

## BI-DIRECTIONAL KNIFE GATE VALVE SK SERIES



KGV SK SERIES SEMI LUGGED WITH RISING STEM AND HANDWHEEL



KGV XD SERIES SEMI LUGGED WITH HANDWHEEL RS AND GEARBOX



KGV SK SERIES SEMI LUGGED WITH D/A PNEUM ACTUATOR

The SK series is a short face-to-face knife gate slurry valve designed to handle abrasive slurries from mineral extraction processes: iron ore, copper ore, gold ore, soda ash, phosphate, coal, gypsum, cement and limestone. Equipped with two field replaceable vulcanized rubber sleeves, ensures a bi-directional shutoff against heavy slurries.

### GENERAL FEATURES

- Bi-directional shut off
- Short face-to-face
- Monoblock one-piece body, wafer-design
- Adjustable external stuffing box
- Two abrasive resistant vulcanized rubber sleeves, replaceable without valve disassembly from the pipeline
- Only rubber parts are in contact with the flowing slurry
- Unobstructed passage reduces pressure drop and cavities, minimizing wear
- Easy drive replacement
- Cleaning door with flush points
- Proximity and limit switch mounting points

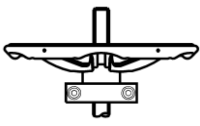
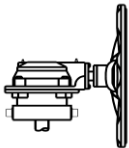
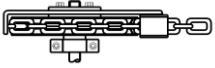
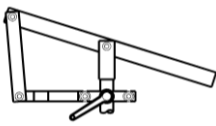
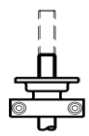
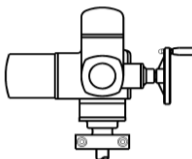
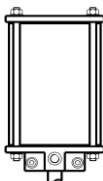
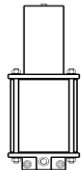

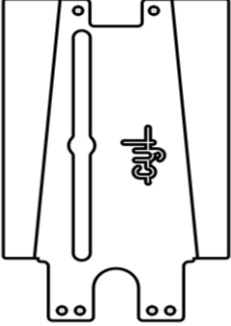
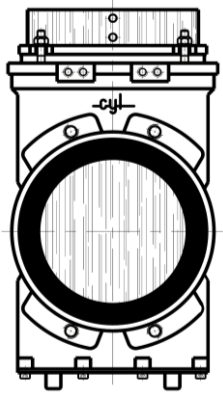
### APPLICATION FIELDS

- Mining and mineral extraction processes
- Mine dewatering
- Bulk handling
- Pulp and paper
- General industry
- Etc

### TECHNICAL DATA

- **Size range:**  
DN-50 (2") to DN-600 (24")
- **Working pressure:**  
DN 50 to DN 300: 10 kg/cm<sup>2</sup>  
DN 350 to DN 400: 6 kg/cm<sup>2</sup>  
DN 450 to DN 600: 4 kg/cm<sup>2</sup>
- **Flange ratings:**  
PN10, PN16 and ANSI B16.5 (class 150)  
Note: other flange drillings under request
- **Coating:**  
RAL 5017, 150 microns epoxy coated
- **Directives:**  
Pressure equipment directive 97/23/CE  
DIR 2006/42/CE (MACHINES)

