

Other type approvals and certifications

- Canadian Registration Number (CRN)
- China Manufacturing License (TS)
- Pressure Equipment Directive (2014/68/EU), (ISO-4126-1) (OE)
- United States Coast Guard (USCG)

Connections

The Series 900 OMNI-TRIM is supplied with screwed inlet and outlet connections as standard but is also available with optional flanged end connections or male socket weld ends. Standard flanged end connections are Lap Joint Inlet and Lap Joint Outlet for the 972, 981 & 991 models. However, the standard flanged end connections are Lap Joint Inlet and Integral Cast Outlet for the 951, 955, 961 & 965 models. Optional flanged end connections with unique face-to-face dimensions to match existing installations are also available. Contact your sales representative for availability of these and other special designs.

For installations where a bolted cylinder is preferred for maintenance reasons, a special version of the No. 5 orifice is available in ¾" x 1 connection size only. This valve is designated as 95110199A and has a maximum set pressure of 1500 psig (103 barg). Standard connections are ¾" x 1 MNPT x FNPT. For optional flanged construction, please contact your sales representative.

Seat design

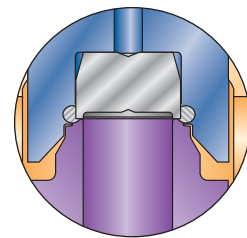
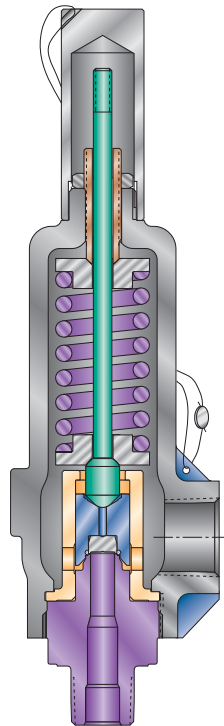
The valve is available with flat metal-to-metal, elastomer or Polytetrafluoroethylene O-ring soft seats for optimum seat tightness and minimal maintenance. O-rings are standard commercial sizes.

O-RING SOFT SEAT MATERIALS⁽¹⁾ AND PRESSURE/TEMPERATURE LIMITS

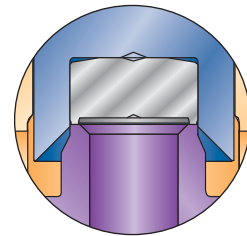
| Material | Set pressure psig (barg) | | Inlet temperature °F (°C) | |
|---------------------|--------------------------|---------------|---------------------------|---------------|
| | Minimum | Maximum | Minimum | Maximum |
| NBR | 15 (1.03) | 2500 (172.41) | -50 (-45.6) | +250 (+121.1) |
| FKM | 15 (1.03) | 2500 (172.41) | 0 (-17.8) | +400 (+204.4) |
| EPR ⁽²⁾ | 15 (1.03) | 2500 (172.41) | -50 (-45.6) | +250 (+121.1) |
| FFKM | 15 (1.03) | 2500 (172.41) | 0 (-17.8) | +500 (+260.0) |
| PTFE ⁽²⁾ | 100 (6.89) | 2500 (172.41) | -50 (-45.6) | +500 (+260.0) |
| Silicone | 15 (1.03) | 1500 (103.44) | -50 (-45.6) | +400 (+204.4) |

NOTES

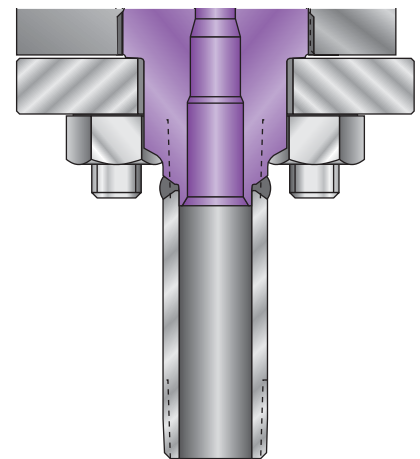
1. Metal-to-metal seats are recommended for steam service. Contact your sales representative if soft seats are required.
2. EPR = ethylene propylene rubber, PTFE = Polytetrafluoroethylene



O-ring soft seat



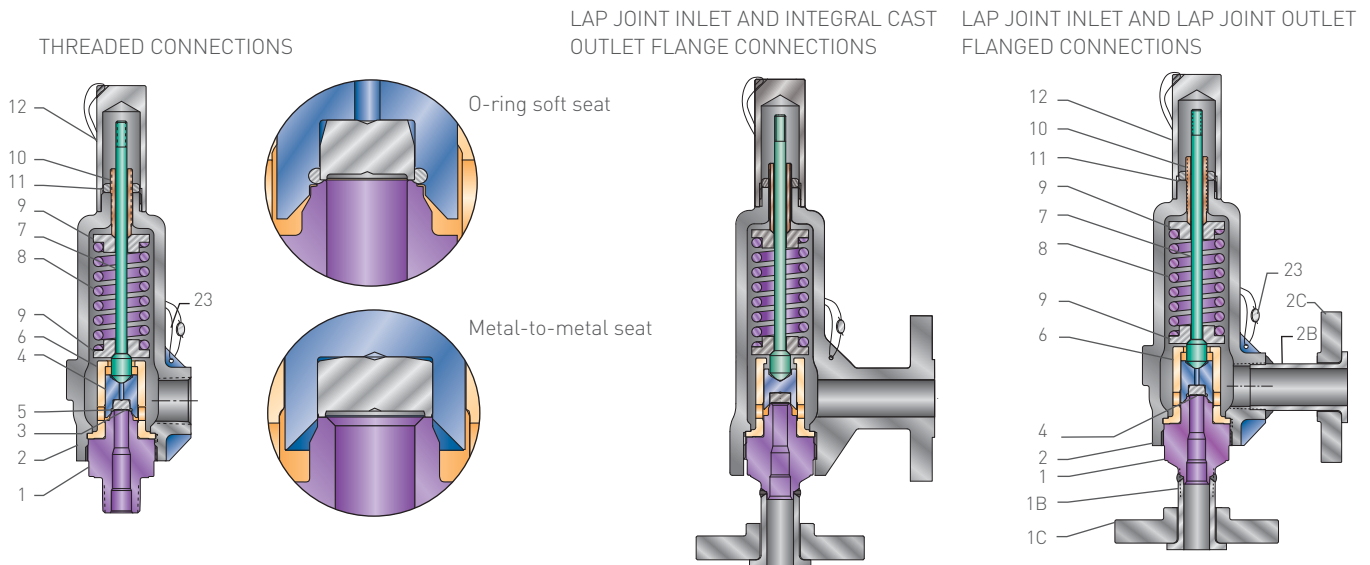
Metal-to-metal seat



Series 900 bolted cylinder

CROSBY OMNI-TRIM®

SERIES 900 FIXED BLOWDOWN OMNI-TRIM PRESSURE RELIEF VALVE



MATERIALS OF CONSTRUCTION

| Part no. | Part name | Standard materials | Variations from standard materials | | | | | | |
|----------|-----------------------------|--|---|---|--|---|--|--|--|
| | | 0 ⁽¹³⁾ | Material designation | | | | | | |
| | | | 1 | 2 ⁽¹⁰⁾ | 3 ⁽¹³⁾ | 4 ⁽¹⁰⁾ | 5 ⁽¹³⁾ | 6 | 7 ^(10, 13) |
| | | -50°F to +750°F [-45.6°C to +399°C] | -450°F to +500°F [-268°C to +260°C] | -450°F to +750°F [-268°C to +399°C] | -50°F to +750°F [-45.6°C to +399°C] | -320°F to +750°F [-196°C to +399°C] | -50°F to +750°F [-45.6°C to +399°C] | -320°F to +750°F [-196°C to +399°C] | -50°F to +750°F [-45.6°C to +399°C] |
| | | | | | | | | | ANSI/NACE MR0175/ ISO 15156-1:2015 |
| 1 | Base | 316 SS | 316 SS | 316 SS | Monel® | Monel® | Hastelloy® C | Hastelloy® C | 316 SS |
| 2 | Cylinder ^(11,12) | Carbon steel SA-216 Gr. WCB | 316 SS SA-351 Gr. CF8M | 316 SS SA-351 Gr. CF8M | Carbon steel SA-216 Gr. WCB | Monel ⁽⁷⁾ ASTM A 494 Gr. M35-1 | Carbon steel SA-216 Gr. WCB | Hastelloy® C SA-494 Gr. CW-12MW | Carbon steel SA-216 Gr. WCB |
| 3 | Disc insert ⁽³⁾ | 316 SS | 316 SS | 316 SS | Monel® | Monel® | Hastelloy® C | Hastelloy® C | 316 SS |
| 4 | Disc holder | 316 SS ⁽¹⁾ | 316 SS ⁽¹⁾ | 316 SS ⁽¹⁾ | Monel® | Monel® | Hastelloy® C | Hastelloy® C | 316 SS ⁽¹⁾ |
| 5 | O-ring ^(2,3) | Specify | Specify | Specify | Specify | Specify | Specify | Specify | Specify |
| 6 | Guide | 316 SS | 316 SS | 316 SS | Monel® | Monel® | Hastelloy® C | Hastelloy® C | 316 SS |
| 7 | Spindle ⁽⁸⁾ | 416 SS | 316 SS | 316 SS | 416 SS | Monel® | 416 SS | Hastelloy® C | 316 SS |
| 8 | Spring | 17-7PH SS | 316 SS | Inconel® X750 | Inconel® X750 | Inconel® X750 | Inconel® X750 | Hastelloy® C | Inconel® X750 |
| 9 | Spring washers | 416 SS | 316 SS | 316 SS | 316 SS | Monel® | 316 SS | Hastelloy® C | 316 SS |
| 10 | Adjusting bolt | 416 SS | 316 SS | 316 SS | 416 SS | Monel® | 416 SS | Hastelloy® C | 316 SS |
| 11 | Adj. bolt nut | Carbon steel | 316 SS | 316 SS | Carbon steel | Monel® | Carbon steel | Hastelloy® C | 316 SS |
| 12 | Type A cap ⁽⁴⁾ | Carbon steel | 316 SS | 316 SS | Carbon steel | Monel® | Carbon steel | Hastelloy® C | Carbon steel |
| 13 | Nameplate ⁽⁵⁾ | 300 Series SS | 300 Series SS | 300 Series SS | 300 Series SS | 300 Series SS | 300 Series SS | 300 Series SS | 300 Series SS |
| 14 | Drive screws ⁽⁵⁾ | SS | SS | SS | SS | SS | SS | SS | SS |
| 15 | Seal and wire | Lead and SS | Lead and SS | Lead and SS | Lead and SS | Lead and SS | Lead and SS | Lead and SS | Lead and SS |
| 1B | Lap joint stub end (inlet) | 316 SS | 316 SS | 316 SS | Monel® | Monel® | Hastelloy® C | Hastelloy® C | 316 SS |
| 1C | Inlet flange | Carbon steel ⁽⁶⁾ | 316 SS | 316 SS | Carbon steel ⁽⁶⁾ | Carbon steel ⁽⁶⁾ | Carbon steel ⁽⁶⁾ | Carbon steel ⁽⁶⁾ | Carbon steel ⁽⁶⁾ |
| 2B | Lap joint stub end (outlet) | Carbon steel ⁽⁶⁾ | 316 SS | 316 SS | Carbon steel ⁽⁶⁾ | Monel® | Carbon steel ⁽⁶⁾ | Hastelloy® C | Carbon steel ⁽⁶⁾ |
| 2C | Outlet flange | Carbon steel ⁽⁶⁾ | 316 SS | 316 SS | Carbon steel ⁽⁶⁾ | Carbon steel ⁽⁶⁾ | Carbon steel ⁽⁶⁾ | Carbon steel ⁽⁶⁾ | Carbon steel ⁽⁶⁾ |

Materials in bold indicate variation from standard.

NOTES

- Material is 17-4PH SS for steam applications.
- Refer to page 5 for pressure/temperature limits and available O-ring materials.
Used on soft seated valve only.
- Recommended spare part.
- Refer to page 9 for other available cap styles and materials.
- Not shown.
- Low temperature limit for carbon steel flanges is -20°F (-28.9°C).
Use 316 SS below -20°F.
- ASME Code Case 1750-30.
- Styles 9511 ()-STM and 9611 ()-STM spindle furnished as spindle and spindle ball sub-assembly.
- A nickel/graphite based lubricant/sealant is used on threads, sealing and bearing surfaces.
- Available with ANSI/NACE MR0175/ISO 15156-1:2015 [N2] model number supplement.
- The standard flanged end connections are Lap Joint Inlet and Integral Cast Outlet for the 951, 955, 961, 965 & 972 models in WCB & 316 SS materials only.
- Standard flanged end connections are Lap Joint Inlet and Lap Joint Outlet for the 981 & 991 models.
- Please consult factory for applications with temperature below -20°F (-28.9°C).

CROSBY OMNI-TRIM®

SERIES BP BALANCED OMNI-TRIM PRESSURE RELIEF VALVE

PRODUCT OVERVIEW

Series BP OMNI-TRIM® pressure relief valve is a piston, single trim designed valve for gas, vapor and liquid applications involving variable back pressure. Full nozzle design with O-ring seat as standard.

Back pressure

The maximum allowable back pressure in liquid applications is 70% of set pressure; in vapor and gas applications it is 50% and for liquid thermal relief applications 90% of set pressure. Note: The maximum back pressure rating is 400 psig (27.58 barg). For back pressures greater than 400 psig (27.58 barg), consult Crosby.

Blowdown

Series BP blowdown is fixed and non-adjustable (typically 25% or less) on liquid, gas and vapor applications.

Optional connections

The valves may be furnished with optional flanged connections up to ANSI Class 1500. Standard flanged connections are lap joint stub end construction.

Materials

Optional materials of construction are available for special applications or conditions involving corrosive fluids. All materials used in the primary (wetted while the valve is closed) pressure zone of the pressure relief valve meet the material requirements of the current revision of ANSI/NACE MR0175/ISO 15156-1:2015. Contact your sales representative for specific compliance to NACE requirements. Special cleanings, coatings and lubricants are also available on application.

The purchaser must decide whether their specific application requires compliance to NACE recommendations. Emerson will provide materials that meet the material requirements in the requested NACE specification; however, the purchaser must ensure all valve materials selected meet their application's NACE requirements.

Special cleanings, coatings and lubricants are also available on application.

ASME code requirements

Series BP pressure relief valves are manufactured to ASME Boiler and Pressure Vessel Code, ASME Section VIII and XIII (UV Designator) and ASME Section III (NV Designator).

Other type approvals and certifications

- Canadian Registration Number (CRN)
- China Manufacturing License (TS)

O-RING SOFT SEAT MATERIALS AND PRESSURE/TEMPERATURE LIMITS

| Material | Set pressure psig (barg) | | Inlet temperature °F (°C) | |
|----------|--------------------------|---------------|---------------------------|---------------|
| | Minimum | Maximum | Minimum | Maximum |
| NBR | 50 (3.45) | 1500 (103.44) | -20 (-28) | +250 (+121.1) |
| FKM | 50 (3.45) | 1500 (103.44) | 0 (-17.8) | +400 (+204.4) |
| EPR* | 50 (3.45) | 1500 (103.44) | -20 (-28) | +250 (+121.1) |
| FFKM | 100 (6.89) | 1500 (103.44) | 0 (-17.8) | +400 (+204.4) |
| PTFE* | 100 (6.89) | 1500 (103.44) | -20 (-28) | +400 (+204.4) |
| Silicone | 50 (3.45) | 1500 (103.44) | -20 (-28) | +400 (+204.4) |

NOTE

* EPR = ethylene propylene rubber, PTFE = Polytetrafluoroethylene

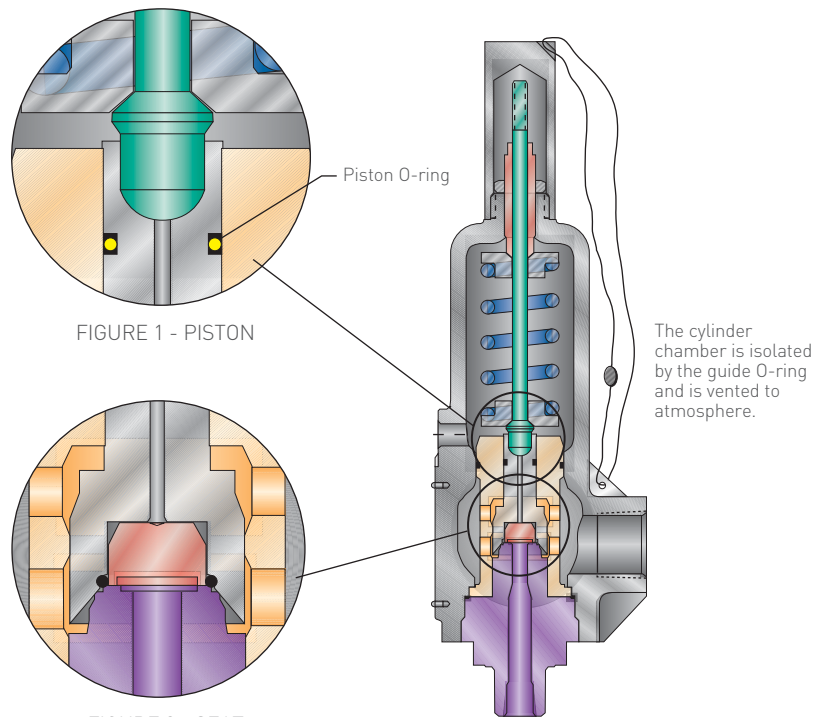


FIGURE 1 - PISTON

FIGURE 2 - SEAT

- Pressure Equipment Directive (2014/68/EU), (ISO-4126-1) [OE]

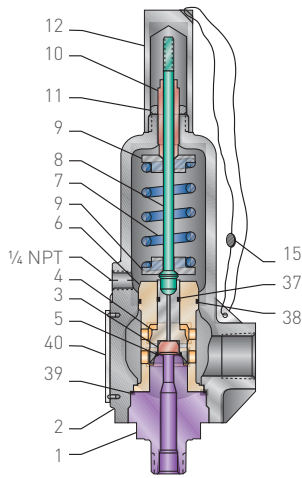
Seat design

Valves are available with elastomer or PTFE O-ring soft seats for optimum seat tightness and minimal maintenance. All O-rings are standard commercial sizes.

