



Enriching Lives

# KNIFE GATE VALVE

AS PER MSS SP 81



**KIRLOSKAR BROTHERS LIMITED**

Established 1888

A Kirloskar Group Company

NOTES

# ABOUT KBL

Kirloskar Brothers Limited (KBL) is a world-class pump manufacturing company with expertise in the engineering and manufacturing of fluid management systems. Established in 1888 and incorporated in 1920, KBL is the mother company of the Kirloskar Group. KBL provides complete fluid management solutions for large infrastructure projects in the areas of water supply, power plants, irrigation, building & construction, oil & gas industry, and marine & defence. KBL manufactures industrial, agriculture and domestic pumps, valves and hydro-turbines.

Over the years, KBL has developed innovative products, which have enabled it to carve a niche globally. It is a global conglomerate and is equipped with the best technologies in the world. It is also India's largest centrifugal pump manufacturer with nine manufacturing facilities in India along with other international subsidiaries and operations in the Netherlands, South Africa, Thailand, the United Kingdom, and the United States of America. KBL has over 16,000 channel partners globally and is supported by best-in-class Pan-India network of authorised service and refurbishment centres.

KBL is the first Indian pump manufacturing company to be certified for Integrated Management System, (ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, ISO 50001:2018).

Its factories deploy Total Quality Management tools using the European Foundation for Quality Management (EFQM) model.

## Indian subsidiaries and joint ventures

- Kirloskar Ebara Pumps Limited (KEPL) manufactures API, Non-API pumps, and steam turbines.
- Kirloskar Corrocoat Private Limited (KCPL) is the leading solution provider in long-term corrosion protection and energy conversion.

- Karad Projects and Motors Limited (KPML) is a motor manufacturing company with expertise in the manufacture of stampings, stators, rotors, AC rotating machines, aluminium die-cast connecting rods and pump assemblies. It also houses a notable foundry facility specialising in the manufacture of a wide range of carbon steel, alloy steel, stainless steel and cast iron castings for industries such as pumps, valves, turbines, shipping, heavy engineering applications and more.

## International, subsidiaries and joint ventures

- SPP Pumps Limited, United Kingdom is a 140-year-old leading pumps manufacturer of centrifugal pumps and associated systems, a global principal in the design, supply and servicing of pumps, renowned fire pump packages and high-quality equipment for a wide range of applications and industry sectors. It is the largest pump manufacturer in the United Kingdom.
- SyncroFlo, Inc., United States of America manufactures pre-assembled pumping systems and provides solutions for HVAC systems, fire protection and turf irrigation.
- Rodelta Pumps International is a Dutch pump manufacturing company that offers products for flood control, irrigation, drinking water, wastewater, pulp & paper, power, chemical, oil & gas and general industries.
- Kirloskar Brothers Thailand Limited (KBTL), Bangkok is the Thailand Board of Investment (BOI) promoted headquarters and assembly plant of the KBL Group companies for the ASEAN and East Asia regions.
- Braybar Pumps (Pty) Limited, Republic of South Africa is engaged in the manufacturing and sales of high-head multi-stage pumps, rubber-lined slurry pumps and metal-lined bearings.

## Pumps | Valves | Hydro Turbines | Turnkey Projects

Water Resource Management | Irrigation | Power | Industry | Oil & Gas | Marine & Defence | Building & Construction | Distribution (Small Pumps) | Valves | Customer Service & Spares



Global Headquarter:  
"Yamuna", Baner, Pune.



# KNIFE GATE VALVE (UNIDIRECTIONAL)

Widely accepted by Municipal Corporations Irrigation Authorities, Water Supply Authorities, Power Generation, Pulp and Paper, Cement and Industrial users.

Designed as per latest editions of Specifications

## Applications:

- Suitable for corrosive and Abrasive services
- Ideal for Application in Cement, Pulp and Paper, Aluminum, Fertilizer, Sugar, Coal and Mining, Power Generation, Ash Handling, Iron and Steel, Sewage and Waste water treatment

## Salient Constructional Features:

- Knife Gate Valves features a single piece full port type
- Body is very robust in construction to cater to the extreme demanding applications
- Ensure greater flow capacity and minimal pressure drop
- Valves incorporate gates made of stainless steel and other superior alloys
- Super ground super surface finish on both sides to assure positive shutoff
- The machined and highly finished gland pockets ensure a leak proof gland packing and perfect stem seal
- Self cleaning, Knife(Sharp) edge Precision machined seating contour for smooth operation and leak tight sealing

## Accessories:

- Electric Actuator
- Pneumatic Cylinder Actuator
- Extension spindle arrangement
- Hydraulic Cylinder Actuator
- Chain Padlock Arrangement
- Limit switch arrangement
- Proximity Switch arrangement
- Companion Flange

## Hydrostatic Test Pressures kg/cm<sup>2</sup>:

| Scope           | Size Range                                                         | Manufacturing Standard and Pressure Rating | Hydrostatic Test Pressure Kg/cm <sup>2</sup> |                        |
|-----------------|--------------------------------------------------------------------|--------------------------------------------|----------------------------------------------|------------------------|
|                 |                                                                    |                                            | boby                                         | Seru                   |
| Standard Supply | 50 mm - 1000 mm                                                    | PN 10 as per MSS Sp81                      | 15.5 kg/cm <sup>2</sup>                      | 2.8 kg/cm <sup>2</sup> |
| Optional        | For Higher Pressure ratings can be supplied on case to case basis. |                                            |                                              |                        |

