



MODEL — 6590-01

Pressure Reducing Valve



- Sensitive and Accurate Pressure Control
- High Corrosion Resistance
- Easy Adjustment and Maintenance
- Optional Check Feature
- Fully Supported Frictionless Diaphragm

The Cla-Val Model 6590-01 Pressure Reducing Valve automatically reduces a higher inlet pressure to a steady lower downstream pressure regardless of changing flow rate and/or varying inlet pressure. All metal parts are 316 Stainless Steel for high corrosion resistance in many industrial applications. This valve is an accurate, pilot-operated regulator capable of holding downstream pressure to a pre-determined limit. When downstream pressure exceeds the pressure setting of the pilot control, the valve and close drip-tight.

If a check feature is added, and a pressure reversal occurs, the downstream pressure is admitted in the main valve cover chamber, closing the valve to prevent return flow.

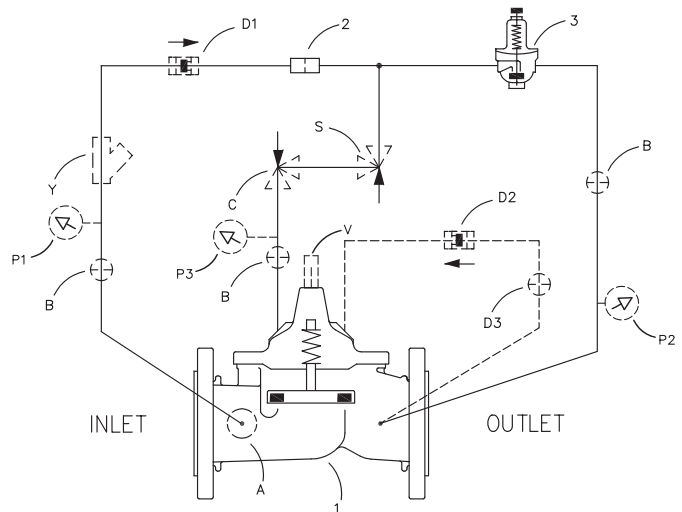
Schematic Diagram

Item	Description
1	100-44 Hytrol Main Valve
2	X58C Restriction Fitting
3	CRD Pressure Reducing Control

Optional Features

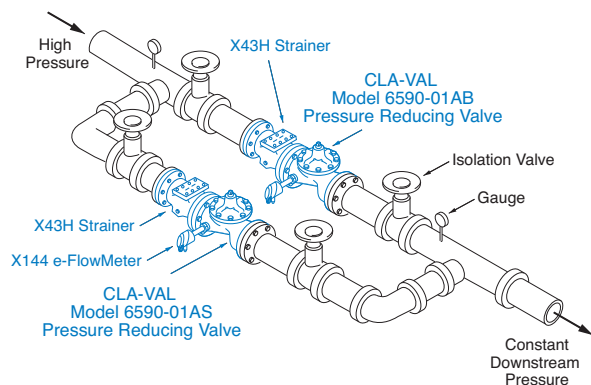
Item	Description
A	X46A Flow Clean Strainer
B	CK2 Isolation Valve
C	CV Flow Control (Closing)*
D	Check Valves with Isolation Valve
P	X141 Pressure Gauge
S	CV Flow Control (Opening)
V	X101 Valve Position Indicator
Y	X43 "Y" Strainer

*The closing speed control (optional) on this valve should always be open at least three (3) turns off its seat.

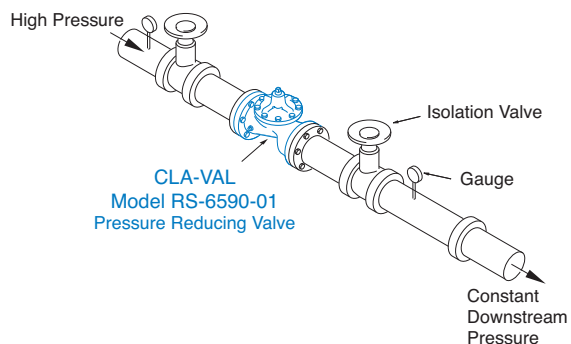


Typical Applications

Typical pressure reducing valve station using Model 6590-01AB in parallel to handle wide range of flow rates. Larger Model 6590-01AB valve takes care of peak loads. Smaller Model 6590-01AS handles low flows.



