

# Knife gate valve Series L2 25 to L2 95

Closing or regulating knife gate valve, direct bore, watertight in both ways.



## Options

- Others operating tools:
  - protecting cover - Série L2 95
  - square 30 - Série L2 25
  - lever - Série L2 33
  - chain wheel - Série L2 32
  - electric actuator - Séries L2 93-95
  - pneumatic or hydraulic jack - Série L2 31
  - headstock
  - extension spindle
  - triangular regulating orifice



## Alternatives

- EPDM seal (ACS) - Séries L2 40-41-95
- Operating screw
- Stainless steel blade Inox 316 Ti  
Séries L2 41-34
- Stainless steel nuts and bolts A4.
- Safety device.

## Description

- Easy mounting between flanges.
- Watertight in both ways.
- Direct bore no internal retention zone.
- Materials:
  - Cast iron body FGL 250.
  - Blade: stainless steel 304.
  - Operating nut: stainless steel 420.
  - Operating screw: brass.
  - Seal: NBR.
  - Bolts: stainless steel A2.
  - Blue epoxy coating 250 (GSK).
- Control by hand wheel.
- Clockwise closing.

## Assembly

- Little space required between flanges, conform to standard EN 558-1, basic series 20 (DIN 322, part 3 series K1).
- Assembly in chamber, on horizontal pipe or at the end of the pipe ; operate on the top.
- Assembly in other positions, please consult us.

## Characteristics

- Range: DN 50 to 600.
- Flanges ISO PN 10.
- Maximum operating pressure:
  - DN 50 to 350 - PFA 10
  - DN 400 to 600 - PFA 4
- Operating temperature: -20°C to +70°C.
- Max flow : 4 m/s.

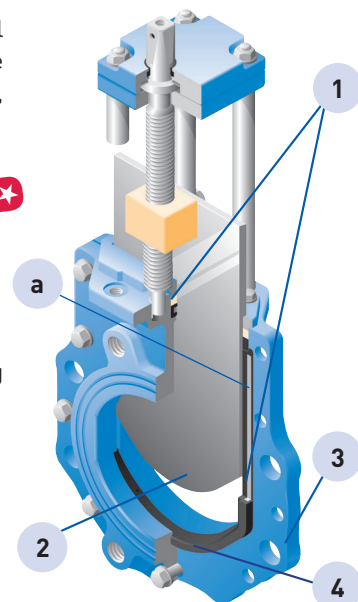
## Applications

- Waste water management, rough muds and sharp, feces...
- Paper industry and of cellulose: paper, sawdust pulp...
- Chemical industry: viscous pastes, colloids, pellets, water chemically not purified.
- Sugar industry: cleaning facility of beets, syrup, juice.
- Food industry: rinsing and cleaning facility, installation of transport of cereals, vegetables...
- Industry iron and steel, mining, water of slag, laundrette with coal...

## Description

### PERFECT TIGHTNESS

- **Adjustable cable sea:** The sealing partly higher is ensured by an external adjustable stuffing box of the DN 50 to 300, and intern of the DN 350 to 600, with PTFE cords, to limit the forces of friction and the driving torques.
- **Sealing element with steel reinforcement profiled, moulded elastomer:** The element of sealing is composed of a steel reinforcement profiled, moulded elastomer (rep.a – fig.I). The steel reinforcement ensures the guidance of the obturator, as well as a permanent pre-tensioning of the elastomer coating. The grooves located on the interior faces of the coating make it possible to obtain a hermetically-sealed behavior, thus guaranteeing a perfect side sealing.
- Peripheral sealing between two half bodies which allows an **easy maintenance and a perfect tightness.**
- Its robust and technical design makes it possible to have a **bidirectional sealing** whatever its type of assembly.



### EASY OPERATING

- The slightly bevelled blade enables destruction of elements of small sizes causing obstruction during the closing of the valve.

