

# KNIFE GATE VALVE CAST IRON BODY

TECHNICAL PASSPORT

## KNIFE GATE VALVE UNDER SILO WITH DOUBLE ACTING PNEUMATIC ACTUATOR CAST IRON BODY - BETWEEN FLANGES PN10

VGS 3400-03

### APPLICATION

The TECOFI slide gate valve under silo is particularly suitable for assembly under silo.

**Areas of use:** chemical plants, industry, cement, sugar, pneumatic transport, storage.



**Fluides:** usage exclusif pour granulés, produits pulvérulents et cristallisants.

### GENERAL CHARACTERISTICS

**Range:** from DN150 to DN400.

Knife gate valve under silo with double acting pneumatic actuator. One-piece molded body. Unidirectional sealing: direction of installation is indicated by an arrow on the body. Installation between flanges ISO PN10. Face to face more important than a conventional knife gate valve.

Internal parts designed to ensure easy passage for products containing particules.

The gate is guided in the body using fingers which considerably reduce friction and allow the product to descend without accumulating in the body. The attack of the gate is straight and its end chamfered, which facilitates the penetration into product and guarantes the closing of the valve without blocking. The polishing of its faces as standard ensures soft contact with the seals. The packing gland made of very resitant ductile iron avoids any risk of breaking. The stuffing box packing and O-ring are made of the same material as the seat gasket, this fact gives more elasticity to the assembly and contributes to reduce the maneuvering forces. The support plates are made of profiled sheet metal and preformed from DN150 to DN300 for mounting accessories or kits. At the end of maneuvering the valve has full bore. The blowing holes in the body are provided as standard to eject compressed air of low pressure (<1 bar) and thus prevent clogging and any accumulation of product.



### STANDARDS

|                     |   |          |          |             |          |          |
|---------------------|---|----------|----------|-------------|----------|----------|
| <b>Design</b>       | Manufacture according to the requirements of the European directive n° 2014/68/UE «Equipment under pressure» : modulate H.<br>In option: product conform to European directive ATEX «ATmosphère EXplosive» n° 2014/34/UE. |          |          |             |          |          |
| <b>Face to face</b> | Face to face dimension according to TECOFI standard   |          |          |             |          |          |
| <b>Connection</b>   | Mounting between flanges in accordance with EN1092-2 and ISO7005-1 : ISO PN10   |          |          |             |          |          |
| <b>Tests</b>        | Pressure test according to standards EN12266-1, DIN 3230, BS 5154 and ISO 5208.   |          |          |             |          |          |
|                     | DN  | Body     | Seat     | DN          | Body     | Seat     |
|                     | DN150 :   | 3.75 bar | 2.75 bar | DN250-300 : | 2.25 bar | 1.65 bar |
| DN200 :             | 3 bar   | 2.2 bar  | DN400 :  | 1.95 bar    | 1.43 bar |          |

### PRODUCT APPROVALS



### Tecofi France

83 rue Marcel Mérieux - 69960 Corbas  
Tél. +33 (0)4 72 79 05 79 - Fax. +33 (0)4 78 90 19 19  
E-mail : sales@tecofi.fr - [www.tecofi.fr](http://www.tecofi.fr)



## KNIFE GATE VALVE CAST IRON BODY

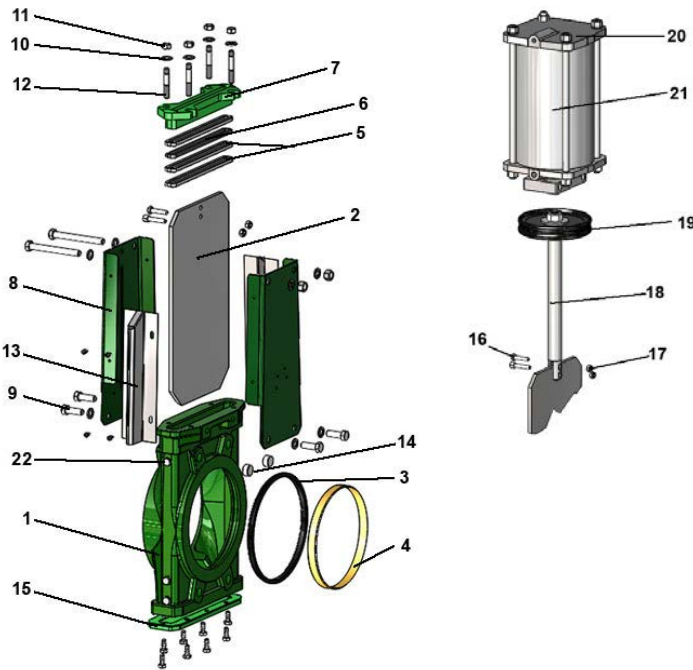
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#### CONSTRUCTION

