

KNIFE GATE VALVE DUCTILE IRON BODY

TECHNICAL PASSPORT

KNIFE GATE VALVE WITH DOUBLE ACTING PNEUMATIC ACTUATOR DUCTILE IRON BODY - BETWEEN FLANGES PN10

VG 4400-03EA

APPLICATION

The knife gate valve is particularly suitable for the most difficult applications.

Area of use: water distribution.



Fluids: drinking water.

GENERAL CHARACTERISTICS

Range: from DN50 to DN600.

- Knife Gate Valve on/off or regulation with rising stem.
- Molded monobloc body
- Unidirectional water tightness: Flow direction indicated on the body with an arrow.
- Installation between flanges ISO PN10.
- Small retention zone.
- Gate with a beveled cutting edge guided in the body with little backlash.
- Guaranteed closure, without risk of blockage.
- Standard polished gate, soft contact with the gaskets.
- Very resistant ductile iron packing flange avoids risks of breaks.
- Operating force reduced thanks to the elasticity of the gaskets.
- Pre-formed profiled sheet metal support plates from DN50 to DN300 for accessory or kit mounting.
- Full flow when fully opened, ensuring a high flow rate with low head loss.
- Flow regulation possible for pasty or abrasive fluids with installation of a deflector.

STANDARDS

| | | | | | | |
|---------------------|--|---------|-------------|------------|----------|---------|
| Design | Manufacture according to the requirements of the European directive n° 2014/68/UE «Equipment under pressure» : modulate H. | | | | | |
| | In option: product conform to European directive ATEX «ATmosphère EXplosive» n° 2014/34/UE. | | | | | |
| Face to face | Face to face dimension according to TECOFI standard | | | | | |
| Connection | Mounting between flanges in accordance with EN1092-2 and ISO 7005-1 : ISO PN10 | | | | | |
| Tests | Pressure test according to standards EN12266-1, DIN 3230, BS 5154 and ISO 5208. | | | | | |
| | DN | Body | Seat | DN | Body | Seat |
| | DN50-250 : | 15 bar | 11 bar | DN300-450: | 10.5 bar | 7.7 bar |
| DN500-600: | 6 bar | 4.4 bar | DN700-1200: | 3 bar | 2.2 bar | |

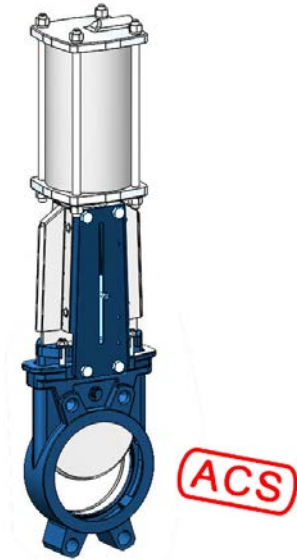
PRODUCT APPROVALS



Sur demande



Attestation of health conformity n° 20 ACC LY 445



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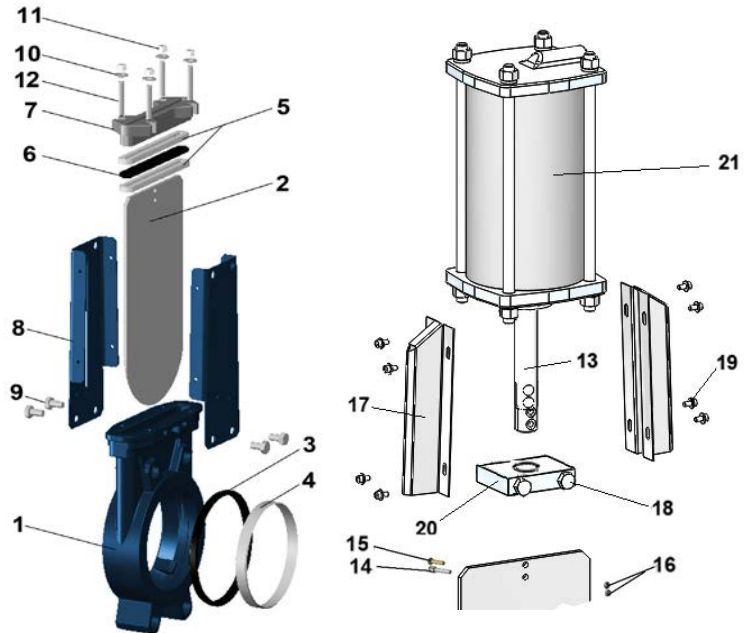
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CONSTRUCTION

