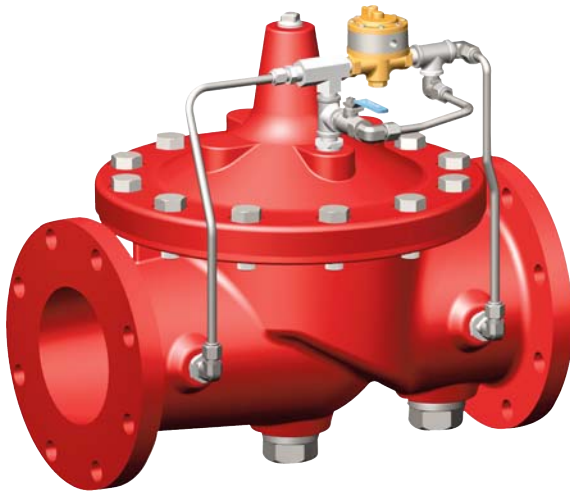




# — MODEL — Series 403

## Pneumatically Operated Remote Control Valve For Freshwater and Seawater Service



403G-11A

- **Single Seat with Resilient Disc Insures Tight Seal**
- **Simply Designed with Few Working Parts**
- **Quick Response to Remote Control**
- **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 403 Series 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. Only the small amount of fluid in the auxiliary valve must pass through the remote control pilot in order to fully open or close the larger main valve.

The Model 403 Series consists of a 100-01 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

<b>Sizes</b>	Globe: 1 1/2" - 24" flanged Angle: 1 1/2" - 16" flanged
<b>End Details</b>	125 and 250 ANSI B16.1
<b>Pressure Ratings</b>	150 class - 250 psi Max. 300 class - 400 psi Max.
<b>Temperature Range</b>	Water: to 180° F. Max.
<b>Materials</b>	<b>Main valve body &amp; cover:</b> 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  <b>Main valve trim:</b> Bronze ASTM B61 Monel Stainless Steel 316  <b>Pilot control system:</b> Cast bronze ASTM B61 with monel trim Stainless Steel 316 Tubing & Fitting

\*Internally & Externally Epoxy Coated

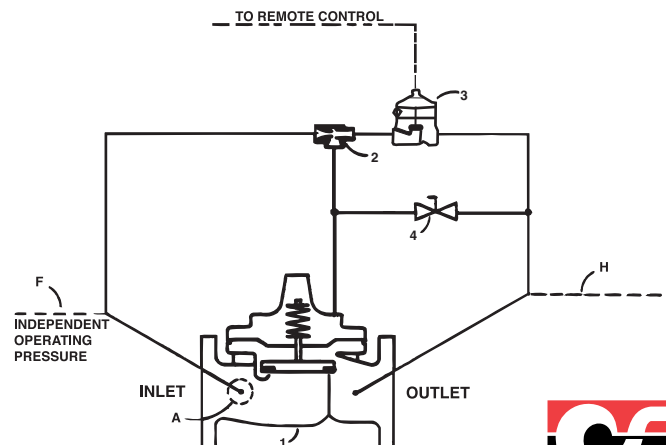
**For Seawater Service use 100S/2100S or 100GS/2100GS Main Valve**

### Schematic Diagram

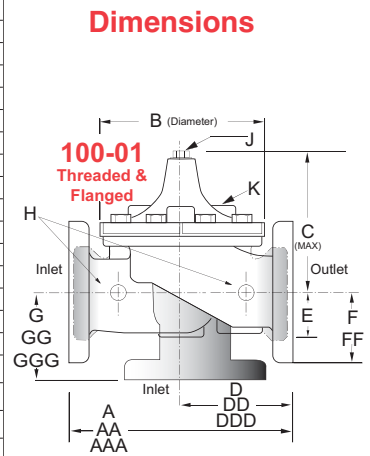
Item	Description
1	100-01 Hytrol (Main Valve)
2	X47A Ejector
3	100-02 Powertrol
4	CK2 Ball Valve

### Optional Features

Item	Description
A	X46A Flow Clean Strainer
F	Independent Operating Pressure
H	Drain to Atmosphere



