



PMP PRECISION VALVE CO. LTD.
www.pmpvalve.com



PZ Series **Bi-Directional** **KNIFE GATE** **Valve**

- **Power**
- **Cement**
- **Paper & Pulp**
- **Petrochemical**
- **Chemical**
- **Mining**
- **Pharmaceutical**
- **Food Processing**
- **Water, Waste Water & Sea Water**

“PZ” Series Heavy Duty Knife Gate Valve

PZ series valves are bi-directional, full lug design and manufactured as per MSS SP-81 standard and TAPPI TIS 405-8 standard for Industrial service applications. The PZ series design assures non-clogging shut-off of suspended solids.

The PZ series Knife Gate Valve can be used for liquid, solid-liquid mixes / slurries, dry bulk solid applications. These valves are provided with full bore (100%) opening which does not restrict the flow of the media in pipeline.

Resilient seated valves offer a leak tight shutoff. Metal seated valves offer leakage within permissible limits as per MSS SP-81 standard to size 36” and to manufacturer’s standard with acceptance by customer for sizes above 36”.

PZ Series Knife Gate Valve Features:

- A full lug type, MSS SP81 full bi-directional design available in ANSI B16.5 class 150 BCD.
- Cast body to 60” diameter; larger sizes, available on request.
- Sealing configurations: integral metal seat or resilient seat locked in place by a stainless steel retainer ring with stainless steel retainer fasteners.
- Zero leakage sealing achieved with dual resilient seats.
- Gate: Polished 316 Stainless Steel
- Self lubricated packing gland.
- Packing: Synthetic PTFE
- Rising stem as standard / Non rising stem is available on request.
- Operating options: Hand wheel / Hand Lever / Bevel Gear / Pneumatic Cylinder / Electric Actuator & Hydraulic Cylinder.

The PZ Series Valves are available in the following Sealing Configurations:

- PZ-M: Integral metal seat.
- PZ-S: Resilient seat retained by stainless steel ring.

Standard Technical Specifications Materials of Construction

Standard Technical Specifications:

Manufacturing Standard	- MSS-SP 81 / TAPPI TIS 450-8 to 36" Manufacturer's standard for valves sizes above 36"
Lug / Flange	- Full Lug up to 36", Flanged for larger sizes
Bore Opening	- Full bore (100%)
Flange Drilling	- ANSI B16.5 Class 150lb to 36" & MSS SP 44 for larger sizes
Face To Face	- MSS SP-81 to 36", Manufacturer's standard for larger sizes
Sealing Configuration	- Integral metal seat in "PZ-M" - Resilient seat retained by stainless steel retainer ring in "PZ-S"
Pressure Rating	- 150 PSI rated from 2" to 24", 100 PSI rated from 26" to 60" Full rated ANSI pressures for all sizes available on request
Nominal Size	- 3" to 60" (larger diameters upon request)

Materials of Construction:

Housing	- Cast Stainless Steel ASTM A 351 Gr. CF:8 / CF:8M / CF:3M / (other alloy materials on request)
Gate	- Stainless Steel ASTM A 240 Gr. 304 / 316 / 310 / Alloy (other materials on request)
Seat for PZ-M	- SS304 / SS316 / SS317 (other materials on request)
Seat for PZ-S	- Standard Viton. EPDM & Buna on request
Stem	- Stainless Steel ASTM A 276 Gr. 304 / 316
Packing	- PTFE Impregnated Synthetic Fibre



Painting | Testing Temperature Suitability Chart

Painting:

For non-stainless steel parts - Epoxy painted

Testing:

Body test pressure - As per MSS SP-81 norms up to 36" / As agreed mutually for higher sizes