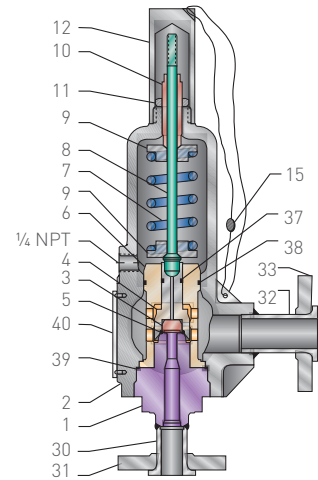
CROSBY OMNI-TRIM®

SERIES BP OMNI-TRIM PRESSURE RELIEF VALVE

THREADED CONNECTIONS



FLANGED CONNECTIONS



MATERIALS OF CONSTRUCTION

| Part no. | Part name | Standard materials | Variations from standard materials | | | | | |
|----------|--------------------------------|--------------------------------------|---|--------------------------------------|---|--------------------------------------|---|--|
| | | 0 | Material designation | | | | | |
| | | | 1 | 3 | 4 ⁽⁶⁾ | 5 | 6 | 7 ⁽⁶⁾ |
| | | -20°F to +400°F (-28°C to +204°C) | -20°F to +400°F (-28°C to +204°C) | -20°F to +400°F (-28°C to +204°C) | -20°F to +400°F (-28°C to +204°C) | -20°F to +400°F (-28°C to +204°C) | -20°F to +400°F (-28°C to +204°C) | ANSI/NACE ⁽⁵⁾ MR0175/ ISO 15156-1:2015 -20°F to +400°F (-28°C to +204°C) |
| 1 | Base | 316 SS | 316 SS | Monel® | Monel® | Hastelloy® C | Hastelloy® C | 316 SS |
| 2 | Cylinder | Carbon steel SA-216 Gr. WCB | 316 SS SA-351 Gr. CF8M | Carbon steel SA-216 Gr. WCB | Monel® ASTM A 494 Gr. M35-1 | Carbon steel SA-216 Gr. WCB | Hastelloy® C SA-494 Gr. CW-12MW | Carbon steel SA-216 Gr. WCB |
| 3 | Disc insert ⁽¹⁾ | 316 SS | 316 SS | Monel® | Monel® | Hastelloy® C | Hastelloy® C | 316 SS |
| 4 | Disc holder | 316 SS | 316 SS | Monel® | Monel® | Hastelloy® C | Hastelloy® C | 316 SS |
| 5 | Seat O-ring ^(1,2) | Specify | Specify | Specify | Specify | Specify | Specify | Specify |
| 6 | Guide | 316 SS | 316 SS | Monel® | Monel® | Hastelloy® C | Hastelloy® C | 316 SS |
| 7 | Spindle | 416 SS | 316 SS | 416 SS | Monel® | 416 SS | Hastelloy® C | 316 SS |
| 8 | Spring | 17-7PH SS | 316 SS | Inconel® X750 | Inconel® X750 | Inconel® X750 | Hastelloy® C | Inconel® X750 |
| 9 | Spring washers | 416 SS | 316 SS | 316 SS | Monel® | 316 SS | Hastelloy® C | 316 SS |
| 10 | Adjusting bolt | 416 SS | 316 SS | 416 SS | Monel® | 416 SS | Hastelloy® C | 316 SS |
| 11 | Adj. bolt nut | Carbon steel | 316 SS | Carbon steel | Monel® | Carbon steel | Hastelloy® C | 316 SS |
| 12 | Type A cap ⁽³⁾ | Carbon steel | 316 SS | Carbon steel | Monel® | Carbon steel | Hastelloy® C | Carbon steel |
| 13 | Nameplate ⁽⁴⁾ | 300 Series SS | 300 Series SS | 300 Series SS | 300 Series SS | 300 Series SS | 300 Series SS | 300 Series SS |
| 14 | Drive screws ⁽⁴⁾ | SS | SS | SS | SS | SS | SS | SS |
| 15 | Seal and wire | Lead and SS | Lead and SS | Lead and SS | Lead and SS | Lead and SS | Lead and SS | Lead and SS |
| 30 | Lap joint stub end (inlet) | 316 SS | 316 SS | Monel® | Monel® | Hastelloy® C | Hastelloy® C | 316 SS |
| 31 | Inlet flange | Carbon steel | 316 SS | Carbon steel | Carbon steel | Carbon steel | Carbon steel | Carbon steel |
| 32 | Lap joint stub end (outlet) | Carbon steel | 316 SS | Carbon steel | Monel® | Carbon steel | Hastelloy® C | Carbon steel |
| 33 | Outlet flange | Carbon steel | 316 SS | Carbon steel | Carbon steel | Carbon steel | Carbon steel | Carbon steel |
| 37 | O-ring piston ⁽¹⁾ | Specify | Specify | Specify | Specify | Specify | Specify | Specify |
| 38 | O-ring guide ⁽¹⁾ | Specify | Specify | Specify | Specify | Specify | Specify | Specify |
| 39 | O-ring cylinder ⁽¹⁾ | Specify | Specify | Specify | Specify | Specify | Specify | Specify |
| 40 | Caution plate | 300 Series SS | 300 Series SS | 300 Series SS | 300 Series SS | 300 Series SS | 300 Series SS | 300 Series SS |

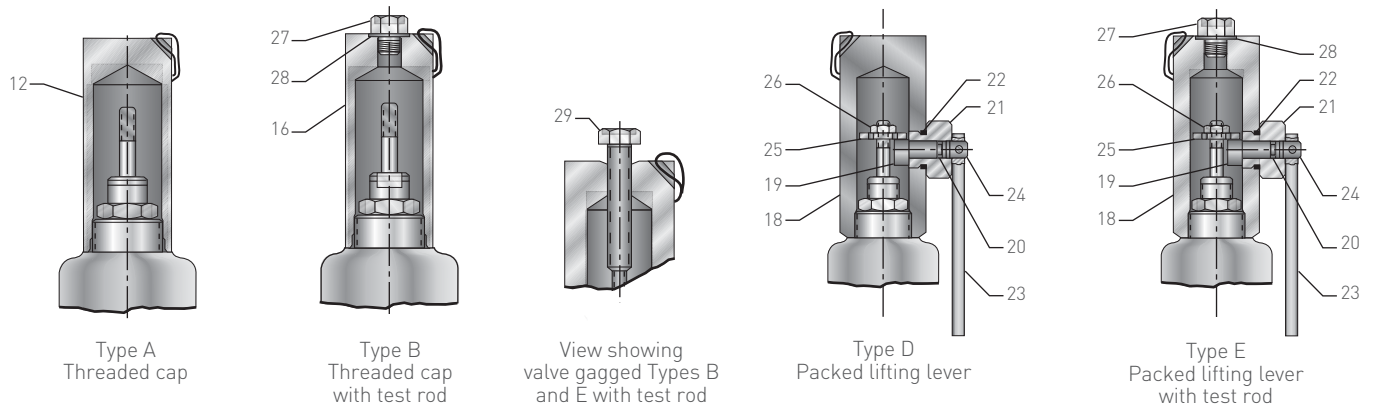
Materials in bold indicate variation from standard.

NOTES

1. Recommended spare part.
2. Refer to page 7 for pressure/temperature limits and available O-ring materials.
3. Refer to page 9 for other available cap styles and materials.
4. Not shown.
5. Contact your sales representative for specific compliance to NACE requirements.
6. Available with ANSI/NACE MR0175/ISO 15156-1:2015 (N2) model number supplement.

CROSBY OMNI-TRIM®

CAPS AND LIFTING LEVERS



MATERIALS OF CONSTRUCTION

| Cap type | Part no. | Part name | Material designation | | | |
|----------|----------|-------------------|----------------------|----------------------|----------------|---------------------|
| | | | 0, 3, 5 | 1, 2 | 4 | 6 |
| A | 12 | Cap | Steel | 316 SS | Monel® | Hastelloy® C |
| B | 16 | Cap | Steel | 316 SS | Monel® | Hastelloy® C |
| | 27 | Cap plug | Steel | 316 SS | Monel® | Hastelloy® C |
| | 28 | Cap plug O-ring | FKM | FKM | FKM | FKM |
| | 29 | Test rod | Steel (plated) | Steel (plated) | Steel (plated) | Steel (plated) |
| D | 18 | Cap | Steel | 316 SS | Monel® | Hastelloy® C |
| | 19 | Cam | 416 SS | 316 SS | Monel® | Hastelloy® C |
| | 20 | Cam O-ring | FKM | FKM | FKM | FKM |
| | 21 | Cam sleeve | 416 SS | 316 SS | Monel® | Hastelloy® C |
| | 22 | Cam sleeve O-ring | FKM | FKM | FKM | FKM |
| | 23 | Lever | Steel | Steel | Steel | Steel |
| | 24 | Lever pin | 302 SS | 302 SS | 302 SS | 302 SS |
| | 25 | Spindle nut | Steel | 316 SS | Monel® | Hastelloy® C |
| | 26 | Locknut | Steel (plated) | 300 Series SS | Monel® | Hastelloy® C |
| | E | 18 | Cap | Steel | 316 SS | Monel® |
| 19 | | Cam | 416 SS | 316 SS | Monel® | Hastelloy® C |
| 20 | | Cam O-ring | FKM | FKM | FKM | FKM |
| 21 | | Cam sleeve | 416 SS | 316 SS | Monel® | Hastelloy® C |
| 22 | | Cam sleeve O-ring | FKM | FKM | FKM | FKM |
| 23 | | Lever | Steel | Steel | Steel | Steel |
| 24 | | Lever pin | 302 SS | 302 SS | 302 SS | 302 SS |
| 25 | | Spindle nut | Steel | 316 SS | Monel® | Hastelloy® C |
| 26 | | Locknut | Steel (plated) | 300 Series SS | Monel® | Hastelloy® C |
| 27 | | Cap plug | Steel | 316 SS | Monel® | Hastelloy® C |
| 28 | | Cap plug O-ring | FKM | FKM | FKM | FKM |
| 29 | Test rod | Steel (plated) | Steel (plated) | Steel (plated) | Steel (plated) | |

Materials in bold indicate variation from standard.

Crosby Series 900 OMNI-TRIM® and Series BP pressure relief valves are furnished with a threaded cap over the adjusting bolt as a standard. Optional cap types and lifting levers are:

1. Standard threaded cap (Type A)
Where no lifting lever is required.
2. Threaded cap with test rod (Type B)
Normally used to hold the pressure relief valve closed when the system is being tested hydrostatically.
3. Packed lifting lever (Type D)
For applications where periodic testing is desirable. This is a sealed design for pressure integrity.

4. Packed lifting lever with test rod (Type E).
Same as Type D except furnished with a test rod.

NOTE

ASME Boiler and Pressure Vessel Code rules require that a lifting lever must be supplied with the valve when the service is (1) air, (2) water at the valve inlet that exceeds 140°F (60°C) excluding over pressure or relief events or (3) steam.

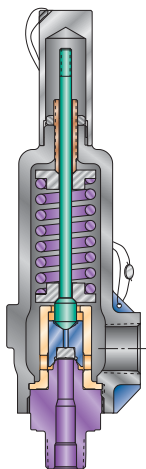
CAUTION

Test rods should never be tightened more than finger tight. Overtightening may damage internal parts. Moreover, a test rod should never be kept on the valve during operation of the equipment.

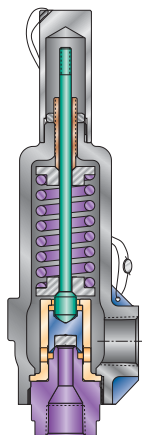
During normal operation the test rod is replaced with cap plug and O-ring to maintain tightness on the discharge side.

CROSBY OMNI-TRIM®
 SERIES 900 VALVE CONFIGURATIONS

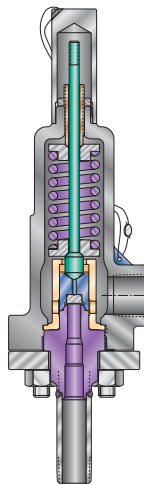
SERIES 900



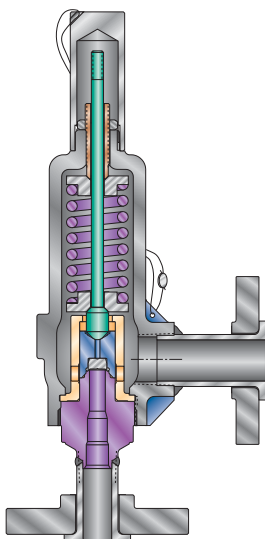
Standard threaded
 MNPT x FNPT^[3]



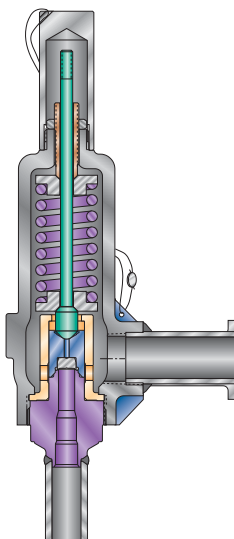
Threaded
 FNPT x FNPT^[3]



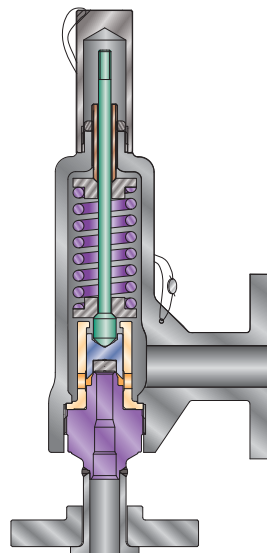
Bolted cylinder
 MNPT x FNPT^[3]
 Available in no. 5 orifice only



Lap joint inlet flange x
 Lap joint outlet flange^[4]



Male SW x Male SW^[5,6]
 (socket weld)



Lap joint x Integral-A cast
 outlet flange connections^[4]

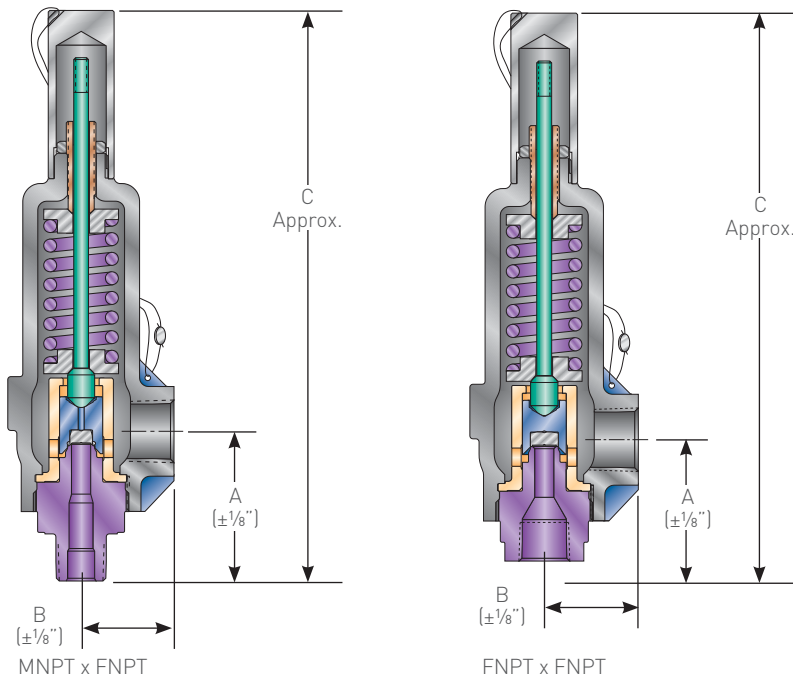
NOTES

1. Dimensions, weights and pressure/temperature ratings are found on pages 11 and 13.
2. Dimensions, weights and pressure/temperature ratings are found on pages 12 and 14.
3. Dimensions, weights and pressure/temperature ratings are found on pages 15-16 and 19-20.
4. Dimensions, weights and pressure/temperature ratings are found on pages 17-18 and 21-22.
5. Contact your sales representative for dimensions and weights.
6. Valves with SW connections not available with O-ring seats.

CROSBY OMNI-TRIM®

SPECIFICATIONS

SERIES 900 OMNI-TRIM® THREADED CONNECTIONS (NPT) - USCS (U.S. CUSTOMARY SYSTEM) UNITS



SERIES 900 DIMENSIONS AND WEIGHTS, PRESSURE/TEMPERATURE RATINGS (continued next page)

| Valve style number | Connection size (NPS) | | Minimum set pressure (psig) ⁽⁴⁾ | Maximum set pressure (psig) ^(1,3) | Maximum outlet pressure (psig) | Temperature range (°F) ⁽¹⁾ | Dimensions (in.) | | | Approx. weight (lbs) |
|--|-----------------------|--------|--|--|--------------------------------|---------------------------------------|------------------|---------|------------------|----------------------|
| | Inlet | Outlet | | | | | A | B | C ⁽²⁾ | |
| Style 951 - Series 900 with no. 5 orifice (0.074 sq. in.)* and 1500 psig maximum set pressure | | | | | | | | | | |
| 9511()0MF | 1/2 | 1 | 5 | 1500 | 400 | -450/+750 | 3 | 1 3/4 | 10 3/8 | 7 |
| 9511()1MF | 3/4 | 1 | 5 | 1500 | 400 | -450/+750 | 3 | 1 3/4 | 10 3/8 | 7 |
| 9511()2MF | 1 | 1 | 5 | 1500 | 400 | -450/+750 | 3 1/4 | 1 3/4 | 10 3/8 | 7 |
| Style 951 - Series 900 bolted connection with no. 5 orifice (0.074 sq. in.) and 1500 psig max. set pressure⁽⁵⁾ | | | | | | | | | | |
| 9511()199 | 3/4 | 1 | 5 | 1500 | 400 | -450/+750 | 6 13/16 | 1 3/4 | 14 1/4 | 12 |
| Style 955 - Series 900 with no. 5 orifice (0.074 sq. in.)* and 5000 psig maximum set pressure | | | | | | | | | | |
| 9551()0MF | 1/2 | 1 | 1501 | 5000 | 400 | -450/+750 | 3 1/8 | 1 15/16 | 11 7/8 | 9 |
| 9551()1MF | 3/4 | 1 | 1501 | 5000 | 400 | -450/+750 | 3 1/8 | 1 15/16 | 11 7/8 | 9 |
| 9551()2MF | 1 | 1 | 1501 | 5000 | 400 | -450/+750 | 3 3/8 | 1 15/16 | 12 1/8 | 9 |
| Style 961 - Series 900 with no. 6 orifice (0.110 sq. in.) and 1500 psig maximum set pressure | | | | | | | | | | |
| 9611()0MF | 1/2 | 1 | 5 | 1500 | 400 | -450/+750 | 3 1/8 | 1 15/16 | 11 7/8 | 10 |
| 9611()1MF | 3/4 | 1 | 5 | 1500 | 400 | -450/+750 | 3 1/8 | 1 15/16 | 11 7/8 | 10 |
| 9611()2MF | 1 | 1 | 5 | 1500 | 400 | -450/+750 | 3 3/8 | 1 15/16 | 12 1/8 | 10 |
| 9611()1FF | 3/4 | 1 | 5 | 1500 | 400 | -450/+750 | 2 1/2 | 1 15/16 | 11 1/4 | 10 |
| 9611()2FF | 1 | 1 | 5 | 1500 | 400 | -450/+750 | 2 7/8 | 1 15/16 | 11 5/8 | 10 |

* Consult your sales representative for availability of no. 5 (0.074 sq. in.) orifice with FNPT inlet.

NOTES

- Minimum/maximum set pressures and temperatures shown apply to metal seated valves only. Refer to page 5 for pressure and temperature limits for soft seat construction.
- Dimension 'C' shown is for Type A cap.
For Type B cap, add 1/4 in. to 'C' dimension (an additional 2 in. is required for test rod head clearance).
For Type D cap, add 5/8 in. to 'C' dimension.
For Type E cap, add 7/8 in. to 'C' dimension (an additional 2 in. is required for test rod head clearance).
- Maximum set pressure for steam service is 1000 psig.
- Valves set below 15 psig cannot be stamped with the ASME Code Symbol. Only metal seated valves may be set below 15 psig. For set pressure applications below the published minimum values, consult your sales representative.
- See page 5.

CROSBY OMNI-TRIM®

SPECIFICATIONS

SERIES 900 DIMENSIONS AND WEIGHTS, PRESSURE/TEMPERATURE RATINGS (continued)

| Valve style number | Connection size (NPS) | | Minimum ⁽⁴⁾ | Maximum ^(1,3) | Maximum outlet | Temperature ⁽¹⁾ | Dimensions (in.) | | | Approx. weight (lbs) |
|---|-----------------------|--------|------------------------|--------------------------|-----------------|----------------------------|------------------|----|------------------|----------------------|
| | Inlet | Outlet | set pressure (psig) | set pressure (psig) | pressure (psig) | range (°F) | A | B | C ⁽²⁾ | |
| Style 965 - Series 900 with no. 6 orifice (0.110 sq. in.) and 5000 psig maximum set pressure | | | | | | | | | | |
| 9651()1MF | ¾ | 1 | 1501 | 5000 | 400 | -450/+750 | 3½ | 2½ | 13½ | 16 |
| 9651()2MF | 1 | 1 | 1501 | 5000 | 400 | -450/+750 | 3¾ | 2½ | 13¾ | 16 |
| 9651()3MF | 1 | 1½ | 1501 | 5000 | 400 | -450/+750 | 3¾ | 2½ | 13¾ | 16 |
| 9651()1FF | ¾ | 1 | 1501 | 5000 | 400 | -450/+750 | 2½ | 2½ | 12½ | 16 |
| 9651()2FF | 1 | 1 | 1501 | 5000 | 400 | -450/+750 | 3½ | 2½ | 12¾ | 16 |
| 9651()3FF | 1 | 1½ | 1501 | 5000 | 400 | -450/+750 | 3½ | 2½ | 12¾ | 16 |
| Style 972 - Series 900 with no. 7 orifice (0.196 sq. in.) and 2500 psig maximum set pressure | | | | | | | | | | |
| 9721()3MF | 1 | 1½ | 6 | 2500 | 400 | -450/+750 | 3¾ | 2½ | 13¾ | 17 |
| 9721()4MF | 1½ | 1½ | 6 | 2500 | 400 | -450/+750 | 3¾ | 2½ | 13¾ | 17 |
| 9721()3FF | 1 | 1½ | 6 | 2500 | 400 | -450/+750 | 3½ | 2½ | 12¾ | 17 |
| 9721()4FF | 1½ | 1½ | 6 | 2500 | 400 | -450/+750 | 3¾ | 2½ | 13 | 17 |
| Style 981 - Series 900 with no. 8 orifice (0.307 sq. in.) and 1500 psig maximum set pressure | | | | | | | | | | |
| 9811()5MF | 1½ | 2 | 7 | 1500 | 400 | -450/+750 | 4½ | 3¼ | 16¾ | 33 |
| 9811()6MF | 2 | 2 | 7 | 1500 | 400 | -450/+750 | 4½ | 3¼ | 16¾ | 33 |
| 9811()5FF | 1½ | 2 | 7 | 1500 | 400 | -450/+750 | 3¾ | 3¼ | 15¾ | 33 |
| 9811()6FF | 2 | 2 | 7 | 1500 | 400 | -450/+750 | 4 | 3¼ | 15¾ | 33 |
| Style 991 - Series 900 with no. 9 orifice (0.503 sq. in.) and 1500 psig maximum set pressure | | | | | | | | | | |
| 9911()7MF | 1½ | 2½ | 7 | 1500 | 400 | -450/+750 | 4½ | 3¼ | 16¾ | 32 |
| 9911()7FF | 1½ | 2½ | 7 | 1500 | 400 | -450/+750 | 3¾ | 3¼ | 15¾ | 32 |

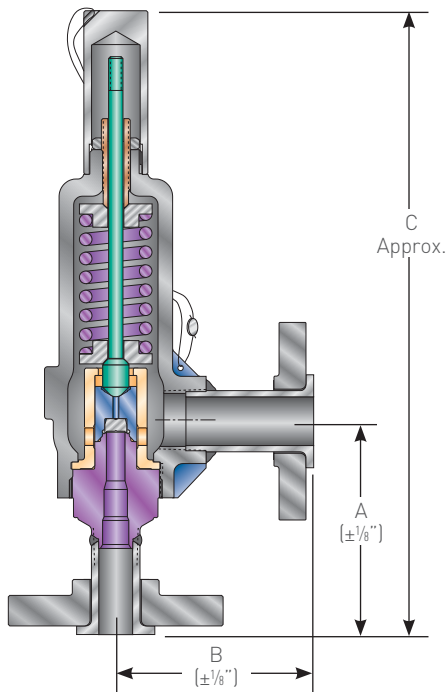
* Consult your sales representative for availability of no. 5 (0.074 sq. in.) orifice with FNPT inlet.

