



General Suppliers

Pressure Relief Valve

PN16

MV80 - 311

Installation & Maintenance Instructions

Pressure Relief Valve

INSTALLATION, OPERATION AND MAINTENANCE MANUAL



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Pressure Relief Valve

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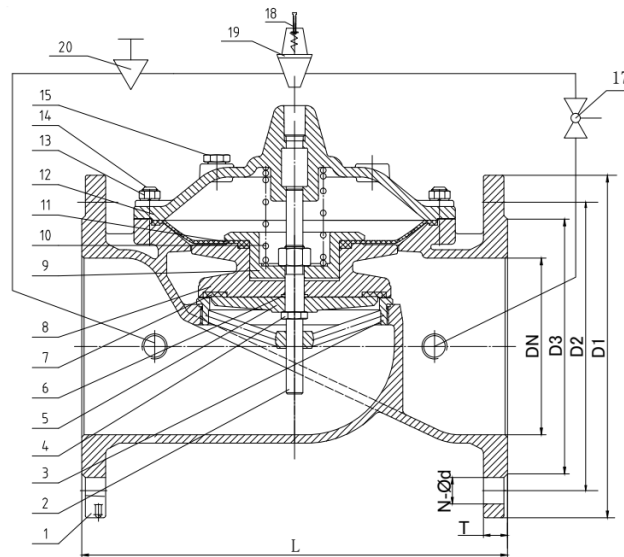
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DESCRIPTION

1. MV80-311 series pressure relief valve is a kind of hydraulic controlling valve, mainly used in the drain system, industrial water system, construction system, fire protection system and so on.
2. Product Standard : Design CJ/T219 JB/T10674
Flanged Standard : BS4504 PN16
Face to face : CJ/T219
Test Standard : ISO5208-1982
3. Technical factor
Size Range : DN40-DN500 PN10/16
Pressure duration Range : 0.2-0.8Mpa 0.2-1.3Mpa, 0.6Mpa-2.0Mpa
Shell Test : 1.5 PN
Seal Test : 1.1 PN
Main Body Material : Ductile iron SS304 and SS316
Sealing : EPDM or NBR
Applicable Temperature : $\leq 80^{\circ}\text{C}$
Application Medium : Water

TECHNICAL DIMENSIONS:



NO.	Parts Name	Material	NO.	Parts Name	Material	NO.	Parts Name	Material
1	Body	QT450/CF8	8	Disc	QT450/CF8	15	plug	304
2	Stem	304	9	Press plate	QT450/CF8	16	Ball valve	CF8
3	Seat	304	10	diaphragm	EPDM/NBR	17	Ball valve	CF8
4	Retaining ring	304	11	Spring	304	18	Lock screw	304
5	O-ring	NBR	12	Cover	QT450/CF8	19	Pilot valve	304
6	Sealing ring	NBR	13	nut	304	20	Needle valve	CF8
7	Sealing ring	NBR	14	bolt	304			



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WORKING PRINCIPAL

1. As a pressure relief valve: water flows through the needle valve, the main valve control room, pilot valve, and the ball valve, at this moment, the main valve is in the open position. When the inlet pressure exceeds the safety value set by the pilot valve, the pilot valve will automatically open, and some water will be discharged through the ball valve to relieve the pressure of the pipeline. When the pressure recovers to a safe value, the pressure relief valve will automatically close. When acting as pressure relief valve, all ball valves are always open.
2. As a pressure holding valve: the pilot valve will close as long as the inlet water pressure of the main valve is lower than the set value of the pilot valve. The pressure of the main control room will rise up and the main valve is closed. When the upstream water pressure exceeds the set pressure of the pilot valve, the pilot valve will be automatically opened. The water in the control room is discharged to the outlet through the ball valve. The pressure of the main control room fall down, then the main valve is open and the water flow is started, through this way, the upstream water pressure is maintained.

INSTALLATION

The pressure relief valve shall be installed vertically or horizontally. During installation, pay attention to the flow direction of the pressure relief valve and do not get it wrong. Before installing the pressure relief valve, the pipeline system must be flushed and cleaned to prevent welding slag, oxide scale and other dirt from flowing into the valve and affecting the normal operation of the valve.

The butterfly valve or gate valve and filter shall be installed in front of the pressure relief valve. The gate valve or butterfly valve is generally installed in front of the filter to cut off the water flow during maintenance.

The rotation space of the handle of ball valve and hand wheel of needle valve shall be enough.

Before the system is open, check other valves in the system and ball valves on the pressure relief valve are all open.

If the main valve is installed in the shadow well, there should be enough maintenance space. The main valve must be installed horizontally to facilitate lifting during maintenance.



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METHOD OF ADJUSTING

1. Open the gate valve or butterfly valve both at the inlet and outlet.
2. Close the needle valve first, and then open it at range of half position to one turn; then open the ball valve on the outlet.
3. Turn the adjusting screw of the pilot valve to the top, and be careful not to unscrew it out.
4. Start the water pump to let the water go through the pressure relief valve.
5. Slowly tighten the adjusting screw of the pilot valve, gradually increase the outlet pressure until it reaches the required pressure value, and then lock the adjusting nut.
6. If the pressure is adjusted exceeding the set pressure, it must be adjusted again from the first step.

ATTENTION

1. During in operation, close the outlet ball valve will affect closing of the pressure relief valve.
2. The minimum pressure adjusting of the pressure relief valve is 0.2MPa.

MAINTANANCE

Possible problems and resolution:

Occurred problem	Analysis reasons	Resolution
No pressure relief/ pressure relief unstable	the pressure of pilot valve do not be set	Adjusting the screw on the pilot valve
Do not holding pressure	●Pressure set is not correct ●Diaphragm is damaged	●Re-adjusting the screw on the pilot valve ●change a new diaphragm
Creating Strange voice	● The main valve control room has air ● Needle valve open too big	●release the air by plug on the cover ●Adjusting the needle valve



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STORAGE, PACKING&TRANSPORTAION

1. During transportation and storage, the pressure-relief valve shall not collide, dump or be affected by rain and snow.
2. The pressure relief valve should be stored in a clean, dry, fireproof and well-ventilated place, and there should be no corrosive gas around; it shall be placed stably to prevent the valve from overturning.
3. When carrying the pressure relief valve, it should use a pallet, handle it carefully.
4. The seals of the pressure relief valve are made of rubber. It is strictly prohibited to use alcohol, gasoline and other chemical solvents for flushing.