Seat leakage for PZ-M - 40 cc / min / inch at 2.8 bar as per MSS SP-81

Seat leakage for PZ-S - Zero leakage at full working pressure

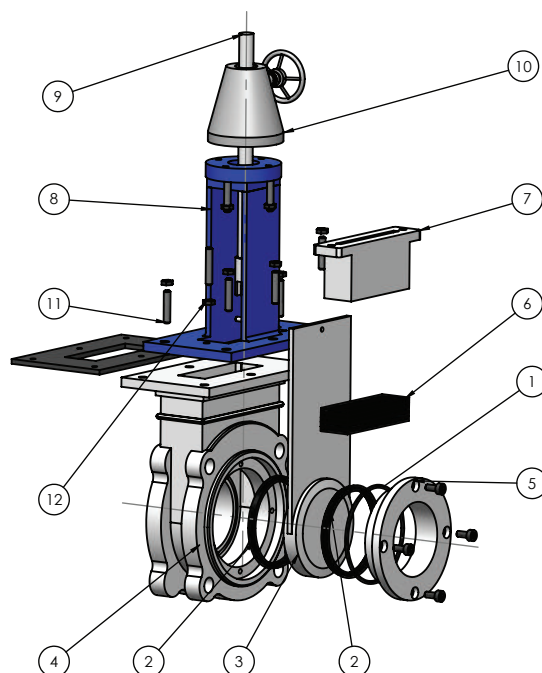
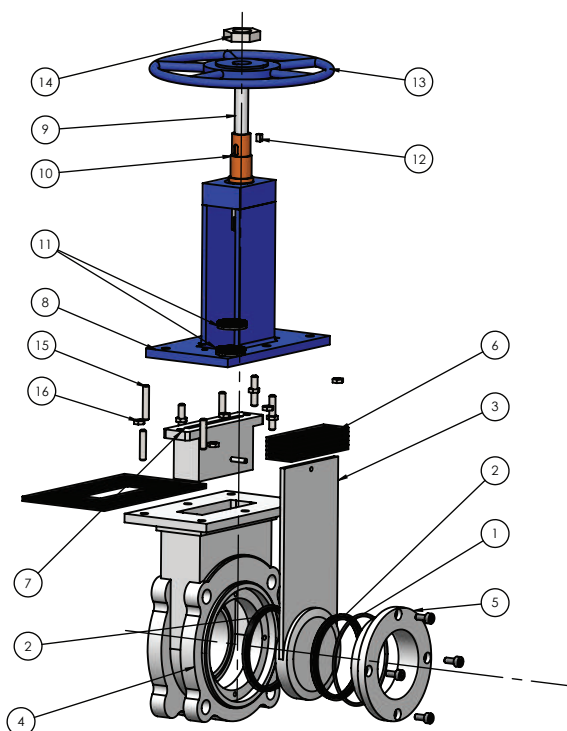
TEMPERATURE SUITABILITY CHART

Resilient Seat			
Sr. no.	Material	Temperature rating (max)	Application
1	EPDM	248 °F	Acids & non-mineral oils
2	Viton	392 °F	Different chemicals (High temperature)
3	Buna-N	248 °F	Petroleum products

Gland Packing			
Sr. no.	Material	Temperature rating (max)	pH
1	PTFE Impregnated Synthetic Fibre	482 °F	2-13