NOTES

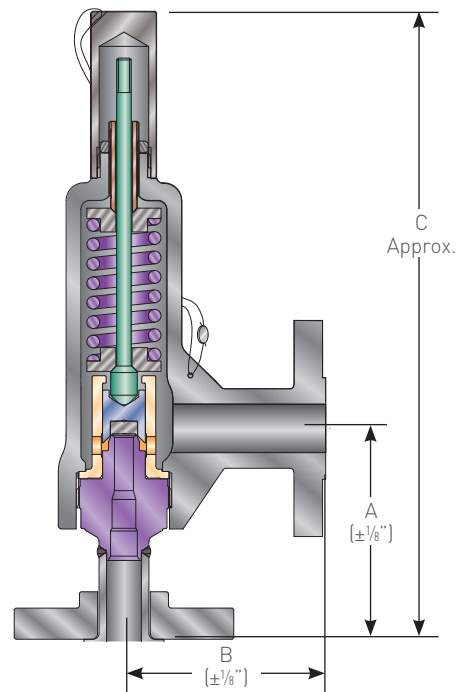
- Minimum/maximum set pressures and temperatures shown apply to metal seated valves only. Refer to page 5 for pressure and temperature limits for soft seat construction.
- Dimension 'C' shown is for Type A cap.
For Type B cap, add ¼ in. to 'C' dimension (an additional 2 in. is required for test rod head clearance).
For Type D cap, add ⅝ in. to 'C' dimension.
For Type E cap, add ⅞ in. to 'C' dimension (an additional 2 in. is required for test rod head clearance).
- Maximum set pressure for steam service is 1000 psig.
- Valves set below 15 psig cannot be stamped with the ASME Code Symbol. Only metal seated valves may be set below 15 psig. For set pressure applications below the published minimum values, consult your sales representative.

CROSBY OMNI-TRIM® SPECIFICATIONS

SERIES 900 OMNI-TRIM® FLANGED CONNECTIONS - USCS (U.S. CUSTOMARY SYSTEM) UNITS



Lap Joint Inlet Flange X Lap Joint Outlet Flange



Lap Joint x Integral-A Cast Outlet Flange connections⁽⁸⁾

SERIES 900 DIMENSIONS AND WEIGHTS, PRESSURE/TEMPERATURE RATINGS (continued next page)

| Valve style number | Connection size (NPS) | | Std. ANSI lap joint stub end flanges ⁽⁴⁾ | | Maximum ^(1,2,6) set pressure at 100°F (psig) | Maximum outlet pressure (psig) | Dimensions (in.) | | | Approx. weight (lbs) | |
|--|-----------------------|--------|---|----------------|---|--------------------------------|------------------|-------|------------------|----------------------|--|
| | Inlet | Outlet | Inlet | Outlet | | | A | B | C ⁽⁵⁾ | | |
| Style 951 - Series 900 with no. 5 orifice (0.074 sq. in.) | | | | | | | | | | | |
| 9511()011 | 1/2 | 1 | 150 | 150 | 285 | 285 | 4 1/4 | 4 | 11 11/16 | 10 | |
| 9511()021 | 1/2 | 1 | 300 | 150 | 740 | 285 | 4 1/4 | 4 | 11 11/16 | 11 | |
| 9511()031 | 1/2 | 1 | 600 | 150 | 1480 | 285 | 4 1/4 | 4 | 11 11/16 | 11 | |
| 9511()111 | 3/4 | 1 | 150 | 150 | 285 | 285 | 4 1/4 | 4 | 11 11/16 | 11 | |
| 9511()121 | 3/4 | 1 | 300 | 150 | 740 | 285 | 4 1/4 | 4 | 11 11/16 | 12 | |
| 9511()131 | 3/4 | 1 | 600 | 150 | 1480 | 285 | 4 1/4 | 4 | 11 11/16 | 12 | |
| 9511()211 | 1 | 1 | 150 | 150 | 285 | 285 | 4 1/2 | 4 | 11 15/16 | 12 | |
| 9511()221 | 1 | 1 | 300 | 150 | 740 | 285 | 4 1/2 | 4 | 11 15/16 | 13 | |
| 9511()231 | 1 | 1 | 600 | 150 | 1480 | 285 | 4 1/2 | 4 | 11 15/16 | 13 | |
| Style 955 - Series 900 with no. 5 orifice (0.074 sq. in.) | | | | | | | | | | | |
| 9551()142 | 3/4 | 1 | 1500 | ⁽³⁾ | 3705 | 400 ⁽³⁾ | 5 1/2 | 4 1/2 | 14 5/16 | 19 | |
| 9551()152 | 3/4 | 1 | 2500 | ⁽³⁾ | 5000 | 400 ⁽³⁾ | 5 1/2 | 4 1/2 | 14 5/16 | 21 | |
| 9551()242 | 1 | 1 | 1500 | ⁽³⁾ | 3705 | 400 ⁽³⁾ | 5 3/4 | 4 1/2 | 14 9/16 | 21 | |
| 9551()252 | 1 | 1 | 2500 | ⁽³⁾ | 5000 | 400 ⁽³⁾ | 5 3/4 | 4 1/2 | 14 9/16 | 25 | |

NOTES

- Maximum set pressures shown are based on carbon steel flanges. Pressure limits for 316 SS flanges may be lower. Consult your sales representative.
- Maximum set pressures apply to metal seated valves only; refer to page 5 for limits for soft seat construction.
- ANSI CL 300 supplied; however, the maximum back pressure is 400 psig.
- Flanges are supplied with a serrated face per ANSI B16.5. Other facings/standards (i.e., DIN) are also available.
- Dimension 'C' shown is for Type A cap.
For Type B cap, add 1/4 in. to 'C' dimension (an additional 2 in. is required for test rod head clearance).
For Type D cap, add 5/8 in. to 'C' dimension.
For Type E cap, add 7/8 in. to 'C' dimension (an additional 2 in. is required for test rod head clearance).
- Maximum set pressure for steam service is 1000 psig.
- ANSI CI 600 flange integral with base.
- Lap Joint Inlet x Integral Cast Outlet flange design is the standard offering for models 951, 955, 961, 965 & 972.

CROSBY OMNI-TRIM®

SPECIFICATIONS

SERIES 900 DIMENSIONS AND WEIGHTS, PRESSURE/TEMPERATURE RATINGS (continued)

| Valve style number | Connection size (NPS) | | Std. ANSI lap joint stub end flanges ⁽⁴⁾ | | Maximum ^(1,2,6) set pressure at 100°F (psig) | Maximum outlet pressure (psig) | Dimensions (in.) | | | Approx. weight (lbs) |
|--|-----------------------|--------|---|----------------|---|--------------------------------|------------------|-------|------------------|----------------------|
| | Inlet | Outlet | Inlet | Outlet | | | A | B | C ⁽⁵⁾ | |
| Style 961 - Series 900 with no. 6 orifice (0.110 sq. in.) | | | | | | | | | | |
| 9611()011 | 1/2 | 1 | 150 | 150 | 285 | 285 | 4 3/8 | 4 1/4 | 13 3/16 | 14 |
| 9611()021 | 1/2 | 1 | 300 | 150 | 740 | 285 | 4 3/8 | 4 1/4 | 13 3/16 | 15 |
| 9611()031 | 1/2 | 1 | 600 ⁽⁷⁾ | 150 | 1480 | 285 | 4 3/8 | 4 1/4 | 13 3/16 | 15 |
| 9611()111 | 3/4 | 1 | 150 | 150 | 285 | 285 | 4 3/8 | 4 1/4 | 13 3/16 | 14 |
| 9611()121 | 3/4 | 1 | 300 | 150 | 740 | 285 | 4 3/8 | 4 1/4 | 13 3/16 | 15 |
| 9611()131 | 3/4 | 1 | 600 | 150 | 1480 | 285 | 4 3/8 | 4 1/4 | 13 3/16 | 15 |
| 9611()211 | 1 | 1 | 150 | 150 | 285 | 285 | 4 5/8 | 4 1/4 | 13 7/16 | 14 |
| 9611()221 | 1 | 1 | 300 | 150 | 740 | 285 | 4 5/8 | 4 1/4 | 13 7/16 | 16 |
| 9611()231 | 1 | 1 | 600 | 150 | 1480 | 285 | 4 5/8 | 4 1/4 | 13 7/16 | 16 |
| Style 965 - Series 900 with no. 6 orifice (0.110 sq. in.) | | | | | | | | | | |
| 9651()142 | 3/4 | 1 | 1500 | ⁽³⁾ | 3705 | 400 ⁽³⁾ | 6 | 5 | 15 11/16 | 26 |
| 9651()242 | 1 | 1 | 1500 | ⁽³⁾ | 3705 | 400 ⁽³⁾ | 6 1/4 | 5 | 15 15/16 | 29 |
| 9651()252 | 1 | 1 | 2500 | ⁽³⁾ | 5000 | 400 ⁽³⁾ | 6 1/4 | 5 | 15 15/16 | 32 |
| 9651()342 | 1 | 1 1/2 | 1500 | ⁽³⁾ | 3705 | 400 ⁽³⁾ | 6 1/4 | 5 3/4 | 15 15/16 | 29 |
| 9651()352 | 1 | 1 1/2 | 2500 | ⁽³⁾ | 5000 | 400 ⁽³⁾ | 6 1/4 | 5 3/4 | 15 15/16 | 35 |
| Style 972 - Series 900 with no. 7 orifice (0.196 sq. in.) | | | | | | | | | | |
| 9721()311 | 1 | 1 1/2 | 150 | 150 | 285 | 285 | 5 1/8 | 5 | 14 13/16 | 24 |
| 9721()321 | 1 | 1 1/2 | 300 | 150 | 740 | 285 | 5 1/8 | 5 | 14 13/16 | 25 |
| 9721()331 | 1 | 1 1/2 | 600 | 150 | 1480 | 285 | 5 1/8 | 5 | 14 13/16 | 25 |
| 9721()341 | 1 | 1 1/2 | 1500 | ⁽³⁾ | 2500 | 400 ⁽³⁾ | 6 | 5 3/4 | 15 11/16 | 32 |
| 9721()411 | 1 1/2 | 1 1/2 | 150 | 150 | 285 | 285 | 5 1/2 | 5 | 15 3/16 | 26 |
| 9721()421 | 1 1/2 | 1 1/2 | 300 | 150 | 740 | 285 | 5 1/2 | 5 | 15 3/16 | 29 |
| 9721()431 | 1 1/2 | 1 1/2 | 600 | 150 | 1480 | 285 | 5 1/2 | 5 | 15 3/16 | 29 |
| 9721()441 | 1 1/2 | 1 1/2 | 1500 | ⁽³⁾ | 2500 | 400 ⁽³⁾ | 6 | 5 3/4 | 15 11/16 | 38 |
| Style 981 - Series 900 with no. 8 orifice (0.307 sq. in.) | | | | | | | | | | |
| 9811()511 | 1 1/2 | 2 | 150 | 150 | 285 | 285 | 6 1/2 | 6 | 18 7/16 | 44 |
| 9811()521 | 1 1/2 | 2 | 300 | 150 | 740 | 285 | 6 1/2 | 6 | 18 7/16 | 47 |
| 9811()531 | 1 1/2 | 2 | 600 | 150 | 1480 | 285 | 6 1/2 | 6 | 18 7/16 | 47 |
| 9811()611 | 2 | 2 | 150 | 150 | 285 | 285 | 6 3/4 | 6 | 18 11/16 | 46 |
| 9811()621 | 2 | 2 | 300 | 150 | 740 | 285 | 6 3/4 | 6 | 18 11/16 | 48 |
| 9811()631 | 2 | 2 | 600 | 150 | 1480 | 285 | 6 3/4 | 6 | 18 11/16 | 49 |
| Style 991 - Series 900 with no. 9 orifice (0.503 sq. in.) | | | | | | | | | | |
| 9911()711 | 1 1/2 | 2 1/2 | 150 | 150 | 285 | 285 | 6 1/2 | 6 1/2 | 18 7/16 | 47 |
| 9911()721 | 1 1/2 | 2 1/2 | 300 | 150 | 740 | 285 | 6 1/2 | 6 1/2 | 18 7/16 | 50 |
| 9911()731 | 1 1/2 | 2 1/2 | 600 | 150 | 1480 | 285 | 6 1/2 | 6 1/2 | 18 7/16 | 50 |

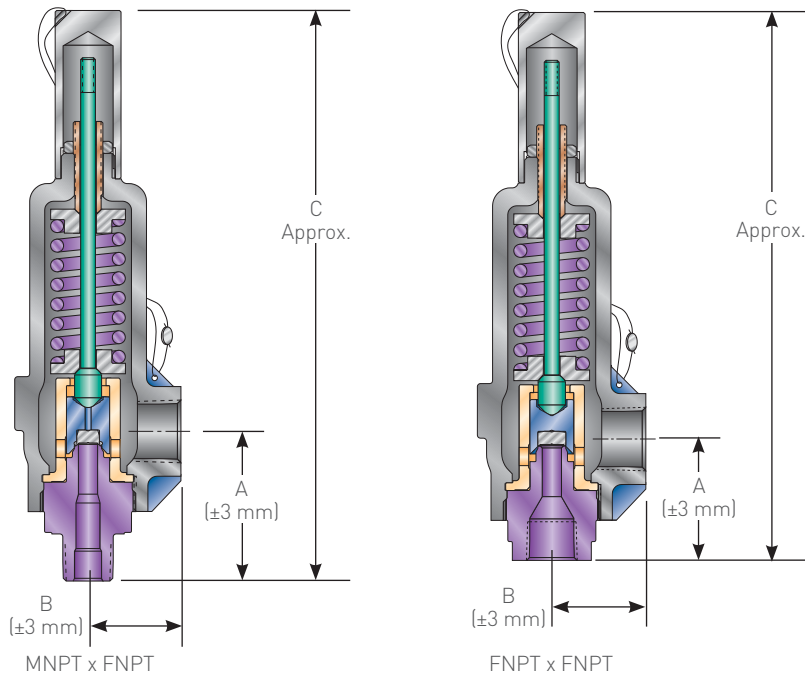
NOTES

- Maximum set pressures shown are based on carbon steel flanges. Pressure limits for 316 SS flanges may be lower. Consult your sales representative.
- Maximum set pressures apply to metal seated valves only; refer to page 5 for limits for soft seat construction.
- ANSI CL 300 supplied; however, the maximum back pressure is 400 psig.
- Flanges are supplied with a serrated face per ANSI B16.5. Other facings/standards (i.e., DIN) are also available.
- Dimension 'C' shown is for Type A cap.
For Type B cap, add 1/4 in. to 'C' dimension (an additional 2 in. is required for test rod head clearance).
For Type D cap, add 5/8 in. to 'C' dimension.
For Type E cap, add 7/8 in. to 'C' dimension (an additional 2 in. is required for test rod head clearance).
- Maximum set pressure for steam service is 1000 psig.
- ANSI CI 600 flange integral with base.
- Lap Joint Inlet x Integral Cast Outlet flange design is the standard offering for models 951, 955, 961, 965 & 972.

CROSBY OMNI-TRIM®

SPECIFICATIONS

SERIES 900 OMNI-TRIM® THREADED CONNECTIONS - METRIC UNITS



SERIES 900 DIMENSIONS AND WEIGHTS, PRESSURE/TEMPERATURE RATINGS (continued next page)

| Valve style number | Connection size (NPS) | | Minimum ⁽⁴⁾ set pressure (barg) | Maximum ^(1,3) set pressure (barg) | Maximum outlet pressure (barg)* | Temperature ⁽¹⁾ range (°C) | Dimensions (mm) | | | Approx. weight (kg) |
|---|-----------------------|--------|--|--|---------------------------------|---------------------------------------|-----------------|----|------------------|---------------------|
| | Inlet | Outlet | | | | | A | B | C ⁽²⁾ | |
| Style 951 - Series 900 with no. 5 orifice (47.74 sq. mm)** and 103.42 barg maximum set pressure | | | | | | | | | | |
| 9511()0MF | 1/2 | 1 | 0.34 | 103.42 | 27.58 | -268/+399 | 76 | 45 | 264 | 3 |
| 9511()1MF | 3/4 | 1 | 0.34 | 103.42 | 27.58 | -268/+399 | 76 | 45 | 264 | 3 |
| 9511()2MF | 1 | 1 | 0.34 | 103.42 | 27.58 | -268/+399 | 83 | 45 | 270 | 3 |
| Style 951 - Series 900 bolted cylinder with No. 5 orifice (47.74 sq. mm) and 103.42 barg max. set pressure | | | | | | | | | | |
| 9511()199 | 3/4 | 1 | 0.34 | 103.42 | 27.58 | -268/+399 | 173 | 44 | 362 | 5 |
| Style 955 - Series 900 with no. 5 orifice (47.74 sq. mm)** and 344.74 barg maximum set pressure | | | | | | | | | | |
| 9551()0MF | 1/2 | 1 | 103.49 | 344.74 | 27.58 | -268/+399 | 79 | 49 | 302 | 4 |
| 9551()1MF | 3/4 | 1 | 103.49 | 344.74 | 27.58 | -268/+399 | 79 | 49 | 302 | 4 |
| 9551()2MF | 1 | 1 | 103.49 | 344.74 | 27.58 | -268/+399 | 86 | 49 | 308 | 4 |
| Style 961 - Series 900 with no. 6 orifice (70.96 sq. mm) and 103.42 barg maximum set pressure | | | | | | | | | | |
| 9611()0MF | 1/2 | 1 | 0.34 | 103.42 | 27.58 | -268/+399 | 79 | 49 | 302 | 4 |
| 9611()1MF | 3/4 | 1 | 0.34 | 103.42 | 27.58 | -268/+399 | 79 | 49 | 302 | 4 |
| 9611()2MF | 1 | 1 | 0.34 | 103.42 | 27.58 | -268/+399 | 86 | 49 | 308 | 4 |
| 9611()1FF | 3/4 | 1 | 0.34 | 103.42 | 27.58 | -268/+399 | 64 | 49 | 286 | 4 |
| 9611()2FF | 1 | 1 | 0.34 | 103.42 | 27.58 | -268/+399 | 73 | 49 | 295 | 4 |

* To obtain units in kPa, multiply barg units by 100.

**Consult your sales representative for availability of no. 5 (47.74 sq. mm) orifice with FNPT inlet.

NOTES

- Minimum/maximum set pressures and temperatures shown apply to metal seated valves only. Refer to page 5 for pressure and temperature limits for soft seat construction.
- Dimension 'C' shown is for Type A cap.
For Type B cap, add 6 mm to 'C' dimension (an additional 51 mm is required for test rod head clearance).
For Type D cap, add 16 mm to 'C' dimension.
For Type E cap, add 22 mm to 'C' dimension (an additional 51 mm is required for test rod head clearance).
- Maximum set pressure for steam service is 68.95 barg.
- Valves set below 1.03 barg cannot be stamped with the ASME Code Symbol. Only metal seated valves may be set below 1.03 barg.