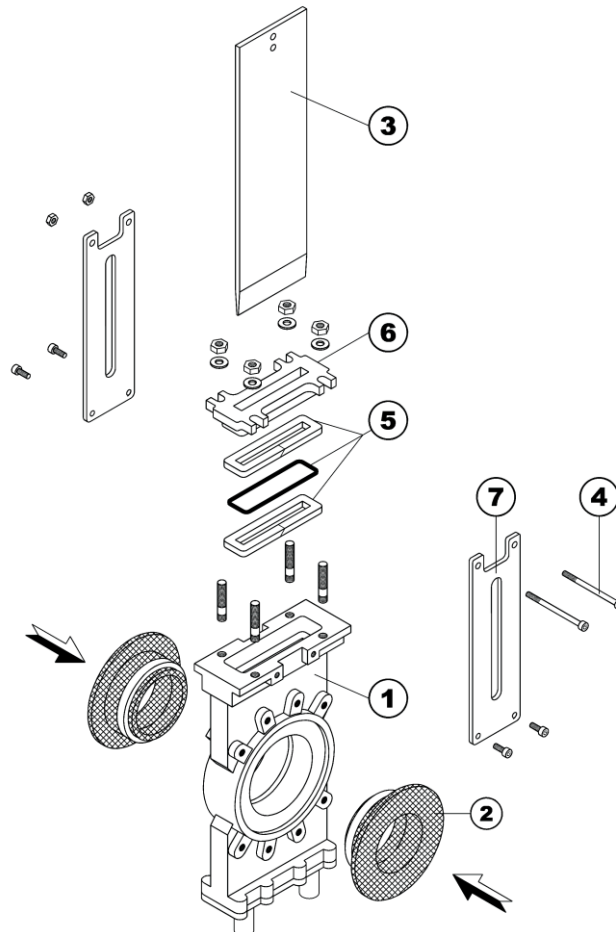
ASSEMBLY CONFIGURATION

|             |  |  |   |   |   |
|-------------|--|--|---|---|---|
| OPERATION   |  <p>Rising stem handwheel</p>   |  <p>Gearbox</p>           |  <p>Chain Wheel</p>                      |  <p>Quick closing lever</p>               |   |
|             |  <p>Rising stem coupling A</p>  |  <p>Electric actuator</p> |  <p>Double acting pneumatic actuator</p> |  <p>Spring-return pneumatic actuator</p> |  <p>Oil hydraulic actuator</p> |
| PLATES      |  <p>Plates</p>   |  |   |   |   |
| BODY        |  <p>Semi lugged (wafer)</p>   |  |   |   |   |
| ACCESSORIES | <ul style="list-style-type: none"> <li>- Locking device</li> <li>- Overriding actuator</li> <li>- Mechanical limit switches</li> <li>- Proximity limit switches</li> <li>- Mechanical position indicator</li> <li>- Solenoid valve</li> <li>- Scraper (Bronze /PPS)</li> <li>- Etc.</li> </ul> |  |   |   |   |

## MATERIAL SPECIFICATION & PART LIST

| No. | DESCRIPTION      | MATERIAL   |
|-----|------------------|--|
| 1   | Body             | Ductile iron – GJS400  |
| 2   | Sleeve           | NATURAL RUBBER (standard)<br>VITON (optional)                            |
| 3   | Gate             | SS 316 (standard)<br>SS 316L, SS 316TI , DUPLEX 2205, SMO 254 (optional) |
| 4   | Screw s and nuts | A-4  |
| 5   | Packing material | ARAMIDE, GRAPHITE (standard)   |
| 6   | Packing gland    | Ductile iron - GJS400  |
| 7   | Plates           | 1.0580   |
| -   | Stem             | SS 316   |
| -   | Bearing          | 1.0401 (standard)<br>SS 316 (optional)                                   |
| -   | Handwheel        | 1.0037   |
| -   | Pneumatic act.   | Aluminium  |
| -   | Hand-protections | 1.0580   |

Figure 1. Exploded view of KGV SK series semi lugged (wafer)



## APPLICATION AND TEMPERATURE RANGE

| SEAT MATERIALS |                       |                       |  |
|----------------|-----------------------|-----------------------|--|
| Material       | Min. temperature (°C) | Max. temperature (°C) | APPLICATIONS                                   |
| NATURAL RUBBER | -10                   | +70                   | Tear and abrasion resistant                    |
| VITON          | -40                   | +180                  | Organic acids, hydrocarbons and heat resistant |

*\*More details and other dimensions and sealing materials under request.*

| PACKING MATERIALS |                       |                       |   |
|-------------------|-----------------------|-----------------------|---|
| Material          | Min. temperature (°C) | Max. temperature (°C) | APPLICATIONS                            |
| ARAMIDE           | -40                   | +250                  | Bulk handling                           |
| GRAPHITE          | -40                   | +300                  | Hydrocarbons, heat resistant and solids |

