CLA-VAL **90A/G-21**

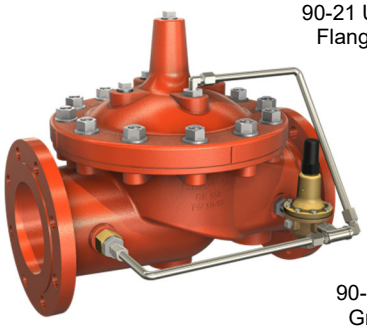
Fire Protection Pressure Reducing Valve

Simple, Reliable and Accurate

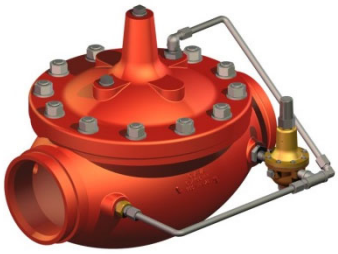
- **U.L. Listed, MEA Approved**
- **Globe or Angle Pattern**
- **Proven Reliable Design**
- **Accurate Pressure Control**
- **In Line Service**
- **Flanged, Grooved or Threaded Ends**

CLA-VAL 90G-21 (globe) and 90A-21 (angle) Pressure Reducing Valves are indispensable in any fire protection system. Our diaphragm actuated design is proven highly reliable and easy to maintain. We offer both a globe or angle pattern with a full range of adjustments. These valves are also available in a variety of material options. Epoxy coating is strongly recommended for all fire system valves (excluding bronze valves). The 90G-21 and 90A-21 can be supplied with optional internal and external epoxy coating of the main valve wetted surfaces.

90-21 UL Listed
Flanged End

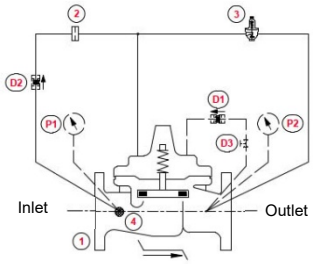


90-21 UL Listed
Grooved End



Special System Water Control Valves - Class II
UL Product Category VLMT - File No. Ex 2534

Function



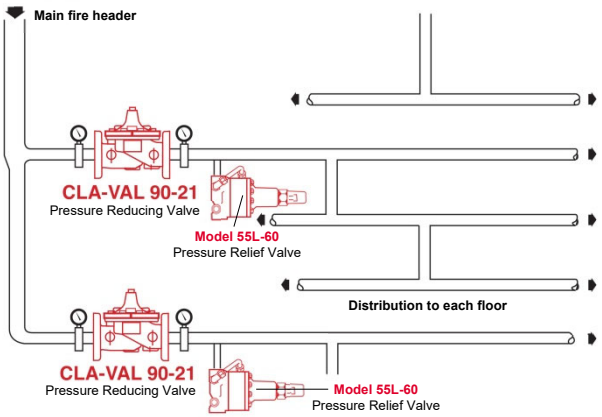
ITEM	DESCRIPTION
1	Model HYTROL AE/GE 100-01/KX
2	X58C Restriction Tube Fitting
3	CRD Pressure Reducing Control
4	X46A Flow Clean Strainer

CLA-VAL 90G-21 (globe) and 90A-21 (angle) Pressure Reducing Valves automatically reduce a higher inlet pressure to a steady lower outlet pressure regardless of changing flow rate and/or varying inlet pressure. The valves pilot control system is very sensitive to slight downstream pressure fluctuations, and will automatically open or close to maintain the desired pressure setting. The downstream pressure can be set over a wide range by turning the adjustment screw on the CRD pilot control. The adjustment screw is protected by a screw-on cover, which can be sealed to discourage tampering.

Typical Application

Underwriters Laboratories requires the installation of pressure gauges upstream and downstream of the Pressure Reducing Valve. Also, a relief valve of not less than 1/2 inch in size must be installed on the downstream side of the pressure control valve. Adequate drainage for the relief valve discharge must be provided.

The valve made be installed in either vertical or horizontal positions.



UL Listings — F - Flanged // G - Grooved // T - Threaded

Size	Globe Class 150 F by F	Globe Class 300 F by F	Globe Class 150 and 300 G by G	Globe Class 300 T by T	Angle Class 150 F by F	Angle Class 300 F by F	Angle Class 150 and 300 G by G	Angle Class 300 T by T
1 1/2"	UL	UL	UL	UL	UL	UL	UL	UL
2"	UL	UL	UL	UL	UL	UL	UL	UL
2 1/2"	UL	UL	UL	UL	UL	UL	UL	UL
3"	UL	UL	UL	UL	UL	UL	UL	UL
4"	UL	UL	UL		UL	UL	UL	
6"	UL	UL	UL		UL	UL	UL	
8"	UL	UL	UL			UL	UL	
10"	UL	UL				UL		
12"	UL	UL				UL		

