

# **BEIJING JOINT FLOW SYSTEM CO.**



**SERIES 6** 

## **MULTI-PORT PLUG VALVE**

The Multi-Port Plug Valve is a 3-way, non-lubricated diverter valve, which features an internally epoxy coated body and an elastomer coated plug face and designed for use in water and wastewater applications , and HVAC systems.

Use of Multi-port Plug Valves is advantageous in many installations, providing simplification of piping and convenience in operation. One 3-way multiport valve may be used in place of two or three straightway valves, and in most cases will also eliminate other fittings such as tees and elbows.



#### **FEATURE**

- Internally epoxy coated
- Elastomer faced plug
- Wrench, Gear or actuator operation is available
- Variety of flange drillings available
- Valves are furnished with replaceable sleeve type bearings which are of sintered, oil impregnated austenitic stainless steel
- Valve shaft seals are 'U' cup, self adjusting and replaceable without removing the bonnet from the valve.
- The valve bonnet seal is an 'O' ring allowing metal to metal body/ bonnet contact.

#### **CONSTRUCTION**

**(Body)** The eccentric plug valve body casting is in cast iron using high pressure molding techniques for consistent quality and precision. Flange diameter and thickness conform to ANSI B 16.1 Class 125. Flange drillings of PN10, PN16, ANSI **(Plug)** Supported on integral trunnions, the solid ductile iron tapered plug is faced with any of a variety of elastomers that are vulcanized in place and ground to size. Plug position and shut off is controlled by use of adjustment gland attached to the plug shaft

{Seat} The multiport valve employs a corrosion and abrasion resistant epoxy seat on all sizes

**(Stem Seal)** Multiple self-adjusting "U" cup seals are used to prevent stem leakage and provide years of trouble free service

**{Bearings}** The plug rotates in oil impregnated sintered 316 grade stainless steel bearings located in both the body and bonnet

**(Bonnet Seal)** Superior "O" ring seal with metal-metal contact means lower stresses compared to traditional compression gaskets

**(Flow)** The wide port design with streamlined internal contours allows for a high capacity flow in the full open position reducing turbulence and pressure drop through the valve

{Position Indication} Active port indication is standard on all wrench operated and gear operated multiport valves

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# MULTI-PORT PLUG VALVE

### **PORT ARRANGEMENT**

When ordering the multi-port plug valves, specify the nominal size, nominal pressure and number of port arrangements.