*\*More details and other dimensions and sealing materials under request*

## DIMENSIONAL DRAWINGS

Figure 2. KGV SK series semi lugged rising stem & handwheel

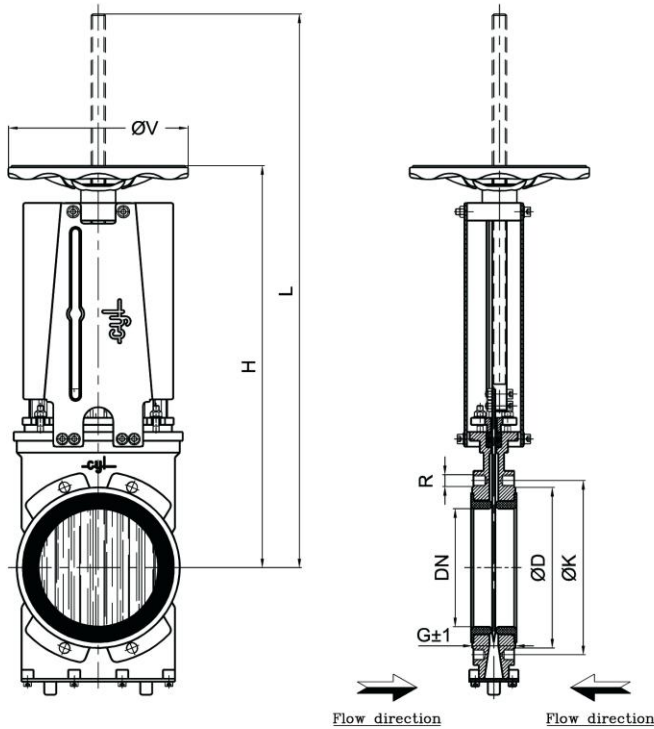


Figure 3. KGV SK series semi lugged rising stem with handwheel & gearbox

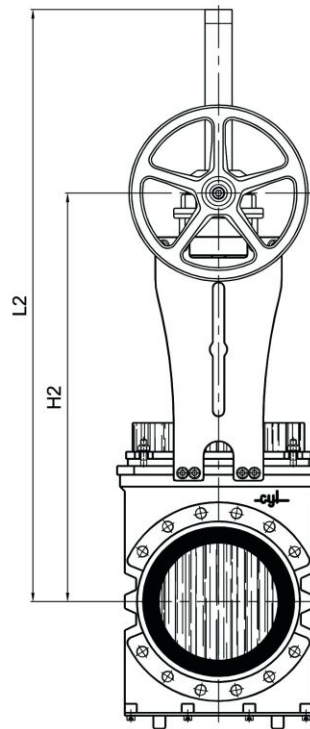
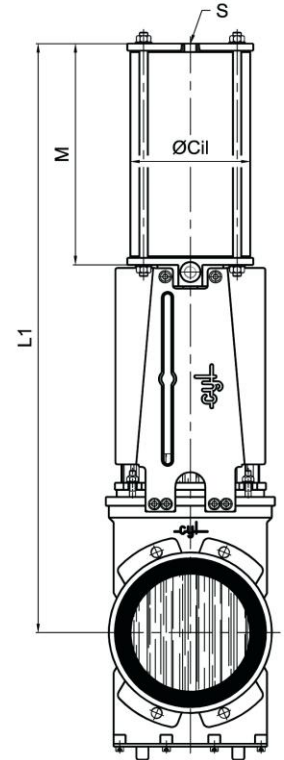


