

Gate Valve

ECOLINE SP/SO

PN 10/16/25
DN 40-600
Metal-seated
Bolted Bonnet
Flanged Ends

Type Series Booklet



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Type Series Booklet ECOLINE SP/SO

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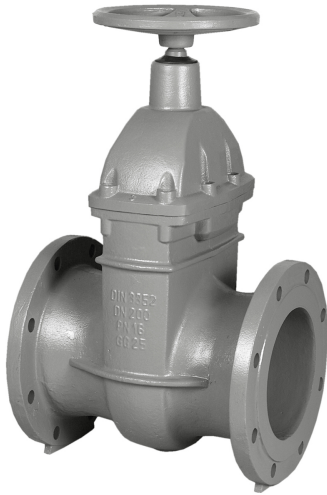
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Gate Valves

Gate Valves to DIN/EN with Bolted Bonnet

ECOLINE SP/SO



Main applications

- Domestic water supply
- Air-conditioning systems
- Cooling circuits
- Hot-water heating systems
- Water treatment
- Water supply systems
- District heating

Fluids handled

- Cooling water
- Heating water
- High-temperature hot water
- Service water

Operating data

Operating properties

| Characteristic | Value |
|------------------------------|--|
| Nominal pressure | PN 10/16/25 |
| Nominal size | DN 40-600 |
| Max. permissible pressure | 16 bar (ECOLINE SO) 25 bar (ECOLINE SP) |
| Max. permissible temperature | 110 °C |

Selection as per pressure/temperature ratings (⇒ Page 4)

Body materials

Overview of available materials

| Material | Material number | Temperature limit |
|-----------------------|-----------------|-------------------|
| ECOLINE SP (PN 10/16) | | |
| EN-GJL-250 | 5.1301 | +110 °C |
| ECOLINE SP (PN 25) | | |
| EN-GJS-400-15 | 5.3106 | +110 °C |
| ECOLINE SO | | |
| EN-GJL-250 | 5.1301 | +110 °C |

Design details

Design

- Gate valve to UNI EN 1171
- ECOLINE SO with oval body
- ECOLINE SP with flat body
- Maintenance-free stem seal with EPDM O-ring
- Tested to EN 12266-1
- Bolted bonnet
- Internal stem thread
- Rotating stem
- Single-piece wedge

