

### SPECIFICATION

Type: Pilot control valve, Working pressure: 16/25 bar.

Meet standards BS EN 1074-5, ISO 5208, BS EN 12266.1, BS EN 558-1.

Flanged to JIS 10/16K, BS4504 PN16/25, ANSI#150/300

- Throttles to reduce high upstream pressure to constant lower downstream pressure.
- Reducing set-point is adjustable.
- Horizontal installation.

### Function:

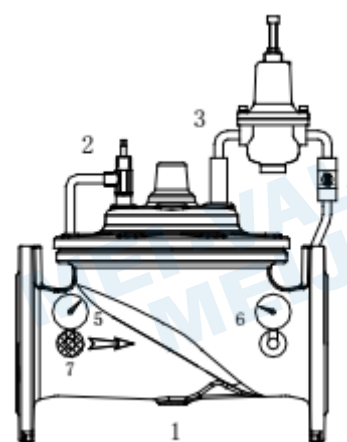
1. Will reduce the higher upstream pressure and keep the downstream pressure as the pilot setting (Adjustable).
2. Regardless of variation of upstream pressure or downstream flow.

Adjustment range: Standard: 25 ~175 psig, Option: 100~300 psig

#### PRESSURE/TEMPERATURE RATINGS

Working pressure	16/25 bar
Testing Pressure	Shell: 24/37.5 bar
Working temperature	-10°C to 80°C
Suitable Media	

- The Pressure Reducing Control Valve shall be a pilot operated diaphragm valve designed to automatically reduce a fluctuating higher upstream pressure to a constant lower downstream pressure regardless of varying flow rates.
- The main valve shall be a hydraulically operated, single diaphragm actuated, globe pattern valve. Y-pattern valves shall not be permitted. The valve shall contain a disc and diaphragm assembly that forms a sealed chamber below the valve cover, separating operating pressure from line pressure. The diaphragm shall be constructed of nylon reinforced (EPDM + Nylon Fabric), and shall not seal directly against the valve seat and shall be fully supported by the valve body and cover. Rolling diaphragm construction will not be allowed and there shall be no pistons operating the main valve or any pilot controls.
- The main valve body and cover shall be Ductile iron ASTM A536 or GJS 500-7 and all internal cast components shall be Ductile Iron or (SUS304) Stainless Steel. All Ductile Iron components, including the body and cover, shall be lined coated with an NSF 61 Certified Epoxy Coating applied by the electrostatic heat fusion process. All main valve throttling components (valve seat and disc guide) shall be Ductile iron ASTM A536 or GJS 500-7 or SUS304 Stainless Steel. The valve body and cover must be machined with a 360-degree locating lip to assure proper alignment.
- The disc and diaphragm assembly shall contain a EPDM + Nylon Fraric that is securely retained on sides by a disc retainer and disc guide. Diaphragm assemblies utilizing bolts or cap screws for component retention will not be permitted.