Reduce your waste - Sort your rubbish

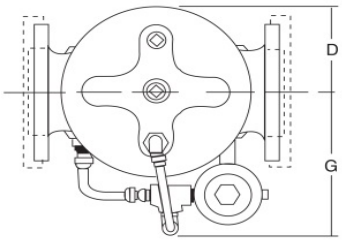
CLA-VAL **90A/G-21**

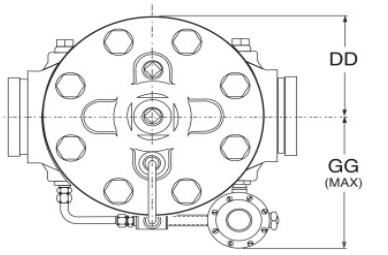
Fire Protection Pressure Reducing Valve

Dimensions

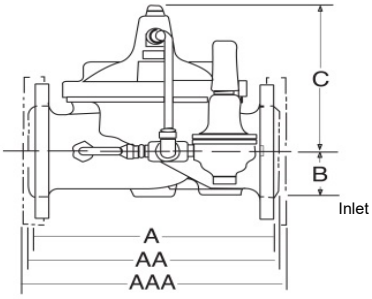
Valve size [mm]	**40**	**50**	**65**	**76,1**	**80**	**100**	**150**	**165,1**	**200**	**250**	**300**
A Threaded	184	238	279	-	318	-	-	-	-	-	-
AA 150 ANSI	216	238	279	-	305	381	508	-	645	756	864
AAA 300 ANSI	229	254	295	-	337	397	533	-	670	790	902
AAAA Grooved (*)	216	228	279	318	318	381	508	508	645	-	-
B	28	38	43	-	65	81	109	-	135	235	273
BB Grooved (*)	52	54	63	-	77	105	152	-	184	-	-
C (max.)	140	161	192	-	208	270	340	-	406	435	530
CC (max.) Grooved (*)	104	127	175	165	165	223	281	281	369	-	-
D	71	84	102	-	116	146	200	-	254	-	-
DD Grooved (*)	71	84	102	116	116	146	200	200	254	-	-
E Threaded	83	121	140	-	159	-	-	-	-	-	-
EE 150 ANSI	102	121	140	-	152	191	254	-	324	378	432
EEE 300 ANSI	108	127	149	-	162	200	267	-	349	395	451
EEEE Grooved (*)	-	121	-	-	152	191	-	-	-	-	-
F Threaded	48	83	102	-	114	-	-	-	-	-	-
FF 150 ANSI	102	83	102	-	102	127	152	-	203	219	349
FFF 300 ANSI	108	89	109	-	111	135	165	-	216	236	368
FFFF Grooved (*)	-	121	-	-	114	127	-	-	-	-	-
G (max.)	191	197	197	203	203	228	241	241	267		
GG (max.)	206	203	-	207	207	236	267	267	292		

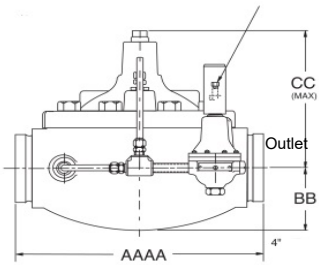
(*) Groove Ends per IPS Steel Specifications

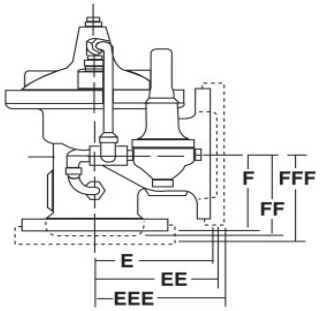


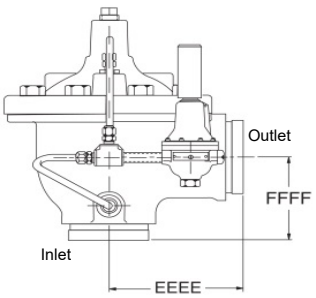


Pressure Reducing Control adjustment: Turn the adjusting stem clockwise to increase the setting.









CLA-VAL 90A/G-21

Fire Protection Pressure Reducing Valve

Standard Specifications

Size:

1,1/2" - 12"

End Details:

Flanged: 150 ANSI B16.5
Flanged: 300 ANSI B16.5
Grooved: 150# or 300#

Pressure Differential:

Min. 10 psi / 0.7 bar

Pressure Adjustment Range:

2" : 30 - 165 psi / 2.1-11.4 bar

1,1/2" & 3" - 12" : 50 - 175 psi / 3.4 - 12.1 bar

Temperature Range:

Water max. 180°F / 82°C

Pressure Rating:

Class 150 - 250 psi Max.
Class 300 - 300 psi Max.

Standard Materials

Main Valve Body & Cover:

Ductile iron - ASTM A536 / EN-GJS-400

Main Valve Internal Trim:

Stainless Steel 316 seat and disc guide

Stainless Steel 303 stem, stem nut and cover bearing

Pilot Control System- Pilot Control Valve:

Bronze ASTM B62 with Stainless Steel 303 internal trim

Stainless Steel 303 tubing with Stainless Steel 316 fittings

Main Valve and Pilot Valve:

Diaphragm and disc: Buna-N® synthetic rubber

Optional Materials for Seawater and Severe Service Applications

Bronze, Nickel Aluminum Bronze, Stainless steel 300 series, Carbon Steel WCB, Monel 400, Super Austenitic Stainless Steel, Super Duplex Stainless Steel

Selection Guidelines

FLOW CAPACITY TABLE		
Valve size	**Maximum flow rate**	
[inch]	[gpm]	[m^3/h]
1 1/2	160	36
2	262	59
2 1/2	373	85
3	576	131
4	992	225
6	2251	511
8	3900	886
10	6000	1361
12	8900	2019

Note: The actual capacity is limited by available Differential Pressure. For accurate sizing contact CLA-VAL Europe.

When Ordering, Please Specify

1. Model Number 90-21
2. Valve size
3. Globe or Angle pattern
4. Main Valve Body and Cover Material
5. Threaded, Flanged or Grooved
6. Optional Epoxy Coating (specify with suffix KC)
7. Pressure Class