Variants

- Larger nominal sizes up to DN 1600
- Gearboxes
- Electric actuators

Related documents

- Operating manual V 020625/6

Purchase order specifications

1. Type
2. Nominal pressure
3. Nominal size
4. Variants
5. Number of type series booklet

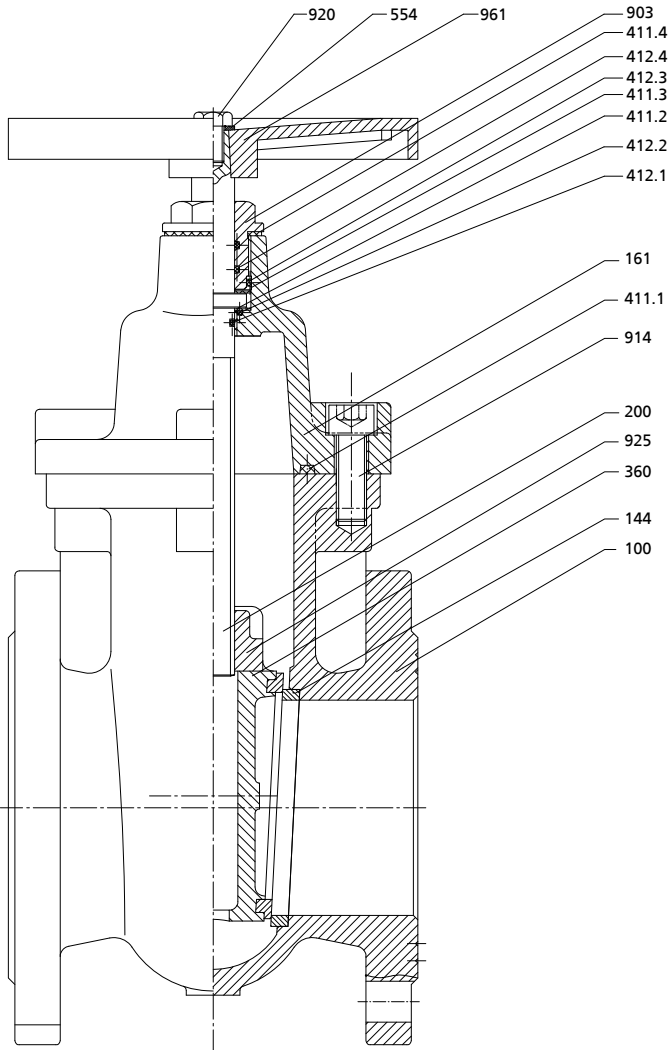
1) Static load

Pressure/temperature ratings

Permissible operating pressures in bar at temperatures in °C

| Nominal pressure | Nominal size | Permissible operating pressures ¹⁾ |
|------------------|--------------|---|
| PN | DN | Up to +110 °C |
| 10 | 40-600 | 10,0 |
| 16 | 40-300 | 16,0 |
| 25 | 40-300 | 25,0 |

Materials



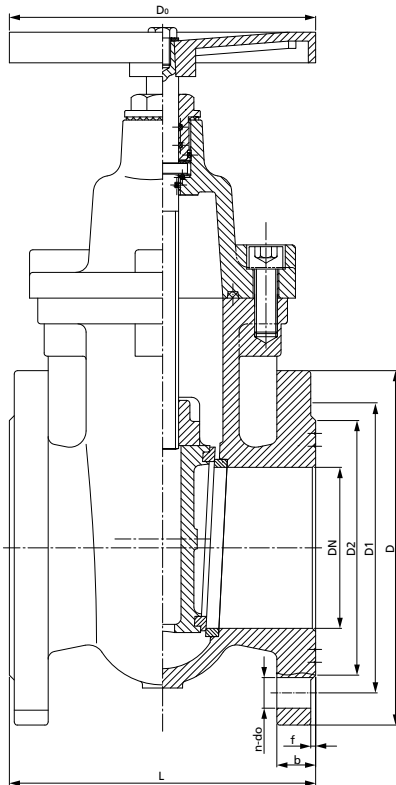
Overview of available materials

| Part No. | Description | Material | Material number | Note |
|----------|-------------|-----------------|-----------------|--------------------|
| 100 | Body | EN-GJL-250 | 5.1301 | ECOLINE SP (PN 16) |
| | | EN-GJS-400-15 | 5.3106 | ECOLINE SP (PN 25) |
| | | EN-GJL-250 | 5.1301 | ECOLINE SO |
| 144 | Seat | Cast brass | ZCuZn40Pb2 | ECOLINE SP (PN 16) |
| | | Stainless steel | | ECOLINE SP (PN 25) |
| | | Cast brass | ZCuZn40Pb2 | ECOLINE SO |
| 360 | Wedge | EN-GJL-250 | 5.1301 | ECOLINE SP (PN 16) |
| | | EN-GJS-400-15 | 5.3106 | ECOLINE SP (PN 25) |
| | | EN-GJL-250 | 5.1301 | ECOLINE SO |
| 925 | Stem nut | Cast brass | ZCuZn40Pb2 | |
| 200 | Stem | Stainless steel | 2Cr13 | |

| Part No. | Description | Material | Material number | Note |
|----------|-------------------------------|---------------|-----------------|--------------------|
| 914 | Hexagon socket head cap screw | Steel | RSt37-2 | |
| 411.1 | Sealing element | EPDM | | |
| 161 | Bonnet | EN-GJL-250 | 5.1301 | ECOLINE SP (PN 16) |
| | | EN-GJS-400-15 | 5.3106 | ECOLINE SP (PN 25) |
| | | EN-GJL-250 | 5.1301 | ECOLINE SO |
| 412.1 | O-ring | EPDM | | |
| 412.2 | O-ring | EPDM | | |
| 411.2 | Back seat | PTFE | | |
| 411.3 | Back seat | PTFE | | |
| 412.3 | O-ring | EPDM | | |
| 412.4 | O-ring | EPDM | | |
| 411.4 | Sealing element | EPDM | | |
| 903 | Screw plug | EN-GJL-250 | 5.1301 | ECOLINE SP (PN 16) |
| | | EN-GJS-400-15 | 5.3106 | ECOLINE SP (PN 25) |
| | | EN-GJL-250 | 5.1301 | ECOLINE SO |
| 961 | Handwheel | EN-GJL-250 | 5.1301 | |
| 554 | Washer | Steel | RSt37-2 | |
| 920 | Hexagon nut | Steel | RSt37-2 | |

