



MODEL 6550-01

Pressure Relief & Pressure Sustaining Valve



- **Accurate Pressure Control**
- **Optional Check Feature**
- **Fast Opening – maintains line pressure**
- **Slow Closing – prevents surges**
- **Completely Automatic Operation**

The Cla-Val Model 6550-01 Pressure Relief Valve is a hydraulically operated, pilot-controlled, modulating valve designed to maintain constant upstream pressure within close limits. This valve can be used for pressure relief, pressure sustaining, back pressure, or unloading functions in a by-pass system.

In operation, the valve is actuated by line pressure through a pilot control system, opening fast to maintain steady line pressure but closing gradually to prevent surges. Operation is completely automatic and pressure settings may be easily changed.

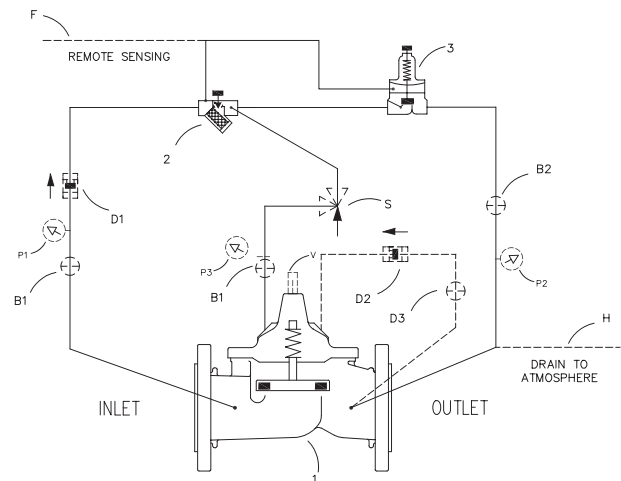
If the optional check feature "D" is added, and a pressure reversal occurs, the valve closes to prevent return flow.

Schematic Diagram

Item	Description
1	100-44 Main Hytrol Valve
2	X42N-2 Strainer & Needle Valve
3	CRL Pressure Relief Control

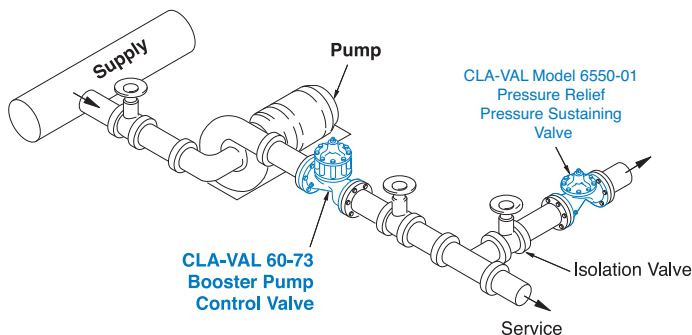
Optional Features

Item	Description
B	CK2 (Isolation Valve)
D	Check Valves with Isolation Valve
F	Remote Pilot Sensing
P	X141 Pressure Gauge
S	CV Speed Control (Opening)
V	X101 Valve Position Indicator



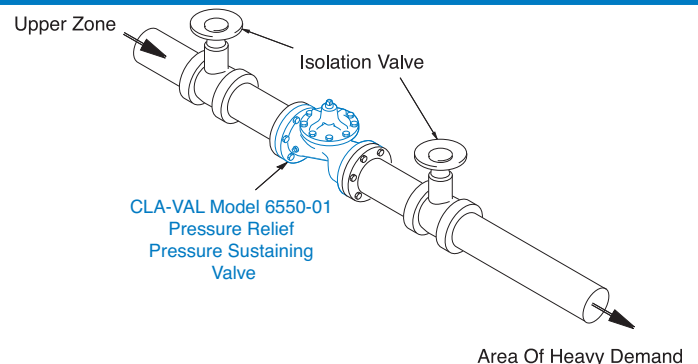
The "D" feature on a vertically installed 6" and larger valve must be horizontally oriented.

Typical Applications



Pressure Relief Service

To provide protection for the system against high pressure surges when pumps are shut down, this fast opening – slow closing relief valve dissipates the excess pressure.



Pressure Sustaining Service

When installed in a line between an upper zone and a lower area of heavy demand, the valve acts to maintain desired upstream pressure to prevent "robbing" of the upper zone. Water in excess of pressure setting flows to area of heavy demand; control is smooth, and pressure regulation is positive.

