



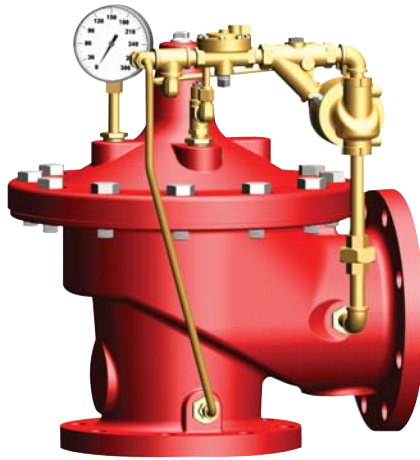
— MODEL —

# 50B-4KG1 Globe 2050B-4KG1 Angle

Listed/Approved Fire Protection Pressure Relief Valve



Type Approved



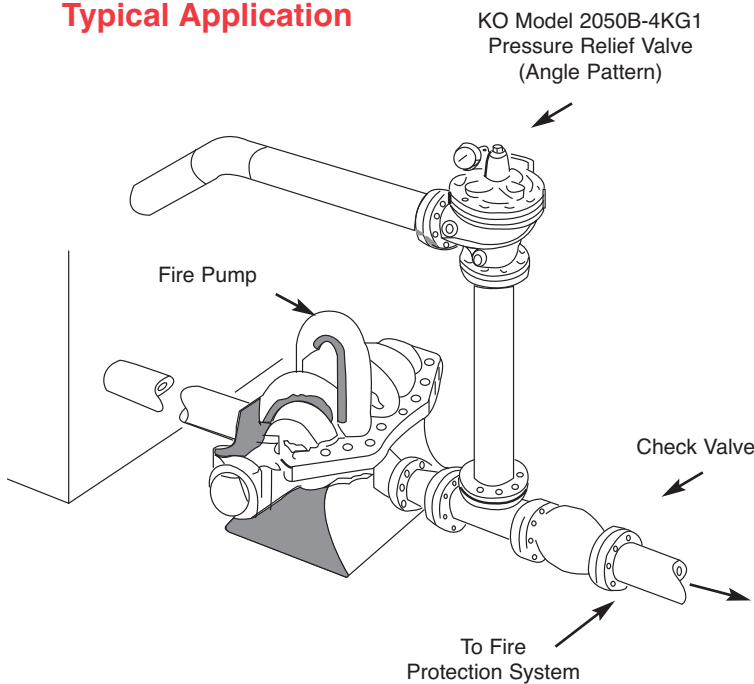
2050B-4KG1 (Angle)

UL Listed.....Sizes 3" thru 8"  
FM Approved.....Sizes 3" thru 8"  
ULC Listed.....Sizes 2" thru 10"

- **UL Listed / ULC Listed**
- **Factory Mutual Approved**
- **Fast Opening to Maintain Steady Line Pressure**
- **Accommodates Wide Range of Flow Rates**
- **Closes Gradually for Surge-Free Operation**
- **Adjustable Pressure Settings, Not Affected by Pressure At Valve Discharge**

The Cla-Val Model 50B-4KG1 Globe / 2050B-4KG1 Angle Pressure Relief Valve is designed specifically to automatically relieve excess pressure in fire protection pumping systems. Pilot controlled, it maintains constant system pressure at the pump discharge within very close limits as demands change. The 50B-4KG1 and 2050B-4KG1 can be supplied with optional internal and external epoxy coating of the main valve wetted surfaces.

## Typical Application



**"Fluid Control at It's Best"**

## Operation Sequence

At pump start, Cla-Val Relief Valve modulates to relieve excess pump capacity, maintaining positive system pressure at the pump discharge.

When fire demand slows or ceases, Cla-Val Model 50B-4KG1 opens, diverting entire pump output to discharge, allowing fire pump to be stopped without causing surging in the lines.

(Please note that if the Model 50B-4KG1 is to be used on a continuous duty basis to maintain fire-system pressure, suitable back pressure must be provided on the valve to prevent cavitation damage. Consult the factory for details.)