Dimensions

Dimensions/weights ECOLINE SP



Dimensions in mm

| PN | DN | L | D ₀ | D | D1 | D2 | b | f | n | do | [kg] |
|-------|-----|-----|----------------|-----|-----|-----|----|----|----|-------|-------|
| 10/16 | 50 | 150 | 160 | 165 | 125 | 102 | 20 | 3 | 4 | 19 | 13,9 |
| | 65 | 170 | 160 | 185 | 160 | 122 | 20 | 3 | 4 | 19 | 16,5 |
| | 80 | 180 | 160 | 200 | 160 | 135 | 22 | 3 | 8 | 19 | 21,4 |
| | 100 | 190 | 200 | 220 | 180 | 158 | 24 | 3 | 8 | 19 | 28,2 |
| | 125 | 200 | 250 | 250 | 210 | 188 | 26 | 3 | 8 | 19 | 38,3 |
| | 150 | 210 | 250 | 285 | 240 | 212 | 26 | 3 | 8 | 23 | 49,1 |
| 16 | 200 | 230 | 250 | 340 | 295 | 268 | 26 | 3 | 12 | 23 | 76,1 |
| 10 | 200 | 230 | 250 | 340 | 295 | 268 | 26 | 3 | 8 | 23 | 76,1 |
| | 250 | 250 | 395 | 395 | 350 | 320 | 28 | 3 | 12 | 23 | 106,0 |
| | 300 | 270 | 445 | 445 | 400 | 370 | 30 | 4 | 12 | 23 | 145,0 |
| | 350 | 290 | 320 | 505 | 460 | 430 | 26 | 4 | 16 | 22 | 214,0 |
| | 400 | 310 | 320 | 565 | 515 | 482 | 28 | 4 | 16 | 26 | 308,0 |
| | 500 | 350 | 630 | 670 | 620 | 585 | 30 | 4 | 20 | 26 | 432,0 |
| 25 | 600 | 390 | 630 | 780 | 725 | 685 | 30 | 5 | 20 | 30 | 667,0 |
| | 50 | 150 | 160 | 165 | 125 | 102 | 20 | 3 | 4 | 18 | 13,3 |
| | 65 | 170 | 160 | 185 | 145 | 122 | 20 | 3 | 8 | 18 | 16,1 |
| | 80 | 180 | 160 | 200 | 160 | 138 | 22 | 3 | 8 | 18 | 20,2 |
| | 100 | 190 | 200 | 235 | 190 | 158 | 24 | 3 | 8 | 22 | 39,3 |
| | 125 | 200 | 250 | 270 | 220 | 188 | 26 | 3 | 8 | 26 | 38,3 |
| | 150 | 210 | 250 | 300 | 250 | 212 | 26 | 3 | 8 | 26 | 50,4 |
| | 200 | 230 | 250 | 360 | 310 | 268 | 26 | 3 | 12 | 26 | 77,3 |
| | 250 | 250 | 320 | 425 | 370 | 320 | 28 | 3 | 12 | 30 | 98,1 |
| 300 | 270 | 320 | 485 | 430 | 378 | 30 | 4 | 12 | 30 | 149,0 | |