CROSBY OMNI-TRIM®

SPECIFICATIONS

SERIES 900 DIMENSIONS AND WEIGHTS, PRESSURE/TEMPERATURE RATINGS (continued)

| Valve style number | Connection size (NPS) | | Minimum ⁽⁴⁾ set pressure (barg) | Maximum ^(1,3) set pressure (barg) | Maximum outlet pressure (barg)* | Temperature ⁽¹⁾ range (°C) | Dimensions (mm) | | | Approx. weight (kg) |
|--|-----------------------|--------|--|--|---------------------------------|---------------------------------------|-----------------|----|------------------|---------------------|
| | Inlet | Outlet | | | | | A | B | C ⁽²⁾ | |
| Style 965 - Series 900 with no. 6 orifice (70.96 sq. mm) and 344.74 barg maximum set pressure | | | | | | | | | | |
| 9651()1MF | ¾ | 1 | 103.49 | 344.74 | 27.58 | -268/+399 | 89 | 64 | 333 | 7 |
| 9651()2MF | 1 | 1 | 103.49 | 344.74 | 27.58 | -268/+399 | 95 | 64 | 340 | 7 |
| 9651()3MF | 1 | 1½ | 103.49 | 344.74 | 27.58 | -268/+399 | 95 | 64 | 340 | 7 |
| 9651()1FF | ¾ | 1 | 103.49 | 344.74 | 27.58 | -268/+399 | 73 | 64 | 318 | 7 |
| 9651()2FF | 1 | 1 | 103.49 | 344.74 | 27.58 | -268/+399 | 79 | 64 | 324 | 7 |
| 9651()3FF | 1 | 1½ | 103.49 | 344.74 | 27.58 | -268/+399 | 79 | 64 | 324 | 7 |
| Style 972 - Series 900 with no. 7 orifice (126.4 sq. mm) and 172.36 barg maximum set pressure | | | | | | | | | | |
| 9721()3MF | 1 | 1½ | 0.41 | 172.36 | 27.58 | -268/+399 | 95 | 64 | 340 | 8 |
| 9721()4MF | 1½ | 1½ | 0.41 | 172.36 | 27.58 | -268/+399 | 95 | 64 | 340 | 8 |
| 9721()3FF | 1 | 1½ | 0.41 | 172.36 | 27.58 | -268/+399 | 79 | 64 | 324 | 8 |
| 9721()4FF | 1½ | 1½ | 0.41 | 172.36 | 27.58 | -268/+399 | 86 | 64 | 330 | 8 |
| Style 981 - Series 900 with no. 8 orifice (198.0 sq. mm) and 103.42 barg maximum set pressure | | | | | | | | | | |
| 9811()5MF | 1½ | 2 | 0.48 | 103.42 | 27.58 | -268/+399 | 114 | 83 | 416 | 15 |
| 9811()6MF | 2 | 2 | 0.48 | 103.42 | 27.58 | -268/+399 | 114 | 83 | 416 | 15 |
| 9811()5FF | 1½ | 2 | 0.48 | 103.42 | 27.58 | -268/+399 | 98 | 83 | 400 | 15 |
| 9811()6FF | 2 | 2 | 0.48 | 103.42 | 27.58 | -268/+399 | 102 | 83 | 403 | 15 |
| Style 991 - Series 900 with no. 9 orifice (324.5 sq. mm) and 103.42 barg maximum set pressure | | | | | | | | | | |
| 9911()7MF | 1½ | 2½ | 0.48 | 103.42 | 27.58 | -268/+399 | 114 | 83 | 416 | 15 |
| 9911()7FF | 1½ | 2½ | 0.48 | 103.42 | 27.58 | -268/+399 | 98 | 83 | 400 | 15 |

* To obtain units in kPa, multiply barg units by 100.

** Consult your sales representative for availability of no. 5 (47.74 sq. mm) orifice with FNPT inlet.

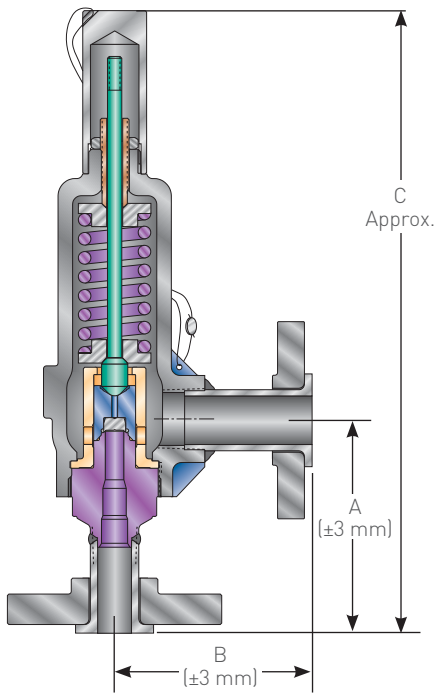
NOTES

1. Minimum/maximum set pressures and temperatures shown apply to metal seated valves only. Refer to page 5 for pressure and temperature limits for soft seat construction.
2. Dimension 'C' shown is for Type A cap.
For Type B cap, add 6 mm to 'C' dimension (an additional 51 mm is required for test rod head clearance).
For Type D cap, add 16 mm to 'C' dimension.
For Type E cap, add 22 mm to 'C' dimension (an additional 51 mm is required for test rod head clearance).
3. Maximum set pressure for steam service is 68.95 barg.
4. Valves set below 1.03 barg cannot be stamped with the ASME Code Symbol. Only metal seated valves may be set below 1.03 barg.

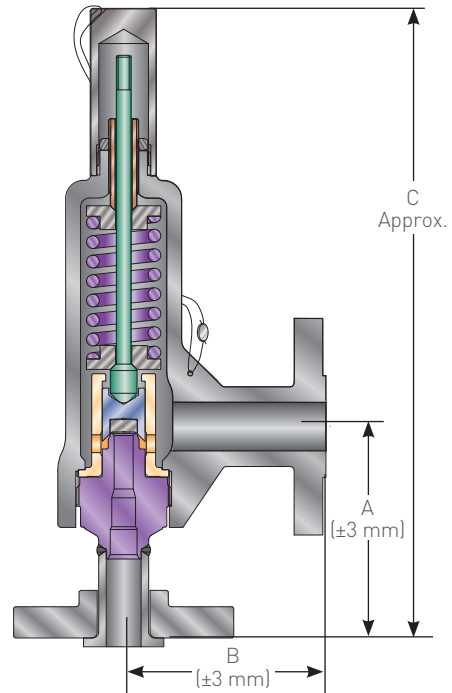
CROSBY OMNI-TRIM®

SPECIFICATIONS

SERIES 900 OMNI-TRIM® FLANGED CONNECTIONS - METRIC UNITS



Lap Joint Inlet Flange X Lap Joint Outlet Flange



Lap Joint Inlet x Integral Cast Outlet⁽⁶⁾

SERIES 900 DIMENSIONS AND WEIGHTS, PRESSURE/TEMPERATURE RATINGS (continued next page)

| Valve style number | Connection size (NPS) | | Std. ANSI lap joint stub end flanges ⁽⁴⁾ | | Maximum ^(1,2,4) set pressure at 37.8°C (barg) | Maximum outlet pressure (barg) | Dimensions (mm) | | | Approx. weight (kg) |
|---|-----------------------|--------|---|----------------|--|--------------------------------|-----------------|-----|------------------|---------------------|
| | Inlet | Outlet | Inlet | Outlet | | | A | B | C ⁽⁵⁾ | |
| Style 951 - Series 900 with no. 5 orifice (47.74 sq. mm) | | | | | | | | | | |
| 9511()011 | ½ | 1 | 150 | 150 | 19.65 | 19.65 | 108 | 102 | 297 | 5 |
| 9511()021 | ½ | 1 | 300 | 150 | 51.02 | 19.65 | 108 | 102 | 297 | 5 |
| 9511()031 | ½ | 1 | 600 | 150 | 102.04 | 19.65 | 108 | 102 | 297 | 5 |
| 9511()111 | ¾ | 1 | 150 | 150 | 19.65 | 19.65 | 108 | 102 | 297 | 5 |
| 9511()121 | ¾ | 1 | 300 | 150 | 51.02 | 19.65 | 108 | 102 | 297 | 6 |
| 9511()131 | ¾ | 1 | 600 | 150 | 102.04 | 19.65 | 108 | 102 | 297 | 6 |
| 9511()211 | 1 | 1 | 150 | 150 | 19.65 | 19.65 | 114 | 102 | 303 | 5 |
| 9511()221 | 1 | 1 | 300 | 150 | 51.02 | 19.65 | 114 | 102 | 303 | 6 |
| 9511()231 | 1 | 1 | 600 | 150 | 102.04 | 19.65 | 114 | 102 | 303 | 6 |
| Style 955 - Series 900 with no. 5 orifice (47.74 sq. mm) | | | | | | | | | | |
| 9551()142 | ¾ | 1 | 1500 | ⁽³⁾ | 255.45 | 27.58 ⁽³⁾ | 140 | 114 | 364 | 8 |
| 9551()152 | ¾ | 1 | 2500 | ⁽³⁾ | 344.74 | 27.58 ⁽³⁾ | 140 | 114 | 364 | 10 |
| 9551()242 | 1 | 1 | 1500 | ⁽³⁾ | 255.45 | 27.58 ⁽³⁾ | 146 | 114 | 370 | 10 |
| 9551()252 | 1 | 1 | 2500 | ⁽³⁾ | 344.74 | 27.58 ⁽³⁾ | 146 | 114 | 370 | 11 |

NOTES

- Maximum set pressures shown are based on carbon steel flanges. Pressure limits for 316 SS flanges may be lower. Consult your sales representative.
- Maximum set pressures apply to metal seated valves only; refer to page 5 for limits for soft seat construction.
- ANSI CL 300 supplied; however, the maximum back pressure is 27.58 barg.
- Flanges are supplied with a serrated face per ANSI B16.5. Other facings/standards (i.e., DIN) are also available.
- Dimension 'C' shown is for Type A cap.
For Type B cap, add 6 mm to 'C' dimension (an additional 51 mm is required for test rod head clearance).
For Type D cap, add 16 mm to 'C' dimension.
For Type E cap, add 22 mm to 'C' dimension (an additional 51 mm is required for test rod head clearance).
- Maximum set pressure for steam service is 68.95 barg.
- ANSI CI 600 flange integral with base.
- Lap Joint Inlet x Integral Cast Outlet flange design is the standard offering for models 951, 955, 961, 965 & 972.

CROSBY OMNI-TRIM®

SPECIFICATIONS

SERIES 900 DIMENSIONS AND WEIGHTS, PRESSURE/TEMPERATURE RATINGS (continued)

| Valve style number | Connection size (NPS) | | Std. ANSI lap joint stub end flanges ⁽⁴⁾ | | Maximum ^(1,2,4) set pressure at 37.8°C (barg) | Maximum outlet pressure (barg) | Dimensions (mm) | | | Approx. weight (kg) |
|---|-----------------------|--------|---|--------|--|--------------------------------|-----------------|-----|------------------|---------------------|
| | Inlet | Outlet | Inlet | Outlet | | | A | B | C ⁽⁵⁾ | |
| Style 961 - Series 900 with no. 6 orifice (70.96 sq. mm) | | | | | | | | | | |
| 9611()011 | 1/2 | 1 | 150 | 150 | 19.65 | 19.65 | 111 | 108 | 335 | 6 |
| 9611()021 | 1/2 | 1 | 300 | 150 | 51.02 | 19.65 | 111 | 108 | 335 | 7 |
| 9611()031 | 1/2 | 1 | 6007 | 150 | 102.04 | 19.65 | 111 | 108 | 335 | 7 |
| 9611()111 | 3/4 | 1 | 150 | 150 | 19.65 | 19.65 | 111 | 108 | 335 | 6 |
| 9611()121 | 3/4 | 1 | 300 | 150 | 51.02 | 19.65 | 111 | 108 | 335 | 7 |
| 9611()131 | 3/4 | 1 | 600 | 150 | 102.04 | 19.65 | 111 | 108 | 335 | 7 |
| 9611()211 | 1 | 1 | 150 | 150 | 19.65 | 19.65 | 117 | 108 | 341 | 7 |
| 9611()221 | 1 | 1 | 300 | 150 | 51.02 | 19.65 | 117 | 108 | 341 | 7 |
| 9611()231 | 1 | 1 | 600 | 150 | 102.04 | 19.65 | 117 | 108 | 341 | 7 |
| Style 965 - Series 900 with no. 6 orifice (70.96 sq. mm) | | | | | | | | | | |
| 9651()142 | 3/4 | 1 | 1500 | (3) | 255.45 | 27.58 ⁽³⁾ | 152 | 127 | 398 | 12 |
| 9651()242 | 1 | 1 | 1500 | (3) | 255.45 | 27.58 ⁽³⁾ | 159 | 127 | 405 | 13 |
| 9651()252 | 1 | 1 | 2500 | (3) | 344.74 | 27.58 ⁽³⁾ | 159 | 127 | 405 | 14 |
| 9651()342 | 1 | 1 1/2 | 1500 | (3) | 255.45 | 27.58 ⁽³⁾ | 159 | 146 | 405 | 13 |
| 9651()352 | 1 | 1 1/2 | 2500 | (3) | 344.74 | 27.58 ⁽³⁾ | 159 | 146 | 405 | 16 |
| Style 972 - Series 900 with no. 7 orifice (126.4 sq. mm) | | | | | | | | | | |
| 9721()311 | 1 | 1 1/2 | 150 | 150 | 19.65 | 19.65 | 130 | 127 | 376 | 11 |
| 9721()321 | 1 | 1 1/2 | 300 | 150 | 51.02 | 19.65 | 130 | 127 | 376 | 11 |
| 9721()331 | 1 | 1 1/2 | 600 | 150 | 102.04 | 19.65 | 130 | 127 | 376 | 11 |
| 9721()342 | 1 | 1 1/2 | 1500 | (3) | 172.36 | 27.58 ⁽³⁾ | 152 | 146 | 398 | 15 |
| 9721()411 | 1 1/2 | 1 1/2 | 150 | 150 | 19.65 | 19.65 | 140 | 127 | 386 | 12 |
| 9721()421 | 1 1/2 | 1 1/2 | 300 | 150 | 51.02 | 19.65 | 140 | 127 | 386 | 13 |
| 9721()431 | 1 1/2 | 1 1/2 | 600 | 150 | 102.04 | 19.65 | 140 | 127 | 386 | 13 |
| 9721()442 | 1 1/2 | 1 1/2 | 1500 | (3) | 172.36 | 27.58 ⁽³⁾ | 152 | 146 | 398 | 17 |
| Style 981 - Series 900 with no. 8 orifice (198.0 sq. mm) | | | | | | | | | | |
| 9811()511 | 1 1/2 | 2 | 150 | 150 | 19.65 | 19.65 | 165 | 152 | 468 | 20 |
| 9811()521 | 1 1/2 | 2 | 300 | 150 | 51.02 | 19.65 | 165 | 152 | 468 | 21 |
| 9811()531 | 1 1/2 | 2 | 600 | 150 | 102.04 | 19.65 | 165 | 152 | 468 | 21 |
| 9811()611 | 2 | 2 | 150 | 150 | 19.65 | 19.65 | 171 | 152 | 475 | 21 |
| 9811()621 | 2 | 2 | 300 | 150 | 51.02 | 19.65 | 171 | 152 | 475 | 22 |
| 9811()631 | 2 | 2 | 600 | 150 | 102.04 | 19.65 | 171 | 152 | 475 | 22 |
| Style 991 - Series 900 with no. 9 orifice (324.5 sq. mm) | | | | | | | | | | |
| 9911()711 | 1 1/2 | 2 1/2 | 150 | 150 | 19.65 | 19.65 | 165 | 165 | 468 | 21 |
| 9911()721 | 1 1/2 | 2 1/2 | 300 | 150 | 51.02 | 19.65 | 165 | 165 | 468 | 23 |
| 9911()731 | 1 1/2 | 2 1/2 | 600 | 150 | 102.04 | 19.65 | 165 | 165 | 468 | 23 |

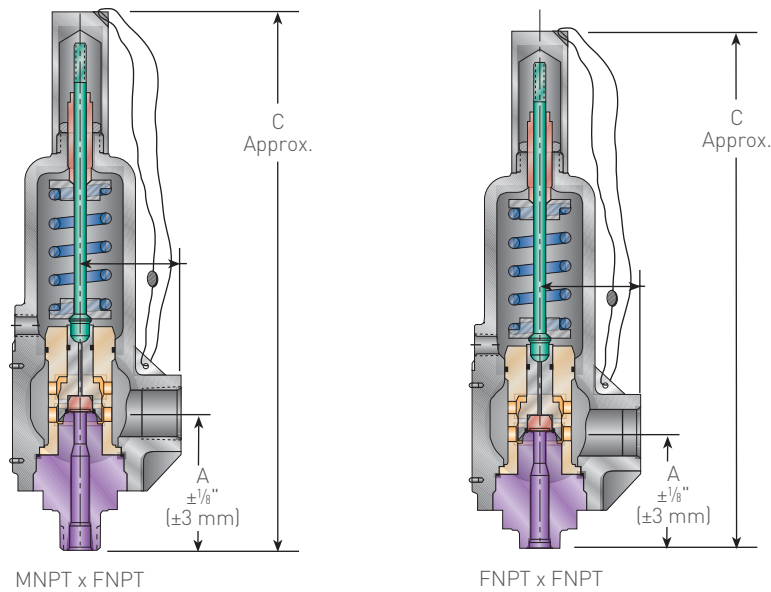
NOTES

- Maximum set pressures shown are based on carbon steel flanges. Pressure limits for 316 SS flanges may be lower. Consult your sales representative.
- Maximum set pressures apply to metal seated valves only; refer to page 5 for limits for soft seat construction.
- ANSI CL 300 supplied; however, the maximum back pressure is 27.58 barg.
- Flanges are supplied with a serrated face per ANSI B16.5. Other facings/standards (i.e., DIN) are also available.
- Dimension 'C' shown is for Type A cap.
For Type B cap, add 6 mm to 'C' dimension (an additional 51 mm is required for test rod head clearance).
For Type D cap, add 16 mm to 'C' dimension.
For Type E cap, add 22 mm to 'C' dimension (an additional 51 mm is required for test rod head clearance).
- Maximum set pressure for steam service is 68.95 barg.
- ANSI CI 600 flange integral with base.
- Lap Joint Inlet x Integral Cast Outlet flange design is the standard offering for models 951, 955, 961, 965 & 972.

CROSBY OMNI-TRIM®

SPECIFICATIONS

SERIES BP THREADED CONNECTIONS (NPT) - USCS UNITS (U.S. CUSTOMARY SYSTEM) (METRIC UNITS)



SERIES BP DIMENSIONS AND WEIGHTS, PRESSURE/TEMPERATURE RATINGS

| Valve style number | Connection size (NPS) | | Minimum set pressure psig (barg) | Maximum set pressure psig (barg) | Maximum outlet pressure (barg) | Temperature ⁽¹⁾ range °F (°C) | Dimensions (mm) | | | Approx. weight ⁽³⁾ lbs (kg) |
|--|-----------------------|--------|----------------------------------|----------------------------------|--------------------------------|--|-----------------|------------|------------------|--|
| | Inlet | Outlet | | | | | A | B | C ⁽²⁾ | |
| Style BP5 - series BP with no. 5 orifice [0.074 in² [47.7 mm²]] and 1500 psig (103.44 barg) maximum set pressure | | | | | | | | | | |
| BP51() ()1MF | 3/4 | 1 | 50 (3.45) | 1500 (103.44) | 400 (27.58) | -20/+400 (-28/+204) | 3 3/8 (86) | 2 1/2 (64) | 13 3/8 (340) | 14 (6) |
| BP51() ()2MF | 1 | 1 | 50 (3.45) | 1500 (103.44) | 400 (27.58) | -20/+400 (-28/+204) | 3 3/8 (92) | 2 1/2 (64) | 13 3/8 (346) | 14 (6) |
| BP51() ()1FF | 3/4 | 1 | 50 (3.45) | 1500 (103.44) | 400 (27.58) | -20/+400 (-28/+204) | 2 3/4 (70) | 2 1/2 (64) | 12 3/4 (324) | 14 (6) |
| BP51() ()2FF | 1 | 1 | 50 (3.45) | 1500 (103.44) | 400 (27.58) | -20/+400 (-28/+204) | 3 (736) | 2 1/2 (64) | 13 (330) | 14 (6) |
| Style BP6 - series BP with no. 6 orifice [0.110 in² [70.96 mm²]] and 1500 psig (103.44 barg) maximum set pressure | | | | | | | | | | |
| BP61() ()1MF | 3/4 | 1 1/2 | 50 (3.45) | 1500 (103.44) | 400 (27.58) | -20/+400 (-28/+204) | 3 3/8 (86) | 2 1/2 (64) | 13 3/8 (340) | 14 (6) |
| BP61() ()2MF | 1 | 1 1/2 | 50 (3.45) | 1500 (103.44) | 400 (27.58) | -20/+400 (-28/+204) | 3 3/8 (92) | 2 1/2 (64) | 13 3/8 (346) | 14 (6) |
| BP61() ()1FF | 3/4 | 1 1/2 | 50 (3.45) | 1500 (103.44) | 400 (27.58) | -20/+400 (-28/+204) | 2 3/4 (70) | 2 1/2 (64) | 12 3/4 (324) | 14 (6) |
| BP61() ()2FF | 1 | 1 1/2 | 50 (3.45) | 1500 (103.44) | 400 (27.58) | -20/+400 (-28/+204) | 3 (736) | 2 1/2 (64) | 13 (330) | 14 (6) |

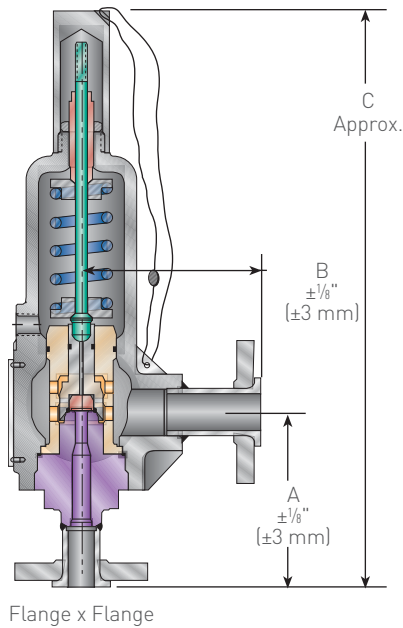
NOTES

- Refer to page 7 for soft seat temperature limits.
- Dimension 'C' shown is for Type A cap.
For Type B cap, add 1/4 in. (6 mm) to 'C' dimension (an additional 2 in. [51 mm] is required for test rod head clearance).
For Type D cap, add 5/8 in. (16 mm) to 'C' dimension.
For Type E cap, add 7/8 in. (22 mm) to 'C' dimension (an additional 2 in. [51 mm] is required for test rod head clearance).
- Add 1.6 lbs (0.7 kg) for Type D and E caps.

