

DB400X Flow control valve Instruction

Product Instruction

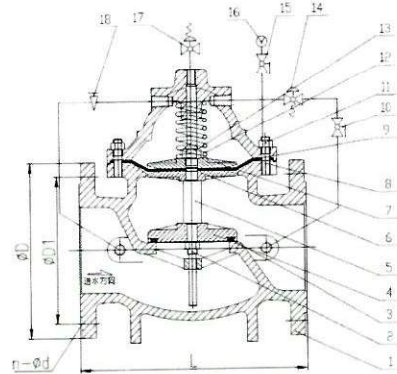
The product is our company engineering and technical personnel through the introduction of new technology, manufacturing technology and the improvement of the structure, Has reached the international advanced level, their type body adopts the whole passage streamlined design, fluid resistance Force is small, large flow, in the mode of transmission adopts the hydraulic operation, it is using hydraulic automatic pipeline Operating the main valve disc up and down movement, control of the main valve mouth opening, the main valve installed in the control flow distribut ion pipe roadThe amount of pipeline. Can design is first valve upper guide regulator and a fixed flow pilot valve, just Can make through the main valve flow rate remains unchanged, even if the main valve upstream press ure changes, also won't affect, Anyway the product is life and industrial water supply system water supply, fire fighting system of ideal products.



Structure

The valve consists of the main valve, pilot valve, needle valve, ball valve, micro filter ,pressure gauge, etc, Due to the pilot valve, needle valve and pressure gauge need to connected the main valve with a catheter , so collectively called catheter control system, as the figure below :

- | | |
|--------------------------|----------------------|
| 1、 Body | 10、 Ball Valve |
| 2、 Nut | 11、 Nut |
| 3、 Sealing Ring | 12、 Nut |
| 4、 Disc | 13、 Spring |
| 5、 Stem | 14、 Pilot valve |
| 6、 Diaphragm Press Plate | 15、 Ball valve |
| 7、 Diaphragm | 16、 Pressure gauge |
| 8、 Bolt | 17、 Adjustment valve |
| 9、 Bonnet | 18、 Needle Valve |



Main Connection Dimensions

| Size in mm | Length L | Main dimension | | | | | | | | | | | |
|------------|----------|-------------------------|------|---------|--------|-----|-------|--------|-----|-------|--------|-----|-------|
| | | Table 15 Flange details | | | 1.0MPa | | | 1.6MPa | | | 2.5MPa | | |
| | | OD | BC | N-d | D | D1 | n-d | D | D1 | n-d | D | D1 | n-d |
| 2" | 200 | | | | 165 | 125 | 4-18 | 165 | 125 | 4-18 | 165 | 125 | 4-18 |
| 5/2" | 220 | | | | 185 | 145 | 4-18 | 185 | 145 | 4-18 | 185 | 145 | 8-18 |
| 3" | 230 | 7.50 | 6.00 | 3/4-4 | 200 | 160 | 8-18 | 200 | 160 | 8-18 | 200 | 160 | 8-18 |
| 4" | 270 | 9.00 | 170 | 3/4-8 | 220 | 180 | 8-18 | 220 | 180 | 8-18 | 235 | 190 | 8-22 |
| 5" | 295 | | | | 250 | 210 | 8-18 | 250 | 210 | 8-18 | 270 | 220 | 8-26 |
| 6" | 330 | 11.0 | 225 | 7/8-8 | 285 | 240 | 8-22 | 285 | 240 | 8-22 | 300 | 250 | 8-26 |
| 8" | 385 | 13.5 | 280 | 7/8-8 | 340 | 295 | 8-22 | 340 | 295 | 12-22 | 360 | 310 | 12-26 |
| 10" | 465 | 16.00 | 335 | 1-12 | 395 | 350 | 12-22 | 405 | 355 | 12-26 | 425 | 370 | 12-30 |
| 12" | 545 | 19.00 | 395 | 1-12 | 445 | 400 | 12-22 | 460 | 410 | 12-26 | 485 | 430 | 16-30 |
| 14" | 610 | 21.00 | 445 | 9/8-12 | 505 | 460 | 16-22 | 520 | 470 | 16-26 | 555 | 490 | 16-33 |
| 16" | 650 | 23.50 | 495 | 9/8-16 | 565 | 515 | 16-26 | 580 | 525 | 16-30 | 620 | 550 | 16-36 |
| 18" | 730 | 25.00 | 550 | 5/4-16 | 615 | 565 | 20-26 | 640 | 585 | 20-30 | 670 | 600 | 20-36 |
| 20" | 800 | 27.50 | 600 | 5/4-16 | 670 | 620 | 20-26 | 715 | 650 | 20-33 | 730 | 660 | 20-36 |
| 24" | 920 | 32.00 | 705 | 11/8-20 | 780 | 725 | 20-30 | 840 | 770 | 20-36 | 845 | 770 | 20-39 |