Exploded View

Knife Gate Valve Type PZ-S



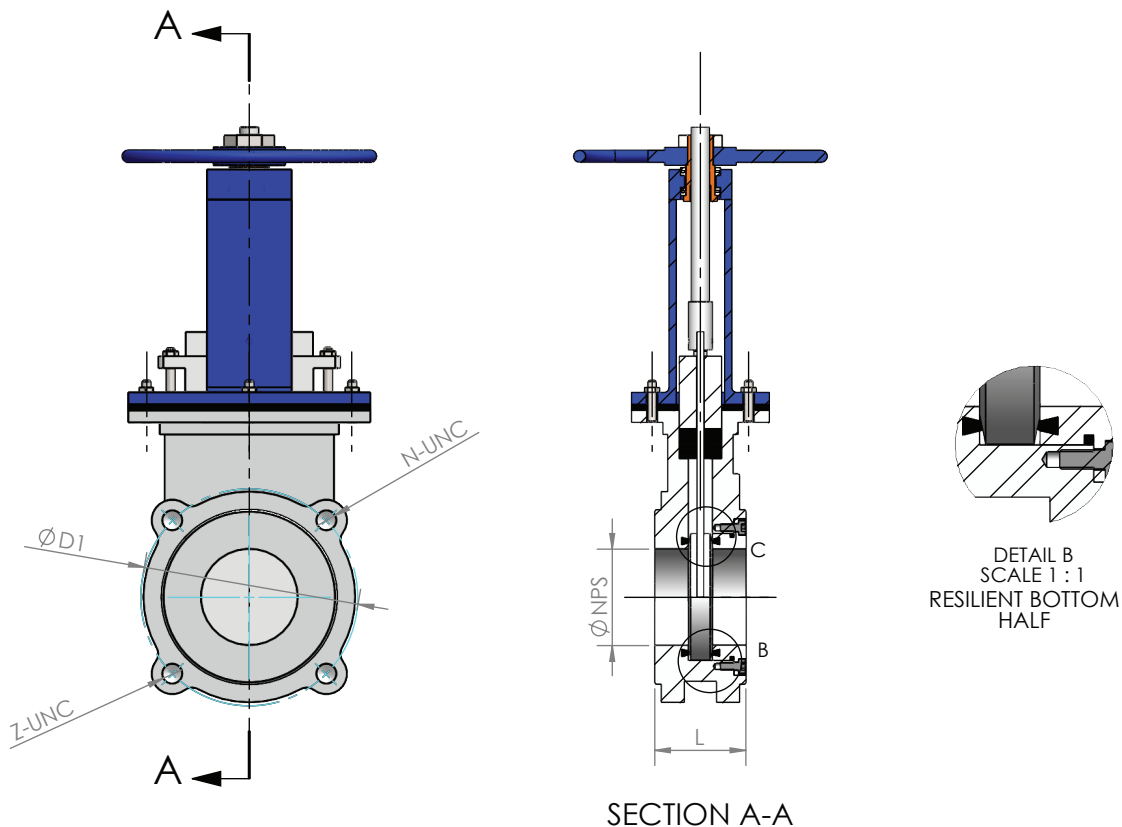
PZ-S		
Part no.	Part	Standard Construction
1	O Ring	Viton
2	Seat	Viton
3	Disc	SS:316
4	Body	CF:8M
5	Seat Retainer	SS:316
6	Packing	PTFE Impregnated Synthetic Fibre
7	Gland	CF:8
8	Yoke	CF:8
9	Stem	SS:304
10	Yoke Sleeve	Copper Alloy
11	Bearing	GCr15
12	Key	45
13	Handwheel	KTH350-10
14	Lock Nut	35
15	Bolt	B8
16	Nut	8

PZ-S		
Part no.	Part	Standard Construction
1	O Ring	Viton
2	Seat	Viton
3	Disc	SS:316
4	Body	CF:8M
5	Seat Retainer	SS:316
6	Packing	PTFE Impregnated Synthetic Fibre
7	Gland	CF:8
8	Yoke	CF:8
9	Stem	SS:304
10	Bevel Gear Actuator	
11	Bolt	B8
12	Nut	8

Hand Wheel Operated | Rising Stem

Dimensional Details

3" - 12" (80mm - 300mm)