### FLANGE MOUNTING

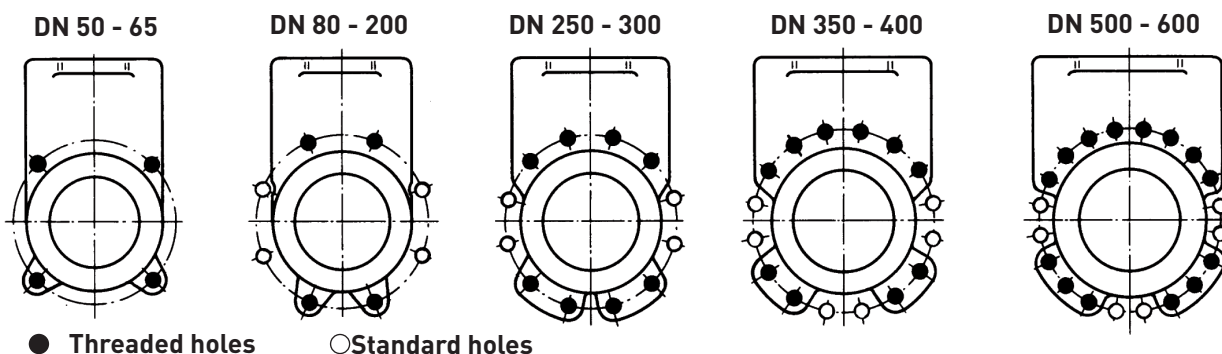
- Reduced square is required.

### NO RETENTION AREA

- Flat seal.
- The blade is totally guide into the body.

- The choice of materials and coating reduces the risk of corrosion: epoxy 250 µm, NBR seal, blade stainless steel 304.

## Flanges drilling



● Threaded holes ○ Standard holes

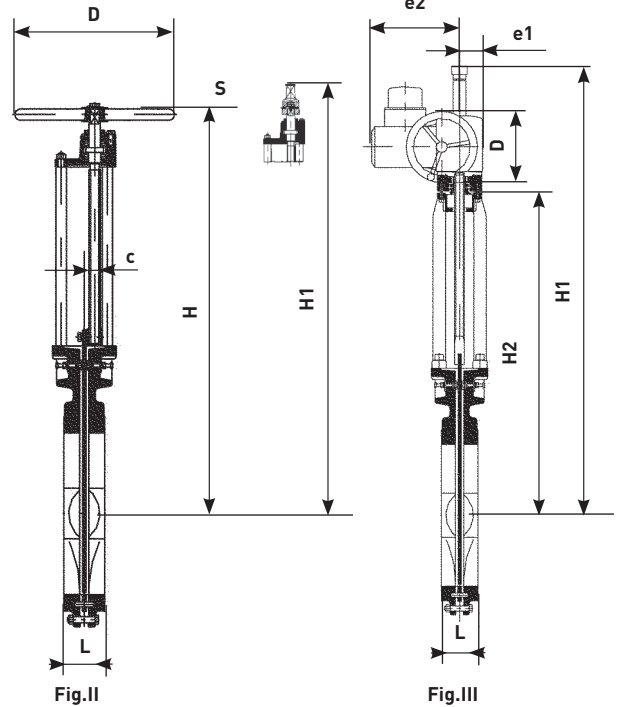
| DN  | Ø drilling | Ø flanges | Nb holes/ franges | Type holes |     | Ø Thread | Depth thread | Threated holes |        |                 |        |                    |        | Standard holes     |        |                  |        |
|-----|------------|-----------|-------------------|------------|-----|----------|--------------|----------------|--------|-----------------|--------|--------------------|--------|--------------------|--------|------------------|--------|
|     |            |           |                   | Threaded   | Std |          |              | Stud NFE27-135 |        | Nut H NFE25-401 |        | Screw H NF E25-112 |        | Screw H NF E25-112 |        | Nut H NF E25-401 |        |
|     |            |           |                   |            |     |          |              | Qty            | Length | Qty             | Length | Qty                | Length | Qty                | Length | Qty              | Length |
| 50  | 125        | 165       | 4                 |            |     | M16      | 10           | solution 1     |        | solution 2      |        |                    |        |                    |        |                  |        |
| 65  | 145        | 185       |                   |            |     |          |              | Qty            | Length | Qty             | Length | Qty                | Length | Qty                | Length | Qty              | Length |
| 80  | 160        | 200       |                   |            |     |          |              | M16x25         |        |                 |        | M16x25             |        |                    |        |                  |        |
| 100 | 180        | 220       | 8                 | 4          | M16 | 15       | 8            | M16x30         | 8      | M16             | 8      | M16x35             | 4      | M16x110            | M16    |                  |        |
| 125 | 210        | 250       |                   |            |     |          |              | M16x35         |        | M20             |        | M16x35             |        | M16x120            |        |                  |        |
| 150 | 240        | 285       |                   |            |     |          |              | M20x35         |        | M20             |        | M20x35             |        | M16x130            |        |                  |        |
| 200 | 295        | 340       | 12                | 8          | M20 | 16       | 16           | M20x40         | 16     | 16              | 16     | M20x40             | 4      | M20x130            | M20    |                  |        |
| 250 | 350        | 395       |                   |            |     |          |              | M20x45         |        |                 |        | M20x40             |        | M20x40             |        | M20x140          |        |
| 300 | 400        | 445       |                   |            |     |          |              | M20x45         |        |                 |        | M20x45             |        | M20x45             |        | M20x150          |        |
| 350 | 460        | 505       | 16                | 10         | M24 | 30       | 20           | M24x60         | 20     | 20              | 20     | M20x160            | 6      | M24x200            | M24    |                  |        |
| 400 | 515        | 565       |                   |            |     |          |              | M24x65         |        |                 |        | M24                |        | M24x60             |        | M24x200          |        |
| 500 | 620        | 670       |                   |            |     |          |              | M24x65         |        |                 |        | M27                |        | M24x65             |        | M24x220          |        |
| 600 | 725        | 780       | 20                | 14         | M27 | 55       | 28           | M27x80         | 28     | 28              | 28     | M27x250            | 6      | M27                |        |                  |        |