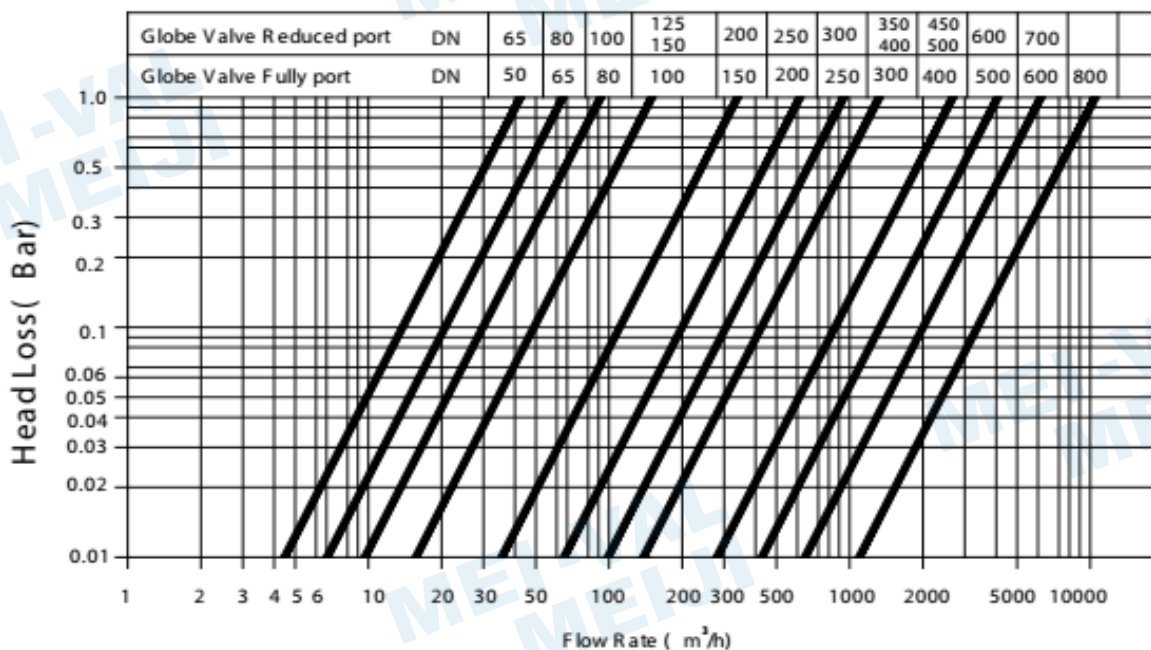
#### STANDARDS COMPONENTS

1. Main valve
2. Need valve
3. Pressure Reducing Pilot Control
4. Ball valve
5. Inlet pressure gauge
6. Outlet pressure gauge
7. Y strainer

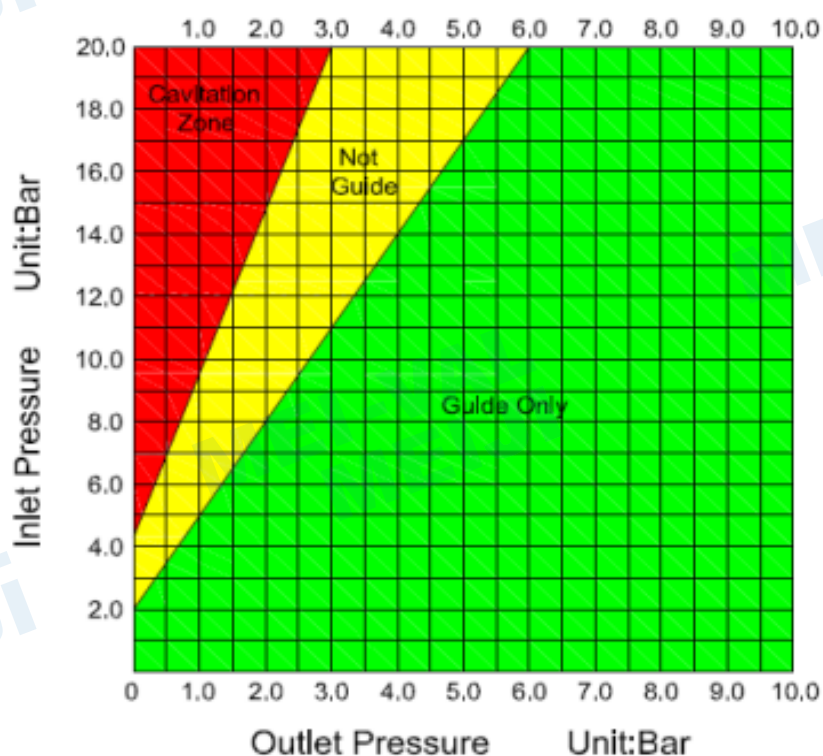
**FIG. 1002N, PRESSURE REDUCING VALVE, PN16/25**

- The exposed portion of the EPDM + Nylon Fabric shall contact the valve seat and seal drip-tight. The disc and diaphragm assembly must be guided by two separate bearings, one installed in the valve cover and one concentrically located within the valve seat, to avoid deflection and assure positive disc-to-seat contact. Center guided valves will not be permit. All necessary repairs shall be made from the top of the valve while the body remains in line.
- Pilot control system for valve shall contain an external Y strainer, Closing Speed, Pressure reducing pilot and ball valves on all body connection. All pilot control systems shall utilize SUS304 fittings regardless of valve size. The adjustment ranges of the pressure reducing pilot shall be 25~175 psi (100~300 psi option).