Coatings applied on the valve :

| Component | Coating |
|-------------------|--------------------------------------|
| Body (1) | Epoxy powder RAL 5015 150 microns |
| Support plate (8) | Liquid epoxy RAL 5015 70 microns |
| Packing gland (7) | |



| Pos. | Q-ty | Description | Material | Equivalences | | |
|------|------|--------------------|------------------------------|--------------|------------------|----------------|
| | | | | DIN | ASTM | BS |
| 1 | 1 | Body | Ductile iron EN-GJS-500-7 | GGG 50 | A536 65-70-50-05 | 1563 EN-JS1050 |
| 2 | 1 | Gate | Stainless steel X5CrNi 18-10 | X5CrNi 18 10 | A 182 AISI 304 | 1449-2 304 S15 |
| 3 | 1 | Seat gasket | EPDM ACS | | | |
| 4 | 1 | Support ring | Stainless steel X5CrNi 18-10 | X5CrNi 18 10 | A 182 AISI 304 | 1449-2 304 S15 |
| 5 | 2 | Packing | LATTYflon 3206 AL | | | |
| 6 | 1 | O-Ring | EPDM ACS | | | |
| 7 | 1 | Packing gland | Ductile iron EN-GJS-400-15 | GGG 40 | 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 | 1 | Stem | Stainless steel 13% Cr | X12Cr13 | AISI 410 | |
| 14 | 1 | Detection screw | Stainless steel X5CrNi 18-10 | X5CrNi 18 10 | A 182 AISI 304 | 1449-2 304 S15 |
| 15 | 1 | Screw | Stainless steel A2-70 | | | |
| 16 | 2 | Nut | Stainless steel X5CrNi 18-10 | X5CrNi 18 10 | A 182 AISI 304 | 1449-2 304 S15 |
| 17 | 1 | Protection plate | Stainless steel X5CrNi 18-10 | X5CrNi 18 10 | A 182 AISI 304 | 1449-2 304 S15 |
| 18 | 4 | Screw | Stainless steel A2-70 | | | |
| 19 | 1 | Screw | Stainless steel A2-70 | | | |
| 20 | 1 | Support nut | Zinc plated steel | | | |
| 21 | 1 | Pneumatic actuator | Aluminium | | | |

* - 8 for DN350-400; ** - 12 for DN450-900 and 16 for DN1000-1200

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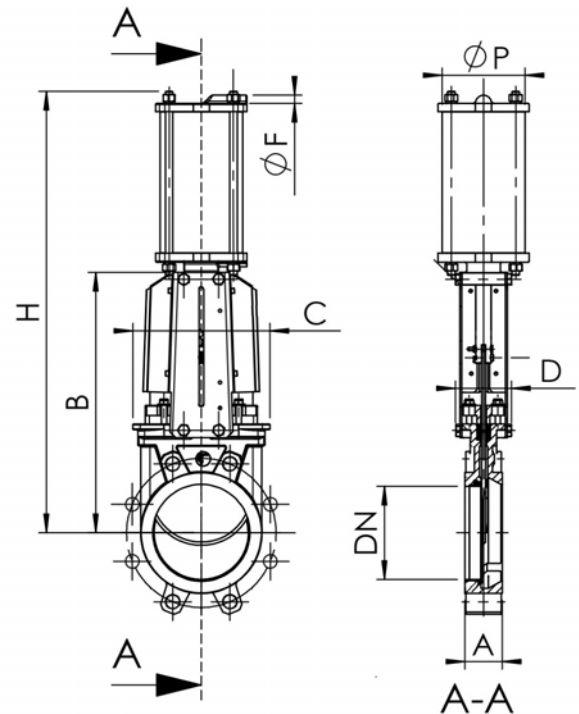
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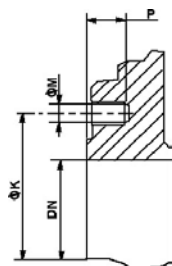
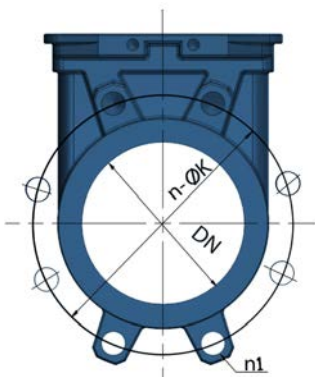
DIMENSIONS

