

Extremely Reliable Piston Valve

Long Service Life
Ease of Maintenance



Features	Details	Benefits
Class VI Leakage	<ul style="list-style-type: none"> • Unique sealing rings i.e. Graphite rings embedded in between stainless steel rings • Super finished sealing surface for piston & body 	<ul style="list-style-type: none"> • Zero leak valves
Glandless & Seatless Piston Valves	<ul style="list-style-type: none"> • Designed to ensure no gland & seat in the valve 	<ul style="list-style-type: none"> • Gland leakages as well as leakage observed over a period of time (due to wear & tear) of the seat are completely eliminated
Abrasion Proof Sealing Surface	<ul style="list-style-type: none"> • Outer surface area of piston and fluid are never in contact - in fully open & closed conditions of valve 	<ul style="list-style-type: none"> • No possibility of abrasion • Longer service life
Inline Maintenance	<ul style="list-style-type: none"> • Any small leakages can be stopped by tightening the bonnet • Sealing rings can be easily replaced online 	<ul style="list-style-type: none"> • Long service life • Lower maintenance time & cost
Protection from Thermal Expansion	<ul style="list-style-type: none"> • The use of Belleville washers results in compensation for any thermal expansion 	<ul style="list-style-type: none"> • Protects the valve from any damage due to thermal expansion
Ease of Operation	<ul style="list-style-type: none"> • Balanced piston used for ease of operation 	<ul style="list-style-type: none"> • The pressure is balanced on the top and bottom of the piston, hence no extra force is required to open or close the valve

MPV28 / MPV78 Series

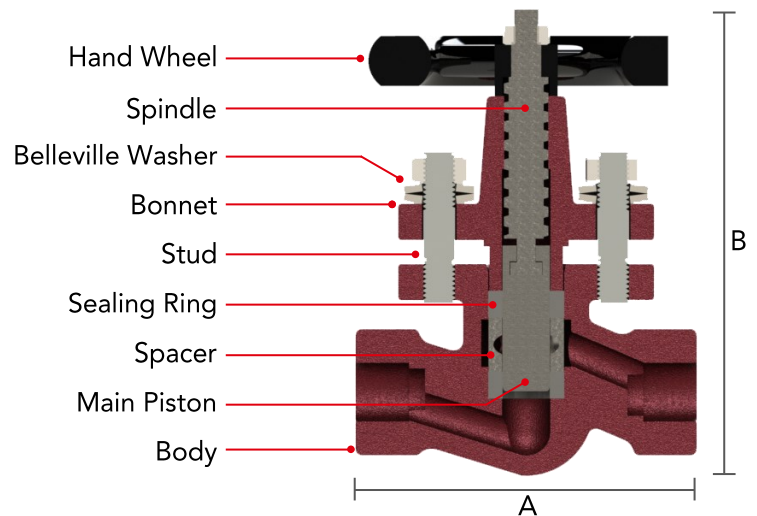
The **MPV28 & MPV78 Piston Valve** Series has been designed for different media & superior performance over normal gate/globe valves. The valves are glandless & seatless valves, consisting of unique sealing rings, which provide class VI leakage from outside as well as inside the sealing ring. Outside sealing is done by the body & the outer surface of the sealing ring while the inside sealing is done by the piston & inside surface of the sealing ring.

The bonnet of the piston valve provides the required thrust on the sealing ring by tightening the bonnet nut. This thrust expands the sealing ring outward & inward, sealing the body from outside & piston from inside. The entire process ensures class VI leakage, resulting in no inline leakage or atmospheric leakage. With zero energy loss & zero contamination of any fluid being used, the valves are highly energy efficient. The inside of the body, where the sealing ring sits, & the outside of the piston have a mirror finish with a surface roughness of less than 0.4 RA. This results in a long surface life and helps in super tight sealing of the valve.

There is no contact of the fluid with the sealing surface of the piston, thus the MPV series gives a corrosion-free, long service life. MPV78 does not require stuffing box, whereas valves from 65 NB to 200 NB generally require stuffing box.

The MPV28 & MPV78 Piston Valves are designed for any kind of fluid media and hence, can be easily used for steam, air, thermic fluid and various other applications over a longer period of time.

MPV78 Series



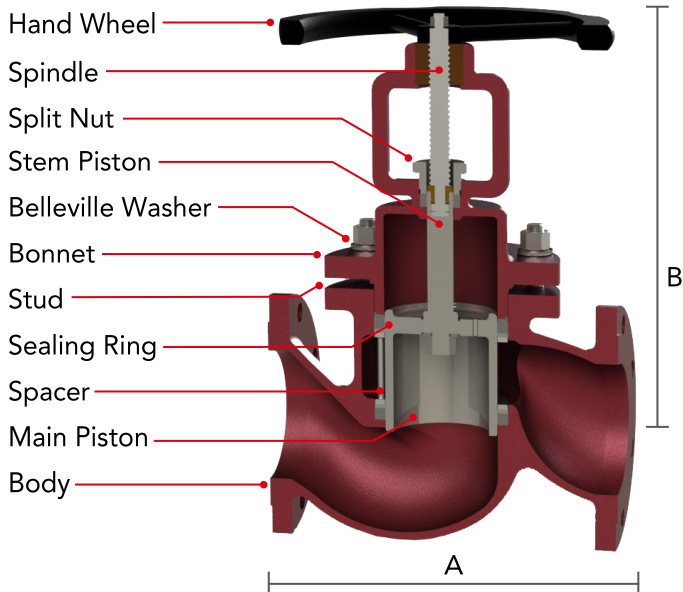
Class #800	A	B	Wt
Size	mm	mm	Kg (approx.)
DN15	108	109	1.8
DN20	108	109	1.8
DN25	130	127	3.5
DN32	170	171	7.3
DN40	170	171	7.3