The valves are coated with epoxy paint to protect them against corrosion

| Component         | Coating                              |
|-------------------|--------------------------------------|
| Body (1)          | Epoxy powder RAL 6005<br>150 microns |
| Support plate (8) | Epoxy liquid RAL 6005<br>70 microns  |
| Packing gland (7) | Epoxy liquid RAL 6005<br>70 microns  |



| Pos. | Q-ty | Description             | Material                     | Equivalences |                |                |
|------|------|-------------------------|------------------------------|--------------|----------------|----------------|
|      |      |                         |                              | DIN          | ASTM           | BS             |
| 1    | 1    | Body                    | Cast iron EN-GJL-250         | GG25         | A48 class 40B  | 1452 Grade 250 |
| 2    | 1    | Gate                    | Stainless steel X5CrNi 18-10 | X5CrNi 18 10 | A 182 AISI 304 | 1449-2 304 S15 |
| 3    | 1    | Gasket                  | NBR                          |              |                | NBR            |
| 4    | 1    | Frette                  | Stainless steel X5CrNi 18-10 | X5CrNi 18 10 | A 182 AISI 304 | 1449-2 304 S15 |
| 5    | 2    | Packing                 | PTFE                         |              |                |                |
| 6    | 1    | O ring                  | NBR                          |              |                | NBR            |
| 7    | 1    | Packing gland           | Fonte ductile EN-GJS-400-15  | GGG40        | A536 65-45-12  | 1563 EN-JS1030 |
| 8    | 2    | Support plate           | Steel                        |              |                |                |
| 9    | 4*   | Screw                   | Stainless steel A2-70        |              |                |                |
| 10   | 4*   | Washer                  | Stainless steel A2-70        |              |                |                |
| 11   | 4*   | Nut                     | Stainless steel A2-70        |              |                |                |
| 12   | 4*   | Tie rod                 | Stainless steel A2-70        |              |                |                |
| 13   | 2    | Protection cap          | Stainless steel X5CrNi 18-10 | X5CrNi 18 10 | A 182 AISI 304 | 1449-2 304 S15 |
| 14   | 1    | Support guide           | PTFE                         |              |                |                |
| 15   | 1    | Cover                   | Fonte EN-GJL-250             | GG25         | A48 class 40B  | 1452 Grade 250 |
| 16   | 2    | Screw                   | Stainless steel A2-70        |              |                |                |
| 17   | 1    | Nut                     | Stainless steel A2-70        |              |                |                |
| 18   | 4    | Stem                    | Stainless steel 13% Cr       | X12CR13      | AISI 410       |                |
| 19   | 1    | Piston                  |                              |              |                |                |
| 20   | 1    | Protection plate        | Stainless steel X5CrNi 18-10 | X5CrNi 18 10 | A 182 AISI 304 | 1449-2 304 S15 |
| 21   | 1    | Pneumatic actuator      | Aluminium                    |              |                |                |
| 22   | 4    | Plug of blowing orifice | Stainless steel A2-70        |              |                |                |

\* - 8 for DN400;