### Optional UL Listed Materials for Seawater and Severe Service Applications:

- Nickel Aluminum Bronze (NAB) - ASTM B148 Alloy C95800
- Monel - QQ-N-288 Comp B - ASTM A494 Grade M30H
- Cast Steel - ASTM A216 Grade WCB
- 316 Stainless Steel - ASTM A743 Grades CF3M and CFM8
- Super Austenitic Stainless Steel - ASTM A351 Grade CK3MCuN (SMO 254)
- Super Duplex Stainless Steel - ASTM A890 Grade 5A (CE3MN)

## Specifications

**Sizes** *Globe:* 2" - 10" flanged  
*Angle:* 2" - 10" flanged

**End Details** 150 and 300 ANSI B16.42

**Pressure Ratings** Class 150 - 250 psi Max.  
Class 300 - 300 psi Max.  
Water, to 180°F Max.

**Standard Materials** **Main Valve Body & Cover**  
Ductile Iron ASTM A536 Grade 65-45-12  
**Standard Main Valve Trim:**  
Bronze Seat, Teflon Coated  
Stainless Steel Stem, Dura-Kleen Stem  
**Standard Pilot Control System:**  
Cast Bronze with  
Stainless Steel trim

Available in the following relief pressure ranges:

**Adjustment Range** 20-200 psi (150 Class)  
100-300 psi (300 Class)

**Optional** Protective epoxy resin coating of wetted surfaces of main valve cast iron components (UL listed HNFx EX2855)

## Purchase Specifications

The Fire Pump Pressure Relief Valve shall modulate to relieve excess pressure in a fire protection system. It shall maintain constant pressure in the system regardless of demand changes. It shall be pilot controlled and back pressure shall not affect its set point. It shall be actuated by line pressure through a pilot control system and open fast in order to maintain steady system pressure as system demand decreases. It shall close gradually to control surges and shall re-seat drip-tight within 5% of its pressure setting. The main valve shall be of the hydraulically-operated, pilot-controlled, diaphragm-type, globe or angle valve. It shall have a single, removable, teflon-coated seat, a grooved stem guided at both ends, and a resilient disc with a rectangular cross section, being contained on 3 1/2 sides. No external packing glands shall be permitted and the diaphragm shall not be used as a seating surface. The pilot control shall be a direct-acting, adjustable, spring-loaded, diaphragm-type valve designed for modulating service to permit flow when controlling pressure exceeds spring setting. This valve shall be UL Listed and Factory Mutual approved. It shall be the Model 50B-4KG1 (globe) or Model 2050B-4KG1 (angle) Pressure Relief Valve as manufactured by Cla-Val Newport Beach, California.

### \*Special Note:

The Model 50B-4KG1 Pressure Relief Valve is available with 300# ANSI inlet flange and 150# ANSI outlet flange. This valve is used on higher pressure systems where 300# flange connections are required, and allows for adapting of a discharge cone (generally supplied with 150# flange) to accommodate "atmospheric break" at relief valve discharge. This relief valve, with 300# / 150# flanges is available on special order, and is UNDERWRITERS LABORATORIES LISTED AND FACTORY MUTUAL APPROVED.

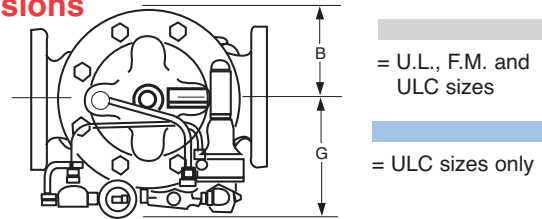
## Specifications: Seawater Service Option

**Sizes** *Globe:* 2" - 8" flanged  
*Angle:* 2" - 8" flanged

**Consult factory for flange ratings.**

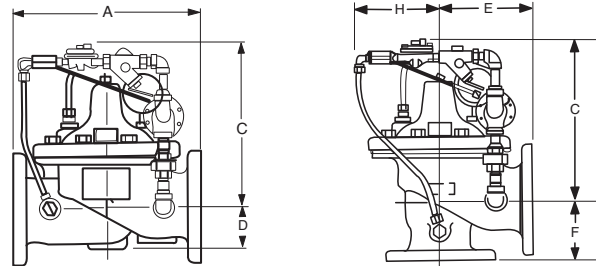
See page 1 for seawater service materials options.

## Dimensions



Model 50B-4KG1 Globe

Model 2050B-4KG1 Angle



We recommend providing adequate space around valve for maintenance work.

