



— MODEL — **414-01**

Pneumatically Operated with Manual Reset Deluge Valve For Freshwater and Seawater Service



414-01

- Single Seat with Resilient Disc Insures Tight Seal
- Simply Designed with Few Working Parts
- Quick Response with Manual Reset
- Fully Supported Frictionless Diaphragm
- Leak-proof Service Assured – No Packing Glands
- Single Tube Line Required for Control
- Opens Wide for Minimum Flow Resistance

The Cla-Val 414-01 Remote Control Valve is used where “on-off” control is required. Pressure signals from a remote control “open or close” a small auxiliary valve installed on the main valve cover, which in turn opens or closes the main valve. Once sensing pressure drops to “set” pressure the snap action pilot opens to relieve main valve cover pressure to open deluge valve. Once open the pilot valve must be “manually reset” in order to close the valve.

The Model 414-01 consists of a 100G/2100G Hytrol main valve and a small Hytrol Auxiliary Valve. Both the main valve and the auxiliary valve are single-seated, diaphragm operated globe type valves. Line pressure applied to the auxiliary valve cover closes the main valve drip tight.

Specifications

Sizes	Globe: 3” - 10” flanged Angle: 3” - 10” flanged
End Details	125 and 250 ANSI B16.1
Pressure Ratings	125 class - 175 psi Max. 250 class - 300 psi Max.
Temperature Range	Water: to 180° F. Max.

Materials **Main valve body & cover:**

Ductile Iron ASTM A-536*
Cast Steel ASTM A216-WCB*
Naval Bronze ASTM B-61
Nickel Aluminum Bronze ASTM B148
Super Duplex Stainless Steel
Stainless Steel ASTM A743-CF-8M

Main valve trim:

Bronze ASTM B61
Monel

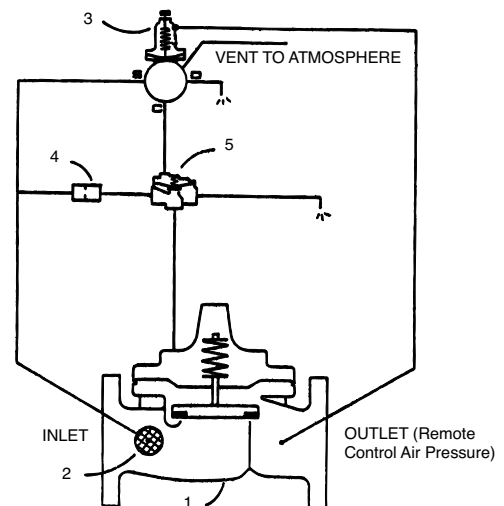
Pilot control system:

Cast bronze ASTM B61 with monel trim
Stainless Steel 316 Tubing & Fitting

For Seawater Service use 100GS/2100GS Main Valve

Schematic Diagram

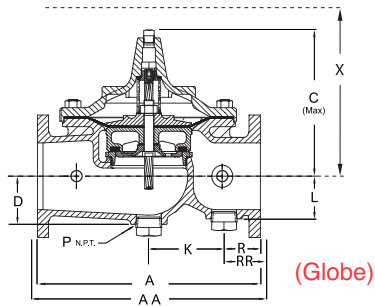
Item	Description
1	100G/2100G Hytrol (Main Valve)
2	X46A Flow Clean Strainer
3	CDHS-3C-A2-3 Differential Control
4	X58C Restriction Assembly
5	100-01 Auxiliary Hytrol



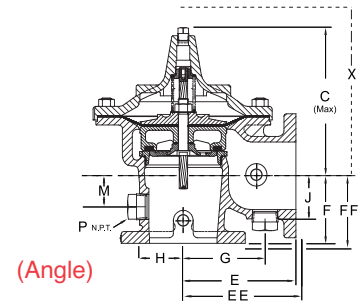
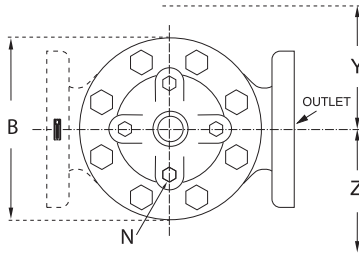
*Internally & Externally Epoxy Coated