Stud's and screw's calculated length are based on:  
 - a wafer installation between steel welding necks, according standard ISO 7005-1, PN10.  
 - the use of flat flange gasket 3 mm thick, according standard NFE 29-900.

Please, refer to solution 1 to assemble the valve (threaded holes installation).

## Operating by wheel or square 30 - Series L2 25 Non rising stem (Fig. II)

| DN  | PFA bar | L mm | H mm | H1 mm | ØD  | Number of turn | S  | C    | Weight |
|-----|---------|------|------|-------|-----|----------------|----|------|--------|
| 50  | 10      | 43   | 323  | 365   | 200 | 12             | 14 | 19,5 | 10     |
| 65  | 10      | 46   | 348  | 390   | 200 | 16             | 14 | 19,5 | 11     |
| 80  | 10      | 46   | 378  | 420   | 200 | 20             | 14 | 19,5 | 13     |
| 100 | 10      | 52   | 416  | 460   | 250 | 25             | 17 | 22   | 17     |
| 125 | 10      | 56   | 456  | 500   | 250 | 31             | 17 | 22   | 20     |
| 150 | 10      | 56   | 509  | 553   | 250 | 30             | 19 | 25,5 | 26     |
| 200 | 10      | 60   | 600  | 654   | 300 | 40             | 19 | 25,5 | 39     |
| 250 | 10      | 68   | 713  | 768   | 300 | 50             | 19 | 32   | 64     |
| 300 | 10      | 78   | 832  | 891   | 400 | 60             | 24 | 35   | 93     |
| 350 | 10      | 78   | 919  | 976   | 400 | 70             | 24 | 26   | 135    |
| 400 | 4       | 102  | 1016 | 1073  | 400 | 80             | 24 | 26   | 165    |
| 500 | 4       | 127  | 1265 | 1324  | 500 | 84             | 27 | 35   | 255    |
| 600 | 4       | 154  | 1442 | 1502  | 500 | 100            | 27 | 35   | 370    |



## Operating by electric actuator - Series L2 93 Rising stem (Fig. III)

| DN  | PFA bar | L mm | H1 mm | H2 mm | e1 mm | e2 mm | ø D mm | Number of turn | Weight Kg | Actuator AUMA | Closing time (depending on RPM speed of actuator T/mn) 45 |
|-----|---------|------|-------|-------|-------|-------|--------|----------------|-----------|---------------|---|
| 50  | 10      | 43   | 599   | 311   | 62    | 237   | 140    | 12             | 32        | SA07.2        | 17  |
| 65  | 10      | 46   | 624   | 336   | 62    | 237   | 140    | 16             | 33        | SA07.2        | 22  |
| 80  | 10      | 46   | 654   | 366   | 62    | 237   | 140    | 20             | 35        | SA07.2        | 27  |
| 100 | 10      | 52   | 684   | 399   | 62    | 237   | 140    | 25             | 39        | SA07.2        | 33  |
| 125 | 10      | 56   | 727   | 439   | 62    | 237   | 140    | 31             | 42        | SA07.2        | 42  |
| 150 | 10      | 56   | 779   | 491   | 68    | 237   | 160    | 30             | 48        | SA07.6        | 40  |
| 200 | 10      | 60   | 879   | 591   | 68    | 237   | 160    | 40             | 61        | SA07.6        | 53  |
| 250 | 10      | 68   | 1089  | 712   | 80    | 237   | 160    | 50             | 88        | SA07.6        | 67  |
| 300 | 10      | 78   | 1198  | 821   | 80    | 237   | 160    | 60             | 112       | SA07.6        | 80  |
| 350 | 10      | 78   | 1305  | 808   | 65    | 247   | 200    | 58             | 160       | SA10.2        | 87  |
| 400 | 4       | 102  | 1405  | 908   | 65    | 247   | 200    | 80             | 207       | SA10.2        | 107   |
| 500 | 4       | 127  | 1715  | 1118  | 65    | 247   | 200    | 83             | 285       | SA10.2        | 111   |
| 600 | 4       | 154  | 2075  | 1322  | 90    | 285   | 315    | 100            | 459       | SA14.2        | 133   |