| DN | | A | B | C | D | Ø F | Ø P | H | Weight (kg) |
|------|-------|-----|------|------|-----|------|-----|------|-------------|
| mm | inch | | | | | | | | |
| 50 | 2" | 40 | 240 | 124 | 83 | 1/4" | 80 | 412 | 7,5 |
| 65 | 2"1/2 | 40 | 265 | 139 | 83 | 1/4" | 80 | 458 | 7.8 |
| 80 | 3" | 50 | 29*0 | 154 | 83 | 1/4" | 80 | 502 | 804 |
| 100 | 4" | 50 | 335 | 174 | 83 | 1/4" | 100 | 562 | 12.5 |
| 125 | 5" | 50 | 373 | 189 | 93 | 1/4" | 125 | 642 | 16.4 |
| 150 | 6" | 60 | 424 | 220 | 93 | 1/4" | 125 | 718 | 205 |
| 200 | 8" | 60 | 533 | 275 | 108 | 1/4" | 160 | 882 | 35.8 |
| 250 | 10" | 70 | 625 | 326 | 108 | 1/4" | 200 | 1044 | 52 |
| 300 | 12" | 70 | 732 | 380 | 108 | 1/4" | 200 | 1164 | 72 |
| 350 | 14" | 96 | 835 | 438 | 290 | 3/8" | 250 | 1362 | 129 |
| 400 | 16" | 100 | 945 | 494 | 290 | 3/8" | 250 | 1542 | 144 |
| 450 | 18" | 106 | 1040 | 547 | 290 | 3/8" | 250 | 1677 | 177 |
| 500 | 20" | 110 | 1150 | 613 | 290 | 1/2" | 320 | 1815 | 268 |
| 600 | 24" | 110 | 1354 | 716 | 290 | 1/2" | 320 | 2130 | 351 |
| 700 | 28" | 110 | 1540 | 835 | 320 | 1/2" | 426 | 2488 | 556 |
| 800 | 32" | 110 | 1750 | 972 | 320 | 1/2" | 426 | 2798 | 679 |
| 900 | 36" | 110 | 1990 | 1041 | 320 | 1/2" | 538 | 3162 | 804 |
| 1000 | 40" | 110 | 2195 | 1152 | 320 | 1/2" | 538 | 3452 | 1053 |
| 1200 | 48" | 150 | 2390 | 1255 | 400 | 1/2" | 538 | 4048 | - |