Specifications	Material	Qty
Body	ASTM A105	1
Bonnet	ASTM A105	1
Piston	AISI304	1
Spindle	AISI420	1
Lantern Ring	AISI420	1
Seal Ring	Graphite with AISI304	2
Belleville Washer	51CrV4	8
Stud	ASTM A193 GR.B7	4
Nut	ASTM A194 GR.2H	4
Handwheel	Cast	1
Nameplate	AISI304	1
Nyloc Nut	AISI304	1

MPV28 / MPV78 Series



MPV28 Series



Specifications	Material	Qty
Body	ASTM A216 GR. WCB	1
Bonnet	ASTM A216 GR. WCB	1
Piston	ASTM A351 GR. CF8	1
Spindle	AISI 420	1
Lantern Ring	ASTM A743 GR CA40	1
Seal Ring	Graphite with AISI304	2
Bush	Aluminium Bronze	1
Split Nut	Brass	1
Thrust Disc	AISI 420 (H.T)	1
Stem	AISI304	1
Back Seat Bush	AISI304	1
Tapered Seal Ring	Graphite with AISI304	1
Gland Packing	Graphite with AISI304	1
Gland Nut	AISI304	1
Stem Nut	ASTM A194 GR.2H	1
Stem Washer	AISI304	1
Bush Retainer	Spring Steel	2
Belleville Washer	51CrV4	12
Stud	ASTM A193 GR.B7	6
Nut	ASTM A194 GR.2H	6
Handwheel	Cast	1
Nameplate	AISI304	1
Nyloc Nut	AISI304	1

Class #150	A	B	Wt
Size	mm	mm	Kg (approx.)
50	204	211	14.7
65	216	306	24
80	240	342	33
100	292	405	43.5
125	356	447	75
150	406	466	87.5
200	495	567	135

Class #300	A	B	Wt
Size	mm	mm	Kg (approx.)
DN50	265	211	18
DN65	293	306	28.5
DN80	318	342	40
DN100	356	405	60
DN125	400	447	92
DN150	444	466	121
DN200	558	567	215

Available Sizes: 15, 20, 25, 32, 40, 50, 65, 80, 100, 125, 150, 200 NB

Material Of Construction: WCB, Stainless Steel

End Connections: 15, 20, 25, 32, 40 NB : BSPT, BSP, NPT, SW, Flanged

50, 65, 80, 100, 125, 150, 200 NB : Flanged to #150, #300

Application Media: Steam, Thermic Fluid, Hot Water, Gases, Other Chemicals

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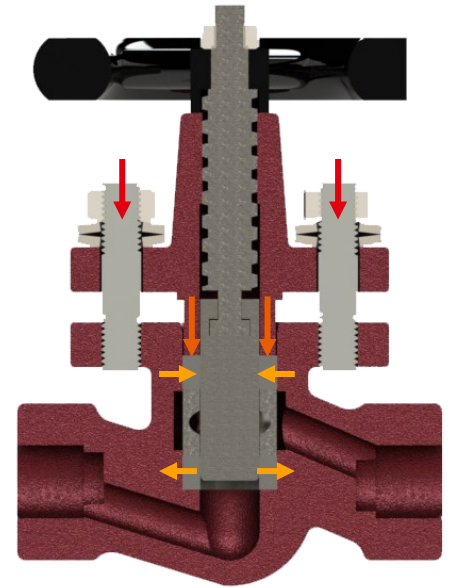


Unique Sealing System of Piston Valve

The MPV Piston Valve's unique sealing system comprises of sealing stacks, consisting of multiple graphite & stainless steel stacks, placed one over the other bonded uniquely.

Class VI leakage is achieved by tightening the bonnet & nuts which provides the necessary force acting on the sealing ring. This force gets transmitted both in the outward and inward direction of the sealing ring. The outward force provides a leakproof joint thereby providing leak tight sealing to the atmosphere. The inward force provides leak tight sealing across the valve.

These unique sealing rings of piston valves have self lubricating properties throughout their service life and can be easily replaced.



Installation & Maintenance

- MPV Piston Valves should be installed by following the flow direction arrow on the valve.
- The piston valves should be lubricated periodically.
- Hot tightening of bonnet nuts needs to be done after a couple of hours of steaming.
- For socket weldable valves, the welding has to be done by keeping the valve in closed position.
- Before commissioning, thoroughly flush the piping before putting the valve in operation.
- No excessive force must be applied for closing the valve, as the sealing is achieved before the final close position is reached.
- Maxima piston valves have to be kept in closed position when not in use for ensuring longer life.
- In case any leakage is observed in the valve, the following steps must be followed:
 - Put the valve in fully closed position. Tighten the bonnet nuts and observe for leakage. Small leakages are addressed by the tightening of bonnet nuts. However, if the leakage persists, please replace the sealing rings with new sets.

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