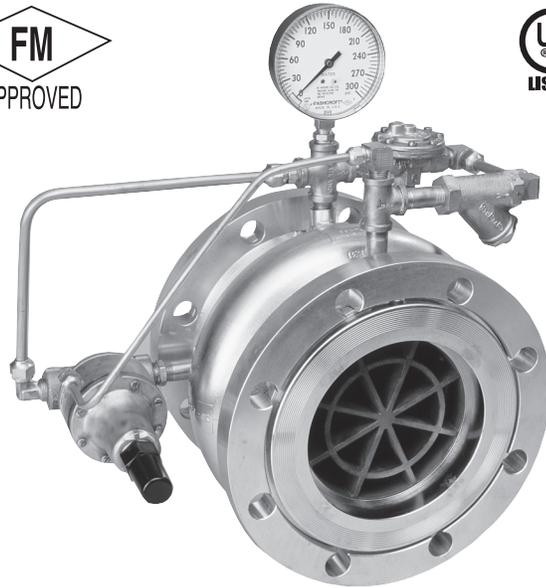




MODEL **750B-4KG1**

# Fire Protection Pressure Relief Valve



## Description

The Cla-Val Model 750B-4KG1 Pressure Relief Valve is a hydraulically operated pilot actuated automatic control valve 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 main valve consists of a stainless steel body and only one moving part, an elastomeric liner or control element.

Cla-Val Model 750B-4KG1 will control from no flow, to full open flow, without any chattering or slamming. For this reason, there is never a region of control instability. There is no slip-type friction because the valve has no bearings. Cla-Val Model 750B-4KG1 valves have excellent resistance to cavitation with a  $C_f$  factor of 0.9.

Pilot controls are fully piped at the factory and the Cla-Val Model 750B-4KG1 is shipped complete, ready for installation.

**For Seawater Service Options See 750-20 E-sheet**

## Operation Sequence

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

When fire demand slows or ceases, the main valve opens, diverting the entire pump output to discharge, allowing the fire pump to be stopped without causing surging in the lines.

(Please note that when the Model 750B-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.)

## Material Specification

Body: 316L Stainless Steel  
 Liner: Nitrile, 70 durometer  
 Liner Retainer: 316 Stainless Steel

## Pilot

Body: ASTM B62 Bronze\*  
 Spring Cover: ASTM B62 Bronze\*  
 Wetted Parts: Bronze/Stainless Steel\*  
 Buna-N®

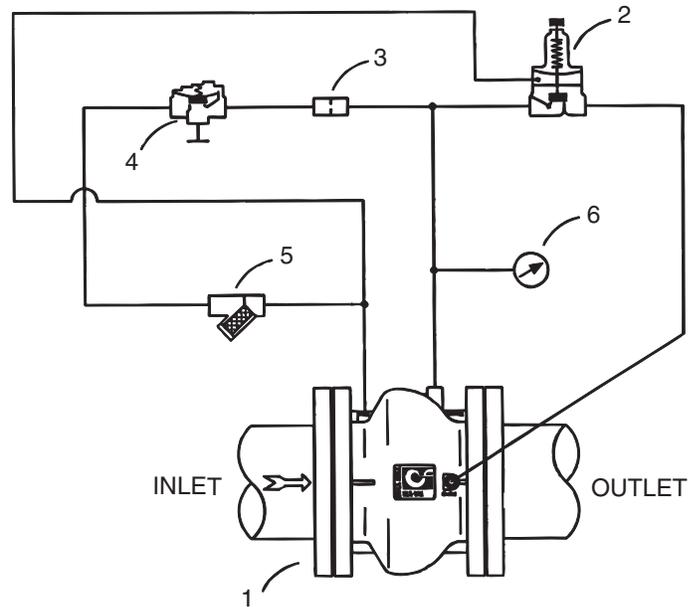
## Accessories

Check Control: Brass\*  
 Control Piping: Copper\*  
 "Y" Strainer: Bronze\*  
 Control Fittings: Brass\*

\* 316 stainless steel available

For other than standard ANSI flanges consult factory

**Din drilling available on all sizes**



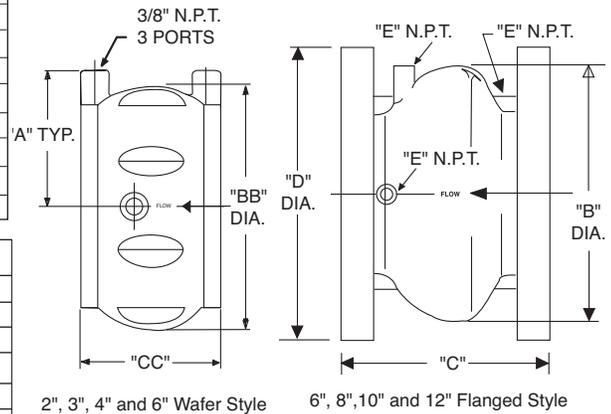
## 750B-4KG1 Basic Components

Item	Description
1	100-42 Roll Seal Main Valve
2	CRL5A Pressure Relief Control
3	X58A Restriction
4	81-01 Check Valve (125 psid max. reverse pressure)
5	X43 Y-Strainer
6	Pressure Gauge

