

**B-270** Manual Hand Wheel Operated



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# B-270

# **BI-DIRECTIONAL**

# KNIFE EDGE GATE VALVE

The V-TURK® B-270 Bi Directional Lug Type Knife Gate Valve is designed to handle pressure or flow from either directions, mainly for ON-OFF applications in abrasive and corrosive slurry lines of various industries. It features a single piece cast body with heavy duty stainless steel gate & Replaceable U-Shaped Metal wire impregnated Elastomer Seal which provides a peripheral seal along the edge of the gate that gives 100% leak-proof and greater reliability. In the open position the valve offers maximum flow area and minimum resistance to flow (and lowest pressure drop) and in the closed position there is no raised seat in the flow path.

### **DESIGN / MANUFACTURING / TESTING STANDARD**



#### **SIZE RANGE**

2" to 64" (50MM to 1600MM)

#### **PRESSURE RATING**

150 CWP (1030 kPa)

#### **SEATING**

Soft Seated (Replaceable U shaped Metal Wire Impregnated Elastomer Seal)

#### **OPERATION**

Lever, Hand Wheel, Chain Wheel, Bevel Gear, Hydraulic Cylinder, Pneumatic Cylinder, Electrical Actuator etc.

#### **ACCESSORIES**

Limit Switch, Solenoid Valve, Positioner Air Filter Regulator etc.

#### **APPLICATIONS**

Waste Water Treatment (Digester Isolation, Sludge discharge, Sewage), Cement Plants (Slurry transfer, Dry Lime, Pneumatic conveying systems),

Paper & Pulp (Pulp preparation, Pulp Transfer, stock tower isolation), Sugar Plants,

Minerals & Metals (Pneumatic conveying systems, iron ore slurry, Beneficiation plant, Blast Furnace),

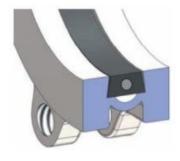
Chemical & General Industries (Dry Solids bagging, Hopper Dump, Pump isolation & silos)





### **SEATING ARRANGEMENT**





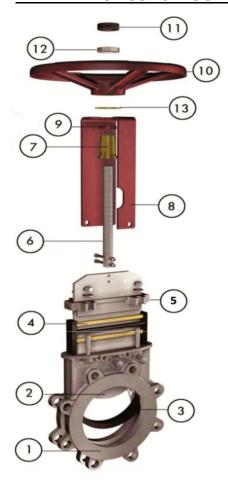
 $\ensuremath{\mathsf{DN}}$  50 to  $\ensuremath{\mathsf{DN}}$  500 – Single Piece Body with Extruded Rubber Seal



DN 600 and above – Split Piece Body with Extruded Rubber Seal

The Seat is retained in the valve Body's internal groove by its trapezoidal shape and is in contact with the gate around its perimeter. This design provides water tightness and seamless liquid flow in both directions while avoiding any buildup of solids that could prevent the valve from closing.