CROSBY OMNI-TRIM®

SPECIFICATIONS

SERIES BP FLANGED CONNECTIONS (NPT) - USCS UNITS (U.S. CUSTOMARY SYSTEM) (METRIC UNITS)



SERIES BP DIMENSIONS AND WEIGHTS, PRESSURE/TEMPERATURE RATINGS

| Valve style number | Connection size (NPS) | | Std. ANSI ⁽²⁾ lap joint stub end flanges | | Maximum ⁽¹⁾ set pressure at 100°F (37.8°C) psig (barg) | Maximum outlet pressure psig (barg) | Dimensions (mm) | | | Approx. weight ⁽⁴⁾ lbs (kg) |
|---|-----------------------|--------|---|--------|---|-------------------------------------|-----------------|-------------|------------------|--|
| | Inlet | Outlet | Inlet | Outlet | | | A | B | C ⁽³⁾ | |
| Style BP5 - Series BP with no. 5 orifice (0.074 in² [47.74 sq. mm]) | | | | | | | | | | |
| BP51() ()111 | 3/4 | 1 | 150 | 150 | 285 (19.65) | 285 (19.65) | 4 3/8 (117) | 4 3/4 (121) | 14 5/8 (371) | 18 (8) |
| BP51() ()121 | 3/4 | 1 | 300 | 150 | 740 (51.02) | 285 (19.65) | 4 3/8 (117) | 4 3/4 (121) | 14 5/8 (371) | 20 (9) |
| BP51() ()131 | 3/4 | 1 | 600 | 150 | 1480 (102.04) | 285 (19.65) | 4 3/8 (117) | 4 3/4 (121) | 14 5/8 (371) | 20 (9) |
| BP51() ()142 | 3/4 | 1 | 1500 | 300 | 1500 (19.65) | 400 (27.85) ⁽⁵⁾ | 5 (143) | 5 (127) | 15 7/8 (397) | 24 (11) |
| BP51() ()211 | 1 | 1 | 150 | 150 | 285 (19.65) | 285 (19.65) | 4 3/8 (124) | 4 3/4 (121) | 14 7/8 (378) | 19 (9) |
| BP51() ()221 | 1 | 1 | 300 | 150 | 740 (51.02) | 285 (19.65) | 4 3/8 (124) | 4 3/4 (121) | 14 7/8 (378) | 20 (9) |
| BP51() ()231 | 1 | 1 | 600 | 150 | 1480 (102.04) | 285 (19.65) | 4 3/8 (124) | 4 3/4 (121) | 14 7/8 (378) | 20 (9) |
| BP51() ()242 | 1 | 1 | 1500 | 300 | 1500 (19.65) | 400 (27.85) ⁽⁵⁾ | 5 (143) | 5 (127) | 15 7/8 (403) | 26 (12) |
| Style BP6 - Series BP with no. 6 orifice (0.110 in² [70.96 mm²]) | | | | | | | | | | |
| BP61() ()111 | 3/4 | 1 | 150 | 150 | 285 (19.65) | 285 (19.65) | 4 3/8 (117) | 4 3/4 (121) | 14 5/8 (371) | 18 (8) |
| BP61() ()121 | 3/4 | 1 | 300 | 150 | 740 (51.02) | 285 (19.65) | 4 3/8 (117) | 4 3/4 (121) | 14 5/8 (371) | 20 (9) |
| BP61() ()131 | 3/4 | 1 | 600 | 150 | 1480 (102.04) | 285 (19.65) | 4 3/8 (117) | 4 3/4 (121) | 14 5/8 (371) | 20 (9) |
| BP61() ()142 | 3/4 | 1 | 1500 | 300 | 1500 (19.65) | 400 (27.85) ⁽⁵⁾ | 5 (143) | 5 (127) | 15 5/8 (397) | 24 (11) |
| BP61() ()211 | 1 | 1 | 150 | 150 | 285 (19.65) | 285 (19.65) | 4 3/8 (124) | 4 3/4 (121) | 14 7/8 (378) | 19 (9) |
| BP61() ()221 | 1 | 1 | 300 | 150 | 740 (51.02) | 285 (19.65) | 4 3/8 (124) | 4 3/4 (121) | 14 7/8 (378) | 20 (9) |
| BP61() ()231 | 1 | 1 | 600 | 150 | 1480 (102.04) | 285 (19.65) | 4 3/8 (124) | 4 3/4 (121) | 14 7/8 (378) | 20 (9) |
| BP61() ()242 | 1 | 1 | 1500 | 300 | 1500 (19.65) | 400 (27.85) ⁽⁵⁾ | 5 (143) | 5 (127) | 15 5/8 (403) | 26 (12) |

NOTES

- Maximum set pressures shown are based on carbon steel flanges. Pressure limits for 316 SS flanges may be lower. Consult your sales representative.
- Flanges are supplied with a serrated face per ANSI B16.5. Other facings/standards (i.e., DIN) are also available.
- Dimension 'C' shown is for Type A cap.
 For Type B cap, add 1/4 in. (6 mm) to 'C' dimension (an additional 2 in. [51 mm] is required for test rod head clearance).
 For Type D cap, add 5/8 in. (16 mm) to 'C' dimension.
 For Type E cap, add 7/8 in. (22 mm) to 'C' dimension (an additional 2 in. [51 mm] is required for test rod head clearance).
- Add 1.6 lbs [0.7 kg] for Type D and E caps.
- ANSI CL 300 supplied; however the maximum back pressure is 400 psig [27.58 barg].

CROSBY OMNI-TRIM®

AIR CAPACITIES

SERIES 900 VALVES - USCS (U.S. CUSTOMARY SYSTEM) UNITS

Note: For air capacities, USCS units are exact equivalents of imperial units.

AIR CAPACITIES - SET PRESSURES 5-5000 psig (continued next page)

| Set pressure (psig) | Effective area (sq. in.) | | | | | Set pressure (psig) | Effective area (sq. in.) | | | | |
|----------------------------------|--------------------------|-------------|-------------|-------------|-------------|----------------------------------|--------------------------|-------------|-------------|-------------|-------------|
| | 0.074 | 0.110 | 0.196 | 0.307 | 0.503 | | 0.074 | 0.110 | 0.196 | 0.307 | 0.503 |
| 1 psi incr.⁽¹⁾ | 1.4 | 2.1 | 3.8 | 6.1 | 10.0 | 1 psi incr.⁽¹⁾ | 1.4 | 2.1 | 3.8 | 6.1 | 10.0 |
| 5 psi incr. | 7.4 | 10.9 | 19.4 | 30.7 | 50.1 | 5 psi incr. | 7.4 | 10.9 | 19.4 | 30.7 | 50.1 |
| 5 | 34.2 | 50.4 | | | | 280 | 438 | 645 | 1140 | 1801 | 2943 |
| 6 | 35.7 | 52.6 | 93.0 | | | 300 | 468 | 689 | 1218 | 1924 | 3144 |
| 7 | 37.2 | 54.8 | 96.9 | 153 | 250 | 320 | 498 | 733 | 1295 | 2047 | 3344 |
| 8 | 38.7 | 57.1 | 100 | 159 | 260 | 340 | 528 | 777 | 1373 | 2170 | 3545 |
| 9 | 40.3 | 59.3 | 104 | 165 | 270 | 360 | 557 | 821 | 1451 | 2293 | 3746 |
| 10 | 41.8 | 61.5 | 108 | 171 | 280 | 380 | 587 | 865 | 1528 | 2415 | 3946 |
| 15 | 44.4 | 65.3 | 115 | 182 | 298 | 400 | 617 | 909 | 1606 | 2538 | 4147 |
| 20 | 51.2 | 75.3 | 133 | 210 | 343 | 420 | 647 | 953 | 1684 | 2661 | 4348 |
| 30 | 64.7 | 95.3 | 168 | 266 | 435 | 440 | 677 | 997 | 1762 | 2784 | 4548 |
| 40 | 79.7 | 117 | 207 | 327 | 535 | 460 | 707 | 1041 | 1839 | 2907 | 4749 |
| 50 | 94.6 | 139 | 246 | 389 | 635 | 480 | 737 | 1085 | 1917 | 3030 | 4950 |
| 60 | 109 | 161 | 285 | 450 | 736 | 500 | 767 | 1129 | 1995 | 3152 | 5151 |
| 70 | 124 | 183 | 324 | 511 | 836 | 520 | 797 | 1173 | 2073 | 3275 | 5351 |
| 80 | 139 | 205 | 362 | 573 | 936 | 540 | 826 | 1217 | 2150 | 3398 | 5552 |
| 90 | 154 | 227 | 401 | 634 | 1037 | 560 | 856 | 1261 | 2228 | 3521 | 5753 |
| 100 | 169 | 249 | 440 | 696 | 1137 | 580 | 886 | 1305 | 2306 | 3644 | 5953 |
| 120 | 199 | 293 | 518 | 819 | 1338 | 600 | 916 | 1349 | 2384 | 3767 | 6154 |
| 140 | 229 | 337 | 596 | 941 | 1538 | 620 | 946 | 1393 | 2461 | 3889 | 6355 |
| 160 | 259 | 381 | 673 | 1064 | 1739 | 640 | 976 | 1437 | 2539 | 4012 | 6555 |
| 180 | 288 | 425 | 751 | 1187 | 1940 | 660 | 1006 | 1481 | 2617 | 4135 | 6756 |
| 200 | 318 | 469 | 829 | 1310 | 2140 | 680 | 1036 | 1525 | 2695 | 4258 | 6957 |
| 220 | 348 | 513 | 907 | 1433 | 2341 | 700 | 1065 | 1569 | 2772 | 4381 | 7157 |
| 240 | 378 | 557 | 984 | 1556 | 2542 | 720 | 1095 | 1613 | 2850 | 4504 | 7358 |
| 260 | 408 | 601 | 1062 | 1678 | 2742 | 740 | 1125 | 1657 | 2928 | 4626 | 7559 |

NOTES

1. Not valid below 30 psig set pressure.
2. Capacities below 30 psig set pressure are calculated at 3 psi overpressure.
3. The scope of the ASME Code, Section VIII & XIII (UV Designator), does not include pressures below 15 psig and therefore pressure relief valves set below 15 psig are not stamped with the ASME Code Symbol.

Capacity in standard cubic feet per minute of air at 60°F and 10% overpressure. Valve discharging to atmospheric pressure.⁽²⁾

Capacities certified by the National Board of Boiler and Pressure Vessel Inspectors and in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII & XIII (UV Designator).

CROSBY OMNI-TRIM®

AIR CAPACITIES

AIR CAPACITIES - SET PRESSURES 5-5000 psig (continued)

| Set pressure (psig) | Effective area (sq. in.) | | | | | Set pressure (psig) | Effective area (sq. in.) | | | | |
|----------------------------------|--------------------------|-------------|-------------|-------------|-------------|----------------------------------|--------------------------|-------------|-------------|-------------|-------------|
| | 0.074 | 0.110 | 0.196 | 0.307 | 0.503 | | 0.074 | 0.110 | 0.196 | 0.307 | 0.503 |
| 1 psi incr.⁽¹⁾ | 1.4 | 2.1 | 3.8 | 6.1 | 10.0 | 1 psi incr.⁽¹⁾ | 1.4 | 2.1 | 3.8 | 6.1 | 10.0 |
| 5 psi incr. | 7.4 | 10.9 | 19.4 | 30.7 | 50.1 | 5 psi incr. | 7.4 | 10.9 | 19.4 | 30.7 | 50.1 |
| 760 | 1155 | 1701 | 3006 | 4749 | 7759 | 2200 | 3307 | 4869 | 8603 | | |
| 780 | 1185 | 1745 | 3083 | 4872 | 7960 | 2300 | 3456 | 5089 | 8991 | | |
| 800 | 1215 | 1789 | 3161 | 4995 | 8161 | 2400 | 3606 | 5309 | 9380 | | |
| 820 | 1245 | 1833 | 3239 | 5118 | 8361 | 2500 | 3755 | 5529 | 9769 | | |
| 840 | 1275 | 1877 | 3316 | 5241 | 8562 | 2600 | 3905 | 5749 | | | |
| 860 | 1305 | 1921 | 3394 | 5363 | 8763 | 2700 | 4054 | 5969 | | | |
| 880 | 1334 | 1965 | 3472 | 5486 | 8963 | 2800 | 4203 | 6189 | | | |
| 900 | 1364 | 2009 | 3550 | 5609 | 9164 | 2900 | 4353 | 6409 | | | |
| 920 | 1394 | 2053 | 3627 | 5732 | 9365 | 3000 | 4502 | 6629 | | | |
| 940 | 1424 | 2097 | 3705 | 5855 | 9565 | 3100 | 4652 | 6849 | | | |
| 960 | 1454 | 2141 | 3783 | 5978 | 9766 | 3200 | 4801 | 7069 | | | |
| 980 | 1484 | 2185 | 3861 | 6100 | 9967 | 3300 | 4951 | 7288 | | | |
| 1000 | 1514 | 2229 | 3938 | 6223 | 10167 | 3400 | 5100 | 7508 | | | |
| 1100 | 1663 | 2449 | 4327 | 6837 | 11171 | 3500 | 5249 | 7728 | | | |
| 1200 | 1813 | 2669 | 4716 | 7452 | 12174 | 3600 | 5399 | 7948 | | | |
| 1300 | 1962 | 2889 | 5104 | 8066 | 13178 | 3700 | 5548 | 8168 | | | |
| 1400 | 2111 | 3109 | 5493 | 8680 | 14181 | 3800 | 5698 | 8388 | | | |
| 1500 | 2261 | 3329 | 5882 | 9294 | 15184 | 3900 | 5847 | 8608 | | | |
| 1600 | 2410 | 3549 | 6271 | | | 4000 | 5997 | 8828 | | | |
| 1700 | 2560 | 3769 | 6659 | | | 4200 | 6295 | 9268 | | | |
| 1800 | 2709 | 3989 | 7048 | | | 4400 | 6594 | 9708 | | | |
| 1900 | 2859 | 4209 | 7437 | | | 4600 | 6893 | 10148 | | | |
| 2000 | 3008 | 4429 | 7825 | | | 4800 | 7192 | 10588 | | | |
| 2100 | 3157 | 4649 | 8214 | | | 5000 | 7491 | 11028 | | | |

NOTES

1. Not valid below 30 psig set pressure.
2. Capacities below 30 psig set pressure are calculated at 3 psi overpressure.
3. The scope of the ASME Code, Section VIII and XIII (UV Designator) does not include pressures below 15 psig and therefore pressure relief valves set below 15 psig are not stamped with the ASME Code Symbol.

Capacity in standard cubic feet per minute of air at 60°F and 10% overpressure. Valve discharging to atmospheric pressure.⁽²⁾

Capacities certified by the National Board of Boiler and Pressure Vessel Inspectors and in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII and XIII (UV Designator).

CROSBY OMNI-TRIM®

SATURATED STEAM CAPACITIES

UNFIRED PRESSURE VESSEL SERVICE SERIES 900 VALVES USCS (U.S. CUSTOMARY SYSTEM) UNITS

Note: for steam capacities, USCS units are exact equivalents of imperial units.

SATURATED STEAM CAPACITIES - SET PRESSURES 5-1000 psig (continued next page)

| Set pressure (psig) | Effective area (sq. in.) | | | | | Set pressure (psig) | Effective area (sq. in.) | | | | |
|----------------------------|--------------------------|-------|-------|-------|-------|----------------------------|--------------------------|-------|-------|-------|-------|
| | 0.074 | 0.110 | 0.196 | 0.307 | 0.503 | | 0.074 | 0.110 | 0.196 | 0.307 | 0.503 |
| 1 psi incr. ⁽¹⁾ | 4.1 | 6.1 | 10.9 | 17.2 | 28.1 | 1 psi incr. ⁽¹⁾ | 4.1 | 6.1 | 10.9 | 17.2 | 28.1 |
| 5 psi incr. | 20.9 | 30.9 | 54.6 | 86.2 | 140 | 5 psi incr. | 20.9 | 30.9 | 54.6 | 86.2 | 140 |
| 5 | 96.2 | 141 | | | | 160 | 727 | 1071 | 1893 | 2991 | 4887 |
| 6 | 100 | 147 | 261 | | | 170 | 769 | 1133 | 2002 | 3163 | 5168 |
| 7 | 104 | 154 | 272 | | | 180 | 811 | 1195 | 2111 | 3336 | 5450 |
| 8 | 108 | 160 | 283 | 447 | 731 | 190 | 853 | 1256 | 2220 | 3508 | 5732 |
| 9 | 113 | 166 | 294 | 465 | 760 | 200 | 895 | 1318 | 2329 | 3681 | 6014 |
| 10 | 117 | 172 | 305 | 482 | 788 | 210 | 937 | 1380 | 2439 | 3854 | 6296 |
| 15 | 124 | 183 | 324 | 512 | 837 | 220 | 979 | 1442 | 2548 | 4026 | 6578 |
| 20 | 143 | 211 | 374 | 591 | 966 | 230 | 1021 | 1504 | 2657 | 4199 | 6860 |
| 30 | 182 | 268 | 473 | 748 | 1222 | 240 | 1063 | 1565 | 2766 | 4371 | 7142 |
| 40 | 224 | 329 | 582 | 920 | 1504 | 250 | 1105 | 1627 | 2875 | 4544 | 7424 |
| 50 | 266 | 391 | 691 | 1093 | 1786 | 260 | 1147 | 1689 | 2985 | 4716 | 7706 |
| 60 | 307 | 453 | 801 | 1265 | 2068 | 270 | 1189 | 1751 | 3094 | 4889 | 7987 |
| 70 | 349 | 515 | 910 | 1438 | 2349 | 280 | 1231 | 1813 | 3203 | 5061 | 8269 |
| 80 | 391 | 577 | 1019 | 1610 | 2631 | 290 | 1273 | 1874 | 3312 | 5234 | 8551 |
| 90 | 433 | 638 | 1128 | 1783 | 2913 | 300 | 1315 | 1936 | 3421 | 5406 | 8833 |
| 100 | 475 | 700 | 1237 | 1956 | 3195 | 310 | 1357 | 1998 | 3531 | 5579 | 9115 |
| 110 | 517 | 762 | 1347 | 2128 | 3477 | 320 | 1399 | 2060 | 3640 | 5752 | 9397 |
| 120 | 559 | 824 | 1456 | 2301 | 3759 | 330 | 1441 | 2122 | 3749 | 5924 | 9679 |
| 130 | 601 | 886 | 1565 | 2473 | 4041 | 340 | 1483 | 2183 | 3858 | 6097 | 9961 |
| 140 | 643 | 947 | 1674 | 2646 | 4323 | 350 | 1525 | 2245 | 3967 | 6269 | 10243 |
| 150 | 685 | 1009 | 1783 | 2818 | 4605 | 360 | 1567 | 2307 | 4077 | 6442 | 10524 |

NOTES

1. Not valid below 30 psig set pressure.
2. Capacities below 30 psig set pressure are calculated at 3 psi overpressure.
3. Maximum set pressure for steam service is 1000 psig.
4. The scope of the ASME Code, Section VIII and XIII (UV Designator), does not include pressures below 15 psig and therefore pressure relief valves set below 15 psig are not stamped with the ASME Code Symbol.

Capacity in pounds per hour of steam at 10% overpressure. Valve discharging to atmospheric pressure.⁽²⁾

Capacities certified by the National Board of Boiler and Pressure Vessel Inspectors and in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII and XIII (UV Designator).