Figure 4. KGV SK series semi lugged with d/a pneumatic actuator



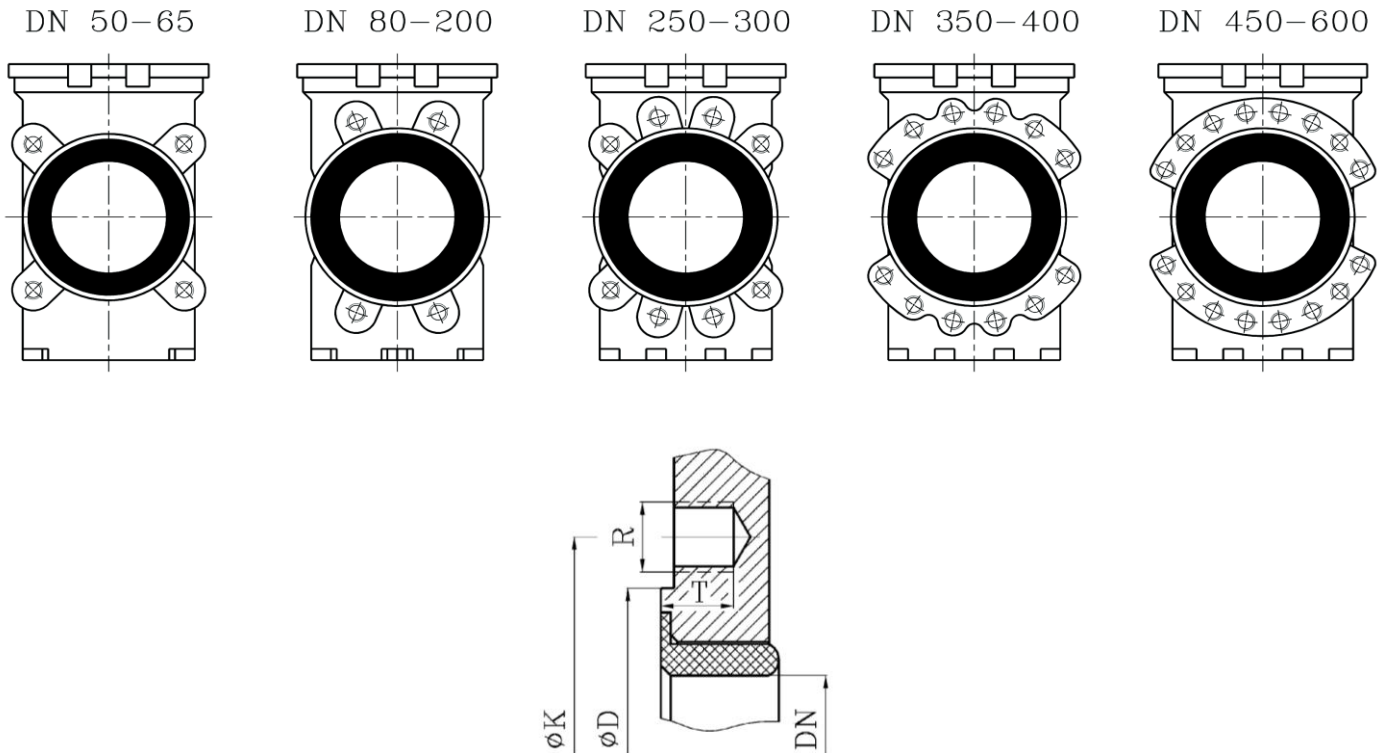
| DN  | G±1 | H   | L    | L2   | H2   | Ø V | L1   | M   | Ø Cil | S      | Spindle thread |
|-----|-----|-----|------|------|------|-----|------|-----|-------|--------|----------------|
| 50  | 52  | 352 | 435  | -    | -    | 225 | 476  | 177 | 100   | 1/4" G | Tr20x4i        |
| 65  | 52  | 359 | 442  | -    | -    | 225 | 484  | 177 | 100   | 1/4" G | Tr20x4i        |
| 80  | 52  | 386 | 518  | -    | -    | 225 | 576  | 219 | 100   | 3/8" G | Tr20x4i        |
| 100 | 52  | 427 | 605  | -    | -    | 225 | 616  | 239 | 125   | 3/8" G | Tr20x4i        |
| 125 | 58  | 510 | 661  | -    | -    | 300 | 719  | 267 | 160   | 3/8" G | Tr24x5i        |
| 150 | 64  | 588 | 789  | -    | -    | 300 | 857  | 327 | 190   | 1/2" G | Tr24x5i        |
| 200 | 72  | 681 | 932  | -    | -    | 300 | 998  | 375 | 190   | 1/2" G | Tr24x5i        |
| 250 | 76  | 786 | 1088 | -    | -    | 400 | 1173 | 456 | 250   | 1/2" G | Tr28x5i        |
| 300 | 82  | 862 | 1214 | -    | -    | 400 | 1292 | 499 | 250   | 1/2" G | Tr28x5i        |
| 350 | 82  | -   | -    | 1441 | 1005 | 500 | 1461 | 550 | 300   | 1/2" G | Tr40X7i        |
| 400 | 95  | -   | -    | 1650 | 1164 | 500 | 1720 | 700 | 350   | 1/2" G | Tr40X7i        |
| 450 | 95  | -   | -    | 1880 | 1305 | 500 | 1904 | 750 | 400   | 1/2" G | Tr50X8i        |
| 500 | 120 | -   | -    | 2165 | 1502 | 500 | 2020 | 778 | 400   | 1/2" G | Tr50X8i        |
| 600 | 120 | -   | -    | 2400 | 1710 | 500 | 2268 | 878 | 400   | 1/2" G | Tr50X8i        |