The 6590-01D Combination Pressure Reducing and Check Valve is installed downstream of a pump where a constant system pressure is required. The check feature is to prevent reverse flow through the pump and to hold system pressure when the pump is off.



Specifications

Model 6590-01

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)

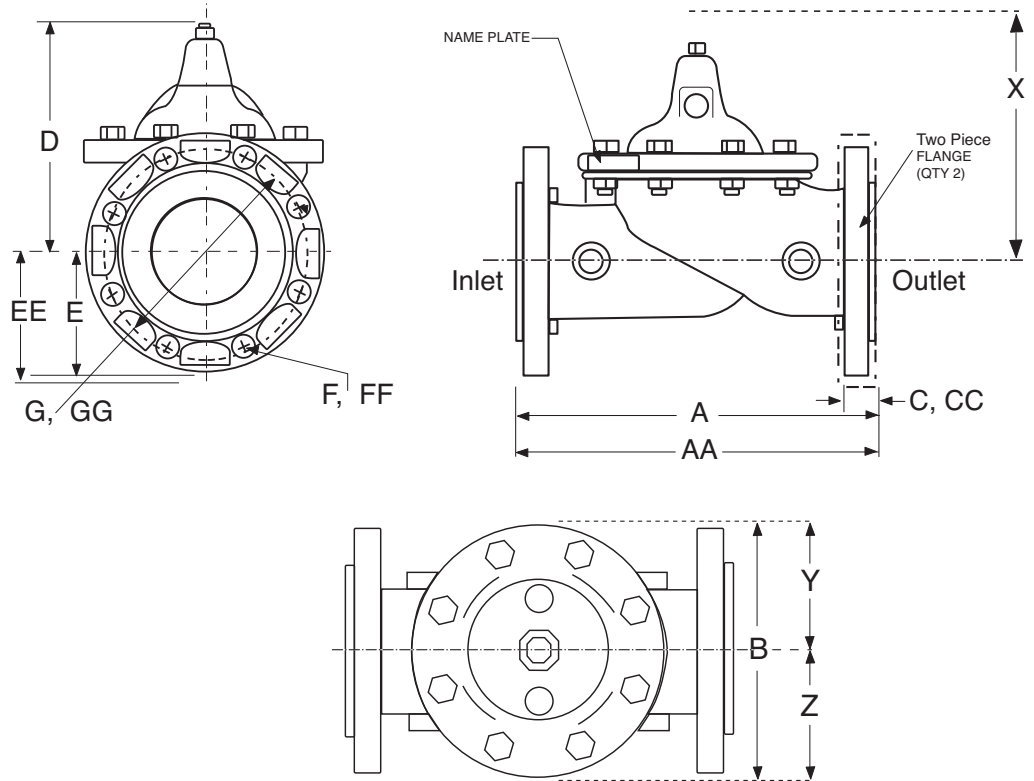
Materials

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 6590-01 Dimensions (Inches)

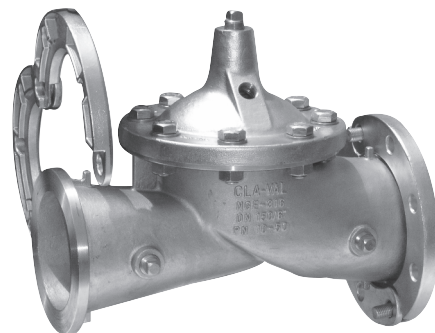
Valve Size (Inches)	2	2½	3	4	6	8	10	12
A 150 ANSI	9.06	11.42	12.20	13.78	18.90	23.62	28.74	33.46
AA 300 ANSI	9.06	11.42	12.20	13.78	18.90	23.62	28.74	33.46
B	5.70	8.06	6.69	9.25	11.61	15.75	20.08	23.62
C	0.89	0.89	0.93	0.93	1.02	1.15	1.15	1.25
CC 300 ANSI	0.96	0.96	1.00	1.00	1.10	1.15	1.46	1.50
D	6.50	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