CROSBY OMNI-TRIM®
SATURATED STEAM CAPACITIES

SATURATED STEAM CAPACITIES - SET PRESSURES 5-1000 psig (continued)

| Set pressure (psig) | Effective area (sq. in.) | | | | | Set pressure (psig) | Effective area (sq. in.) | | | | |
|----------------------------------|--------------------------|-------------|-------------|-------------|-------------|----------------------------------|--------------------------|-------------|-------------|-------------|-------------|
| | 0.074 | 0.110 | 0.196 | 0.307 | 0.503 | | 0.074 | 0.110 | 0.196 | 0.307 | 0.503 |
| 1 psi incr.⁽¹⁾ | 4.1 | 6.1 | 10.9 | 17.2 | 28.1 | 1 psi incr.⁽¹⁾ | 4.1 | 6.1 | 10.9 | 17.2 | 28.1 |
| 5 psi incr. | 20.9 | 30.9 | 54.6 | 86.2 | 140 | 5 psi incr. | 20.9 | 30.9 | 54.6 | 86.2 | 140 |
| 370 | 1609 | 2369 | 4186 | 6614 | 10806 | 640 | 2742 | 4038 | 7134 | 11273 | 18418 |
| 380 | 1651 | 2431 | 4295 | 6787 | 11088 | 660 | 2826 | 4161 | 7353 | 11618 | 18981 |
| 390 | 1693 | 2492 | 4404 | 6959 | 11370 | 680 | 2910 | 4285 | 7571 | 11963 | 19545 |
| 400 | 1735 | 2554 | 4513 | 7132 | 11652 | 700 | 2994 | 4408 | 7790 | 12308 | 20109 |
| 410 | 1777 | 2616 | 4623 | 7304 | 11934 | 720 | 3078 | 4532 | 8008 | 12653 | 20673 |
| 420 | 1819 | 2678 | 4732 | 7477 | 12216 | 740 | 3162 | 4656 | 8226 | 12998 | 21237 |
| 430 | 1861 | 2740 | 4841 | 7650 | 12498 | 760 | 3246 | 4779 | 8445 | 13344 | 21800 |
| 440 | 1903 | 2801 | 4950 | 7822 | 12780 | 780 | 3330 | 4903 | 8663 | 13689 | 22364 |
| 450 | 1945 | 2863 | 5059 | 7995 | 13062 | 800 | 3414 | 5026 | 8882 | 14034 | 22928 |
| 460 | 1987 | 2925 | 5169 | 8167 | 13343 | 820 | 3498 | 5150 | 9100 | 14379 | 23492 |
| 470 | 2029 | 2987 | 5278 | 8340 | 13625 | 840 | 3582 | 5274 | 9318 | 14724 | 24055 |
| 480 | 2071 | 3049 | 5387 | 8512 | 13907 | 860 | 3666 | 5397 | 9537 | 15069 | 24619 |
| 490 | 2113 | 3111 | 5496 | 8685 | 14189 | 880 | 3750 | 5521 | 9755 | 15414 | 25183 |
| 500 | 2155 | 3172 | 5605 | 8857 | 14471 | 900 | 3834 | 5644 | 9974 | 15759 | 25747 |
| 520 | 2239 | 3296 | 5824 | 9202 | 15035 | 920 | 3918 | 5768 | 10192 | 16104 | 26311 |
| 540 | 2323 | 3420 | 6042 | 9548 | 15599 | 940 | 4002 | 5892 | 10410 | 16449 | 26874 |
| 560 | 2407 | 3543 | 6261 | 9893 | 16162 | 960 | 4086 | 6015 | 10629 | 16794 | 27438 |
| 580 | 2491 | 3667 | 6479 | 10238 | 16726 | 980 | 4170 | 6139 | 10847 | 17140 | 28002 |
| 600 | 2574 | 3790 | 6698 | 10583 | 17290 | 1000 | 4254 | 6263 | 11066 | 17485 | 28566 |
| 620 | 2658 | 3914 | 6916 | 10928 | 17854 | | | | | | |

NOTES

1. Not valid below 30 psig set pressure.
2. Capacities below 30 psig set pressure are calculated at 3 psi overpressure.
3. Maximum set pressure for steam service is 1000 psig.
4. The scope of the ASME Code, Section VIII and XIII (UV Designator), does not include pressures below 15 psig and therefore pressure relief valves set below 15 psig are not stamped with the ASME Code Symbol.

Capacity in pounds per hour of steam at 10% overpressure. Valve discharging to atmospheric pressure.⁽²⁾

Capacities certified by the National Board of Boiler and Pressure Vessel Inspectors and in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII and XIII (UV Designator).

CROSBY OMNI-TRIM®

WATER CAPACITIES

SERIES 900 OMNI-TRIM® VALVES - USCS (U.S. CUSTOMARY SYSTEM) UNITS

Note: USCS units for water and liquids are U.S. gallons per minute (1 U.S. gallon equals 0.833 imperial gallon).

WATER CAPACITIES - DIFFERENTIAL PRESSURES $\Delta P^{(1)}$ 5-5000 psi⁽²⁾ (continued next page)

| Diff. pressure $\Delta P^{(1)}$ (psi) | Effective area (sq. in.) | | | | | Diff. pressure $\Delta P^{(1)}$ (psi) | Effective area (sq. in.) | | | | |
|---|--------------------------|-------|-------|-------|-------|---|--------------------------|-------|-------|-------|-------|
| | 0.074 | 0.110 | 0.196 | 0.307 | 0.503 | | 0.074 | 0.110 | 0.196 | 0.307 | 0.503 |
| 5 | 4.7 | 6.9 | | | | 420 | 43.5 | 64.0 | 113 | 178 | 292 |
| 10 | 6.7 | 9.8 | 17.4 | | | 440 | 44.5 | 65.5 | 115 | 183 | 299 |
| 15 | 8.2 | 12.1 | 21.3 | 33.8 | 55.2 | 460 | 45.5 | 67.0 | 118 | 187 | 305 |
| 20 | 9.4 | 13.9 | 24.7 | 39.0 | 63.7 | 480 | 46.5 | 68.5 | 121 | 191 | 312 |
| 30 | 11.6 | 17.1 | 30.2 | 47.8 | 78.1 | 500 | 47.4 | 69.9 | 123 | 195 | 318 |
| 40 | 13.4 | 19.7 | 34.9 | 55.2 | 90.2 | 520 | 48.4 | 71.3 | 125 | 199 | 325 |
| 50 | 15.0 | 22.1 | 39.0 | 61.7 | 100 | 540 | 49.3 | 72.6 | 128 | 202 | 331 |
| 60 | 16.4 | 24.2 | 42.7 | 67.6 | 110 | 560 | 50.2 | 73.9 | 130 | 206 | 337 |
| 80 | 18.9 | 27.9 | 49.4 | 78.0 | 127 | 580 | 51.1 | 75.3 | 133 | 210 | 343 |
| 100 | 21.2 | 31.2 | 55.2 | 87.2 | 142 | 600 | 52.0 | 76.5 | 135 | 213 | 349 |
| 120 | 23.2 | 34.2 | 60.5 | 95.6 | 156 | 620 | 52.8 | 77.8 | 137 | 217 | 355 |
| 140 | 25.1 | 36.9 | 65.3 | 103 | 168 | 640 | 53.7 | 79.1 | 139 | 220 | 360 |
| 160 | 26.8 | 39.5 | 69.8 | 110 | 180 | 660 | 54.5 | 80.3 | 141 | 224 | 366 |
| 180 | 28.4 | 41.9 | 74.1 | 117 | 191 | 680 | 55.3 | 81.5 | 144 | 227 | 371 |
| 200 | 30.0 | 44.2 | 78.1 | 123 | 201 | 700 | 56.1 | 82.7 | 146 | 230 | 377 |
| 220 | 31.5 | 46.3 | 81.9 | 129 | 211 | 720 | 56.9 | 83.9 | 148 | 234 | 382 |
| 240 | 32.9 | 48.4 | 85.5 | 135 | 220 | 740 | 57.7 | 85.0 | 150 | 237 | 387 |
| 260 | 34.2 | 50.4 | 89.0 | 140 | 229 | 760 | 58.5 | 86.2 | 152 | 240 | 393 |
| 280 | 35.5 | 52.3 | 92.4 | 146 | 238 | 780 | 59.3 | 87.3 | 154 | 243 | 398 |
| 300 | 36.7 | 54.1 | 95.6 | 151 | 247 | 800 | 60.0 | 88.4 | 156 | 246 | 403 |
| 320 | 37.9 | 55.9 | 98.8 | 156 | 255 | 820 | 60.8 | 89.5 | 158 | 249 | 408 |
| 340 | 39.1 | 57.6 | 101 | 160 | 262 | 840 | 61.5 | 90.6 | 160 | 253 | 413 |
| 360 | 40.3 | 59.3 | 104 | 165 | 270 | 860 | 62.2 | 91.7 | 162 | 256 | 418 |
| 380 | 41.4 | 60.9 | 107 | 170 | 278 | 880 | 63.0 | 92.7 | 163 | 258 | 423 |
| 400 | 42.4 | 62.5 | 110 | 174 | 285 | 900 | 63.7 | 93.8 | 165 | 261 | 427 |

NOTES

1. Differential pressure (ΔP) equals inlet pressure (set pressure plus overpressure) at flowing conditions minus back pressure.
2. See pages 15-18 for minimum and maximum set pressure limits.
3. The scope of the ASME Code, Section VIII and XIII (UV Designator), does not include pressures below 15 psig and therefore pressure relief valves set below 15 psig are not stamped with the ASME Code Symbol.

Capacity in U.S. gallons per minute of water at 70°F and 10% overpressure.

Capacities certified by the National Board of Boiler and Pressure Vessel Inspectors and in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII and XIII (UV Designator).

CROSBY OMNI-TRIM®
WATER CAPACITIES

WATER CAPACITIES - DIFFERENTIAL PRESSURES $\Delta P^{(1)}$ 5-5000 psi⁽²⁾ (continued)

| Diff. pressure $\Delta P^{(1)}$ (psi) | Effective area (sq. in.) | | | | | Diff. pressure $\Delta P^{(1)}$ (psi) | Effective area (sq. in.) | | | | |
|---|--------------------------|-------|-------|-------|-------|---|--------------------------|-------|-------|-------|-------|
| | 0.074 | 0.110 | 0.196 | 0.307 | 0.503 | | 0.074 | 0.110 | 0.196 | 0.307 | 0.503 |
| 920 | 64.4 | 94.8 | 167 | 264 | 432 | 3100 | 118 | 174 | | | |
| 940 | 65.1 | 95.8 | 169 | 267 | 437 | 3200 | 120 | 176 | | | |
| 960 | 65.8 | 96.8 | 171 | 270 | 441 | 3300 | 122 | 179 | | | |
| 980 | 66.4 | 97.8 | 172 | 273 | 446 | 3400 | 123 | 182 | | | |
| 1000 | 67.1 | 98.8 | 174 | 276 | 451 | 3500 | 125 | 184 | | | |
| 1100 | 70.4 | 103 | 183 | 289 | 473 | 3600 | 127 | 187 | | | |
| 1200 | 73.5 | 108 | 191 | 302 | 494 | 3700 | 129 | 190 | | | |
| 1300 | 76.5 | 112 | 199 | 314 | 514 | 3800 | 130 | 192 | | | |
| 1400 | 79.4 | 116 | 206 | 326 | 533 | 3900 | 132 | 195 | | | |
| 1500 | 82.2 | 121 | 213 | 338 | 552 | 4000 | 134 | 197 | | | |
| 1600 | 84.9 | 125 | 220 | 349 | 570 | 4100 | 136 | 200 | | | |
| 1700 | 87.5 | 128 | 227 | | | 4200 | 137 | 202 | | | |
| 1800 | 90.1 | 132 | 234 | | | 4300 | 139 | 205 | | | |
| 1900 | 92.5 | 136 | 240 | | | 4400 | 140 | 207 | | | |
| 2000 | 94.9 | 139 | 247 | | | 4500 | 142 | 209 | | | |
| 2100 | 97.3 | 143 | 253 | | | 4600 | 144 | 212 | | | |
| 2200 | 99.6 | 146 | 259 | | | 4700 | 145 | 214 | | | |
| 2300 | 101 | 149 | 264 | | | 4800 | 147 | 216 | | | |
| 2400 | 104 | 153 | 270 | | | 4900 | 148 | 218 | | | |
| 2500 | 106 | 156 | 276 | | | 5000 | 150 | 221 | | | |
| 2600 | 108 | 159 | 281 | | | | | | | | |
| 2700 | 110 | 162 | 287 | | | | | | | | |
| 2800 | 112 | 165 | | | | | | | | | |
| 2900 | 114 | 168 | | | | | | | | | |
| 3000 | 116 | 171 | | | | | | | | | |

NOTE

1. Differential pressure (ΔP) equals inlet pressure (set pressure plus overpressure) at flowing conditions minus back pressure. Capacity in U.S. gallons per minute of water at 70°F and 10% overpressure.

CROSBY OMNI-TRIM®

AIR CAPACITIES

SERIES 900 VALVES - METRIC UNITS

AIR CAPACITIES - SET PRESSURES 0.35-338 barg (continued next page)

| Set press. (barg) | Effective area (sq. mm.) | | | | | Set press. (kPag) | Set press. (barg) | Effective area (sq. mm.) | | | | | Set press. (kPag) |
|----------------------------|--------------------------|------|------|------|------|----------------------|----------------------------|--------------------------|------|------|------|------|----------------------|
| | 47.7 | 71 | 126 | 198 | 325 | | | 47.7 | 71 | 126 | 198 | 325 | |
| 1 bar incr. ⁽¹⁾ | 0.5 | 0.8 | 1.5 | 2.4 | 4.0 | 100 kPa incr. | 1 bar incr. ⁽¹⁾ | 0.5 | 0.8 | 1.5 | 2.4 | 4.0 | 100 kPa incr. |
| 5 bar incr. | 2.9 | 4.4 | 7.9 | 12.3 | 20.3 | 500 kPa incr. | 5 bar incr. | 2.9 | 4.4 | 7.9 | 12.3 | 20.3 | 500 kPa incr. |
| 0.35 | 0.98 | 1.45 | 2.57 | | | 35 | 22 | 14.2 | 21.0 | 37.1 | 58.7 | 95.9 | 2200 |
| 0.4 | 1.01 | 1.50 | 2.65 | 4.19 | | 40 | 24 | 15.5 | 22.8 | 40.3 | 63.8 | 104 | 2400 |
| 0.45 | 1.05 | 1.54 | 2.73 | 4.32 | | 45 | 26 | 16.7 | 24.6 | 43.6 | 68.9 | 112 | 2600 |
| 0.5 | 1.08 | 1.59 | 2.81 | 4.45 | 7.27 | 50 | 28 | 18.0 | 26.5 | 46.8 | 74.0 | 121 | 2800 |
| 0.55 | 1.11 | 1.64 | 2.89 | 4.58 | 7.48 | 55 | 30 | 19.2 | 28.3 | 50.1 | 79.1 | 129 | 3000 |
| 0.6 | 1.14 | 1.68 | 2.98 | 4.70 | 7.69 | 60 | 32 | 20.5 | 30.2 | 53.3 | 84.3 | 137 | 3200 |
| 0.65 | 1.17 | 1.73 | 3.06 | 4.83 | 7.90 | 65 | 34 | 21.7 | 32.0 | 56.6 | 89.4 | 146 | 3400 |
| 0.7 | 1.20 | 1.77 | 3.14 | 4.96 | 8.11 | 70 | 36 | 23.0 | 33.8 | 59.8 | 94.5 | 154 | 3600 |
| 0.75 | 1.24 | 1.82 | 3.22 | 5.09 | 8.32 | 75 | 38 | 24.2 | 35.7 | 63.0 | 99.6 | 162 | 3800 |
| 0.8 | 1.27 | 1.87 | 3.30 | 5.22 | 8.53 | 80 | 40 | 25.5 | 37.5 | 66.3 | 104 | 171 | 4000 |
| 0.85 | 1.30 | 1.91 | 3.38 | 5.35 | 8.75 | 85 | 42 | 26.7 | 39.3 | 69.5 | 109 | 179 | 4200 |
| 0.9 | 1.33 | 1.96 | 3.47 | 5.48 | 8.96 | 90 | 44 | 27.9 | 41.2 | 72.8 | 115 | 187 | 4400 |
| 0.95 | 1.36 | 2.01 | 3.55 | 5.61 | 9.17 | 95 | 46 | 29.2 | 43.0 | 76.0 | 120 | 196 | 4600 |
| 1 | 1.39 | 2.05 | 3.63 | 5.74 | 9.38 | 100 | 48 | 30.4 | 44.8 | 79.2 | 125 | 204 | 4800 |
| 2 | 1.80 | 2.60 | 4.70 | 7.40 | 12.2 | 200 | 50 | 31.7 | 46.7 | 82.5 | 130 | 213 | 5000 |
| 4 | 3.00 | 4.50 | 7.90 | 12.6 | 20.5 | 400 | 52 | 32.9 | 48.5 | 85.7 | 135 | 221 | 5200 |
| 6 | 4.30 | 6.30 | 11.2 | 17.7 | 28.9 | 600 | 54 | 34.2 | 50.3 | 89.0 | 140 | 229 | 5400 |
| 8 | 5.50 | 8.10 | 14.4 | 22.8 | 37.3 | 800 | 56 | 35.4 | 52.2 | 92.2 | 145 | 238 | 5600 |
| 10 | 6.80 | 10.0 | 17.7 | 27.9 | 45.6 | 1000 | 58 | 36.7 | 54.0 | 95.5 | 150 | 246 | 5800 |
| 12 | 8.00 | 11.8 | 20.9 | 33.0 | 54.0 | 1200 | 60 | 37.9 | 55.8 | 98.7 | 156 | 254 | 6000 |
| 14 | 9.20 | 13.6 | 24.1 | 38.2 | 62.4 | 1400 | 62 | 39.2 | 57.7 | 101 | 161 | 263 | 6200 |
| 16 | 10.5 | 15.5 | 27.4 | 43.3 | 70.8 | 1600 | 64 | 40.4 | 59.5 | 105 | 166 | 271 | 6400 |
| 18 | 11.7 | 17.3 | 30.6 | 48.4 | 79.1 | 1800 | 66 | 41.7 | 61.3 | 108 | 171 | 280 | 6600 |
| 20 | 13.0 | 19.1 | 33.9 | 53.5 | 87.5 | 2000 | 68 | 42.9 | 63.2 | 111 | 176 | 288 | 6800 |

NOTES

1. Not valid below 2.0 barg set pressure.
2. Capacities below 2.0 barg set pressure are calculated at 0.2 bar overpressure.
3. The scope of the ASME Code, Section VIII and XIII (UV Designator), does not include pressures below 1.0 barg and therefore pressure relief valves set below 1.0 barg are not stamped with the ASME Code Symbol.

**Capacity in standard cubic meters of air per minute at 16°C and 10% overpressure.
Valve discharging to atmospheric pressure.⁽²⁾**

Capacities certified by the National Board of Boiler and Pressure Vessel Inspectors and in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII and XIII (UV Designator).

CROSBY OMNI-TRIM®

AIR CAPACITIES

AIR CAPACITIES - SET PRESSURES 0.35-338 barg (continued)

| Set press. (barg) | Effective area (sq. mm.) | | | | | Set press. (kPag) | Set press. (barg) | Effective area (sq. mm.) | | | | | Set press. (kPag) | |
|----------------------------|--------------------------|------|-----|------|------|----------------------|----------------------------|--------------------------|-----|-----|------|------|----------------------|-------|
| | 47.7 | 71 | 126 | 198 | 325 | | | 47.7 | 71 | 126 | 198 | 325 | | |
| 1 bar incr. ⁽¹⁾ | 0.5 | 0.8 | 1.5 | 2.4 | 4.0 | 100 kPa incr. | 1 bar incr. ⁽¹⁾ | 0.5 | 0.8 | 1.5 | 2.4 | 4.0 | 100 kPa incr. | |
| 5 bar incr. | 2.9 | 4.4 | 7.9 | 12.3 | 20.3 | 500 kPa incr. | 5 bar incr. | 2.9 | 4.4 | 7.9 | 12.3 | 20.3 | 500 kPa incr. | |
| 70 | 44.1 | | | | | 7000 | 208 | 130 | 191 | | | | | 20800 |
| 76 | 47.9 | | | | | 7600 | 214 | 133 | 197 | | | | | 21400 |
| 82 | 51.6 | | | | | 8200 | 220 | 137 | 202 | | | | | 22000 |
| 88 | 55.4 | | | | | 8800 | 226 | 141 | 208 | | | | | 22600 |
| 94 | 59.1 | | | | | 9400 | 232 | 145 | 213 | | | | | 23200 |
| 100 | 62.8 | | | | | 10000 | 238 | 148 | 219 | | | | | 23800 |
| 106 | 66.6 | 98.0 | 173 | | | 10600 | 244 | 152 | 224 | | | | 24400 | |
| 112 | 70.3 | 103 | 183 | | | 11200 | 250 | 156 | 230 | | | | 25000 | |
| 118 | 74.1 | 109 | 192 | | | 11800 | 256 | 160 | 235 | | | | 25600 | |
| 124 | 77.8 | 114 | 202 | | | 12400 | 262 | 163 | 241 | | | | 26200 | |
| 130 | 81.5 | 120 | 212 | | | 13000 | 268 | 167 | 246 | | | | 26800 | |
| 136 | 85.3 | 125 | 221 | | | 13600 | 274 | 171 | 252 | | | | 27400 | |
| 142 | 89.0 | 131 | 231 | | | 14200 | 280 | 175 | 257 | | | | 28000 | |
| 148 | 92.8 | 136 | 241 | | | 14800 | 286 | 178 | 263 | | | | 28600 | |
| 154 | 96.5 | 142 | 251 | | | 15400 | 292 | 182 | 268 | | | | 29200 | |
| 160 | 100 | 147 | 260 | | | 16000 | 298 | 186 | 274 | | | | 29800 | |
| 166 | 104 | 153 | 270 | | | 16600 | 304 | 190 | 279 | | | | 30400 | |
| 172 | 107 | 158 | 280 | | | 17200 | 310 | 193 | 285 | | | | 31000 | |
| 178 | 111 | 164 | | | | 17800 | 316 | 197 | 290 | | | | 31600 | |
| 184 | 115 | 169 | | | | 18400 | 322 | 201 | 296 | | | | 32200 | |
| 190 | 118 | 175 | | | | 19000 | 328 | 204 | 301 | | | | 32800 | |
| 196 | 122 | 180 | | | | 19600 | 334 | 208 | 307 | | | | 33400 | |
| 202 | 126 | 186 | | | | 20200 | 338 | 211 | 310 | | | | 33800 | |

NOTE

Capacity in standard cubic meters of air per minute at 16°C and 10% overpressure. Valve discharging to atmospheric pressure.⁽²⁾