\* Valves above DN-300 need to be operated with gearbox and handwheel.

\* Data sheet for ØK & ØD stated in "flange drillings chapter".

FLANGE DRILLINGS

**FLANGE DRILLING - PN10**

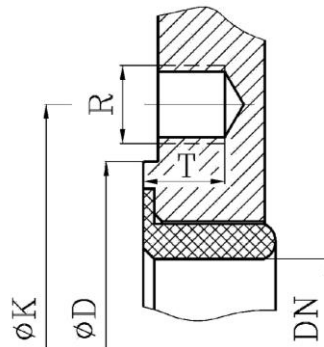
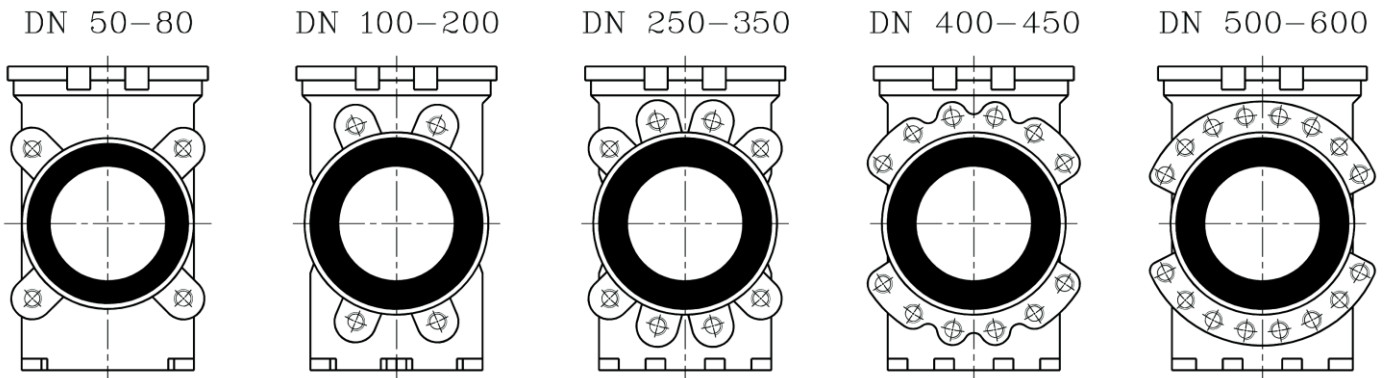


**Bolting Arrangements PN-10 Knife Gate Valve**

| DN  | K   | D   | N (1) | N (2) | N (3) | T  | R    |
|-----|-----|-----|-------|-------|-------|----|------|
| 50  | 125 | 95  | 4     | -     | 4     | 10 | M-16 |
| 65  | 145 | 112 | 4     | -     | 4     | 13 | M-16 |
| 80  | 160 | 135 | 4     | 4     | 8     | 13 | M-16 |
| 100 | 180 | 158 | 4     | 4     | 8     | 13 | M-16 |
| 125 | 210 | 188 | 4     | 4     | 8     | 14 | M-16 |
| 150 | 240 | 212 | 4     | 4     | 8     | 16 | M-20 |
| 200 | 295 | 268 | 4     | 4     | 8     | 20 | M-20 |
| 250 | 350 | 320 | 8     | 4     | 12    | 22 | M-20 |
| 300 | 400 | 370 | 8     | 4     | 12    | 22 | M-20 |
| 350 | 460 | 430 | 12    | 4     | 16    | 22 | M-20 |
| 400 | 515 | 482 | 12    | 4     | 16    | 23 | M-24 |
| 450 | 565 | 532 | 16    | 4     | 20    | 24 | M-24 |
| 500 | 620 | 585 | 16    | 4     | 20    | 25 | M-24 |
| 600 | 725 | 685 | 16    | 4     | 20    | 26 | M-27 |