Other speeds, consult us

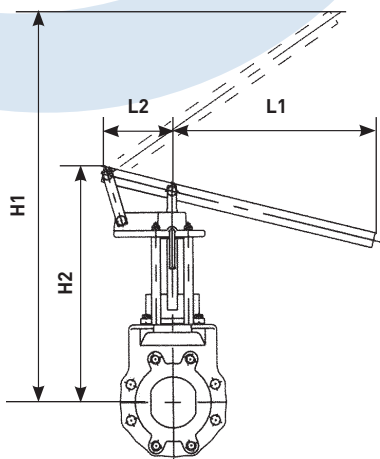
### Characteristics standard for electric actuator

- On/off duty standard AUMA SA.
- Supply voltage and frequencies 380/400 V - 3 phase AC 50 Hz.
- Speed 45 turns/minute.
- Base plate of form A.
- Car-controlling resistance of heating from 3 to 15 60-250 volts).
- Enclosure protection IP 68.
- Limit switching closing and the opening direction.
- Torque switching for positions closed/open actuators.
- Intermittent duty S2-15mn normalizes VDE 0530.
- Temperature of service: -25°C with +80°C.
- Corrosion protection KS.
- Disengageable wheel.

### Possible options on actuator

- Auma-matic (Am), Aumatic (AC).
- Additional safety device.
- Other supply voltages.
- Other operating speeds.
- Position indicator 4/20 mA 4 wire.
- Explosion protection.
- Actuator of regulation.

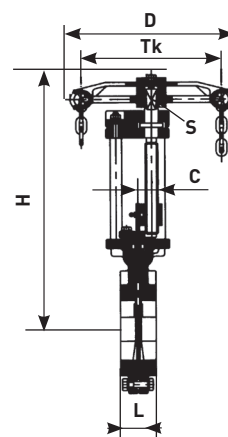
## Operating by lever - Series L2 33



| DN  | PFA | L  | H1   | H2  | L1   | L2  | Weight |
|-----|-----|----|------|-----|------|-----|--------|
| 50  | 2   | 43 | 568  | 336 | 520  | 80  | 10     |
| 65  | 2   | 46 | 667  | 370 | 590  | 90  | 11     |
| 80  | 2   | 46 | 741  | 408 | 650  | 100 | 13     |
| 100 | 2   | 52 | 889  | 458 | 850  | 130 | 17     |
| 125 | 2   | 56 | 1025 | 510 | 910  | 140 | 21     |
| 150 | 2   | 56 | 1204 | 564 | 980  | 150 | 29     |
| 200 | 2   | 60 | 1754 | 690 | 1137 | 153 | 41     |

## Operating by chain wheel - Series L2 32

Non rising stem



| DN  | PFA | L   | H    | Tk  | D   | Number of turn | S  | C    | Weight |
|-----|-----|-----|------|-----|-----|----------------|----|------|--------|
| 50  | 10  | 43  | 313  | 177 | 212 | 12             | 14 | 19,5 | 10     |
| 65  | 10  | 46  | 338  | 177 | 212 | 16             | 14 | 19,5 | 11     |
| 80  | 10  | 46  | 368  | 177 | 212 | 20             | 14 | 19,5 | 13     |
| 100 | 10  | 52  | 408  | 213 | 248 | 25             | 17 | 22,0 | 18     |
| 125 | 10  | 56  | 448  | 213 | 248 | 31             | 17 | 22,0 | 21     |
| 150 | 10  | 56  | 501  | 260 | 295 | 30             | 19 | 25,5 | 27     |
| 200 | 10  | 60  | 602  | 260 | 295 | 40             | 19 | 25,5 | 39     |
| 250 | 10  | 68  | 716  | 260 | 295 | 50             | 19 | 32,0 | 64     |
| 300 | 10  | 78  | 835  | 307 | 342 | 60             | 24 | 35,0 | 92     |
| 350 | 10  | 78  | 927  | 307 | 342 | 58             | 24 | 26,0 | 135    |
| 400 | 4   | 102 | 1024 | 307 | 342 | 80             | 24 | 26,0 | 165    |
| 500 | 4   | 127 | 1277 | 377 | 412 | 83             | 27 | 35,0 | 257    |
| 600 | 4   | 154 | 1455 | 377 | 412 | 100            | 27 | 35,0 | 371    |