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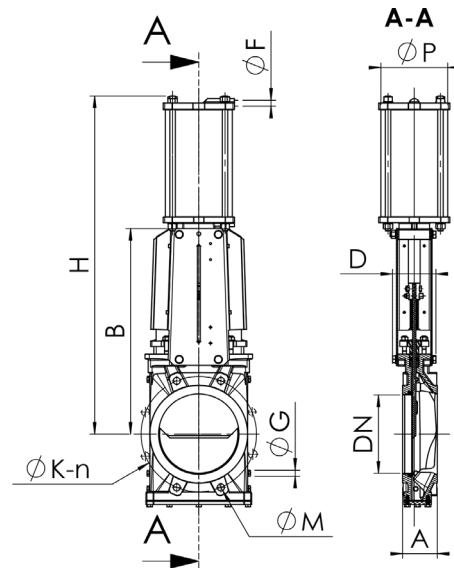


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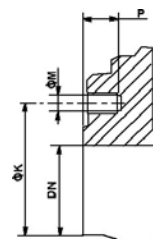
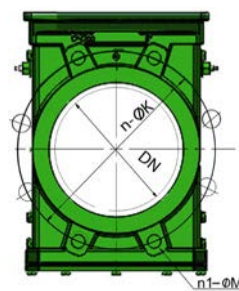
### DIMENSIONS



| DN  |      | A   | B   | C   | D   | Ø F  | Ø P | H    | Weight (kg) |
|-----|------|-----|-----|-----|-----|------|-----|------|-------------|
| mm  | inch |     |     |     |     |      |     |      |             |
| 150 | 6"   | 76  | 420 | 220 | 93  | 1/4" | 125 | 692  | 23          |
| 200 | 8"   | 89  | 526 | 275 | 108 | 1/4" | 160 | 859  | 31.3        |
| 250 | 10"  | 114 | 627 | 340 | 108 | 1/4" | 200 | 1017 | 65          |
| 300 | 12"  | 114 | 715 | 380 | 108 | 1/4" | 200 | 1156 | 81          |
| 400 | 16"  | 140 | 945 | 502 | 290 | 3/8" | 250 | 1491 | 177         |

Dimension A - face to face according to standard TECOFI

### MOUNTING



Body details

| DN  |      | n  | n <sub>1</sub> -ØM | P  | ØK  |
|-----|------|----|--------------------|----|-----|
| mm  | inch |    |                    |    |     |
| 150 | 6"   | 8  | 4XM20              | 10 | 240 |
| 200 | 8"   | 8  | 4XM20              | 12 | 295 |
| 250 | 10"  | 12 | 8XM20              | 12 | 350 |
| 300 | 12"  | 12 | 8XM20              | 19 | 400 |
| 400 | 16"  | 16 | 12XM24             | 24 | 515 |

n - total number of holes  
n<sub>1</sub> - number of threaded holes

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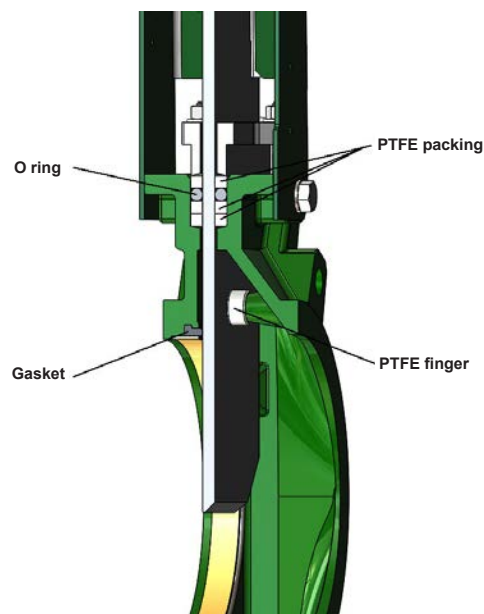
## WORKING CONDITIONS

|                                 |           |
|---------------------------------|-----------|
| Maximum working pressure: DN150 | : 2.5 bar |
| DN200                           | : 2 bar   |
| DN250-300                       | : 1.5 bar |
| DN400                           | : 1.3 bar |

Maximum working temperature : -10°C / +80°C (standard tightness)

 The above mentioned pressures are only valid if the direction of assembly indicated by the arrow on the valves is observed.

## Tightness



The photographs and technical art works are not contractual. The specifications of the presented products are open to modifications without previous advice.

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