Dimension A - face to face according to TECOFI standard

MOUNTING



Body details

| DN | | Maximum pressure (bar) | n | n1-ØM | P | ØK |
|------|-------|------------------------|----|--------|----|------|
| mm | inch | | | | | |
| 50 | 2" | 10 | 4 | 4xM16 | 8 | 125 |
| 65 | 2"1/2 | 10 | 4 | 4xM16 | 8 | 145 |
| 80 | 3" | 10 | 8 | 4xM16 | 9 | 160 |
| 100 | 4" | 10 | 8 | 4xM16 | 9 | 180 |
| 125 | 5" | 10 | 8 | 4xM16 | 9 | 210 |
| 150 | 6" | 10 | 8 | 4XM20 | 10 | 240 |
| 200 | 8" | 10 | 8 | 4XM20 | 12 | 295 |
| 250 | 10" | 10 | 12 | 8XM20 | 12 | 350 |
| 300 | 12" | 7 | 12 | 8XM20 | 19 | 400 |
| 350 | 14" | 7 | 16 | 10XM20 | 20 | 460 |
| 400 | 16" | 7 | 16 | 10XM24 | 24 | 515 |
| 450 | 18" | 7 | 20 | 14XM24 | 24 | 565 |
| 500 | 20" | 4 | 20 | 14XM24 | 24 | 620 |
| 600 | 24" | 4 | 20 | 14XM27 | 24 | 725 |
| 700 | 28" | 2 | 24 | 16XM27 | 29 | 840 |
| 800 | 32" | 2 | 24 | 16XM30 | 29 | 950 |
| 900 | 36" | 2 | 28 | 20XM30 | 40 | 1050 |
| 1000 | 40" | 2 | 28 | 20XM33 | 40 | 1160 |
| 1200 | 48" | 2 | 32 | 24XM36 | 40 | 1380 |

n- total number of holes
n1- number of threaded holes



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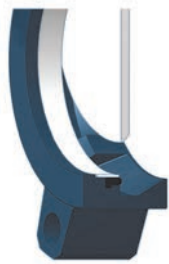
WORKING CONDITIONS

Maximum working pressure : DN50-250 : 10 bar
 DN 300-450 : 7 bar
 DN500-600 : 4 bar
 DN700-1200 : 2 bar

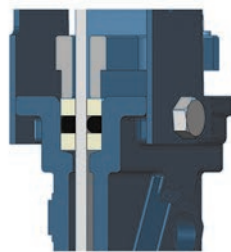
Maximum working temperature : -10°C / +80°C

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

Upstream/downstream tightness



Packing tightness



FLOWS

Flow rates of valves under different differential pressure (m³/h)

| DN | | 0.2 bar | 0.4 bar | 0.6 bar | 0.8 bar | 1.0 bar |
|------|--------|---------|---------|---------|---------|---------|
| mm | inch | | | | | |
| 50 | 2" | 93 | 134 | 165 | 185 | 206 |
| 65 | 2 1/2" | 129 | 180 | 213 | 268 | 309 |
| 80 | 3" | 191 | 309 | 371 | 422 | 494 |
| 100 | 4" | 443 | 618 | 721 | 824 | 927 |
| 125 | 5" | 700 | 927 | 1133 | 1339 | 1545 |
| 150 | 6" | 927 | 1339 | 1545 | 1906 | 2060 |
| 200 | 8" | 1597 | 2369 | 2987 | 3399 | 4017 |
| 250 | 10" | 2472 | 3502 | 4429 | 5150 | 5665 |
| 300 | 12" | 4120 | 5665 | 6798 | 7828 | 8755 |
| 350 | 14" | 5335 | 7372 | 8730 | 9700 | 11640 |
| 400 | 16" | 6693 | 9312 | 11640 | 13580 | 15520 |
| 450 | 18" | 8342 | 12610 | 14550 | 16490 | 18430 |
| 500 | 20" | 9700 | 14550 | 17460 | 19400 | 22310 |
| 600 | 24" | 14550 | 19400 | 25220 | 29100 | 33950 |
| 700 | 28" | 17460 | 29100 | 36860 | 42680 | 48500 |
| 800 | 32" | 25220 | 38800 | 48500 | 52380 | 58200 |
| 900 | 36" | 34920 | 50440 | 61110 | 67900 | 77600 |
| 1000 | 40" | 46560 | 62080 | 77600 | 87300 | 97000 |
| 1200 | 48" | 62080 | 87300 | 106700 | 121250 | 145500 |

The column of the table under 1 bar gives the values of the Kvs of the valves.

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