| Valve Size (inches)  | 2"    | 2-1/2" | 3"    | 4"    | 6"    | 8"    | 10"   |
|----------------------|-------|--------|-------|-------|-------|-------|-------|
| <b>Threaded Ends</b> | 9.38  | 11.00  | 12.50 | ---   | ---   | ---   | ---   |
| <b>A 150 Flanged</b> | 9.38  | 11.00  | 12.00 | 15.00 | 20.00 | 25.38 | 29.75 |
| 300 Flanged          | 10.00 | 11.62  | 13.25 | 15.62 | 21.00 | 26.38 | 31.12 |
| 300 X 150            |       |        | 12.88 | 15.31 | 20.56 | 25.88 | 30.44 |
| <b>B</b>             | 3.31  | 4.00   | 4.56  | 5.75  | 7.88  | 10.00 | 11.81 |
| <b>C</b>             | 12.00 | 12.25  | 12.50 | 13.00 | 14.31 | 16.31 | 18.00 |
| <b>D</b>             | 1.50  | 1.69   | 2.66  | 3.19  | 4.31  | 5.31  | 9.25  |
| <b>Threaded Ends</b> | 4.75  | 5.50   | 6.25  | ---   | ---   | ---   | ---   |
| <b>E 150 Flanged</b> | 4.75  | 5.50   | 6.00  | 7.50  | 10.00 | 12.75 | 14.88 |
| 300 Flanged          | 5.00  | 5.88   | 6.38  | 7.88  | 10.50 | 13.25 | 15.56 |
| <b>Threaded Ends</b> | 3.25  | 4.00   | 4.50  | ---   | ---   | ---   | ---   |
| <b>F 150 Flanged</b> | 3.25  | 4.00   | 4.00  | 5.00  | 6.00  | 8.00  | 8.62  |
| 300 Flanged          | 3.50  | 4.31   | 4.38  | 5.31  | 6.50  | 8.50  | 9.31  |
| <b>G &amp; H</b>     | 6.00  | 6.69   | 7.75  | 7.88  | 8.50  | 9.75  | 13.25 |

| Valve Size (mm)      | 50  | 65  | 80   | 100 | 150 | 200 | 250 |
|----------------------|-----|-----|------|-----|-----|-----|-----|
| <b>Threaded Ends</b> | 238 | 279 | 318  | --- | --- | --- | --- |
| <b>A 150 Flanged</b> | 234 | 279 | 305  | 381 | 508 | 645 | 756 |
| 300 Flanged          | 254 | 295 | 337  | 397 | 533 | 670 | 790 |
| 300 X 150            | --- | --- | 327  | 389 | 522 | 657 | 773 |
| <b>B</b>             | 84  | 102 | 116  | 146 | 200 | 254 | 300 |
| <b>C</b>             | 305 | 311 | 1318 | 330 | 363 | 414 | 457 |
| <b>D</b>             | 38  | 43  | 65   | 81  | 109 | 135 | 235 |
| <b>Threaded Ends</b> | 121 | 140 | 159  | --- | --- | --- | --- |
| <b>E 150 Flanged</b> | 121 | 140 | 152  | 191 | 254 | 324 | 378 |
| 300 Flanged          | 127 | 149 | 162  | 200 | 267 | 337 | 395 |
| <b>Threaded Ends</b> | 83  | 102 | 114  | --- | --- | --- | --- |
| <b>F 150 Flanged</b> | 83  | 102 | 102  | 127 | 152 | 203 | 219 |
| 300 Flanged          | 89  | 109 | 111  | 135 | 165 | 216 | 236 |
| <b>G &amp; H</b>     | 152 | 170 | 197  | 200 | 216 | 248 | 337 |

## Valve Capacity

| Valve Sizes in Inches: | 2"  | 2 1/2" | 3"  | 4"   | 6"   | 8"   | 10"   |
|------------------------|-----|--------|-----|------|------|------|-------|
| NFPA 20 Maximum        | 208 | 300    | 500 | 1000 | 2500 | 5000 | 11000 |



E-50B-4KG1/2050B-4KGL1 (R-08/2017)

## CLA-VAL

1701 Placentia Avenue • Costa Mesa CA 92627

800-942-6326 • Fax: 949-548-5441 • Web Site: cla-val.com • E-mail: info@cla-val.com

**CLA-VAL CANADA**  
4687 Christie Drive  
Beamsville, Ontario  
Canada L0R 1B4  
Phone: 905-563-4963  
Fax: 905-563-4040  
E-mail sales@cla-val.ca

**CLA-VAL EUROPE**  
Chemin des Mésanges 1  
CH-1032 Romanel/  
Lausanne, Switzerland  
Phone: 41-21-643-15-55  
Fax: 41-21-643-15-50  
E-mail: cla-val@cla-val.ch

**CLA-VAL UK**  
Dainton House, Goods Station Road  
Tunbridge Wells  
Kent TN11 2 DH England  
Phone: 44-1892-514-400  
Fax: 44-1892-543-423  
E-mail: info@cla-val.co.uk

**CLA-VAL FRANCE**  
Porte du Grand Lyon 1  
ZAC du Champ du Pérrier  
France - 01700 Neyron  
Phone: 33-4-72-25-92-93  
Fax: 33-4-72-25-04-17  
E-mail: cla-val@cla-val.fr

**CLA-VAL PACIFIC**  
45 Kennaway Road  
Woolston, Christchurch, 8023  
New Zealand  
Phone: 64-39644860  
www.cla-valpacific.com  
E-mail: info@cla-valpacific.com