## Head Loss Curve

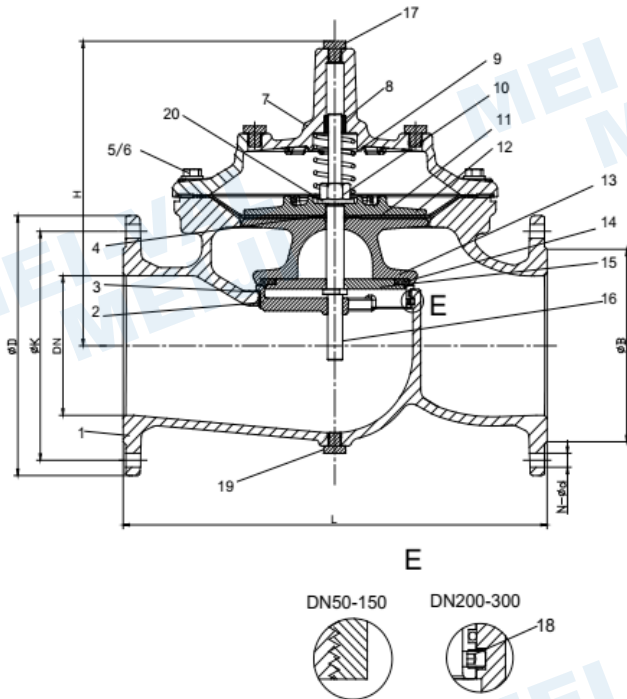


## Cavitation



The main valve include: Main valve + Reducing pilot control

Material & dimension of Main valve DN 50-350mm



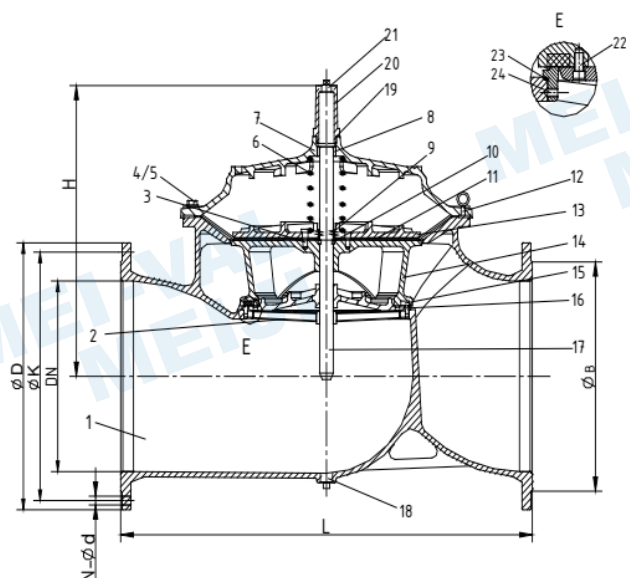
## Parts List

No.	Description	Material	Standard
1	Body	Ductile Iron	GJS 500-7
2	Seat	Stainless Steel	AISI 304/316
3	O-ring	Rubber	NBR
4	O-ring	Rubber	NBR
5	Bolt	Stainless Steel	A2/A4
6	Washer	Stainless Steel	A2/A4
7	Bonnet	Ductile Iron	GJS 500-7
8	Bush	Bronze	C61900
9	Spring	Stainless Steel	AISI 304/316
10	Caulking Nut	Stainless Steel	A4
11	Diaphragm	Nylon Reinforced Rubber	EPDM +Nylon Fabric
12	Fixing holder	Ductile Iron	GJS 500-7
13	Disc Holder	Ductile Iron	GJS 500-7
14	Seal	Rubber	EPDM
15	Seat Retainer	Stainless Steel	AISI 304/316
16	Stem	Stainless Steel	AISI 304/316
17	Plug	Stainless Steel	AISI 304/316
18	Screw	Stainless Steel	A2/A4
19	Plug	Stainless Steel	A2/A4
20	Washer	Stainless Steel	A2/A4