CROSBY OMNI-TRIM®

SATURATED STEAM CAPACITIES

UNFIRED PRESSURE VESSEL SERVICE SERIES 900 VALVES - METRIC UNITS

SATURATED STEAM CAPACITIES - SET PRESSURES 0.35-68 barg

| Set pressure (barg) | Effective area (sq. mm.) | | | | | Set pressure (kPag) | Set pressure (barg) | Effective area (sq. mm.) | | | | | Set pressure (kPag) |
|------------------------------|--------------------------|------|------|------|------|------------------------|------------------------|--------------------------|------|------|------|-------|------------------------|
| | 47.7 | 71.0 | 126 | 198 | 325 | | | 47.7 | 71.0 | 126 | 198 | 325 | |
| 0.1 bar incr. ⁽¹⁾ | 2.7 | 4.0 | 7.1 | 11.3 | 18.5 | 10 kPa incr. | 0.1 bar incr. | 2.7 | 4.0 | 7.1 | 11.3 | 18.5 | 10 kPa incr. |
| 0.5 bar incr. | 13.8 | 20.3 | 35.9 | 56.7 | 92.7 | 50 kPa incr. | 0.5 bar incr. | 13.8 | 20.3 | 35.9 | 56.7 | 92.7 | 50 kPa incr. |
| 0.35 | 43.8 | 64.4 | | | | 35 | 24 | 688 | 1013 | 1790 | 2828 | 4621 | 2400 |
| 0.4 | 45.2 | 66.5 | 117 | | | 40 | 25 | 715 | 1053 | 1862 | 2942 | 4807 | 2500 |
| 0.45 | 46.5 | 68.6 | 121 | | | 45 | 26 | 743 | 1094 | 1934 | 3055 | 4992 | 2600 |
| 0.5 | 47.9 | 70.6 | 124 | 197 | 322 | 50 | 27 | 771 | 1135 | 2005 | 3169 | 5178 | 2700 |
| 0.55 | 49.3 | 72.7 | 128 | 202 | 331 | 55 | 28 | 798 | 1175 | 2077 | 3282 | 5363 | 2800 |
| 0.6 | 50.7 | 74.7 | 132 | 208 | 341 | 60 | 29 | 826 | 1216 | 2149 | 3396 | 5549 | 2900 |
| 0.65 | 52.1 | 76.8 | 135 | 214 | 350 | 65 | 30 | 854 | 1257 | 2221 | 3510 | 5734 | 3000 |
| 0.7 | 53.5 | 78.8 | 139 | 220 | 359 | 70 | 31 | 881 | 1297 | 2293 | 3623 | 5919 | 3100 |
| 0.75 | 54.9 | 80.9 | 142 | 225 | 369 | 75 | 32 | 909 | 1338 | 2365 | 3737 | 6105 | 3200 |
| 0.8 | 56.3 | 82.9 | 146 | 231 | 378 | 80 | 33 | 936 | 1379 | 2436 | 3850 | 6290 | 3300 |
| 0.85 | 57.7 | 85.0 | 150 | 237 | 387 | 85 | 34 | 964 | 1419 | 2508 | 3964 | 6476 | 3400 |
| 0.9 | 59.1 | 87.0 | 153 | 243 | 397 | 90 | 35 | 992 | 1460 | 2580 | 4077 | 6661 | 3500 |
| 0.95 | 60.5 | 89.1 | 157 | 248 | 406 | 95 | 36 | 1019 | 1501 | 2652 | 4191 | 6847 | 3600 |
| 1 | 61.9 | 91.1 | 161 | 254 | 415 | 100 | 37 | 1047 | 1541 | 2724 | 4304 | 7032 | 3700 |
| 1.5 | 68.3 | 100 | 177 | 280 | 458 | 150 | 38 | 1074 | 1582 | 2796 | 4418 | 7218 | 3800 |
| 2 | 80.6 | 118 | 209 | 331 | 541 | 200 | 39 | 1102 | 1623 | 2868 | 4531 | 7403 | 3900 |
| 3 | 108 | 159 | 281 | 445 | 727 | 300 | 40 | 1130 | 1663 | 2939 | 4645 | 7589 | 4000 |
| 4 | 135 | 200 | 353 | 558 | 912 | 400 | 41 | 1157 | 1704 | 3011 | 4758 | 7774 | 4100 |
| 5 | 163 | 240 | 425 | 672 | 1098 | 500 | 42 | 1185 | 1745 | 3083 | 4872 | 7959 | 4200 |
| 6 | 191 | 281 | 497 | 785 | 1283 | 600 | 43 | 1213 | 1785 | 3155 | 4985 | 8145 | 4300 |
| 7 | 218 | 322 | 569 | 899 | 1469 | 700 | 44 | 1240 | 1826 | 3227 | 5099 | 8330 | 4400 |
| 8 | 246 | 362 | 640 | 1012 | 1654 | 800 | 45 | 1268 | 1867 | 3299 | 5212 | 8516 | 4500 |
| 9 | 274 | 403 | 712 | 1126 | 1839 | 900 | 46 | 1295 | 1907 | 3370 | 5326 | 8701 | 4600 |
| 10 | 301 | 444 | 784 | 1239 | 2025 | 1000 | 47 | 1323 | 1948 | 3442 | 5439 | 8887 | 4700 |
| 11 | 329 | 484 | 856 | 1353 | 2210 | 1100 | 48 | 1351 | 1989 | 3514 | 5553 | 9072 | 4800 |
| 12 | 356 | 525 | 928 | 1466 | 2396 | 1200 | 49 | 1378 | 2029 | 3586 | 5666 | 9258 | 4900 |
| 13 | 384 | 566 | 1000 | 1580 | 2581 | 1300 | 50 | 1406 | 2070 | 3658 | 5780 | 9443 | 5000 |
| 14 | 412 | 606 | 1071 | 1693 | 2767 | 1400 | 52 | 1461 | 2151 | 3801 | 6007 | 9814 | 5200 |
| 15 | 439 | 647 | 1143 | 1807 | 2952 | 1500 | 54 | 1516 | 2233 | 3945 | 6234 | 10185 | 5400 |
| 16 | 467 | 688 | 1215 | 1920 | 3138 | 1600 | 56 | 1572 | 2314 | 4089 | 6461 | 10556 | 5600 |
| 17 | 494 | 728 | 1287 | 2034 | 3323 | 1700 | 58 | 1627 | 2395 | 4232 | 6688 | 10927 | 5800 |
| 18 | 522 | 769 | 1359 | 2147 | 3509 | 1800 | 60 | 1682 | 2477 | 4376 | 6915 | 11298 | 6000 |
| 19 | 550 | 810 | 1431 | 2261 | 3694 | 1900 | 62 | 1737 | 2558 | 4520 | 7142 | 11669 | 6200 |
| 20 | 577 | 850 | 1503 | 2374 | 3879 | 2000 | 64 | 1793 | 2639 | 4664 | 7369 | 12039 | 6400 |
| 21 | 605 | 891 | 1574 | 2488 | 4065 | 2100 | 66 | 1848 | 2721 | 4807 | 7596 | 12410 | 6600 |
| 22 | 633 | 931 | 1646 | 2601 | 4250 | 2200 | 68 | 1903 | 2802 | 4951 | 7823 | 12781 | 6800 |
| 23 | 660 | 972 | 1718 | 2715 | 4436 | 2300 | | | | | | | |

NOTES

1. Not valid below 2.0 barg set pressure.
2. Capacities below 2.0 barg set pressure are calculated at 0.2 bar overpressure.
3. Maximum set pressure for steam service is 68.95 barg.
4. The scope of the ASME Code, Section VIII and XIII (UV Designator), does not include pressures below 1.0 barg and therefore pressure relief valves set below 1.0 barg are not stamped with the ASME Code Symbol.

Capacity in kilograms per hour of steam at 10% overpressure. Valve discharging to atmospheric pressure.⁽²⁾

Capacities certified by the National Board of Boiler and Pressure Vessel Inspectors and in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII and XIII (UV Designator).

CROSBY OMNI-TRIM®

WATER CAPACITIES

SERIES 900 OMNI-TRIM® VALVES - METRIC UNITS

WATER CAPACITIES - DIFFERENTIAL PRESSURES $\Delta P^{(1)}$ 0.4-380 bar⁽²⁾ (continued next page)

| Diff. pressure $\Delta P^{(1)}$ (bar) | Effective area (sq. mm) | | | | | Diff. pressure $\Delta P^{(1)}$ (kPa) | Diff. pressure $\Delta P^{(1)}$ (bar) | Effective area (sq. mm) | | | | | Diff. pressure $\Delta P^{(1)}$ (kPa) |
|---|-------------------------|------|------|------|------|---|---|-------------------------|-----|-----|------|------|---|
| | 47.7 | 71 | 126 | 198 | 325 | | | 47.7 | 71 | 126 | 198 | 325 | |
| 0.4 | 19.3 | 28.5 | 50.3 | | | 40 | 40 | 193 | 285 | 503 | 795 | 1300 | 4000 |
| 0.6 | 23.7 | 34.9 | 61.6 | 97.4 | 159 | 60 | 42 | 198 | 292 | 516 | 815 | 1332 | 4200 |
| 0.8 | 27.3 | 40.3 | 71.2 | 112 | 183 | 80 | 44 | 203 | 299 | 528 | 834 | 1363 | 4400 |
| 1 | 30.6 | 45.0 | 79.6 | 125 | 205 | 100 | 46 | 207 | 305 | 540 | 853 | 1394 | 4600 |
| 2 | 43.3 | 63.7 | 112 | 177 | 290 | 200 | 48 | 212 | 312 | 551 | 871 | 1424 | 4800 |
| 4 | 61.2 | 90.1 | 159 | 251 | 411 | 400 | 50 | 216 | 318 | 563 | 889 | 1453 | 5000 |
| 6 | 75.0 | 110 | 195 | 308 | 503 | 600 | 52 | 220 | 325 | 574 | 907 | 1482 | 5200 |
| 8 | 86.6 | 127 | 225 | 355 | 581 | 800 | 54 | 225 | 331 | 585 | 924 | 1510 | 5400 |
| 10 | 96.8 | 142 | 251 | 397 | 650 | 1000 | 56 | 229 | 337 | 596 | 941 | 1538 | 5600 |
| 12 | 106 | 156 | 275 | 435 | 712 | 1200 | 58 | 233 | 343 | 606 | 958 | 1565 | 5800 |
| 14 | 114 | 168 | 298 | 470 | 769 | 1400 | 60 | 237 | 349 | 616 | 974 | 1592 | 6000 |
| 16 | 122 | 180 | 318 | 503 | 822 | 1600 | 62 | 241 | 354 | 627 | 990 | 1618 | 6200 |
| 18 | 129 | 191 | 337 | 533 | 872 | 1800 | 64 | 244 | 360 | 637 | 1006 | 1644 | 6400 |
| 20 | 136 | 201 | 356 | 562 | 919 | 2000 | 66 | 248 | 366 | 647 | 1022 | 1670 | 6600 |
| 22 | 143 | 211 | 373 | 590 | 964 | 2200 | 68 | 252 | 371 | 656 | 1037 | 1695 | 6800 |
| 24 | 150 | 220 | 390 | 616 | 1007 | 2400 | 70 | 256 | 377 | 666 | 1052 | 1720 | 7000 |
| 26 | 156 | 229 | 406 | 641 | 1048 | 2600 | 76 | 266 | 392 | 694 | 1097 | 1792 | 7600 |
| 28 | 162 | 238 | 421 | 665 | 1087 | 2800 | 82 | 277 | 408 | 721 | 1139 | 1861 | 8200 |
| 30 | 167 | 246 | 436 | 689 | 1126 | 3000 | 88 | 287 | 422 | 747 | 1180 | 1928 | 8800 |
| 32 | 173 | 255 | 450 | 711 | 1163 | 3200 | 94 | 296 | 437 | 772 | 1220 | 1993 | 9400 |
| 34 | 178 | 262 | 464 | 733 | 1198 | 3400 | 100 | 306 | 450 | 796 | 1258 | 2056 | 10000 |
| 36 | 183 | 270 | 477 | 755 | 1233 | 3600 | 106 | 315 | 464 | 820 | 1295 | 2116 | 10600 |
| 38 | 188 | 277 | 490 | 775 | 1267 | 3800 | 112 | 324 | 477 | 842 | 1331 | 2175 | 11200 |

NOTES

1. Differential pressure (ΔP) equals inlet pressure (set pressure plus overpressure) at flowing conditions minus back pressure.
2. See pages 19-22 for minimum and maximum set pressure limits.
3. The scope of the ASME Code, Section VIII and XIII (UV Designator), does not include pressures below 1.0 barg and therefore pressure relief valves set below 1.0 barg are not stamped with the ASME Code Symbol.

Capacity in liters per minute of water at 20°C and 10% overpressure.

Capacities certified by the National Board of Boiler and Pressure Vessel Inspectors and in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII and XIII (UV Designator).

CROSBY OMNI-TRIM®
WATER CAPACITIES

WATER CAPACITIES - DIFFERENTIAL PRESSURES $\Delta P^{(1)}$ 0.4-380 bar⁽²⁾ (continued)

| Diff. pressure $\Delta P^{(1)}$ (bar) | Effective area (sq. mm) | | | | | Diff. pressure $\Delta P^{(1)}$ (kPa) | Diff. pressure $\Delta P^{(1)}$ (bar) | Effective area (sq. mm) | | | | | Diff. pressure $\Delta P^{(1)}$ (kPa) |
|---|-------------------------|-----|------|------|------|---|---|-------------------------|-----|-----|-----|-----|---|
| | 47.7 | 71 | 126 | 198 | 325 | | | 47.7 | 71 | 126 | 198 | 325 | |
| 118 | 332 | 489 | 865 | 1367 | 2233 | 11800 | 256 | 489 | 721 | | | | 25600 |
| 124 | 340 | 501 | 886 | 1401 | 2289 | 12400 | 262 | 495 | 729 | | | | 26200 |
| 130 | 349 | 513 | 908 | | | 13000 | 268 | 501 | 737 | | | | 26800 |
| 136 | 357 | 525 | 928 | | | 13600 | 274 | 506 | 746 | | | | 27400 |
| 142 | 364 | 537 | 949 | | | 14200 | 280 | 512 | 754 | | | | 28000 |
| 148 | 372 | 548 | 968 | | | 14800 | 286 | 517 | 762 | | | | 28600 |
| 154 | 379 | 559 | 988 | | | 15400 | 292 | 523 | 770 | | | | 29200 |
| 160 | 387 | 570 | 1007 | | | 16000 | 298 | 528 | 778 | | | | 29800 |
| 166 | 394 | 580 | 1026 | | | 16600 | 304 | 533 | 785 | | | | 30400 |
| 172 | 401 | 591 | 1044 | | | 17200 | 310 | 539 | 793 | | | | 31000 |
| 178 | 408 | 601 | 1062 | | | 17800 | 316 | 544 | 801 | | | | 31600 |
| 184 | 415 | 611 | 1080 | | | 18400 | 322 | 549 | 808 | | | | 32200 |
| 190 | 422 | 621 | | | | 19000 | 328 | 554 | 816 | | | | 32800 |
| 196 | 428 | 631 | | | | 19600 | 334 | 559 | 823 | | | | 33400 |
| 202 | 435 | 640 | | | | 20200 | 340 | 564 | 831 | | | | 34000 |
| 208 | 441 | 650 | | | | 20800 | 346 | 569 | 838 | | | | 34600 |
| 214 | 447 | 659 | | | | 21400 | 352 | 574 | 845 | | | | 35200 |
| 220 | 454 | 668 | | | | 22000 | 358 | 579 | 852 | | | | 35800 |
| 226 | 460 | 677 | | | | 22600 | 364 | 584 | 860 | | | | 36400 |
| 232 | 466 | 686 | | | | 23200 | 370 | 588 | 867 | | | | 37000 |
| 238 | 472 | 695 | | | | 23800 | 376 | 593 | 874 | | | | 37600 |
| 244 | 478 | 704 | | | | 24400 | 380 | 596 | 878 | | | | 38000 |
| 250 | 484 | 712 | | | | 25000 | | | | | | | |

NOTES

- Differential pressure (ΔP) equals inlet pressure (set pressure plus overpressure) at flowing conditions minus back pressure.**
- See pages 19-22 for minimum and maximum set pressure limits.
- The scope of the ASME Code, Section VIII and XIII (UV Designator), does not include pressures below 1.0 barg and therefore pressure relief valves set below 1.0 barg are not stamped with the ASME Code Symbol.

Capacity in liters per minute of water at 20°C and 10% overpressure.

Capacities certified by the National Board of Boiler and Pressure Vessel Inspectors and in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII and XIII (UV Designator).

CROSBY OMNI-TRIM®

AIR CAPACITIES

SERIES BP, USCS UNITS (U.S. CUSTOMARY SYSTEM)

USCS - SET PRESSURES 50-1500 psig

| Set pressure (psig) | Effective area (sq. in.) | | Set pressure (psig) | Effective area (sq. in.) | |
|------------------------|--------------------------|-------|------------------------|--------------------------|-------|
| | 0.074 | 0.110 | | 0.074 | 0.110 |
| 1 psi incr. | 1.5 | 2.3 | 1 psi incr. | 1.5 | 2.3 |
| 5 psi incr. | 7.8 | 11.5 | 5 psi incr. | 7.8 | 11.5 |
| 50 | 99 | 146 | 560 | 903 | 1326 |
| 60 | 115 | 169 | 580 | 934 | 1372 |
| 70 | 131 | 192 | 600 | 966 | 1418 |
| 80 | 147 | 215 | 620 | 997 | 1465 |
| 90 | 162 | 239 | 640 | 1029 | 1511 |
| 100 | 178 | 262 | 660 | 1060 | 1557 |
| 120 | 210 | 308 | 680 | 1092 | 1603 |
| 140 | 241 | 354 | 700 | 1123 | 1650 |
| 160 | 273 | 401 | 720 | 1155 | 1696 |
| 180 | 304 | 447 | 740 | 1186 | 1742 |
| 200 | 336 | 493 | 760 | 1218 | 1788 |
| 220 | 367 | 539 | 780 | 1249 | 1835 |
| 240 | 399 | 586 | 800 | 1281 | 1881 |
| 260 | 430 | 632 | 820 | 1312 | 1927 |
| 280 | 462 | 678 | 840 | 1344 | 1973 |
| 300 | 493 | 724 | 860 | 1375 | 2020 |
| 320 | 525 | 771 | 880 | 1407 | 2066 |
| 340 | 556 | 817 | 900 | 1438 | 2112 |
| 360 | 588 | 863 | 920 | 1470 | 2158 |
| 380 | 619 | 909 | 940 | 1501 | 2205 |
| 400 | 651 | 956 | 960 | 1533 | 2251 |
| 420 | 682 | 1002 | 980 | 1564 | 2297 |
| 440 | 714 | 1048 | 1000 | 1596 | 2343 |
| 460 | 745 | 1094 | 1100 | 1753 | 2575 |
| 480 | 777 | 1141 | 1200 | 1911 | 2806 |
| 500 | 808 | 1187 | 1300 | 2069 | 3037 |
| 520 | 840 | 1233 | 1400 | 2226 | 3269 |
| 540 | 871 | 1279 | 1500 | 2384 | 3500 |

NOTE

- To determine capacities on gases other than air, or for fluid temperatures other than 60°F (16°C), use the gas and vapor sizing formula in the Crosby Engineering Handbook.

Note: for air capacities, USCS units are exact equivalents of imperial units.

The capacities listed in the table above are based on discharging to atmospheric pressure. For applications involving back pressure these capacities must be multiplied by the back pressure correction factor determined from the applicable curve shown on page 40.

Capacity in standard cubic feet per minute of air at 60°F and 10% overpressure.

Valve discharging to atmospheric pressure. (Capacity in standard cubic meters of air per minute at 16°C and 10% overpressure. Valve discharging to atmospheric pressure.)

Capacities certified by the National Board of Boiler and Pressure Vessel Inspectors and in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII and XIII (UV Designator).

CROSBY OMNI-TRIM®

WATER CAPACITIES

SERIES BP, USCS UNITS (U.S. CUSTOMARY SYSTEM)

USCS - DIFFERENTIAL PRESSURES $\Delta P^{(1)}$ 20-1600 psi

| Diff. pressure ΔP (psi) | Effective area (sq. in.) | | Diff. pressure ΔP (psi) | Effective area (sq. in.) | |
|------------------------------------|--------------------------|-------|------------------------------------|--------------------------|-------|
| | 0.074 | 0.110 | | 0.074 | 0.110 |
| 50 | 15.7 | 23.1 | 580 | 53.6 | 78.7 |
| 60 | 17.2 | 25.3 | 600 | 54.5 | 80.1 |
| 80 | 19.9 | 29.2 | 620 | 55.4 | 81.4 |
| 100 | 22.2 | 32.7 | 640 | 56.3 | 82.7 |
| 120 | 24.4 | 35.8 | 660 | 57.2 | 84.0 |
| 140 | 26.3 | 38.6 | 680 | 58.0 | 85.2 |
| 160 | 28.1 | 41.3 | 700 | 58.9 | 86.5 |
| 180 | 29.8 | 43.8 | 720 | 59.7 | 87.7 |
| 200 | 31.5 | 46.2 | 740 | 60.5 | 88.9 |
| 220 | 33.0 | 48.5 | 760 | 61.4 | 90.1 |
| 240 | 34.5 | 50.6 | 780 | 62.2 | 91.3 |
| 260 | 35.9 | 52.7 | 800 | 63.0 | 92.5 |
| 280 | 37.2 | 54.7 | 820 | 63.7 | 93.6 |
| 300 | 38.5 | 56.6 | 840 | 64.5 | 94.7 |
| 320 | 39.8 | 58.5 | 860 | 65.3 | 95.9 |
| 340 | 41.0 | 60.3 | 880 | 66.0 | 97.0 |
| 360 | 42.2 | 62.0 | 900 | 66.8 | 98.1 |
| 380 | 43.4 | 63.7 | 920 | 67.5 | 99.1 |
| 400 | 44.5 | 65.4 | 940 | 68.2 | 100 |
| 420 | 45.6 | 67.0 | 960 | 69.0 | 101 |
| 440 | 46.7 | 68.6 | 980 | 69.7 | 102 |
| 460 | 47.7 | 70.1 | 1000 | 70.4 | 103 |
| 480 | 48.8 | 71.6 | 1100 | 73.8 | 108 |
| 500 | 49.8 | 73.1 | 1200 | 77.1 | 113 |
| 520 | 50.7 | 74.5 | 1300 | 80.3 | 117 |
| 540 | 51.7 | 75.9 | 1400 | 83.3 | 122 |
| 560 | 52.7 | 77.3 | 1500 | 86.2 | 126 |

NOTES

1. Differential pressure (ΔP) equals inlet pressure (set pressure plus overpressure) at flowing conditions minus back pressure.
2. See pages 23 and 24 for minimum and maximum set pressure limits.