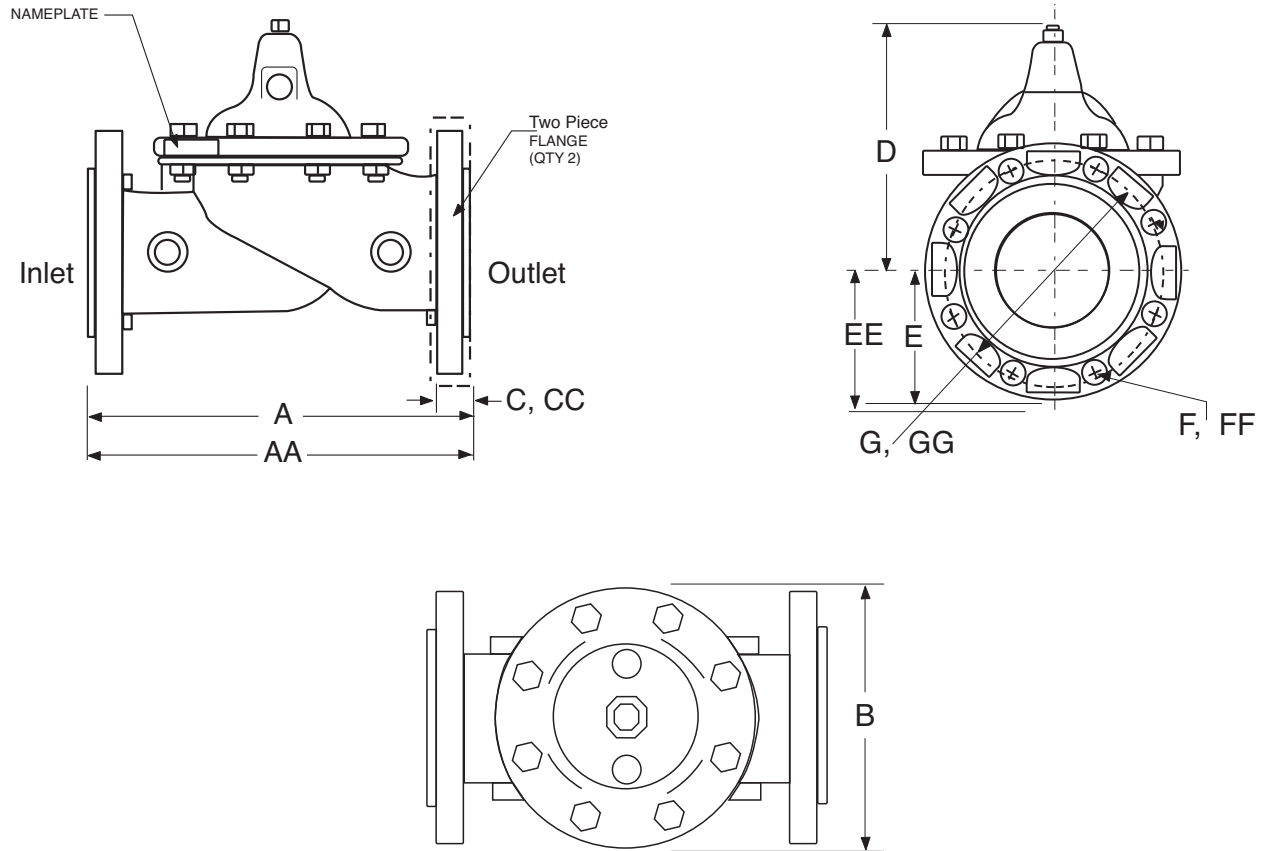
Size (Inches)	Cv (gpm)*	Cv (l/s)**
2	38	9
2 1/2	50	12
3	67	16
4	138	33
6	242	58
8	555	133
10	923	222
12	1492	359

*Cv = gpm flow at 1 psi drop

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



Model 6590-01 Dimensions (mm)



Model 6590-01 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

6590-01 Valve Selection	100-20 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
Main 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	160	260	260	580	1025	2300	4100	6400
	Minimum	1	2	1	2	4	10	15	35
Suggested Flow (Liters/Sec)	Maximum	8	16	16	37	65	145	258	403
	Minimum	.06	.13	.06	.13	.25	.63	.95	2.2

100-44 Series is the reduced internal port size version of the 100-01 Series. For Lower Flows Consult Factory

Pilot System Specifications

Adjustment Ranges

2	to	30	psi
15	to	75	psi
20	to	105	psi
30	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. 6590-01
2. Valve Size
3. Pattern - Globe
4. Pressure Class
5. Flanged (150 / 300)
6. Trim Material
7. Adjustment Range
8. Desired Options
9. When Vertically Installed

Valve Options

X141
Pressure
Gauge



X101AR Valve
Position Indicator
with Air Release



X101
Valve Position
Indicator



X144 e-FlowMeter



X43H
Strainer



Stainless
Steel Pilot



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