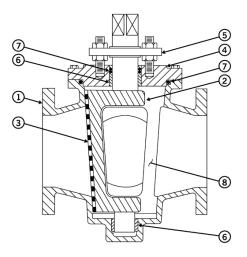
3-way.3-port 90' turn Tove Position 1       Position 1       Position 2       Position 2         3-way.3-port 180' turn Tove Position 2       Position 1       Position 2       Position 2         3-way.3-port 180' turn Tove Position 2       Position 1       Position 2       Position 2         3-way.3-port 180' turn Tove Position 3       Position 1       Position 1       Position 2         3-way.3-port 180' turn Tove Position 4       Position 1       Position 1       Position 2         Position 1       Position 2       Position 1       Position 2       Position 3         Position 1       Position 2       Position 3       Position 3       Position 3         Position 1       Position 2       Position 3       Position 3       Position 3         Position 1       Position 2       Position 3       Position 3       Position 3         Position 1       Position 2       Position 3       Position 3       Position 3         Position 1       Position 2       Position 3       Position 3       Position 3         Position 1       Position 2       Position 3       Position 3       Position 3         Position 1       Position 2       Position 3       Position 4       Position 3         Position 1       Position 2       Position 3							
Ansatz (A)       Analysis (A)       A	90° turn						
Arrangement 3       Arrangement 4         3-way, 3-port 180° turn       Position 1       Position 2         3-way, 3-port 180° turn       Position 1       Position 2       Position 2         3-way, 3-port 180° turn       Position 1       Position 2       Position 2       Position 2         180° turn       Position 1       Position 2       Position 3       Position 1       Position 2         180° turn       Position 1       Position 2       Position 2       Position 3       Position 1       Position 3         180° turn       Position 1       Position 2       Position 2       Position 3       Position 1       Position 3       Position 3         180° turn       Position 1       Position 2       Position 3       Position 3       Position 1       Position 3         Position 1       Position 1       Position 2       Position 3       Position 3       Position 3       Position 3         Arrangement 8       Position 1       Position 2       Position 4       Position 4       Position 4         Arrangement 10       Position 1       Position 7       Position 4       Position 4       Position 4         Arrangement 10       Position 1       Position 7       Position 4       Positio 4       Positio 7       Positio 7							
3-way, 3-port 180° turn       Position 1       Position 1       Position 2         3-way, 3-port 180° turn       Image: Constrained for the second		Position 1 Position 2	Position 1 Position 2				
180° turn Two PositionsPosition 1Position 23-way, 3-port 180° turn Three Position 1Position 1Position 2Position 33-way, 3-port 270° turn Four Position 1Position 2Position 3Position 13-way, 3-port 270° turn Four Position 1Position 2Position 3Position 13-way, 3-port 270° turn Four Position 2Position 1Position 2Position 33-way, 3-port 270° turn Four Position 2Position 2Position 3Position 13-way, 3-port 270° turn Four Position 2Position 1Position 2Position 33-way, 3-port 270° turn Four Position 3Position 3Position 4Position 2Position 33-way, 3-port 270° turn Four Position 3Position 3Position 4Position 2Position 3Position 43-way, 3-port 270° turn Four Position 3Position 3Position 4Position 2Position 4Position 43-way, 3-port 270° turn Four Position 4Position 3Position 4Position 4Position 4Position 43-way, 3-port 270° turn Position 1Position 2Position 3Position 4 </th <th></th> <td>Arrangement 3</td> <td>Arrangement 4</td>		Arrangement 3	Arrangement 4				
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3-way, 3-port 180* turn       Position 1       Position 2       Position 3       Position 1       Position 2       Position 3         Arrangement 6       Arrangement 7       Position 1       Position 2       Position 3       Position 1       Position 3         Position 1       Position 2       Position 2       Position 3       Position 1       Position 2       Position 3         Position 1       Position 2       Position 2       Position 3       Position 3       Position 1       Position 2       Position 3         Position 1       Position 2       Position 2       Position 3       Position 3       Position 1       Position 2       Position 3         3-way, 3-port       Position 1       Position 2       Position 3       Position 4       Position 1       Position 4         Four Position 1       Position 2       Position 3       Position 4       Position 1       Position 4         Four Position 1       Position 2       Position 3       Position 4       Position 1       Position 4         Four Position 1       Position 2       Position 3       Position 4       Position 4       Position 4         Four Position 1       Position 2       Position 3       Position 4       Position 4       Position 4         Four Position 1	Two Positions						
3-way, 3-port       Arrangement 6       Arrangement 7         180° turn       Image: Arrangement 6       Image: Arrangement 7         Three Positions       Image: Arrangement 6       Image: Arrangement 7         Position 1       Position 2       Position 3       Position 1         Position 1       Position 2       Position 3       Position 1       Position 2       Position 3         Arrangement 8       Arrangement 8       Arrangement 9       Image: Arrangement 9       Image: Arrangement 9         3-way, 3-port       Position 1       Position 2       Position 3       Position 4       Position 1       Position 4         Arrangement 10       Image: Arrangement 10       Image: Arrangement 11       Image: Arrangement 11       Image: Arrangement 11         Arrangement 10       Image: Arrangement 11       Image: Arrangement 11       Image: Arrangement 11       Image: Arrangement 12         Position 1       Position 2       Position 2       Position 3       Position 4       Position 4         Position 1       Position 2       Position 3       Position 4       Position 4       Position 4         Position 1       Position 2       Position 3       Position 4       Position 4       Position 4         Position 1       Position 2       Position 3		Arrangement 5					
3-way, 3-port       Arrangement 6       Arrangement 7         180° turn       Image: Arrangement 6       Image: Arrangement 7         Three Positions       Image: Arrangement 6       Image: Arrangement 7         Position 1       Position 2       Position 3       Position 1         Position 1       Position 2       Position 3       Position 1       Position 2       Position 3         Arrangement 8       Arrangement 8       Arrangement 9       Image: Arrangement 9       Image: Arrangement 9         3-way, 3-port       Position 1       Position 2       Position 3       Position 4       Position 1       Position 4         Arrangement 10       Image: Arrangement 10       Image: Arrangement 11       Image: Arrangement 11       Image: Arrangement 11         Arrangement 10       Image: Arrangement 11       Image: Arrangement 11       Image: Arrangement 11       Image: Arrangement 12         Position 1       Position 2       Position 2       Position 3       Position 4       Position 4         Position 1       Position 2       Position 3       Position 4       Position 4       Position 4         Position 1       Position 2       Position 3       Position 4       Position 4       Position 4         Position 1       Position 2       Position 3							
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Arrangement 8 Arrangement 9   3-way, 3-port Position 1 Position 2 Position 3 Position 4   Position 1 Position 2 Position 3 Position 4 Position 1 Position 2 Position 3 Position 4   Arrangement 10 Position 1 Position 2 Position 2 Position 3 Position 4   Position 1 Position 1 Position 2 Position 2 Position 3 Position 4 Position 1 Position 2 Position 3 Position 4							
3-way, 3-port       270° turn         Four Positions       Position 1       Position 2       Position 3       Position 4         Position 1       Position 2       Position 4       Position 4		Position 1 Position 2 Position 3	Position 1 Position 2 Position 3				
3-way, 3-port         270° turn       Arrangement 10         Four Positions       Image: Colspan="4">Arrangement 11         Position 1       Position 2       Position 3       Position 4       Position 1       Position 2       Position 3       Position 4		Arrangement 8	Arrangement 9				
3-way, 3-port         270° turn       Arrangement 10         Four Positions       Image: Colspan="4">Arrangement 11         Position 1       Position 2       Position 3       Position 4       Position 1       Position 2       Position 3       Position 4	270° turn						
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Four Positions       Position 1       Position 2       Position 3       Position 4       Position 1       Position 2       Position 3       Position 4		Arrangement 10	Arrangement 11				
Arrangement 12 Arrangement 15		Position 1 Position 2 Position 3 Position 4	Position 1 Position 2 Position 3 Position 4				
		Arrangement 12	Arrangement 15				

