CLA-VAL **50B-4KG1 / 2050B-4KG1**

Fire Protection Pressure Relief Valve

Simple, Reliable and Accurate

- **U.L. 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**

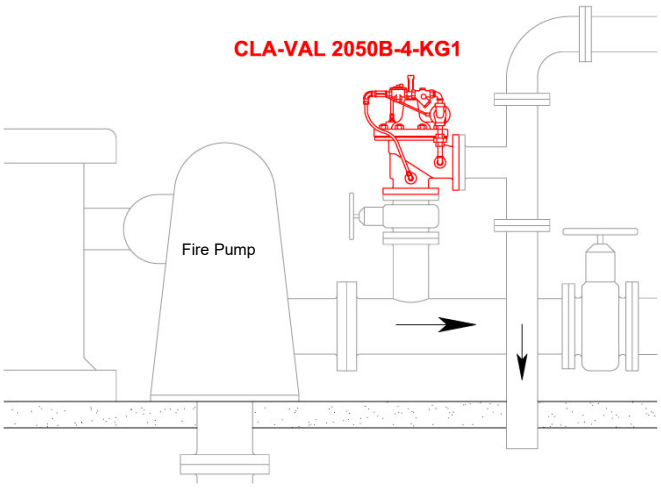
50B-4KG1 (Globe)

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.

U.L. Listed	**Sizes 3" thru 8"**
F.M. Approved	**Sizes 3" thru 8"**

2050B-4KG1 (Angle)

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.

(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.)

Valve Capacity

Valve size [mm]	**50**	**65**	**80**	**100**	**150**	**200**	**250**	**300**
NFPA 20 Pump Rating [gpm]	250	300	500	1000	2500	5000	11000	16000

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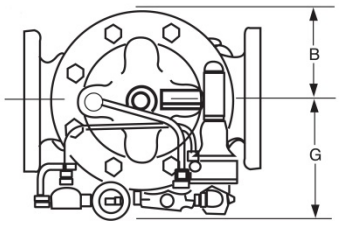
CLA-VAL **50B-4KG1 / 2050B-4KG1**

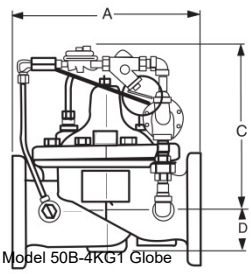
Fire Protection Pressure Relief Valve

Dimensions

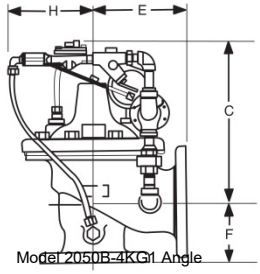
Valve size [mm]	50	65	80	100	150	200	250	300
Threaded Ends	238	279	318	-	-	-	-	-
A 150 Flanged	238	279	305	381	508	645	756	864
A 300 Flanged	254	295	337	397	533	670	790	902
300 x 150	-	-	327	389	522	657	773	883
B	84	102	116	146	200	254	300	356
C	305	311	318	330	363	414	457	522
D	38	43	65	81	109	135	235	273
Threaded Ends	121	140	159	-	-	-	-	-
E 150 Flanged	121	140	152	191	254	324	378	432
E 300 Flanged	127	149	162	200	267	337	395	451
Threaded Ends	83	102	114	-	-	-	-	-
F 150 Flanged	83	102	102	127	152	203	219	349
F 300 Flanged	89	109	111	135	165	216	236	368
G & H	152	170	197	200	216	248	337	362

Note: We recommend providing adequate space around valve for maintenance work.





Model 50B-4KG1 Globe



Model 2050B-4KG1 Angle

Model 50B-4KG1 Globe

Model 2050B-4KG1 Angle

Specifications

Size:

Globe 2" - 12" flanged

Angle 2" - 12" flanged

End Details:

Flanged: 150 and 300 ANSI B16.5

Flanged: ISO PN10, 16, 25

Other end details available

Pressure Ratings:

Class 150 - 250 psi max.

Class 300 - 300 psi max.

Pressure Adjustment Range:

Available in the following relief pressure ranges:

20-200 psi (150 Class / 300 Class) - UL / FM

100-300 psi (300 Class) - UL / FM

Temperature Range:

Water Max. 180°F / 82°C

Materials

Main Valve Body & Cover:

Ductile iron - ASTM A536 / EN-GJS-400

Nickel-Aluminium-Bronze ASTM B148

Protective epoxy resin coating of wetted surfaces of main valve cast iron components (UL listed HNFX EX2855

Other material available

Standard Main Valve Internal Trim:

Stainless Steel 316 seat and disc guide

Stainless Steel 303 stem, stem nut and cover bearing

Standard Pilot Control System:

Bronze ASTM B62 with Stainless Steel 303 internal trim

Stainless Steel 303 tubing with Stainless Steel 316 fittings (UL CLA-VAL Europe Standard)

Main Valve and Pilot Valve:

Diaphragm and disc: Buna-N® synthetic rubber

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 Europe.

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.

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