Specifications

Sizes

Globe (inch):
2", 2½", 3", 4", 6", 8", 10", 12"
Globe (mm):
50, 65, 80, 100, 150, 200, 250, 300

End Detail

Slip-on Two Piece Flange
Dimensions Per ANSI B16.5

Pressure Rating

ANSI Class 150:
Maximum 285 psi
ANSI Class 300:
Maximum 400 psi

Higher Pressure Available
Please Contact Factory

Operating Temperature

Fluids Compatible with Valve
Materials
-40° to 180° F (-40° to 82° C)

Materials

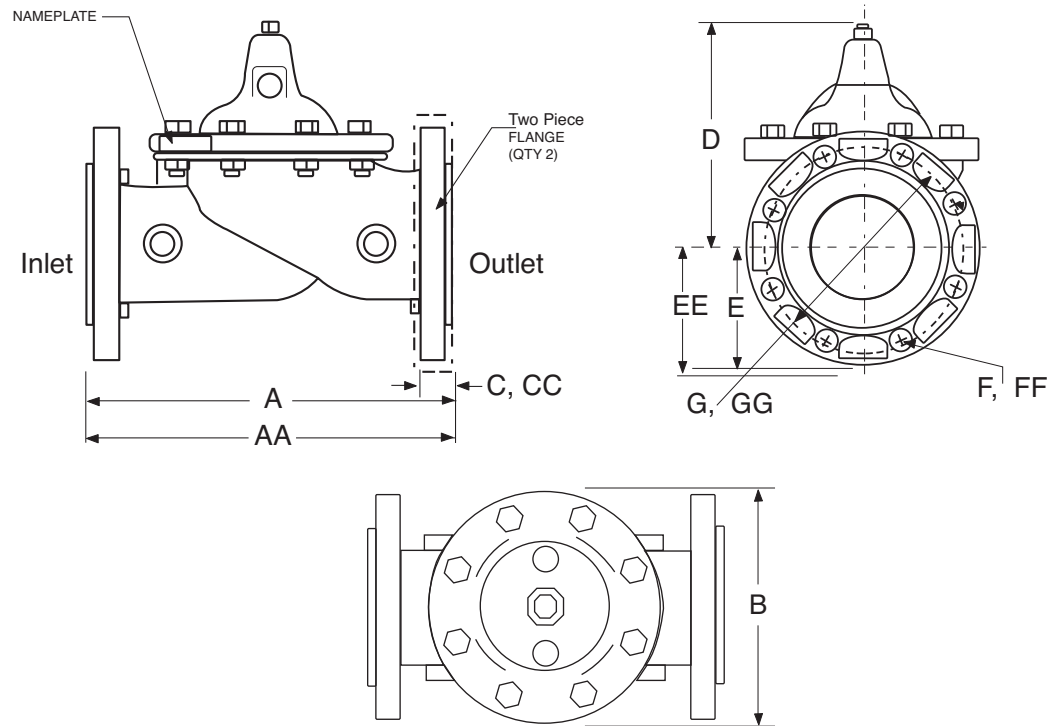
Body, Cover, Trim,
Diaphragm Assembly,
Flanges, and Fasteners
316 Series
Stainless Steel
Electropolished

Disc:
Buna-N® Rubber*

Diaphragm:
Nylon Fabric Reinforced
Synthetic Buna-N® Rubber*

* Contact Factory for Other
Disc or Diaphragm Materials

Model 6550-01



Model 6550-01 Dimensions (Inches)

