

# INDDOP ENGINEERING & MARKETING PRIVATE LIMITED

## KNIFE EDGE GATE VALVE

### Characteristics:

**General Knife Gate Valves** are specially designed and manufactured according to MSS SP/Customized to meet the worst working conditions in Pulp & Paper, Mining & Steel, Power & Chemical Industries, Water Treatment Industries to handle Semi-Solids, Abrasive Slurries, Dry-Ash, Chips, Fiber contents Pulps etc. The compact design of the valves facilitates light weight, minimum space for installing, easy operation and maintenance. The compact Knife Edged gate is manufactured from Stainless Steel Plates of various grades irrespective of Body material. The bottom of the Gate is having Knife type edge which can cut through Semi-Solid or Paste type Pulp with possible fiber and solid contents, Fly ash, Chemicals with solid contents and ensure smooth shutdown operation and tight shut-off. The Knife gate valves are available in wide range of material. Trim options are available to suit individual requirements for various working.

**Slurry Knife Gate valves** are designed for heavy duty purposes to isolate flow, even in the most demanding process conditions. The complete valve is built around an ease of maintenance concept which contains Purge port, Replaceable Retainer ring, Dual Elastomer Seals for long operational period. These Soft Seated Knife Gate Valve features a unique design that provides bubble-tight shutoff in either direction. The valve is designed for isolation and on/off applications in the paper, chemical, mining, power and waste water industries. It is designed to handle clean, dirt, viscous and corrosive Liquids, sludge, fibrous slurries, clean and corrosive gases.

**AWWA/water Knife Gate valve** standard describes Bonneted / Bonnet less and one piece/two piece construction which is made of stainless steel /cast iron /ductile iron body with resilient or metal seated knife gate valves. These AWWA valves are especially used in water, wastewater, and sludge water systems. Our Valves are specially manufactured by AWWA standard to suit critical water applications.

## UNI DIRECTIONAL



## BI DIRECTIONAL



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SN	PARTS	MATERIAL
1	Type	Uni-directional/Bi-directional
2	Body	DI/CI/WCB/CF8/CF8M/CF3/CF3M/CG8M/CG3M/CK3MCuN
4	Gland	DI/CI/WCB/CF8/CF8M/CF3/CF3M/CG8M/CG3M/CK3MCuN
5	Gate	ASTM A240 Gr. SS 304/316/316L/117/117L/ASTM S31254 SMO 254
6	Seat	Nitrile / EPDM / Viton/PTFE/Metal to Metal
7	Gland Packing	PTFE Impregnate Synthetic Fiber (Optional- Graphite / Ceramic), O Wire EPDM (Optional Viton®)
8	Gland	DI/CI/WCB/CF8/CF8M/CF3/CF3M/CG8M/CG3M/CK3MCuN
9	Stem	SS410/F304/F316/F44
10	Stem Nut	SS410/F304/F316/F44
11	Gasket/O-Ring	EPDM
12	Support Plate	CS/SS
13	Thrust Washer	PTFE
14	Hand Wheel	S.G IRON / Fabricated
15	Stopper	Brass
16	Lock Nut	ASTM A193-B8 / A193-8
17	Thrust Washer	Brass
18	Fasteners	CS/SS / SS304 / ASTM A193-B8 / A193-B
19	Actuator	Manual Hand Wheel/Chain Wheel/Bevel Gear/Hydraulic Cylinder/Pneumatic Cylinder/Electrical Actuator

\*\*\*\*\*OTHER EXOTIC ALLOYS ON REQUEST



➔ **Manufacturing Standard:**

MSS SP-81

➔ **Inspection & Testing:**

S SP-81

➔ **Material of Construction:**

Cast Iron, Carbon Steel / SS 304, SS 316 / SS 304 / SS 316L and Other Alloys.

