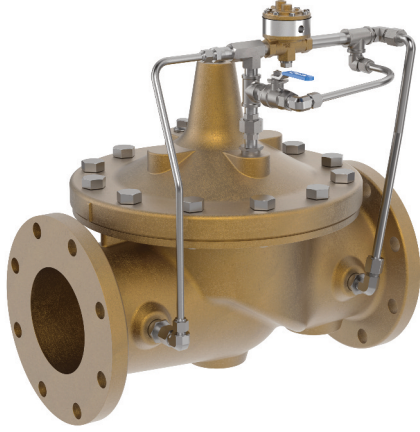


403-11 Series

Pneumatically Operated Remote Control Valve

For Freshwater and Seawater Service



- 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 cover 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 100G/2100G UL listed 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.

Certifications & Approvals



Specifications

| | |
|--------------------------|---|
| Sizes | Globe: 3” - 12” flanged Angle: 3” - 12” flanged |
| End Details | 125 and 250 ANSI B16.1 |
| Pressure Ratings | 150 class - 250 psi Max. 300 class - 400 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 |

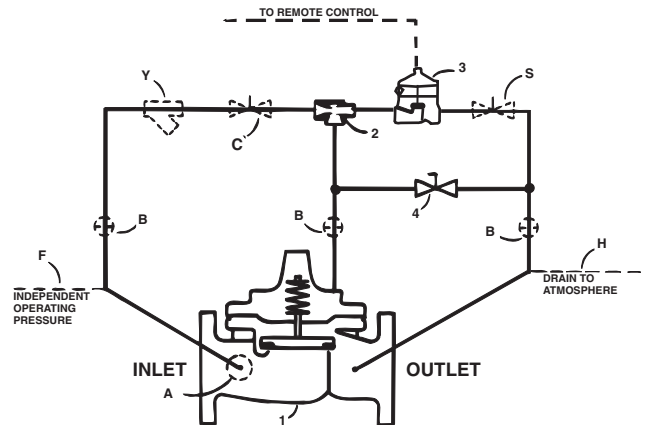
Main valve trim:

Bronze ASTM B61
Monel
Stainless Steel 316

Pilot control system:

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

*Internally & Externally Epoxy Coated



Schematic Diagram

| Item | Description |
|------|--|
| 1 | 100G/2100G UL listed Hytrol (Main Valve) |
| 2 | X47A Ejector |
| 3 | 100-02 Powertrol |
| 4 | Ball Valve |

Optional Features

| Item | Description |
|------|--------------------------------|
| A | X46A Flow Clean Strainer |
| B | CK2 Isolation Valves |
| C | CNB Needle Valve (Closing) |
| F | Independent Operating Pressure |
| H | Drain to Atmosphere |
| S | CNB Needle Valve (Opening) |

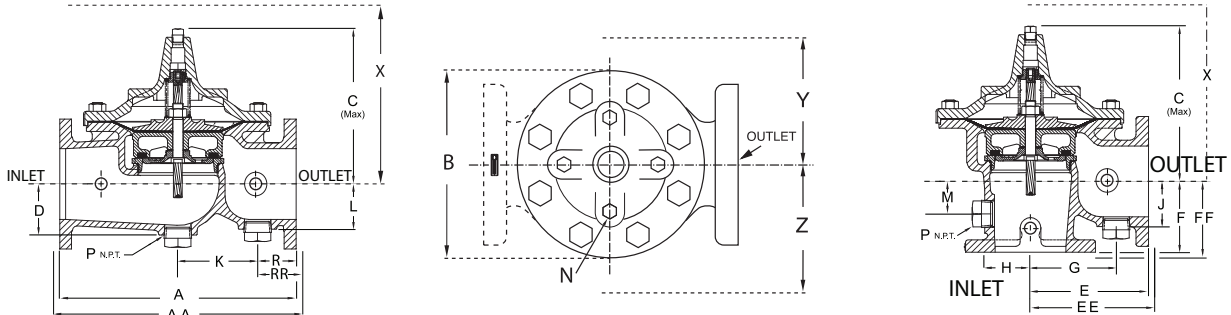
**For Seawater Service use 100S/2100S
or 100GS/2100GS Main Valve**



403-11 Series

Pneumatically Operated Remote Control Valve

For Freshwater and Seawater Service



| Valve Size (Inches) | 3 | 4 | 6 | 8 | 10 | 12 |
|---------------------|----------------|------------|---------|------------|------------|-------|
| A 150 ANSI | 12.00 | 15.00 | 20.00 | 25.38 | 29.75 | 34 |
| AA 300 ANSI | 13.25 | 15.62 | 21.00 | 26.38 | 31.12 | 35.50 |
| B Dia. | 9.12 | 11.50 | 15.75 | 20.00 | 23.62 | 28 |
| C Max. | 8.19 | 10.62 | 13.38 | 16.00 | 17.12 | 20.88 |
| D | 2.56 | 3.19 | 4.31 | 5.16 | 8.50 | -- |
| E 150 ANSI | 7.00 | 8.50 | 10.00 | 12.69 | 14.88 | 17 |
| EE 300 ANSI | -- | 8.81 | 10.50 | 13.19 | 15.56 | 17.75 |
| F 150 ANSI | 4.00 | 4.97 | 6.00 | 8.00 | 8.62 | 13.75 |
| FF 300 ANSI | -- | 5.28 | 6.50 | 8.50 | 9.31 | 14.50 |
| 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 | 300 |
|-----------------|----------------|------------|----------|------------|------------|-----|
| A 150 ANSI | 305 | 381 | 508 | 645 | 756 | 864 |
| AA 300 ANSI | 337 | 397 | 533 | 670 | 791 | 902 |
| B Dia. | 232 | 292 | 400 | 508 | 600 | 711 |
| C Max. | 208 | 270 | 340 | 406 | 435 | 530 |
| D | 65 | 81 | 110 | 131 | 216 | -- |
| E 150 ANSI | 178 | 216 | 254 | 322 | 378 | 432 |
| EE 300 ANSI | -- | 224 | 267 | 350 | 395 | 451 |
| F 150 ANSI | 102 | 126 | 152 | 203 | 219 | 349 |
| FF 300 ANSI | -- | 134 | 165 | 216 | 236 | 268 |
| 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" | 12" |
|-------------------------|------|------|------|------|-------|-------|
| Max. Continuous (gpm) | 460 | 800 | 1800 | 3100 | 4900 | 7000 |
| Max. Intermittent (gpm) | 1000 | 1800 | 4000 | 7000 | 11000 | 16000 |

Functional Data

| Valve Size | | Inches | 3 | 4 | 6 | 8 | 10 | 12 |
|-----------------------|---------------|--------------------|------|-----|-------|-------|------|-------|
| | | mm. | 80 | 100 | 150 | 200 | 250 | 300 |
| C _v Factor | Globe Pattern | Gal./Min. (gpm.) | 115 | 200 | 440 | 770 | 1245 | 1725 |
| | | Litres/Sec. (l/s.) | 27.6 | 48 | 105.6 | 184.8 | 299 | 414 |
| | Angle Pattern | Gal./Min. (gpm.) | 139 | 240 | 541 | 990 | 1575 | 2500* |
| | | Litres/Sec. (l/s.) | 33.4 | 58 | 130 | 238 | 378 | 600 |

*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