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# **MULTI-PORT PLUG VALVE**

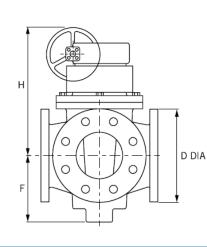
### **PARTS LIST & MATERIAL**

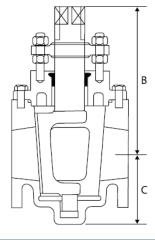
No.	Parts Name	Material			
1	Body	Cast Iron (ASTM A126 GR.B)			
2	Plug Ductile Iron (ASTM A536)				
3	Plug Coating	Elastomeric (NBR, NEOPRENE, EPDM)			
4	Bonnet	Cast Iron (ASTM A126 GR.B)			
5	Gland	Ductile Iron (ASTM A536)			
6	Bearing	ng Stainless Steel (ANSI 316)			
7	Seal	Elastomeric (NBR, NEOPRENE, EPDM)			
8	Seat	Ероху			

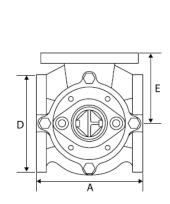


**JFS** 

### DIMENSION (175PSI)







DN (mm)	NPS (inch)	Α	B	c	D	E	н	Weight	
								W.O.	G.O.
80	3	203.2	231.9	120.7	190.5	139.7	348.3	29.5	49.9
100	4	251.0	346.2	152.4	228.6	165.1	485.9	54.5	90.8
150	6	295.4	384.3	179.3	279.4	203.2	517.7	77.2	113.5
200	8	352.6	485.9	279.4	342.9	228.6	622.3	147.6	183.9
250	10	425.5	485.9	279.4	406.4	279.4	622.3	172.6	208.8
300	12	482.6	539.8	327.2	482.6	293.6	673.1	215.7	252.0

\*Flange dimensions refer to Catalogue of Accessory: Series 8 - Flange.

\*More dimension specifications are available on request.