Valve Size (Inches)	1½	2	2½	3	4	6	8	10	12	14	16	24	36
A Threaded	7.25	9.38	11.00	12.50	—	—	—	—	—	—	—	—	—
AA 150 ANSI	8.50*	9.38	11.00	12.00	15.00	20.00	25.38	29.75	34.00	39.00	41.38	61.50	76.00
AAA 300 ANSI	9.00*	10.00	11.62	13.25	15.62	21.00	26.38	31.12	35.50	40.50	43.50	63.24	78.00
B Dia.	5.62	6.62	8.00	9.12	11.50	15.75	20.00	23.62	28.00	32.75	35.50	53.16	66.00
C Max.	5.50	6.50	7.56	8.19	10.62	13.38	16.00	17.12	20.88	24.19	25.00	43.93	61.50
CC Max.	—	5.00	—	6.50	8.80	11.10	—	—	—	—	—	—	—
D Threaded	3.25	4.75	5.50	6.25	—	—	—	—	—	—	—	—	—
DD 150 ANSI	4.00*	4.75	5.50	6.00	7.50	10.00	12.75	14.88	17.00	19.50	20.81	30.75	—
DDD 300 ANSI	4.25*	5.00	5.88	6.38	7.88	10.50	13.25	15.56	17.75	20.25	21.62	31.62	—
E	1.12	1.50	1.69	2.56	3.19	4.31	5.31	9.25	10.75	12.62	15.50	17.75	24.56
F 150 ANSI	2.50	3.00	3.50	3.75	4.50	5.50	6.75	8.00	9.50	10.50	11.75	19.25	28.00
FF 300 ANSI	3.06	3.25	3.75	4.13	5.00	6.25	7.50	8.75	10.25	11.50	12.75	—	—
G Threaded	1.88	3.25	4.00	4.50	—	—	—	—	—	—	—	—	—
GG 150 ANSI	4.00*	3.25	4.00	4.00	5.00	6.00	8.00	8.62	13.75	14.88	15.69	22.06	—
GGG 300 ANSI	4.25*	3.50	4.31	4.38	5.31	6.50	8.50	9.31	14.50	15.62	16.50	22.90	—
H NPT Body Tapping	¾	¾	½	½	¾	¾	1	1	1	1	1	1	2
J NPT Cover Center Plug	¼	½	½	½	¾	¾	1	1	1¼	1½	2	1½	2
K NPT Cover Tapping	¾	¾	½	½	¾	¾	1	1	1	1	1	1	2
Valve Stem Internal Thread UNF	10-32	10-32	10-32	¼-28	¼-28	¾-24	¾-24	¾-24	¾-24	¾-24	¾-24	½-20	¾-16
Stem Travel	0.4	0.6	0.7	0.8	1.1	1.7	2.3	2.8	3.4	4.0	4.5	6.75	10.12
Approx. Ship Wt. Lbs.	15	35	50	70	140	285	500	780	1165	1600	2265	6200	11470



Valve Size (mm)	40	50	65	80	100	150	200	250	300	350	400	600	900
A Threaded	184	238	279	318	—	—	—	—	—	—	—	—	—
AA 150 ANSI	216*	238	279	305	381	508	645	756	864	991	1051	1562	1930
AAA 300 ANSI	229*	254	295	337	397	533	670	790	902	1029	1105	1606	1981
B Dia.	143	168	203	232	292	400	508	600	711	832	902	1350	1676
C Max.	140	165	192	208	270	340	406	435	530	614	635	1116	1562
CC Max.	104	127	—	165	223	281	—	—	—	—	—	—	—
D Threaded	83	121	140	159	—	—	—	—	—	—	—	—	—
DD 150 ANSI	102*	121	140	152	191	254	324	378	432	495	528	781	—
DDD 300 ANSI	108*	127	149	162	200	267	337	395	451	514	549	803	—
E	29	38	43	65	81	110	135	235	273	321	394	451	624
F 150 ANSI	64	76	89	95	114	140	171	203	241	267	298	489	711
FF 300 ANSI	78	83	95	105	127	159	191	222	260	292	324	—	—
G Threaded	48	83	102	114	—	—	—	—	—	—	—	—	—
GG 150 ANSI	102*	83	102	102	127	152	203	219	349	378	399	560	—
GGG 300 ANSI	102*	89	110	111	135	165	216	236	368	397	419	582	—
H NPT Body Tapping	¾	½	½	¾	¾	1	1	1	1	1	1	2	2
J NPT Cover Center Plug	½	½	½	¾	¾	1	1	1¼	1½	2	1½	2	2
K NPT Cover Tapping	¾	½	½	¾	¾	1	1	1	1	1	1	2	2
Valve Stem Internal Thread UNF	10-32	10-32	10-32	¼-28	¼-28	¾-24	¾-24	¾-24	¾-24	¾-24	¾-24	½-20	¾-16
Stem Travel	10	15	18	20	28	43	58	71	86	102	114	171	257
Approx. Ship Wt. Kgs.	7	16	23	32	64	129	227	354	528	726	1027	2812	5200

### When Ordering, Please Specify

1. Catalog No. 403 Series
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

### Valve Capacity

Valve Sizes (inches)	1 1/2"	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"	24"	36"
Max. Continuous (gpm)	125	208	300	460	800	1800	3100	4900	7000	8500	11000	28000	—
Max. Intermittent (gpm)	280	460	650	1000	1800	4000	7000	11000	16000	19000	25000	63000	—

### Functional Data

Valve Size		Inches	1½	2	2½	3	4	6	8	10	12	14	16	24	36
		mm.	40	50	65	80	100	150	200	250	300	350	400	600	900
C <sub>v</sub> Factor	Globe Pattern	Gal./Min. (gpm.)	32	54	85	115	200	440	770	1245	1725	2300	2940	7655	13320
		Litres/Sec. (l/s.)	7.7	13	20.4	27.6	48	105.6	184.8	299	414	552	706	1837	3200
	Angle Pattern	Gal./Min. (gpm.)	29	61	101	139	240	541	990	1575	2500*	3060*	4200*	—	—
		Litres/Sec. (l/s.)	7	14.6	24.2	33.4	58	130	238	378	600	734.4	1008	—	—

\*Estimated

### 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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