## Dimensions (100-42 Main Valve)

Valve Size (Inches)	2	3	4	6	8	10	12
<b>A</b>	2 7/8	3 9/16	4 1/8	5 1/4	—	—	—
<b>B</b>	—	—	—	10 7/8	14 3/8	18	21 5/8
<b>BB</b>	4 3/8	5 7/8	7 3/8	9 13/16	—	—	—
<b>C</b>	—	—	—	9	11	13	15 1/4
<b>CC</b>	2 1/2	3 1/4	4	5 1/2	—	—	—
<b>D (ANSI 150)</b>	—	—	—	11	13 1/2	16	19
<b>D (ANSI 300)</b>	—	—	—	12 1/2	15	17 1/2	20 1/2
<b>E (Ports)</b>	—	—	—	3/8	3/8	1/2	1/2
Approx. Wt. (150 lbs.)	4	7 1/2	14	58	115	190	290
Approx. Wt. (300 lbs.)	4	7 1/2	14	87	155	250	375

VALVE SIZE (mm)	50	80	100	150	200	250	300
A	73	90	105	133	-	-	-
B	-	-	-	276	365	457	549
BB	111	149	187	249	-	-	-
C	-	-	-	229	279	330	387
CC	64	83	102	140	-	-	-
D (ANSI 150)	-	-	-	279	343	406	483
D (ANSI 300)	-	-	-	318	381	445	521
E (Ports) -	-	-	10	10	13	13	-
Approx. kg. (150lbs.)	1.81	3.63	6.35	30	54.43	89	151.50
Approx. kg. (150lbs.)with Studs & Nuts	2.72	4.54	10	-	-	-	-
Approx. kg. (300lbs.)	1.81	3.63	6.35	41.73	72.57	116.57	191
Approx. kg. (300LBs.)with Studs & Nuts	5	6.35	11.80	-	-	-	-



## Performance Specification

Capacity: See Technical Data Sheet  
 C<sub>f</sub> Factor: 0.9  
 Cavitation: See Technical Data Sheet  
 Rangeability: 500:1  
 Bearing Friction: No friction from slip-type bearings

## Design Specification

Sizes: 2, 3, and 6 inch wafer style  
 6, 8, 10, and 12 inch flanged

End Detail Wafer: Fits ANSI B16.5 class 125, 150, 250, and 300 flanges

End Detail Flanged: ANSI B16.5 class 150 (fits class 125) or ANSI B16.5 class 300 (fits class 250)

Maximum Relief Pressure: 3" thru 10" 150 lb. class - 200 psi  
 3" thru 10" 300 lb. class - 300 psi

Approvals: **UL Listed.....Sizes 3" thru 10"**  
**FM Approved.... Sizes 3" and 4"**  
**Not UL or FM.... Sizes 2" and 12"**

Maximum Differential: 150 psid continuous,  
 225 psid intermittent\*

Reverse Pressure: 125 psid maximum  
 Temperature Range: 32 to 160 degrees F\*

Flange Operating Pressure: Class 125-175 psi maximum  
 Class 150-275 psi maximum  
 Class 250-300 psi maximum  
 Class 300-720 psi maximum

\*Temperature range depends on liner material. Higher differential pressure ratings available.

## When Ordering Please Specify

- Catalog No. 750B-4KG1
- Valve Size
- Fluid Being Handled
- Fluid Temperature Range
- Inlet Pressure Range
- Outlet Pressure Range
- Maximum Differential Pressure
- Minimum Differential Pressure
- Maximum Flow Rate
- Pilot Set Point

## Purchase Specification

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. This valve shall be UL Listed and Factory Mutual approved. The control valve shall be constructed of a 316L stainless steel body and only one moving part, an elastomeric liner or control element. Minimum rangeability shall be 500:1 based on capacity at flowing pressure conditions. C<sub>f</sub> shall be greater than or equal to 0.9. Valve and control system shall be similar in all respects to Cla-Val Model 750B-4KG1 as manufactured by Cla-Val, Newport Beach, California.



E-750B-4KG1 (02/2019)

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