➔ **End Connections:**

Flange Type, Two Lugs, Full Lugs, Wafer Type, Flange End

➔ **Pressure Rating:**

150# / 300#

➔ **Operation:**

Manual / Gear, Electrical Actuated and Pneumatic Actuator Operated

➔ **Size Range:**

50mm to 1000mm

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## OUR PRODUCT RANGE

Valve Type	ASME Class	Design Standard		Valve Material		Size Range
		P-T Rating	Complies to	Shell	Trim	
Gate Valve	150	ANSI B16.34	API 600/BS 1414	WCB, LCB, CF8, CF8M, CF3, CF3M, C5,WC6, CD4MCu, Etc.	AISI: SS410, 304,304L, 316, 316L, ST6, Hard Faced, Etc.	1" TO 24"
	300					1" TO 24"
	600					2" TO 12"
	900					2" TO 12"
	1500					2" TO 12"
	2500					2" TO 8"
Globe Valve	150		API 600/BS 1873	WCB, LCB, CF8, CF8M, CF3, CF3M, C5,WC6, CD4MCu, Etc.	AISI: SS410, 304,304L, 316, 316L, ST6, Hard Faced, Etc.	1" TO 16"
	300					1" TO 12"
	600					2" TO 12"
	900					2" TO 12"
	1500					2" TO 12"
	2500					2" TO 8"
Non-Return Valve	150		API 600/BS 1868	WCB, LCB, CF8, CF8M, CF3, CF3M, C5,WC6, CD4MCu, Etc.	AISI: SS410, 304,304L, 316, 316L, ST6, Hard Faced, Etc.	2" TO 24"
	300					2" TO 24"
	600					2" TO 12"
	900					2" TO 12"
	1500					2" TO 12"
	2500					2" TO 8"
Forged Steel Gate Valve	800	API 602/BS 5352	A105, F304, F316, F304L, F316L, Etc.	- do -	¼" TO 2"	
	1500				¼" TO 1½"	
Forged Steel Globe Valve	800		API 602/BS 5352	A105, F304, F316, F304L, F316L, Etc.	- do -	¼" TO 2"
	1500					¼" TO 1½"
Forged Steel Check Valve	800		API 602/BS 5352	A105, F304, F316, F304L, F316L, Etc.	- do -	¼" TO 2"
	1500					¼" TO 1½"
Wafer Type Check Valve	150/PN 10		API 594/API 6D	Cl, WCB, CF8, CF8M, Etc.	Seat: EPDM, Viton, Nitrile, Silicone, PTFE, Etc.	1" TO 28"
	300/PN 16					1" TO 28"
Ball Valve	150		API 6D/BS 5351	WCB, CF8, CF8M, A105, Etc.	PTFE, Reinforced PTFE, Etc.	2" TO 6"
	300					2" TO 6"
	800					½" TO 2"
Butterfly Valve	150/PN 10		API 609/BS 5155	Cl, WCB, CF8, CF8M, Etc.	Seat: EPDM, Hyplone, PTFE Nitrile, Silicone, etc	1" TO 48"
	300/PN 16	1" TO 48"				

- + Any other special materials or requirements available on request.
- + Gear Box & actuator operated valves available upon request.
- + Stellite or Hard facing of valve seats available upon request.
- + Position Indicator, By-Pass arrangement, Locking arrangement available upon request.
- + Seal welded body seating available upon request.
- + Butt Weld Ends available upon request.
- + Swing Check Valves available with Dash Pot & counter Weight Arrangement upon request.
- + Butt Weld Ends available upon request.

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## DESIGN SPECIFICATIONS

Items	American Standard	British Standard
Shell wall thickness and general valve design specifications for Cast Steel & Forged Valves	API 600 / API 6D / API 602 / ASME B 16.34	BS1414 (Gate valve) BS1873 (Globe valve) BS1868 (Check valve)
Pressure-temperature ratings	ASME B16.34	BS1560
Face-to-face dimensions for Flanged Ends End-to-end dimensions for Butt Weld Ends	ANSI B16.10	BS2080
End flange dimensions for Flanged Ends	ANSI B16.5	BS1560
Welding end dimensions for Butt Weld	ANSI B16.25	BS1414 (Gate valve) BS1873 (Globe valve) BS1868 (Check valve)
Welding end dimensions for Socket Weld	ANSI B 16.11	
Testing & Inspection Standard	API 598	BS 6755 (Part-I)
Radiography & NDT	ASME 16.34	

## INSPECTION AND WARRANTY POLICY

Each & every valves are subjected to 100% pressure tests, according to API 598 or BS 6755 Part 1 requirements. Material test reports and inspection certificates are available on your request, while each valve is guaranteed for 12 months after placement in service, but not exceeding 18 months after shipment from our factory.

Some of the additional inspections and tests performed are:

- Random Radiograph Inspection of Body and Bonnet Castings to ASME B16.34 Appendix B
- Random Chemical Composition and Mechanical Properties Verification of Fasteners to ASTM A-193/A-194
- Liquid Penetrate Inspection of Seat Rings
- Visual Inspection of Casting to MSS-SP-55
- Receiving, In-Process, and Final Dimensional Inspections to Relevant Valve Standards.

Test / Inspection Item	Complies to	Evaluation
Chemical composition analysis		Relevant ASTM Std.
Mechanical property test	ASTM A370	Relevant ASTM Stds.
Pressure tests	API 598 or BS 6755 Part 1	API 598
Radiographic inspection	ASTM E142 / E49	ASME B16.34
Wet magnetic particle inspection	ASTM E138	
Liquid penetrant inspection	ASTM E165	
Low temperature impact test	ASTM E23	
Dimensional inspection		Relevant Valve Stds.
Visual inspection		MSS SP-55

Other inspections or tests can be performed or evaluation criteria applied when specified by the customer.