Note: USCS units for water and liquids are U.S. gallons per minute (1 U.S. gallon equals 0.833 imperial gallon).

The capacities listed in the table above are based on discharging to atmospheric pressure. For applications involving back pressure these capacities must be multiplied by the back pressure correction factor determined from the applicable curve shown on page 40.

Capacity in U.S. gallons per minute of water at 70°F and 10% overpressure. Capacities certified by the National Board of Boiler and Pressure Vessel Inspectors and in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII and XIII (UV Designator). (Capacity in liters per minute of water at 21°C and 10% overpressure.)

Capacities certified by the National Board of Boiler and Pressure Vessel Inspectors and in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII and XIII (UV Designator).

CROSBY OMNI-TRIM®

AIR CAPACITIES

SERIES BP, USCS UNITS (METRIC UNITS)

METRIC - SET PRESSURES 3.45-103 barg

| Set pressure (barg) | Effective area (sq. mm) | | Set pressure (kPag) | Set pressure (barg) | Effective area (sq. mm) | | Set pressure (kPag) |
|------------------------|-------------------------|-------|------------------------|------------------------|-------------------------|-------|------------------------|
| | 47.74 | 70.96 | | | 47.74 | 70.96 | |
| 1 bar incr. | 1.26 | 1.85 | 100 kPa incr. | 1 bar incr. | 1.26 | 1.85 | 100 kPa incr. |
| 5 bar incr. | 3.89 | 5.71 | 500 kPa incr. | 5 bar incr. | 3.89 | 5.71 | 500 kPa incr. |
| 3.45 | 2.87 | 4.21 | 345 | 44 | 29.5 | 43.3 | 4400 |
| 4 | 3.23 | 4.74 | 400 | 46 | 30.8 | 45.2 | 4600 |
| 6 | 4.54 | 6.67 | 600 | 48 | 32.1 | 47.1 | 4800 |
| 8 | 5.86 | 8.60 | 800 | 50 | 33.4 | 49.1 | 5000 |
| 10 | 7.17 | 10.50 | 1000 | 52 | 34.7 | 51.0 | 5200 |
| 12 | 8.48 | 12.40 | 1200 | 54 | 36.0 | 52.9 | 5400 |
| 14 | 9.80 | 14.30 | 1400 | 56 | 37.3 | 54.9 | 5600 |
| 16 | 11.10 | 16.30 | 1600 | 58 | 38.7 | 56.8 | 5800 |
| 18 | 12.40 | 18.20 | 1800 | 60 | 40.0 | 58.7 | 6000 |
| 20 | 13.70 | 20.10 | 2000 | 62 | 41.3 | 60.6 | 6200 |
| 22 | 15.00 | 22.10 | 2200 | 64 | 42.6 | 62.6 | 6400 |
| 24 | 16.30 | 24.00 | 2400 | 66 | 43.9 | 64.5 | 6600 |
| 26 | 17.60 | 25.90 | 2600 | 68 | 45.2 | 66.4 | 6800 |
| 28 | 19.00 | 27.80 | 2800 | 70 | 46.5 | 68.4 | 7000 |
| 30 | 20.30 | 29.80 | 3000 | 76 | 50.5 | 74.1 | 7600 |
| 32 | 21.60 | 31.70 | 3200 | 82 | 54.4 | 79.9 | 8200 |
| 34 | 22.90 | 33.60 | 3400 | 88 | 58.4 | 85.7 | 8800 |
| 36 | 24.20 | 35.60 | 3600 | 94 | 62.3 | 91.5 | 9400 |
| 38 | 25.50 | 37.50 | 3800 | 100 | 66.3 | 97.3 | 10000 |
| 40 | 26.80 | 39.40 | 4000 | 103 | 68.2 | 100.0 | 10300 |
| 42 | 28.10 | 41.40 | 4200 | | | | |

NOTE

- To determine capacities on gases other than air, or for fluid temperatures other than 60°F (16°C), use the gas and vapor sizing formula in the Crosby Engineering Handbook.

Note: for air capacities, USCS units are exact equivalents of imperial units.

The capacities listed in the table above are based on discharging to atmospheric pressure. For applications involving back pressure these capacities must be multiplied by the back pressure correction factor determined from the applicable curve shown on page 40.

Capacity in standard cubic feet per minute of air at 60°F and 10% overpressure.

Valve discharging to atmospheric pressure. (Capacity in standard cubic meters of air per minute at 16°C and 10% overpressure. Valve discharging to atmospheric pressure.)

Capacities certified by the National Board of Boiler and Pressure Vessel Inspectors and in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII and XIII (UV Designator).

CROSBY OMNI-TRIM®

WATER CAPACITIES

SERIES BP (METRIC UNITS)

METRIC - SET PRESSURES 3.45-103 barg

| Diff. pressure ΔP (barg) | Effective area (sq. mm) | | Diff. pressure ΔP (kPa) | Diff. pressure ΔP (barg) | Effective area (sq. mm) | | Diff. pressure ΔP (kPa) |
|--------------------------|-------------------------|-------|-------------------------|--------------------------|-------------------------|-------|-------------------------|
| | 47.74 | 70.96 | | | 47.74 | 70.96 | |
| 1.4 | 37.9 | 55.7 | 140 | 44 | 213 | 312 | 4400 |
| 2 | 45.4 | 66.6 | 200 | 46 | 217 | 319 | 4600 |
| 4 | 64.2 | 94.2 | 400 | 48 | 222 | 326 | 4800 |
| 6 | 78.6 | 115 | 600 | 50 | 227 | 333 | 5000 |
| 8 | 90.8 | 133 | 800 | 52 | 231 | 339 | 5200 |
| 10 | 101 | 149 | 1000 | 54 | 235 | 346 | 5400 |
| 12 | 111 | 163 | 1200 | 56 | 240 | 352 | 5600 |
| 14 | 120 | 176 | 1400 | 58 | 244 | 359 | 5800 |
| 16 | 128 | 188 | 1600 | 60 | 248 | 365 | 6000 |
| 18 | 136 | 200 | 1800 | 62 | 252 | 371 | 6200 |
| 20 | 143 | 210 | 2000 | 64 | 256 | 377 | 6400 |
| 22 | 150 | 221 | 2200 | 66 | 260 | 383 | 6600 |
| 24 | 157 | 230 | 2400 | 68 | 264 | 388 | 6800 |
| 26 | 163 | 240 | 2600 | 70 | 268 | 394 | 7000 |
| 28 | 169 | 249 | 2800 | 76 | 279 | 411 | 7600 |
| 30 | 175 | 258 | 3000 | 82 | 290 | 426 | 8200 |
| 32 | 181 | 266 | 3200 | 88 | 301 | 442 | 8800 |
| 34 | 187 | 274 | 3400 | 94 | 311 | 457 | 9400 |
| 36 | 192 | 282 | 3600 | 100 | 321 | 471 | 10000 |
| 38 | 197 | 290 | 3800 | 106 | 330 | 485 | 10600 |
| 40 | 203 | 298 | 4000 | 112 | 339 | 498 | 11200 |
| 42 | 208 | 305 | 4200 | | | | |

NOTES

- Differential pressure (ΔP) equals inlet pressure (set pressure plus overpressure) at flowing conditions minus back pressure.
- See pages 23 and 24 for minimum and maximum set pressure limits.

Note: USCS units for water and liquids are U.S. gallons per minute (1 U.S. gallon equals 0.833 imperial gallon).

The capacities listed in the table above are based on discharging to atmospheric pressure. For applications involving back pressure these capacities must be multiplied by the back pressure correction factor determined from the applicable curve shown on page 40.

Capacity in U.S. gallons per minute of water at 70°F and 10% overpressure. Capacities certified by the National Board of Boiler and Pressure Vessel Inspectors and in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII and XIII (UV Designator). (Capacity in liters per minute of water at 21°C and 10% overpressure.)

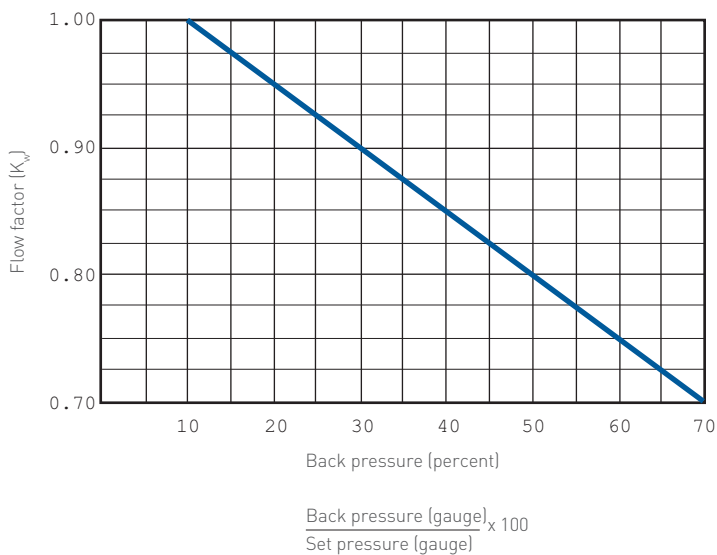
Capacities certified by the National Board of Boiler and Pressure Vessel Inspectors and in accordance with the ASME Boiler and Pressure Vessel Code, Section VIII and XIII (UV Designator).

CROSBY OMNI-TRIM®

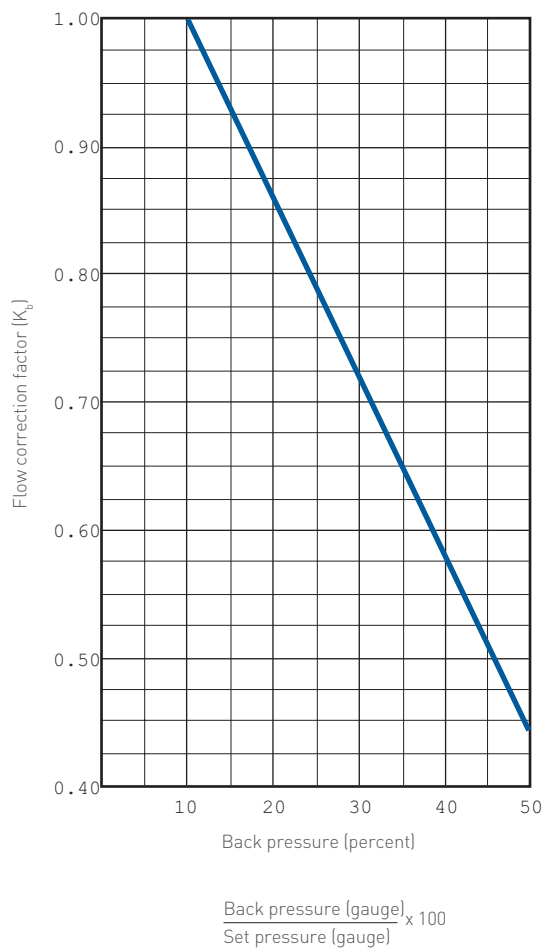
BACK PRESSURE CORRECTION FACTORS

BACK PRESSURE FLOW CORRECTION FACTOR CURVES (SERIES BP OMNI-TRIM®)

**Correction factor for liquids,
K_w for Series BP valves at 10% overpressure**



**Correction factor for vapors and gases,
K_b for Series BP valves at 10% overpressure**



CROSBY OMNI-TRIM®

ORDERING INFORMATION - MODEL NUMBERING

SERIES 900 AND BP

| Example | 9 | 5 | 1 | 3 | 2 | 1 |
|--|---|---|---|---|---|---|
| Series | | | | | | |
| 9 Series 900 fixed blowdown relief valve | | | | | | |
| BP Back pressure balanced threaded relief valve | | | | | | |
| Effective orifice area⁽⁵⁾ | | | | | | |
| 5 0.074 in ² (47.74 mm ²) - Series 900 and BP only | | | | | | |
| 6 0.110 in ² (71.0 mm ²) | | | | | | |
| 7 0.196 in ² (126 mm ²) - Series 900 only | | | | | | |
| 8 0.307 in ² (198 mm ²) - Series 900 only | | | | | | |
| 9 0.503 in ² (325 mm ²) - Series 900 only | | | | | | |
| Maximum set pressure^(1,2) | | | | | | |
| 1 1500 psig (103.42 barg) | | | | | | |
| 2 2500 psig (172.36 barg) - Series 900 only | | | | | | |
| 5 5000 psig (344.74 barg) - Series 900 only | | | | | | |
| Seat material⁽⁶⁾ | | | | | | |
| 1 Metal - Series 900 only | | | | | | |
| 2 NBR | | | | | | |
| 3 Fluoroelastomer (FKM) | | | | | | |
| 4 EPR | | | | | | |
| 5 Perfluoroelastomer (FFKM) | | | | | | |
| 6 PTFE | | | | | | |
| A Silicone | | | | | | |
| X Other | | | | | | |
| Materials of construction^(3,4) | | | | | | |
| 0 Standard | | | | | | |
| 1 All 316 SS | | | | | | |
| 2 All 316 SS with Inconel® X750 spring | | | | | | |
| 3 CS cylinder Monel® base/disc/disc holder/guide, Inconel® X750 spring | | | | | | |
| 4 All Monel® with Inconel® X750 spring | | | | | | |
| 5 CS cylinder, Hastelloy® C base/disc/disc holder/guide, Inconel® X750 spring (900 and BP only) | | | | | | |
| 6 All Hastelloy® C (900 and BP only) | | | | | | |
| 7 Standard, 316 SS internals, Inconel® X750 spring | | | | | | |
| X Other | | | | | | |
| Inlet x outlet connection size (NPS) | | | | | | |
| 0 ½ x 1 - Series 900 only | | | | | | |
| 1 ¾ x 1 | | | | | | |
| 2 1 x 1 | | | | | | |
| 3 1 x 1½ - Series 900 only | | | | | | |
| 4 1½ x 1½ - Series 900 only | | | | | | |
| 5 1½ x 2 - Series 900 only | | | | | | |
| 6 2 x 2 - Series 900 only | | | | | | |
| 7 1½ x 2½ - Series 900 only | | | | | | |
| X Other | | | | | | |

NOTES

- Maximum set pressure for steam service is 1000 psig (68.95 barg).
- See pages 11-24 for appropriate maximum set pressures.
- For steam service, a 17-4Ph disc holder is used.
- See pages 4, 6 and 8 for complete listing of materials of construction.
- See pages 11-24 for appropriate inlet and outlet sizes for each effective orifice area.
- For Series BP, seat and seal materials are identical except for valves with PTFE seats. Seal material for valves with PTFE seats is FKM unless specified otherwise.

CAUTION

Refer to pages 11-24 for availability of orifice, connection size, and connection type combination selected.

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ORDERING INFORMATION - MODEL NUMBERING

SERIES 900 AND BP (continued)

| Example | 32 | T | E | - | PN2 |
|--|---|---|---|---|-----|
| Inlet connection x outlet connection type | | | | | |
| MF | MNPT x FNPT | | | | |
| FF | FNPT x FNPT | | | | |
| 11 | 150# x 150# | | | | |
| 21 | 300# x 150# | | | | |
| 22 | 300# x 300# | | | | |
| 31 | 600# x 150# | | | | |
| 32 | 600# x 300# | | | | |
| 42 | 1500# x 300# | | | | |
| 52 | 2500# x 300# - Series 900 only | | | | |
| 88 | MSW x MSW ^(1,2) - Series 900 only | | | | |
| 99 | Bolted cylinder design (951 orifice only) | | | | |
| XX | Other | | | | |
| Connection facing | | | | | |
| None | NPT or SWE | | | | |
| None | RF x RF | | | | |
| R | RTJ X RF | | | | |
| T | RTJ x RTJ | | | | |
| X | Other | | | | |
| Cap and lifting lever type | | | | | |
| A | Standard threaded cap | | | | |
| B | Threaded cap with test rod | | | | |
| D | Packed lifting lever | | | | |
| E | Packed lifting lever with test rod | | | | |
| X | Other | | | | |
| Model number supplements indicator | | | | | |
| None | No model number supplement(s) | | | | |
| - | If model number supplement is present | | | | |
| Model number supplements⁽⁴⁾ | | | | | |
| P | PED certification | | | | |
| N2 | ANSI/NACE MR0175/ISO 15156-1:2015 ⁽³⁾ | | | | |
| R | TERV bolted cylinder | | | | |
| S | Steam trim | | | | |
| B | Forged block body configurations | | | | |
| SPL | Non-standard option or configuration | | | | |
| L | Lap Joint Inlet x Lap Joint Outlet (for 951, 955, 961, 965 & 972 models only) | | | | |

AVAILABLE OPTIONS

Materials

- Special materials LCB, Alloy 20, Duplex, Titanium, etc.
- Special flange materials Monel®, Hastelloy® C, etc.
- Special O-ring seat materials.

Accessories

- Position indicator, proximity switch, etc.

Connections

- Weldneck flanges.
- Custom center-to-face dimensions.
- Special connections such as tri-clamp, GRAYLOC, etc.
- International flange standards.
- Flat face and RFSF flange options.

Others

- Special painting or coating.
- Special cleaning and testing.

NOTES

1. Contact your sales representative for dimensions.
2. Not available with soft seats, contact your sales representative.
3. Contact your sales representative for specific compliance to NACE requirements.
4. More than one model number supplement can be used at once.

Examples:
 951101MFA
 96137121A-N2
 965X1222D-N2-SPL

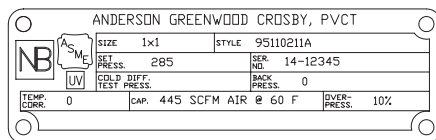
CROSBY OMNI-TRIM®

ORDERING INFORMATION - PARTS

Parts

To order parts, the following information should be included:

1. Quantity
2. Part name, e.g., disc insert
3. Size, series and valve number
4. Shop number (from valve nameplate)
5. Serial number (from valve nameplate)
6. Original purchase order number (if shop number has been destroyed).



Sample nameplate
(for illustrative purposes only)

Emerson provides special 'fast response' delivery service of spare parts to satisfy unplanned parts requirements which can be initiated by contacting your local representative. Emergency delivery service is available direct from the factory, 24 hours a day, 7 days a week.

Springs with washers

To order springs with washers, in addition to the other information included for 'Parts', the required valve set pressure must also be specified. If the spring is for a non-bellows valve, and there is a constant back pressure condition, that should also be specified as should the spring material, if other than standard.

Replacement valves

To replace a valve in service, the shop number, serial number, set pressure and previous order number should be specified.

CROSBY OMNI-TRIM®

SIZING AND SELECTION

PRESSURE RELIEF DEVICE SIZING AND SELECTION SOFTWARE

Emerson PRV²SIZE incorporates over 135 years of experience and engineering expertise for an extensive array of Anderson Greenwood, Crosby and Varec pressure relief devices and related products in one software package. It enables you to address numerous applications in a single sizing and selection platform without the need to use two or more sizing programs.

Emerson PRV²SIZE features:

- User-friendly interface
 - Sizing calculations can be saved at any point
 - Multiple tags can be opened at one time
- Ability to sort data using a variety of parameters
- Fully configured product selection
- Industry standard sizing methodologies
- Drop-down boxes allow instantaneous change of sizing methodology from API to ASME and vice-versa
- 2:1 elliptical head tanks for fire sizing applications
- Catalog integration from existing product literature PDF's
- Detailed product specifications including cross sectional drawings with dimensions and weights
 - U.S. Customary System and metric units
- Advanced tools to export and import device tag numbers with the ability to mail files directly from the software program
- Combination device, reaction force and noise level calculations
- Flow curves for pressure and vacuum relief valves
- Individual capsule summaries of each product including an image of the selected product

Another unique feature of Emerson PRV²SIZE is its capability to provide sizing and selection for tank protection and tank blanketing products in a single software program. This includes pad and de-pad valves, tank blanketing regulators, pressure/vacuum vents and low pressure pilot operated relief valves.

Emerson PRV²SIZE website: valvesizing.emerson.com

