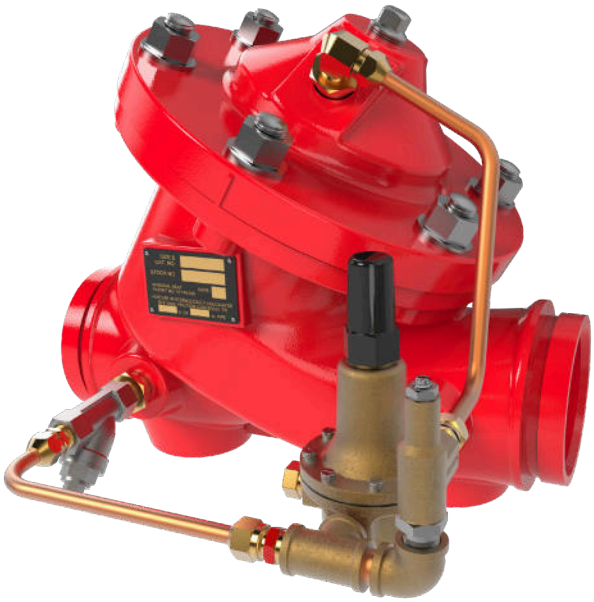
Model 90-FPX

Fire Protection Pressure Reducing Valve



Description

The Cla-Val Model 90-FPX 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. 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 control pilot, the main valve and pilot valve close drip-tight.

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

Main Valve Features

- Single Piece, Non-Guided Diaphragm Assembly
- Patent Pending Cast-in 316 Stainless Steel Seat for Drip Tight Shut-off
- Sensitive and Accurate Pressure Control
- Proven Repeat Functionality in Harsh Conditions
- In-Line Maintenance

Listings and Approvals

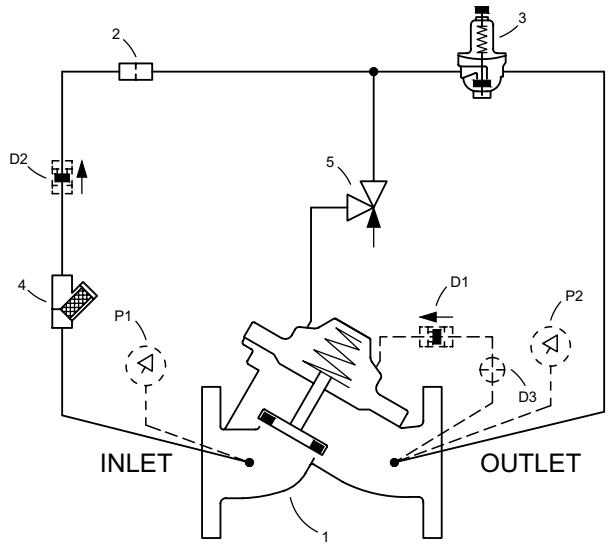
FM APPROVED

Typical Applications

- Fire Pump Regulation
- System Pressure Regulation
- Foam Applications

Model **90-FPX**

Fire Protection Pressure Reducing Valve



Schematic Diagram

Item	Description
1	100-66 Hytrol Main Valve
2	X58C Restriction Assembly
3	CRD Pressure Reducing Control
4	X43 "Y" Strainer
5	CV Flow Control (opening)** ***2" – 4" only*

Optional Features

Item	Description
D	Check Valve Option
P	Gauge Option

The Cla-Val Model 90-FPX Pressure Reducing Valve pilot control system is very sensitive to slight downstream pressure fluctuations and will automatically modulate to maintain the desired pressure setting. The CRD (Item 3) pilot can be easily field adjusted to a wide range of pressure settings. While monitoring the system's downstream pressure gauge (P2), the CRD adjustment screw can be turned clockwise to INCREASE pressure or counterclockwise to DECREASE pressure. The CRD adjustment screw is protected by a screw-on cover, which can be sealed to discourage tampering.

Main Valve Specifications

FM APPROVED SIZES

Flanged: 2" - 6"
Grooved: 2" - 6"

PRESSURE RATINGS

150 class, 250 psi maximum (Ductile Iron)
150 class, 285 psi maximum (All other materials)
300 class, 365 psi maximum (All materials)

TEMPERATURE RANGE

Water: to 180° F. Max

FLUIDS

Water

Materials

Main Valve Body & Cover:

Standard Epoxy Coated Ductile Iron
ASTM A-536*

Main Valve Trim:

316 Stainless Steel

Pilot Control System:

Cast Bronze

Rubber Parts:

EPDM

Functional Data

Valve Size	Inches	2	2.5	3	4	6
	mm	50	65	80	100	150
Y Pattern	Cv	90	120	184	351	780
	Kv	22	29	44	84	187
Max Flow Rate	Gal./Min. (gpm)	200	300	440	780	1760

Note: (1) Minimum Pressure Differential decreases as flow rates decrease.
(2) All sizes are designed to meet minimum flow of system components.

