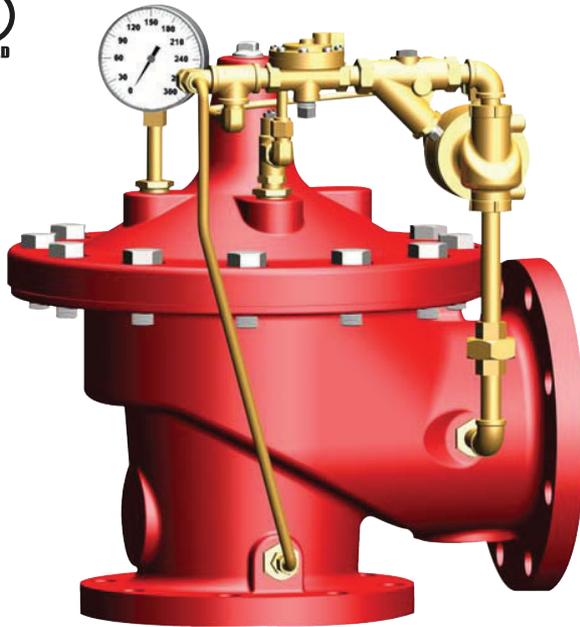




MODEL

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

Listed/Approved Fire Protection Pressure Relief Valve



- U.L. Listed / U.L.C. 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

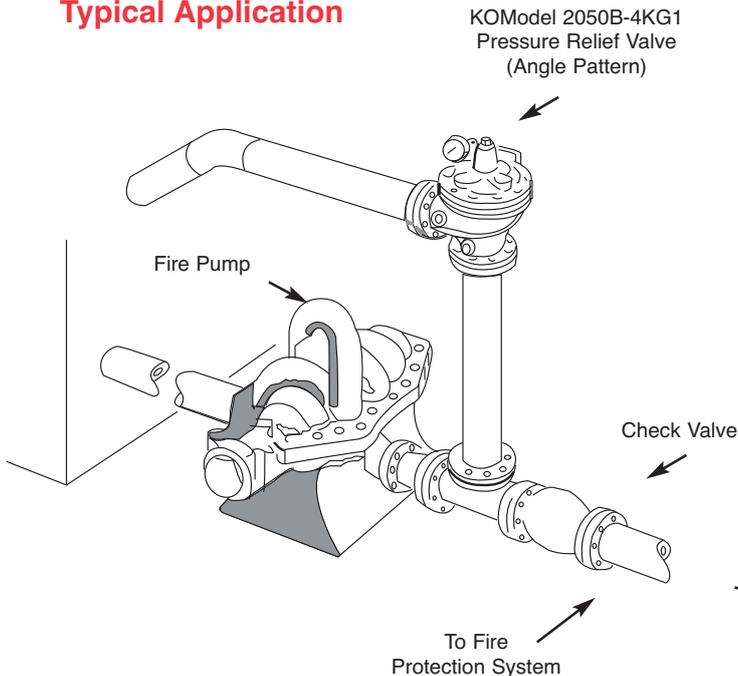
The Cla-Val Model 50B-4KG1 Globe / 2050B-4KG1 Angle Pressure Relief Valve is designed specifically to automatically relieve excess pressure in fire protection pumping systems. Pilot controlled, it maintains constant system pressure at the pump discharge within very close limits as demands change. The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



2050B-4KG1 (Angle)

U.L. Listed.....Sizes 3" thru 8"  
F.M. Approved.....Sizes 3" thru 8"  
U.L.C. Listed.....Sizes 2" thru 10"

## Typical Application



## 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.

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



## Specifications

- Sizes** Globe: 2" - 10" flanged  
Angle: 2" - 10" flanged
- End Details** 150 and 300 ANSI B16.42
- Pressure Ratings** class - 175 psi Max.  
class - 300 psi Max  
Water, to 180°F Max.
- Materials** **Main Valve Body & Cover**  
Ductile Iron ASTM A-536  
Naval Bronze ASTM B61  
Other Material Available  
**Standard Main Valve Trim:**  
Bronze Seat, Teflon Coated  
Stainless Steel Stem, Dura-Kleen Stem  
**Standard Pilot Control System:**  
Cast Bronze with  
Stainless Steel trim
- Adjustment Range** Available in the following relief pressure ranges:  
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:

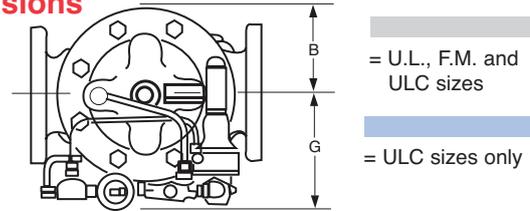
The Model 50B-4KG1 Pressure Relief Valve is available with 300# ANSI inlet flange and 150# ANSI outlet flange. This valve is used on higher pressure systems where 300# flange connections are required, and allows for adapting of a discharge cone (generally supplied with 150# flange) to accommodate "atmospheric 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

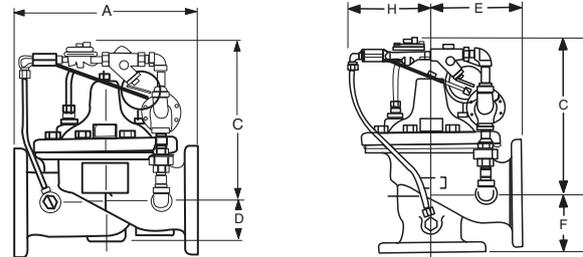
Consult factory for materials and flange ratings.

## 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							
Recommended GPM	208	300	500	1000	2500	5000	11000



E-50B-4KG1/2050B-4KGL1 (R-10/2013)

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