## Operating by double-acting jack hydraulic and pneumatic - Series L2 31

| DN  | PFA | L<br>mm | H<br>mm | Size*<br>jack | D<br>mm | d1<br>DIN ISO 28 | Jack<br>Vol (l) | d2  | Entry pressure<br>Air / oil |     | Weight<br>Kg |
|-----|-----|---------|---------|---------------|---------|------------------|-----------------|-----|-----------------------------|-----|--------------|
|     |     |         |         |               |         |                  |                 |     | Min                         | Max |              |
| 50  | 10  | 43      | 444     | -             | 80      | G1/8             | 0,5             | 140 | 5                           | 10  | 13           |
| 65  | 10  | 46      | 484     | -             | 80      | G1/8             | 0,5             | 140 | 5                           | 10  | 14           |
| 80  | 10  | 46      | 536     | -             | 80      | G1/8             | 0,6             | 140 | 5                           | 10  | 19           |
|     |     |         |         | -             | 100     | G1/8             | 0,9             | 170 | 5                           | 10  | 21           |
| 100 | 10  | 52      | 588     | PV            | 100     | G1/8             | 1,1             | 170 | 5                           | 10  | 23           |
|     |     |         |         | GV            | 125     | G1/4             | 1,6             | 190 | 5                           | 10  | 28           |
| 125 | 10  | 56      | 653     | PV            | 100     | G1/8             | 1,2             | 170 | 6                           | 10  | 26           |
|     |     |         |         | GV            | 125     | G1/4             | 1,9             | 190 | 5                           | 10  | 32           |
| 150 | 10  | 56      | 756     | PV            | 125     | G1/4             | 2,4             | 190 | 6                           | 10  | 36           |
|     |     |         |         | GV            | 160     | G1/4             | 3,9             | 240 | 5                           | 10  | 46           |
| 200 | 10  | 60      | 911     | PV            | 160     | G1/4             | 4,7             | 240 | 8                           | 10  | 61           |
|     |     |         |         | GV            | 250     | G1/2             | 11,5            | 335 | 5                           | 10  | 81           |
| 250 | 10  | 68      | 1101    | PV            | 160     | G1/4             | 5,6             | 240 | 8                           | 10  | 84           |
|     |     |         |         | GV            | 250     | G1/2             | 13,6            | 335 | 5                           | 10  | 107          |
| 300 | 10  | 78      | 1260    | PV            | 160     | G1/4             | 6,4             | 240 | 8                           | 10  | 116          |
|     |     |         |         | GV            | 250     | G1/2             | 15,6            | 335 | 5                           | 10  | 140          |
| 350 | 10  | 78      | 1296    | PV            | 250     | G1/2             | 17,5            | 335 | 8                           | 10  | 165          |
| 400 | 4   | 102     | 1446    | PV            | 250     | G1/2             | 19,8            | 335 | 8                           | 10  | 210          |
| 500 | 4   | 127     | 1756    | PV            | 250     | G1/2             | 27,0            | 335 | 8                           | 10  | 280          |
| 600 | 4   | 154     | 2095    | PV            | 300     | G1/2             | 38,0            | 395 | 8                           | 10  | 475          |

\* LJ: little jack BJ: big jack

## Materials

- Attach connection of the jack:
  - steel DN 50 to 250
  - cast iron FGL 250 DN 300 to 600.
- Melts of the jack: cast iron FGL 250.
- Body of the jack: treated aluminium.
- Stem of the jack: stainless steel.
- Segments of the piston: NBR.
- Ties: steel.
- Cover: cast iron FGL.

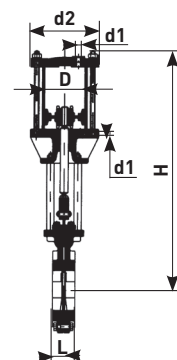
Little jack: operating pressure  $\leq$  PN 5.  
Big jack: operating and sewage pressure  $\geq$  PN 5.

**Note:** for the same DN, a jack of small diameter is advised for a use out of raw waters, and a jack of large diameter for a use out of worn water.

## BAYARD

Tél. + 33 (0)4 37 44 24 24 - www.bayard.fr

BAYARD - Series L2 25 to L2 95 - SVAT07-01-157D-EN



The technical data and performance can be modified without prior notice depending on the technical evolution.