Dimensions



(Globe)



(Angle)

Valve Size (Inches)	3	4	6	8	10
A 150 ANSI	12.00	15.00	20.00	25.38	29.75
AA 300 ANSI	13.25	15.62	21.00	26.38	31.12
B Dia.	9.12	11.50	15.75	20.00	23.62
C Max.	8.19	10.62	13.38	16.00	17.12
D	2.56	3.19	4.31	5.16	8.50
E 150 ANSI	7.00	8.50	10.00	12.69	14.88
EE 300 ANSI	--	8.81	10.50	13.19	--
F 150 ANSI	4.00	4.97	6.00	8.00	8.62
FF 300 ANSI	--	5.28	6.50	8.50	--
G	4.75	5.94	7.25	8.50	10.50
H	2.69	2.81	3.88	5.31	6.56
J	2.56	2.81	3.81	4.81	5.81
K	7.00	4.03	6.75	17.00	15.50
L	2.56	2.81	3.81	4.81	8.50
M	1.75	2.41	2.75	4.00	4.24
N NPT	1/2"-14	3/4"-14	3/4"-14	1"-11 1/2	1"-11 1/2
P NPT	1-1/4"-11 1/2	2"-11 1/2"			
R 150 ANSI	2.50	3.47	3.25	4.19	7.12
RR 300 ANSI	3.12	3.78	3.75	4.69	7.81
X Pilot System	15.00	17.00	29.00	31.00	33.00
Y Pilot System	11.00	12.00	20.00	22.00	24.00
Z Pilot System	11.00	12.00	20.00	22.00	24.00

Valve Size (mm)	80	100	150	200	250
A 150 ANSI	305	381	508	645	756
AA 300 ANSI	337	397	533	670	791
B Dia.	232	292	400	508	600
C Max.	208	270	340	406	435
D	65	81	110	131	216
E 150 ANSI	178	216	254	322	378
EE 300 ANSI	--	224	267	350	--
F 150 ANSI	102	126	152	203	219
FF 300 ANSI	--	134	165	216	--
G	121	151	184	216	267
H	68	71	99	135	167
J	65	71	97	122	148
K	178	102	171	432	394
L	65	71	97	122	216
M	45	61	70	102	108
N NPT	1/2"-14	3/4"-14	3/4"-14	1"-11 1/2	1"-11 1/2
P NPT	1-1/4"-11 1/2	2"-11 1/2"			
R 150 ANSI	64	88	83	106	181
RR 300 ANSI	79	96	95	119	198
X Pilot System	381	432	737	787	838
Y Pilot System	279	305	508	559	610
Z Pilot System	279	305	508	559	610

Valve Capacity

Valve Sizes (inches)	3"	4"	6"	8"	10"
Max. Continuous (gpm)	460	800	1800	3100	4900
Max. Intermittent (gpm)	1000	1800	4000	7000	11000

Functional Data

Valve Size		Inches	3	4	6	8	10
		mm.	80	100	150	200	250
C _v Factor	Globe Pattern	Gal./Min. (gpm.)	115	200	440	770	1245
		Litres/Sec. (l/s.)	27.6	48	105.6	184.8	299
	Angle Pattern	Gal./Min. (gpm.)	139	240	541	990	1575
		Litres/Sec. (l/s.)	33.4	58	130	238	378

When Ordering, Please Specify

1. Catalog No. 414-01
2. Valve Size
3. Pattern - Globe or Angle
4. Pressure Class
5. Threaded, Flanged or Grooved
6. Trim Material
7. Adjustment Range
8. Desired Options
9. When Vertically Installed

Pilot System Specifications

Materials

Standard Pilot System Materials

Pilot Control: Bronze ASTM B61
 Trim: Monel
 Rubber: Buna-N® Synthetic Rubber

Optional Pilot System Materials

Pilot Systems are available with optional Stainless Steel or Monel materials at extra cost.

Note: Available with remote sensing control.

Temperature Range

Water: to 180°F



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