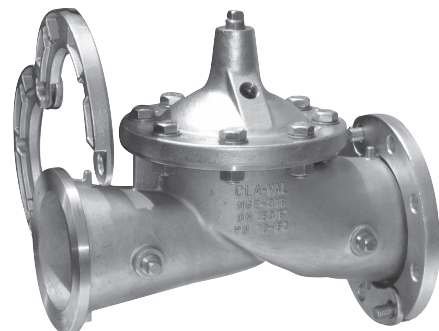
Valve Size (Inches)	2	2½	3	4	6	8	10	12
A 150 ANSI	9.06	11.42	12.20	13.78	18.90	23.62	28.74	33.46
AA 300 ANSI	9.06	11.42	12.20	13.78	18.90	23.62	28.74	33.46
B	5.70	8.06	6.69	9.25	11.61	15.75	20.08	23.62
C	0.89	0.89	0.93	0.93	1.02	1.15	1.15	1.25
CC 300 ANSI	0.96	0.96	1.00	1.00	1.10	1.15	1.46	1.50
D	6.50	7.95	8.20	10.12	13.32	16.39	19.12	20.95
E	3.05	3.54	3.74	4.53	5.61	6.79	7.97	9.55
EE 300 ANSI	3.25	3.75	4.13	5.01	6.30	7.48	8.76	10.24
F	0.71	0.71	0.71	0.71	0.91	0.87	1.02	1.02
FF 300 ANSI	0.71	0.75	0.87	0.87	0.87	1.03	1.16	1.34
G	4.75	5.50	6.00	7.50	9.50	11.75	14.25	17.00
GG 300 ANSI	5.00	5.88	6.62	7.88	10.62	13.00	15.25	17.72
Flange Bolts (150 Class)	4	4	4	8	8	8	12	12
Flange Bolts (300 Class)	8	8	8	8	12	12	16	16
Approx. Wt. (Lbs.)	25	40	40	75	160	290	419	728
Approx. X Pilot System	13.00	14.00	15.00	17.00	29.00	31.00	33.00	36.00
Approx. Y Pilot System	9.00	10.00	11.00	12.00	20.00	22.00	24.00	26.00
Approx. Z Pilot System	9.00	10.00	11.00	12.00	20.00	22.00	24.00	26.00

100-44 Reduced Port Functional Data

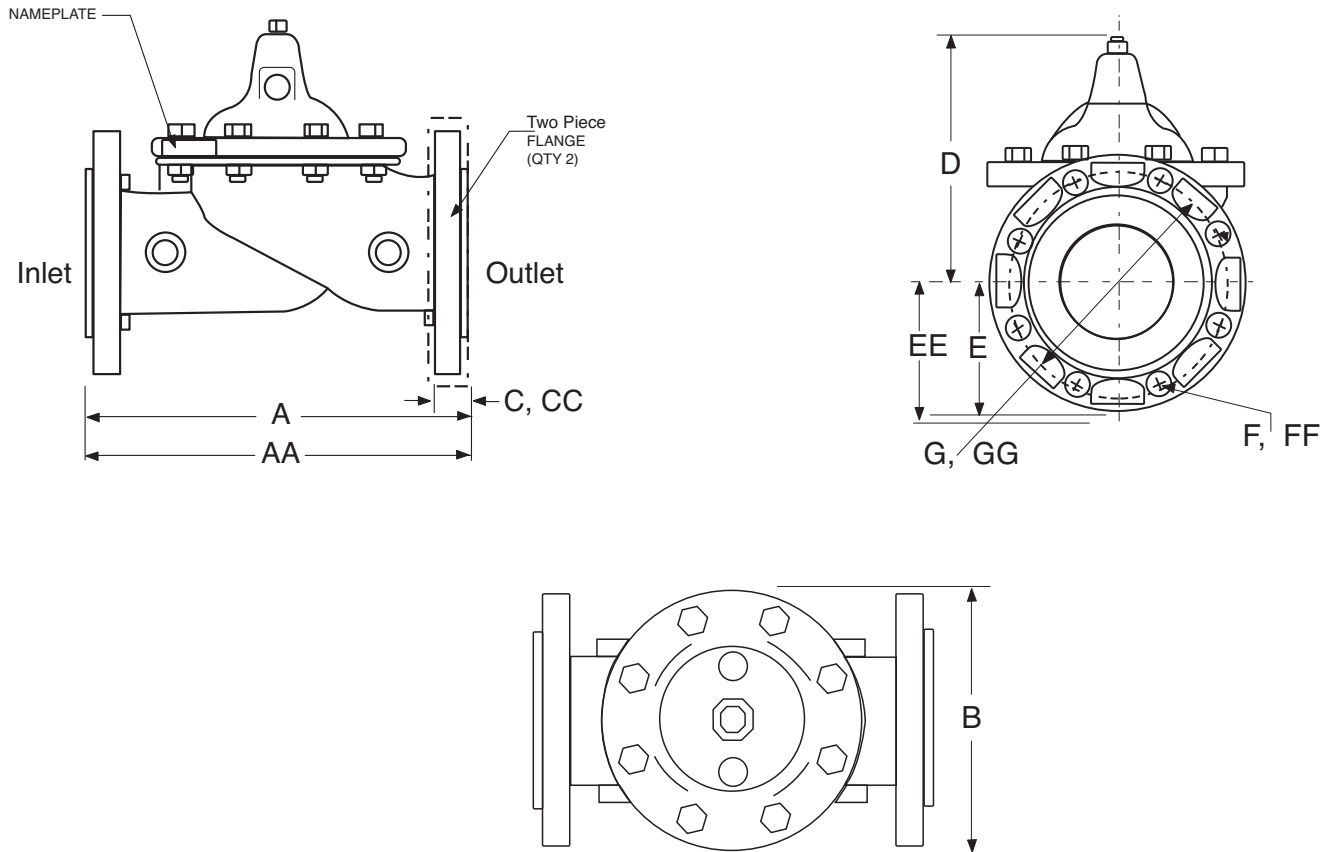
Size (Inches)	Cv (gpm)*	Cv (l/s)**
2	38	9
2½	50	12
3	67	16
4	138	33
6	242	58
8	555	133
10	923	222
12	1492	359