## Dimension

Unit :mm

DN	L	H	øD		øK		N-øD		N-øB	
			PN16	PN25	PN16	PN25	PN16	PN25	PN16	PN25
50	230	177	165	165	125	125	4-ø19	4-ø19	ø99	ø99
65	290	202	185	185	145	145	4-ø19	8-ø19	ø118	ø118
80	310	219	200	200	160	160	8-ø19	8-ø19	ø132	ø132
100	350	243	220	235	180	190	8-ø19	8-ø23	ø156	ø156
125	400	243	250	270	210	220	8-ø19	8-ø28	ø156	ø156
150	480	333	285	300	240	250	8-ø23	8-ø28	ø211	ø211
200	600	428	340	360	295	310	12-ø23	12-ø28	ø266	ø274
250	730	478	405	425	355	370	12-ø28	12-ø31	ø319	ø330
300	850	538	460	485	410	430	12-ø28	12-ø31	ø370	ø389
350	980	550	520	555	470	490	16-ø28	16-ø34	ø429	ø448

**Material & dimension of Main valve DN 400-800mm**

**Parts List**

No.	Description	Material	Standard
1	Body	Ductile Iron	GJS 500-7
2	Seat	Stainless Steel	AISI 304/316
3	Screw	Stainless Steel	A2/A4
4	Screw	Stainless Steel	A2/A4
5	Screw	Stainless Steel	A2/A4
6	Spring	Stainless Steel	AISI 304/316
7	Bonnet	Ductile Iron	GJS 500-7
8	Bush	Bronze	C61900
9	O-ring	Rubber	NBR
10	Fix Washer	Bronze	C61900
11	Diaphragm	Nylon Reinforced Rubber	EPDM +Nylon Fabric
12	Eye Bolts	Carbon Steel	1040
13	Fixing Holder	Ductile Iron	GJS 500-7
14	Disc Holder	Ductile Iron	GJS 500-7
15	Seal	Rubber	EPDM
16	Seal Retainer	Ductile Iron	GJS 500-7
17	Stem	Stainless Steel	AISI 304/316
18	Plug	Stainless Steel	AISI 304/316
19	O-ring	Rubber	NBR
20	Cap	Ductile Iron	GJS 500-7
21	Plug	Stainless Steel	AISI 304/316
22	Screw	Stainless Steel	A2/A4
23	O-ring	Rubber	NBR
24	Screw	Stainless Steel	A2/A4

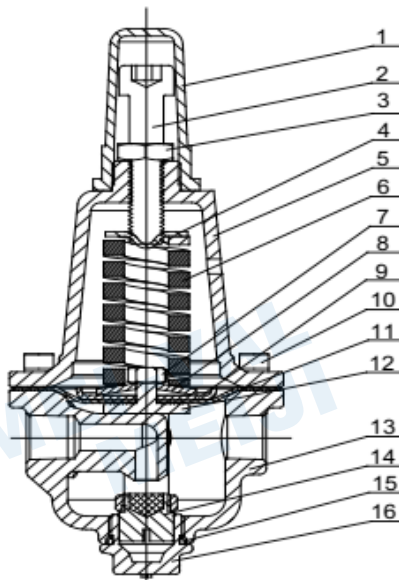
**Dimension**

Unit :mm

DN	L	H	øD		øK		N-øD		N-øB	
			PN16	PN25	PN16	PN25	PN16	PN25	PN16	PN25
400	1100	670	580	620	525	550	16-ø31	16-ø37	480	503
450	1200	700	640	670	585	600	20-ø31	20-ø37	548	548
500	1250	790	715	730	650	660	20-ø34	20-ø37	610	609
600	1450	930	840	845	770	770	20-ø37	20-ø40	720	720
700	1650	950	910	960	840	875	24-ø37	24-ø43	720	720
800	1850	1260	1025	1085	950	990	24-ø40	24-ø49	900	928