N (1)- N° of tapped holes    N (2)- N° of through holes    N (3)- N° of flange holes

**FLANGE DRILLING - ASA 150**



**Bolting Arrangements ASA-150 Knife Gate Valve**

| DN  | K      | D   | N (1) | N (2) | N (3) | T  | R      |
|-----|--------|-----|-------|-------|-------|----|--------|
| 50  | 120,60 | 95  | 4     | -     | 4     | 9  | 5/8 "  |
| 65  | 139,70 | 112 | 4     | -     | 4     | 13 | 5/8 "  |
| 80  | 152,40 | 135 | 4     | 4     | 4     | 13 | 5/8 "  |
| 100 | 190,50 | 158 | 4     | 4     | 8     | 13 | 5/8 "  |
| 125 | 215,90 | 188 | 4     | 4     | 8     | 13 | 3/4 "  |
| 150 | 241,30 | 212 | 4     | 4     | 8     | 12 | 3/4 "  |
| 200 | 298,40 | 268 | 4     | 4     | 8     | 12 | 3/4 "  |
| 250 | 361,90 | 320 | 8     | 4     | 12    | 16 | 7/8 "  |
| 300 | 431,80 | 370 | 8     | 4     | 12    | 16 | 7/8 "  |
| 350 | 476,20 | 430 | 12    | 4     | 12    | 21 | 1"     |
| 400 | 539,70 | 482 | 12    | 4     | 16    | 22 | 1"     |
| 450 | 577,80 | 532 | 16    | 4     | 16    | 23 | 1 1/8" |
| 500 | 635    | 585 | 16    | 4     | 20    | 24 | 1 1/8" |
| 600 | 749,30 | 685 | 16    | 4     | 20    | 25 | 1 1/4" |

N (1)- N° of tapped holes    N (2)- N° of through holes    N (3)- N° of flange holes

## ORDERING GUIDE

| SERIES                | OPERATIONS                                  | BODY MATERIAL     | DN | SEAT MATERIAL       | BODY TYPE               | FLANGE DRILLING |
|-----------------------|---|-------------------|----|---------------------|-------------------------|-----------------|
| Example:<br>SK SERIES | V   | 12                |    | NR                  | W                       | PN-10           |
|                       | V → Handwheel r.s                           | 12 → Ductile iron |    | NR → NATURAL RUBBER | W → Semi Lugged (WAFER) | PN-10           |
|                       | VR → Handwheel r.s + Bevel Gearbox          |                   |    | VI → VITON          |                         | PN-16           |
|                       | B → Iso top flange r.s.                     |                   |    |                     |                         | ASA-150         |
|                       | BR → Iso top flange r.s. + Bevel Gearbox    |                   |    |                     |                         |                 |
|                       | M → Electric actuator r.s.                  |                   |    |                     |                         |                 |
|                       | MR → Electric actuator r.s. + Bevel Gearbox |                   |    |                     |                         |                 |
|                       | P → Quick closing lever                     |                   |    |                     |                         |                 |
|                       | N → D/A pneumatic actuator                  |                   |    |                     |                         |                 |
|                       | SE → S/A pneumatic actuator                 |                   |    |                     |                         |                 |
|                       | H → Oil hydraulic actuator                  |                   |    |                     |                         |                 |
|                       | VCH → Chain wheel r.s.                      |                   |    |                     |                         |                 |
|                       | VCHR → Chain wheel r.s. + Bevel Gearbox     |                   |    |                     |                         |                 |