*Cv = gpm flow at 1 psi drop

**Cv = l/s flow at 1 bar drop



Model 6550-01 Dimensions (mm)



Model 6550-01 Dimensions (mm)

Valve Size (mm)	50	65	80	100	150	200	250	300
A 150 ANSI	230	290	310	350	480	600	730	850
AA 300 ANSI	230	290	310	350	480	600	730	850
B	145	205	170	235	295	400	510	600
C	23	23	24	24	26	29	29	32
CC 300 ANSI	24	24	25	25	58	29	37	38
D	165	202	208	257	338	416	486	532
E	78	90	95	115	143	173	202	243
EE 300 ANSI	83	95	105	127	160	190	223	260
F	18	18	18	18	23	22	26	26
FF 300 ANSI	18	19	22	22	22	26	30	34
G	121	140	152	191	241	299	362	432
GG 300 ANSI	127	149	168	200	270	330	387	450
Flange Bolts (150 Class)	102	102	102	203	203	203	305	305
Flange Bolts (300 Class)	203	203	203	203	305	305	406	406
Approx. Wt. (Kgs.)	11	18	18	34	73	132	190	330
Approx. X Pilot System	330	356	381	432	737	787	838	914
Approx. Y Pilot System	229	254	279	305	508	559	610	660
Approx. Z Pilot System	229	254	279	305	508	559	610	660

6550-01 Valve Selection	100-44 Pattern: Globe (G), Angle (A), End Connections: Flanged (F) Indicate Available Sizes								
	Inches	2	2½	3	4	6	8	10	12
	mm	50	65	80	100	150	200	250	300
Basic Valve 100-44	Pattern	G	G	G	G	G	G	G	G
	End Detail	F	F	F	F	F	F	F	F
Suggested Flow (gpm)	Maximum	95	130	260	580	1025	2300	4100	6400
	Maximum Surge	200	275	440	990	1760	3970	7050	11000
Suggested Flow (Liters/Sec)	Maximum	6	8	16	37	65	145	259	404
	Maximum Surge	13	17	28	62	111	250	445	694

100-44 Series is the reduced internal port size version of the 100-01 Series.

Pilot System Specifications

Adjustment Ranges

0	to	75 psi Max.
20	to	105 psi
20	to	200 psi*
100	to	300 psi

*Supplied unless otherwise specified
Other ranges available, please consult factory

Temperature Range

Water: to 180°F

Materials

Standard Pilot System Materials

Pilot Control: Stainless Steel Type 303
Trim: Stainless Steel Type 303
Rubber: Buna-N® Synthetic Rubber

Optional Pilot System Materials

Pilot Systems are available with optional
316 Stainless Steel or Monel materials.

Note: Available with remote sensing control.



When Ordering, Specify

1. Catalog No. 6550-01
2. Valve Size
3. Pilot System Materials
4. End Detail (150/300)
5. Fluid to be Handled
6. Fluid Temperature
7. Inlet Pressure
8. Outlet Pressure
9. Adjustment Range
10. Desired Options

Valve Options

X141
Pressure
Gauge



X101AR Valve
Position Indicator
with Air Release



X101
Valve Position
Indicator

X144 e-FlowMeter



X43H
Strainer



Stainless
Steel Pilot



E-6550-01 (R-03/2021)

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