## Pressure Reducing Pilot Control

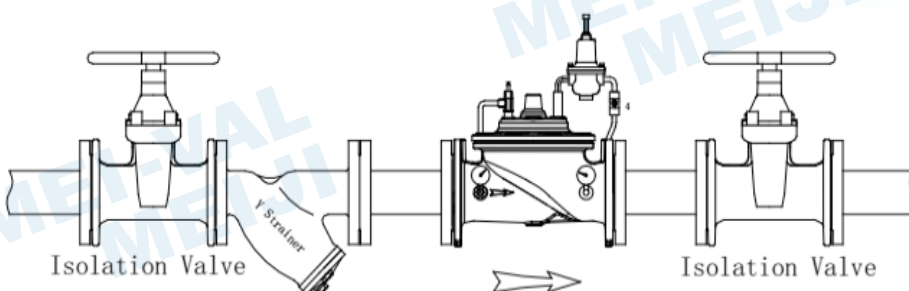


### Part list & Material

No.	Description	Material	Standard
1	Cap	Plastic	ABS
2	Adjusting Screw	Stainless Steel	AISI 304
3	Jam Nut	Stainless Steel	A2
4	Spring table	Stainless Steel	AISI 304
5	Bonnet	Stainless Steel	AISI 304
6	Spring	Spring Steel	SiCrV
7	Nut	Stainless Steel	A2
8	Spring table	Spring Steel	Mn-steel+Ni Plated
9	Fixing Holder	Stainless Steel	AISI 304
10	Screw	Stainless Steel	A2
11	Diaphragm	Nylon Reinforced Rubber	EPDM+Nylon
12	Yoke	Stainless Steel	AISI 304
13	Body	Stainless Steel	AISI 304
14	Disc	Stainless Steel+Rubber	AISI 304+EPDM
15	O-Ring	Rubber	NBR
16	Plug	Stainless Steel	AISI 304

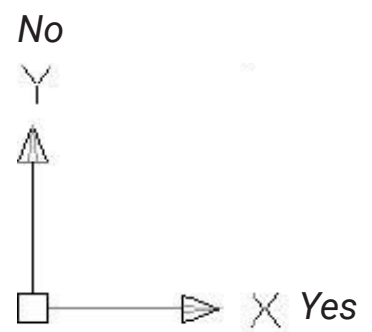
## Installation + Assembly Directions

Installation.



Assembly Directions

No



### OPERATION:

Meiji Pressure Reducing Valve is designed to automatically reduce a fluctuating higher upstream pressure to a constant lower downstream pressure regardless of varying flow rates. It is controlled by a normally open, pressure reducing pilot designed to:

1. **Open:** Allowing fluid out of the main valve cover chamber when downstream pressure is below the adjustable set-point.
2. **Close:** Allowing fluid to fill the main valve cover chamber when downstream pressure is above the adjustable set-point.

A decrease in downstream pressure causes the valve to modulate toward an open position, raising downstream pressure. An increase in downstream pressure cause the valve to modulate toward a close position, lowering downstream pressure.

### The Adjusting way for pressure reducing valve when in pressure:

1. Close the ball (Angle) valve below the pilot valve
2. Veer out regulating pressure screw.
3. Adjust the pressure of outlet again.
4. Adjusting screw in clockwise direction to the pressure in need.
5. Open the ball (Angle) valve below the pilot valve; the red hand-wheel is used for adjusting the yield of water in outlet.

### Note: INSTALLATION

- Prior to installation, flush line to remove debris.
- The valve only Install "horizontally" in line (cover facing up), so flow arrow matches flow through the line. Consult factory prior to ordering if installation is other than described.
- Install inlet and outlet isolation valve. **Note:** when using butterfly valve, insure disc dose not contact control valve. Damage or improper valve seating may occur.
- Provide adequate clearance for valve servicing and maintenance.
- Install pressure gauges to monitor valve inlet and outlet pressure.
- If installation is subjected to very low flow or potentially static conditions, it is recommended a pressure relief valve (1/2" minimum) be installed downstream of the Pressure Reducing Valve for additional system protection.