Material of Construction

| Scope    | Body/Gland                                                                             | Gate       | Stem                             | Gland Packing | Seat                                |
|----------|----------------------------------------------------------------------------------------|------------|----------------------------------|---------------|-------------------------------------|
| Standard | CI IS:210 Gr. Fg260                                                                    | SS 304     | SS ASTM A276<br>Type 410         | PTFE          | EPDM                                |
| Optional | CI IS:210 GR FG260,<br>CS ASTM A216 Gr WCB/<br>SS ASTM A351<br>Gr CF8/CF8M<br>CF3/CF3M | MS, SS 316 | SS ASTM A276<br>Type 304/316/431 | PTFE          | St.St.304<br>316<br>Buna-N<br>Viton |

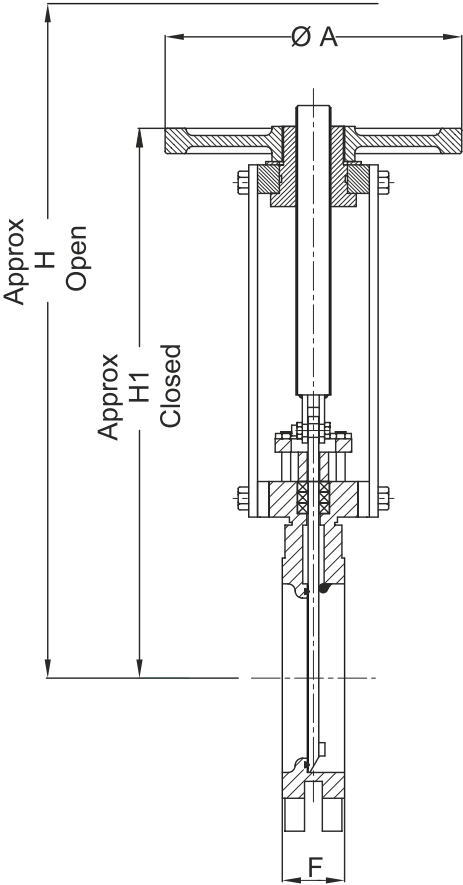
Note: 1. For special material of construction, Contact Design Office.  
2. Protective coating for Body as per requirement.

Technical Specification:

|                                   |                 |
|-----------------------------------|-----------------|
| Design and Manufacturing Standard | MSS SP 81       |
| Testing Standard                  | MSS SP 81       |
| Size Range                        | 50 mm - 1000 mm |
| Pressure Rating                   | Pn10            |

Note: 1. For Higher Pressure Rating contact Design Office.

General Outline Drawing:



## General Outline Dimensions:

| Size            | F   | QA  | H1 (Approx) | H (Approx) |
|-----------------|-----|-----|-------------|------------|
| 50              | 48  | 203 | 294         | 347        |
| 65              | 48  | 203 | 330         | 400        |
| 80              | 51  | 203 | 350         | 437        |
| 100             | 51  | 203 | 379         | 480        |
| 125             | 57  | 270 | 422         | 548        |
| 150             | 57  | 270 | 466         | 615        |
| 200             | 70  | 270 | 620         | 878        |
| 250             | 70  | 390 | 696         | 948        |
| 300             | 76  | 390 | 798         | 1100       |
| 350             | 76  | 500 | 896         | 1238       |
| 400             | 89  | 500 | 982         | 1374       |
| 450             | 89  | 500 | 1070        | 1518       |
| 500             | 114 | 500 | 1160        | 1655       |
| 600             | 114 | 500 | 1432        | 2051       |
| 1000 Fabricated | 190 |     | 3050        | 3810       |

Note: 1. All Dimensions are in 'mm' otherwise stated.

## End Connection:

| Scope           | Flange Drilling Standard                                                                                                   |
|-----------------|----------------------------------------------------------------------------------------------------------------------------|
| Standard Supply | IS:1538 Table 4 and 6                                                                                                      |
| Optional        | BS:10-Table D/E/F<br>BS EN 1092-2, PN6 / PN10 / Pn16<br>IS:1538 Table 5<br>ANSI B 16.1 / 16.5, DIN 2532 (ND 10)<br>IS:6392 |

NOTES



Enriching Lives

## KIRLOSKAR BROTHERS LIMITED

Established 1888  
A Kirloskar Group Company

### REGISTERED OFFICE & GLOBAL HEADQUARTERS

“Yamuna”, S. No. 98/(3-7), Plot No. 3, Baner,  
Pune - 411 045, Maharashtra, India.

**Toll Free:** 1800-123-4443 | **Phone:** +91 (20) 67214444

**Email:** marketing@kbl.co.in | **Fax No.** 020 67211060

**Website:** www.kirloskarpumps.com | **CIN No.** L29113PN1920PLC000670

### OUR COMPANIES



BRAYBAR PUMPS (PTY) LTD  
Republic of South Africa



KARAD PROJECTS AND MOTORS LIMITED  
India



KIRLOSKAR BROTHERS (THAILAND) LIMITED  
Thailand



KIRLOSKAR CORROCOAT PRIVATE LIMITED  
India



KIRLOSKAR EBARA PUMPS LIMITED  
India



RODELTA PUMPS INTERNATIONAL B.V.  
The Netherlands



SPP PUMPS LIMITED  
United Kingdom



SYNCROFLO, INC.  
U.S.A.