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Working principle

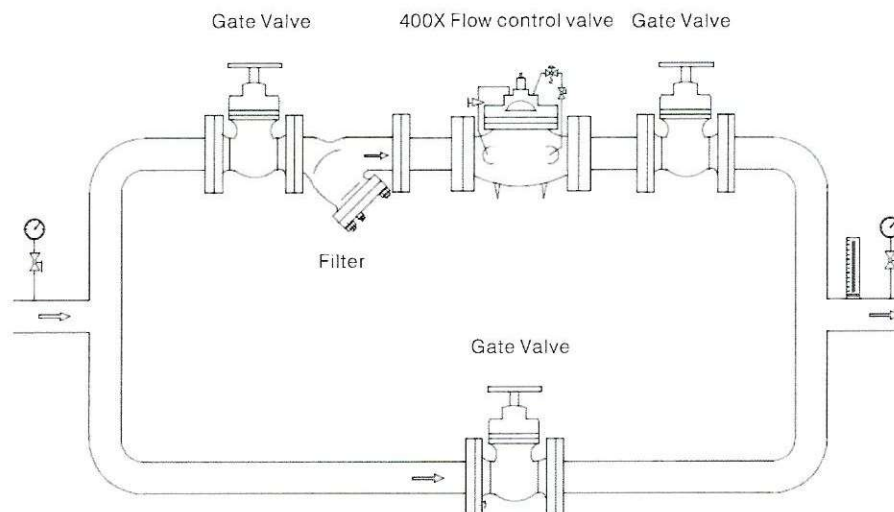
When the main valve inlet side pressure respectively into the valve body and the control room (see chart), and the main valve external ball valve 10 closed at the same time, the valve is in full close state. When the main valve external ball valve 10 fully open, the control room water pressure all drain to downstream low pressure area at this time the main valve fully open position. Adjust the opening of the main valve external ball valve 6, the flow through the water balance of needle valve 18 and ball valve 10, at this time the main valve in the floating state. Flow control valve is the use of the pressure difference that water through the catheter and needle valve 18 into the main valve control room. With the help of the spring of pilot valve control valve 14 Control valve opening, and adjust the upper regulating valve 17 makes the main valve opening, let the flow does not exceed a certain value in the pipeline, even if the upstream pressure changes, also won't affect the downstream pressure.

Main technical data sheet

| | | | |
|--|------------|------------|------------|
| PN | 1.0MPa | 1.6MPa | 2.5MPa |
| Body test pressure | 1.5MPa | 2.4MPa | 3.75MPa |
| Outlet Pressure adjustable range | 0.090-8MPa | 0.101-2MPa | 0.151-6MPa |
| Pressure character $\Delta P2P1$ | P2X8% | P2X10% | P2X12% |
| Flow character $\Delta P2G2$ | P2X15% | P2X20% | P2X25% |
| Suitable Temperature | 0°C-80°C | | |
| Suitable Medium | Water | | |

Installation And Adjustment

- The best installation way of the main valve is horizontal installation, thoroughly remove the clutter of pipe before installation. Pay attention to the main valve body outer flow labeled arrows, should follow the direction installation. After installation shall ensure that no pipe stress on the valve body and valve internal parts.
- Before the main valve need to install a gate valve and a filter, after the main valve also need to install a gate valve, in order to maintenance.
- All the screws removed, including control of necessary copper pipeline and nut.
- Removed the bonnet and spring
- The micro filter need to regular cleaning.
- Must be flushed pipeline thoroughly before water supply.
- If found damage to the diaphragm or gasket, please loose the nut on the axis core, break down one by one the diaphragm or gasket, comes out to replace the new diaphragm, or seal.
- To examine in detail the main valve internal seat, shaft core whether have damage, if there are other debris inside the main valve need to clear it.
- In reverse order will replace the parts after combination, packed the main valve, no Jamming phenomenon of the valve.
- Please refer to the installation operation considerations, thank you for your cooperation!



400X Flow control valve Installation Diagram