# **MATERIAL OF CONSTRUCTION**

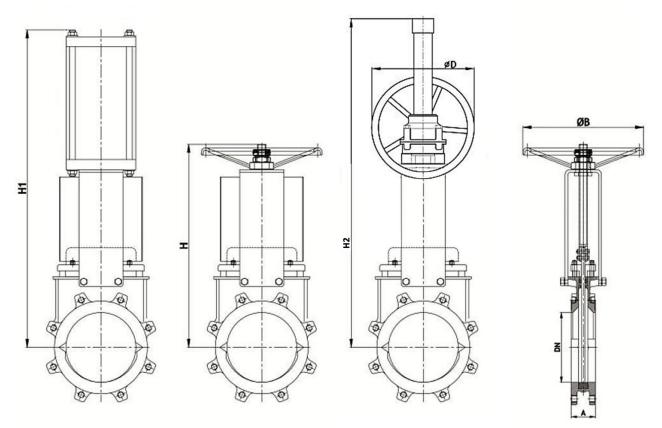


| SL | David             | Material  |                         |                             |                               |                                |                               |                                |                              |                              |
|----|-------------------|---|-------------------------|-----------------------------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|------------------------------|------------------------------|
| No | Part<br>Name      | Ductile<br>Iron   | Cast<br>Iron            | Cast<br>Steel               | CF8                           | CF8M                           | CF3M                          | CG8M                           | CG3M                         | CK3MCuN                      |
| 1  | Body              | ASTM<br>A 536<br>Gr. 60-<br>40-18   | IS<br>210<br>FIG<br>200 | ASTM<br>A 216<br>Gr.<br>WCB | ASTM<br>A 351<br>Gr.<br>CF8   | ASTM<br>A 351<br>Gr.<br>CF8M   | ASTM<br>A 351<br>Gr.<br>CF3M  | ASTM<br>A 351<br>Gr.<br>CG8M   | ASTM<br>A 351<br>Gr.<br>CG3M | ASTM A<br>351 Gr.<br>CK3MCuN |
| 2  | Gland             | ASTM<br>A 536<br>Gr. 60-<br>40-18   | IS<br>210<br>FIG<br>200 | ASTM<br>A 216<br>Gr.<br>WCB | ASTM<br>A 351<br>Gr.<br>CF8   | ASTM<br>A 351<br>Gr.<br>CF8M   | ASTM<br>A 351<br>Gr.<br>CF3M  | ASTM<br>A 351<br>Gr.<br>CG8M   | ASTM<br>A 351<br>Gr.<br>CG3M | ASTM A<br>351 Gr.<br>CK3MCuN |
| 3  | Gate              | ASTM A240 Gr. SS 304  |                         |                             | ASTM<br>A240<br>Gr. SS<br>316 | ASTM<br>A240<br>Gr. SS<br>316L | ASTM<br>A240<br>Gr. SS<br>117 | ASTM<br>A240<br>Gr. SS<br>117L | ASTM<br>S31254<br>SMO 254    |                              |
| 4  | Seat              | Nitrile / EPDM / Viton®   |                         |                             |                               |                                |                               |                                |                              |                              |
| 5  | Stem              | SS410 ASTM A182 Gr. F316 Gr. F44  |                         |                             |                               |                                |                               |                                | r. F44                       |                              |
| 6  | Stem Nut          | 2"-6" Brass 8" & Above SS410 ASTM A182 Gr. ASTM A182 Gr. F44                                    |                         |                             |                               |                                |                               |                                | 182 Gr. F44                  |                              |
| 7  | Gland<br>Packing  | PTFE Impregnate Synthetic Fiber (Optional-Graphite / Ceramic), O Wire EPDM<br>(Optional Viton®) |                         |                             |                               |                                |                               |                                |                              |                              |
| 8  | Support<br>Plate  | ASTM A36 Gr. Carbon Steel / SS304   |                         |                             |                               |                                |                               |                                |                              |                              |
| 9  | Hand<br>Wheel     | S.G IRON / Fabricated   |                         |                             |                               |                                |                               |                                |                              |                              |
| 10 | Gate<br>Cover     | MS / SS304 Sheet  |                         |                             |                               |                                |                               |                                |                              |                              |
| 11 | Stem<br>Protector | MS Pipe – Powder Coated   |                         |                             |                               |                                |                               |                                |                              |                              |
| 12 | Thrust<br>Washer  | PTFE  |                         |                             |                               |                                |                               |                                |                              |                              |
| 13 | Thrust<br>Washer  | Brass   |                         |                             |                               |                                |                               |                                |                              |                              |
| -  | Fasteners         | Steel / SS304 / ASTM A193-B8 / A193-B   |                         |                             |                               |                                |                               |                                |                              |                              |





## **DIMENSIONAL DETAILS**



| Size  | Α     | ØВ    | ØD    | Н     | H1    | H2    |
|-------|-------|-------|-------|-------|-------|-------|
| In mm |
| 50    | 48    | 210   | 200   | 420   | 420   | 540   |
| 80    | 51    | 210   | 200   | 480   | 505   | 575   |
| 100   | 51    | 310   | 200   | 560   | 570   | 620   |
| 150   | 57    | 310   | 200   | 680   | 720   | 730   |
| 200   | 70    | 310   | 200   | 850   | 880   | 970   |
| 250   | 70    | 350   | 200   | 1080  | 1050  | 1140  |
| 300   | 76    | 350   | 200   | 1195  | 1190  | 1210  |
| 350   | 76    |       | 300   |       | 1380  | 1520  |
| 400   | 89    |       | 300   |       | 1510  | 1580  |
| 450   | 89    |       | 400   |       | 1690  | 1840  |
| 500   | 114   |       | 400   |       | 1840  | 1950  |
| 600   | 114   |       | 400   |       |       | 2190  |
| 700   | 117   |       | 400   |       |       | 2490  |
| 800   | 140   |       | 400   |       |       | 2910  |
| 900   | 140   |       | 500   |       |       | 3280  |
| 1000  | 145   |       | 500   |       |       | 3620  |
| 1200  | 150   |       | 600   |       |       | 4280  |
| 1400  | 160   |       | 600   |       |       | 5020  |
| 1500  | 170   |       | 600   |       |       | 5530  |
| 1600  | 170   |       | 600   |       |       | 5910  |

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