Pressure Adjustment Ranges

Size	FM
2" - 6"	30-250 psi

Minimum Pressure Differential (at Max Flow)

Size	PSI
2" - 6"	20 psi

System Parameters

- Factory Mutual requires the installation of pressure gauges upstream and downstream of Pressure Reducing Valves.
- A relief valve of not less than 1/2 inch in size must also be installed on the downstream side of pressure reducing valves. Adequate drainage for the relief valve discharge must be provided.

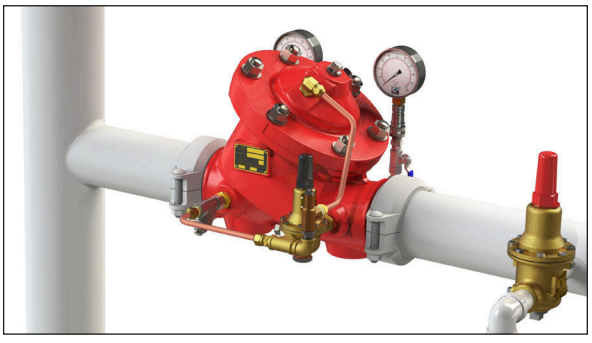
Single Stage



Dual Stage



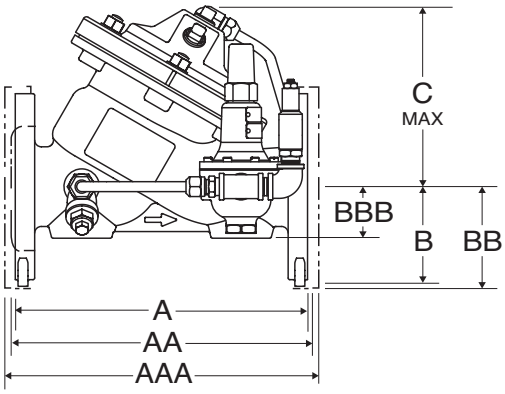
Standpipe

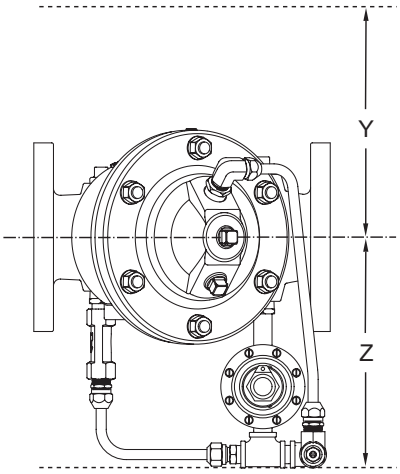


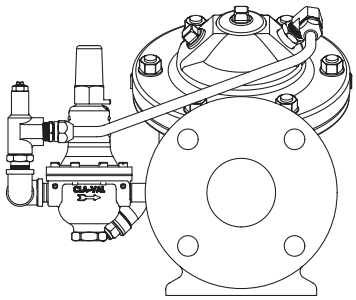
Model **90-FPX**

Fire Protection Pressure Reducing Valve

Dimensions







Valve Size	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
	2	50	2½	65	3	80	4	100	6	150
A 150 ANSI	9.38	238	11.00	279	12.00	305	15.00	381	20.00	508
AA 300 ANSI	10.00	254	11.62	295	13.25	337	15.62	397	21.00	533
AAA Grooved End	9.38	238	11.00	279	12.50	318	15.00	381	20.00	508
B 150 ANSI	3.31	84	3.75	95	3.90	99	4.75	121	6.00	152
BB 300 ANSI	3.56	90	4.00	102	4.50	114	5.25	133	6.50	165
BBB Grooved End	1.56	40	1.94	49	2.25	57	3.00	76	4.30	109
C Maximum	6.25	159	7.00	178	7.50	191	10.00	254	13.25	337
Y Maximum	3.50	89	4.25	108	4.75	121	6.00	152	8.00	203
Z Maximum	7.75	197	8.75	222	8.75	222	9.50	241	10.75	273

Model Number Codes

90-FPX

Size
2"
2.5"
3"
4"
6"

Options	
D	Check Valve
P	Pressure Gauges

Body	
D	Ductile Iron

Trim	
T	316 SS

Pilots	
B	Bronze w/SST
BM	Bronze with Monel Internals
T	316 SS
M	Monel
U	Super Duplex
X	Other

Tubing & Fittings	
B	Copper with Brass Fittings
T	316 SS
M	Monel
U	2507
X	Other

Elastomer	
E	EPDM

Connection
ANSI 150#
ANSI 300#
ISO PN10
ISO PN16
ISO PN25
V Grooved 300#

Face	
RF	
FF	
X	Other

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