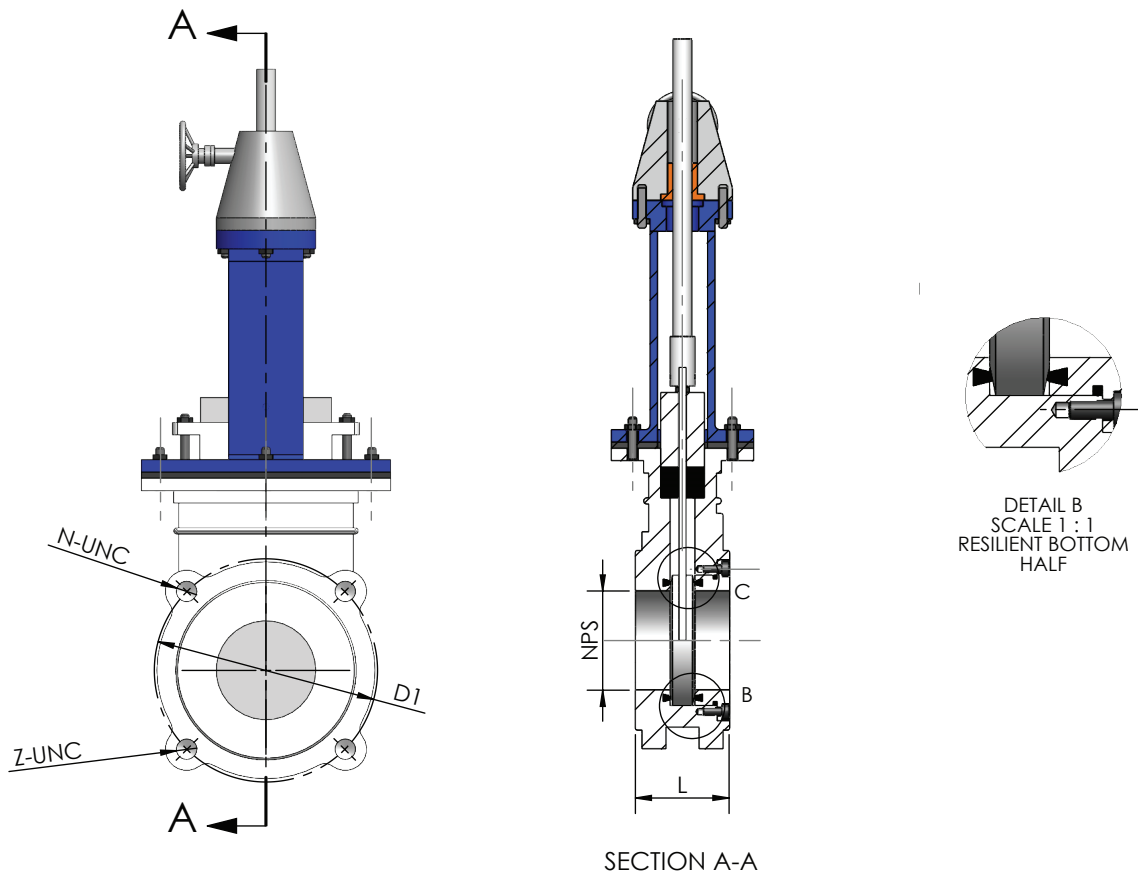


Valve size		L	D1	N-UNC	Z-UNC
Inches	mm				
3	80	51	152.5	2-UNC5/8"~11	2-UNC5/8"~11
4	100	51	190.5	2-UNC5/8"~11	6-UNC5/8"~11
5	125	57	216	2-UNC3/4"~10	6-UNC3/4"~10
6	150	57	241.5	2-UNC3/4"~10	6-UNC3/4"~10
8	200	70	298.5	2-UNC3/4"~10	6-UNC3/4"~10
10	250	70	362	4-UNC7/8"~9	8-UNC7/8"~9
12	300	76	432	4-UNC7/8"~9	8-UNC7/8"~9

Note:

(1) Hand wheel operated valves can be provided with options of chain wheel, non-rising stem and stem extension.

Gear Operated | Rising Stem Dimension Details 14" - 36" (350mm - 900mm)



Valve size		L	D1	N-UNC	Z-UNC
Inches	mm				
14	350	76	476	4-UNC1"~8	8-UNC1"~8
16	400	89	540	6-UNC1"~8	10-UNC1"~8
18	450	89	578	6-UNC1 1/8"~7	10-UNC1 1/8"~7
20	500	114	635	8-UNC1 1/8"~7	12-UNC1 1/8"~7
24	600	114	749.5	8-UNC1 1/4"~7	12-UNC1 1/4"~7
30	750	117	914.4	12-UNC1 1/4"~7	16-UNC1 1/4"~7
36	900	117	1085.8	14-UNC1 1/2"~6	18-UNC1 1/2"~6

Note:

- (1) Gear box shall have 4:1 gear ratio.
- (2) Gear box operated valves can be provided with options of chain wheel, non-rising stem and stem extension.



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Distributor



Pictures shown are general, unless specific job names are listed.
Manufacturer reserves the right to depart from the catalogue specifications and illustrations.

PZ-0717E