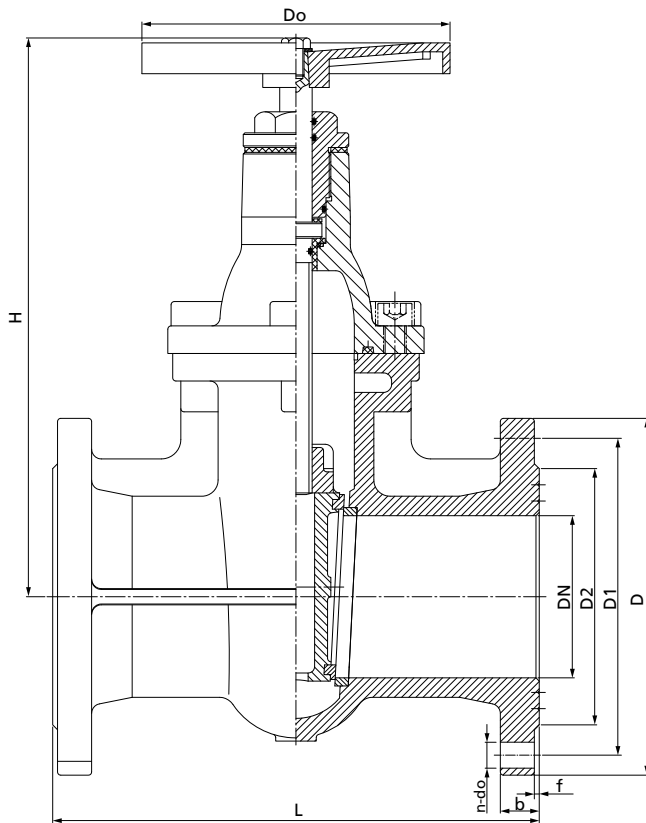
Mating dimensions – Standards

Face-to-face EN 558-1/14

lengths:

Flanges: DIN EN 1092-2

Dimensions/weights ECOLINE SO



Dimensions in mm

| PN | DN | L | H | D ₀ | D | D1 | D2 | b | f | n | do | [kg] |
|-----|-----|-----|-----|----------------|-----|-----|-----|----|----|----|-------|-------|
| 10 | 40 | 240 | 230 | 200 | 150 | 110 | 88 | 18 | 3 | 4 | 18 | 12,4 |
| | 50 | 250 | 250 | 200 | 165 | 125 | 102 | 20 | 3 | 4 | 18 | 16,4 |
| | 65 | 270 | 280 | 200 | 185 | 145 | 122 | 20 | 3 | 4 | 18 | 19,9 |
| | 80 | 280 | 310 | 200 | 200 | 160 | 138 | 22 | 3 | 4 | 18 | 26,2 |
| | 100 | 300 | 350 | 250 | 220 | 180 | 158 | 24 | 3 | 8 | 18 | 36,3 |
| | 125 | 325 | 395 | 250 | 250 | 210 | 188 | 26 | 3 | 8 | 18 | 50,2 |
| | 150 | 350 | 450 | 250 | 285 | 240 | 212 | 26 | 3 | 8 | 22 | 60,0 |
| | 200 | 400 | 510 | 320 | 340 | 295 | 268 | 30 | 3 | 8 | 22 | 99,0 |
| | 250 | 450 | 630 | 320 | 405 | 350 | 320 | 32 | 3 | 12 | 22 | 136,0 |
| | 300 | 500 | 710 | 320 | 460 | 400 | 378 | 32 | 4 | 12 | 22 | 162,0 |
| 16 | 40 | 240 | 245 | 156 | 150 | 110 | 88 | 18 | 3 | 4 | 18 | 12,4 |
| | 50 | 250 | 257 | 160 | 165 | 125 | 102 | 20 | 3 | 4 | 18 | 16,4 |
| | 65 | 270 | 289 | 160 | 185 | 145 | 122 | 20 | 3 | 4 | 18 | 19,9 |
| | 80 | 280 | 300 | 160 | 200 | 160 | 138 | 22 | 3 | 8 | 18 | 26,2 |
| | 100 | 300 | 344 | 200 | 220 | 180 | 158 | 24 | 3 | 8 | 18 | 36,3 |
| | 125 | 325 | 406 | 250 | 250 | 210 | 188 | 26 | 3 | 8 | 18 | 50,2 |
| | 150 | 350 | 460 | 250 | 285 | 240 | 212 | 26 | 3 | 8 | 22 | 60,0 |
| | 200 | 400 | 534 | 250 | 340 | 295 | 268 | 26 | 3 | 12 | 22 | 99,0 |
| | 250 | 450 | 652 | 320 | 405 | 355 | 320 | 28 | 3 | 12 | 26 | 136,0 |
| 300 | 500 | 733 | 320 | 460 | 410 | 378 | 30 | 4 | 12 | 26 | 162,0 | |

Mating dimensions – Standards

Face-to-face EN 558-1/15
lengths:
Flanges: DIN EN 1092-2

Notes on installation

Gate valves are bi-directional and can be installed in any position. However, the preferred installation position is with the stem pointing vertically upwards.



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