

### Application

Gate valves are shut-off valves. It is used especially in power engineering, chemical industry as well as other industries depending on material selection.

### Working medium

- water
- steam
- gas
- other fluids

### Technical description

The body is a forging into which a flexible wedge is inserted through the yoke-type bonnet or through the pressure seal bonnet. The seating surfaces of the wedge are hard faced and proper seating of the wedge is provided for by precision-machined guides in the body. The seat rings are weld deposited in the body and hard faced as well. The bonnet and the stuffing box are sealed with special graphite gaskets and packing rings. The gate valves can be on request designed with pressure cavity released system against over pressurizing of body cavity. There is an option of drilling a hole on an input side of the disc, using diaphragm or safety valve or making a by-pass. Also upon request, the gate valve can be equipped with one to three bypass valves.

### Connection to the piping

- flanged ends acc. to EN 1092-1, ISO 7005-1, GOST 33259-2015
- welded ends acc. to EN 12627



### Operation

- manual (hand wheel)
  - electric actuator
  - pneumatic actuator
  - actuator located out of the valve
- Gate valves can be equipped with a locking device.

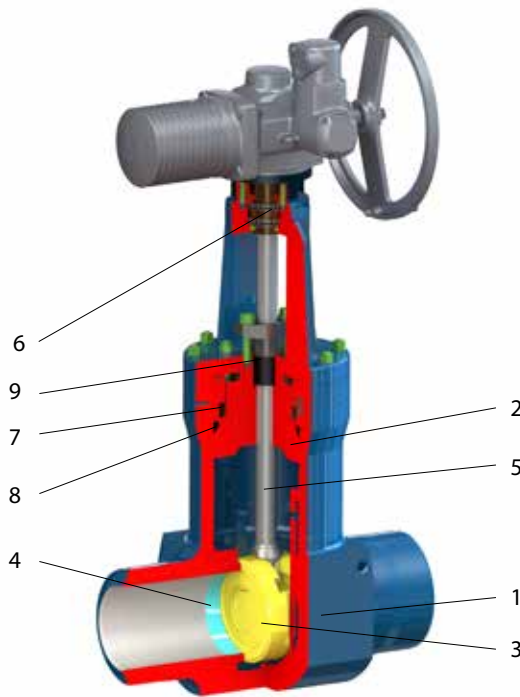
### Testing

The gate valves are subjected to the following tests performed with water:

- shell strength test
- shell tightness test
- seat tightness test and operability test according to EN 12266
- other tests by agreement.

### Installation

Gate valves may be installed in any position.



| Position | Component            |
|----------|----------------------|
| 1        | Body                 |
| 2        | Pressure seal bonnet |
| 3        | Wedge + overlay      |
| 4        | Seat + overlay       |
| 5        | Stem                 |
| 6        | Stem nut             |
| 7        | Segmented ring       |
| 8        | Gasket               |
| 9        | Packing              |

### Production range

| TYPE  | PN  | DN |    |    |     |     |     |     |     |     |     |     |   |
|-------|-----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|---|
|       |     | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 |   |
| S43.1 | 63  | .  | .  | .  | .   | .   | .   | .   | .   | .   | .   | .   | . |
|       | 100 | .  | .  | .  | .   | .   | .   | .   | .   | .   | .   | .   | . |
| S43.3 | 16  | .  | .  | .  | .   | .   | .   | .   | .   | .   | .   | .   | . |
|       | 25  | .  | .  | .  | .   | .   | .   | .   | .   | .   | .   | .   | . |
|       | 40  | .  | .  | .  | .   | .   | .   | .   | .   | .   | .   | .   | . |
|       | 63  | .  | .  | .  | .   | .   | .   | .   | .   | .   | .   | .   | . |
| S43.5 | 100 | .  | .  | .  | .   | .   | .   | .   | .   | .   | .   | .   | . |
|       | 160 | .  | .  | .  | .   | .   | .   | .   | .   | .   | .   | .   | . |
|       | 250 | .  | .  | .  | .   | .   | .   | .   | .   | .   | .   | .   | . |
|       | 320 | .  | .  | .  | .   | .   | .   | .   | .   | .   | .   | .   | . |
|       | 400 | .  | .  | .  | .   | .   | .   | .   | .   | .   | .   | .   | . |



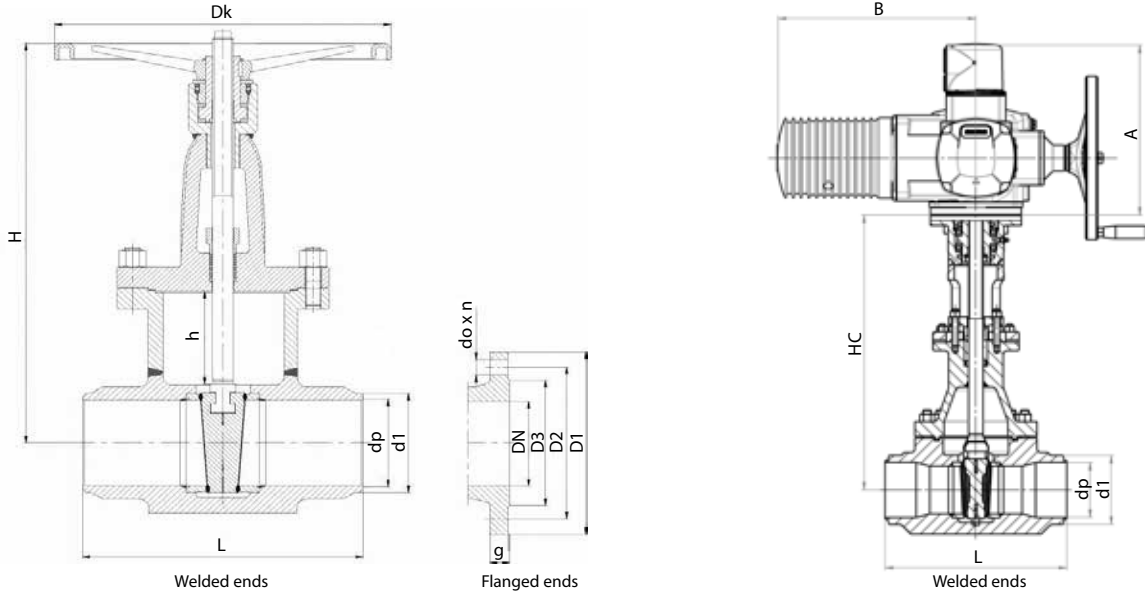
DN 50-350 • PN 63-100 • Tmax 600 °C (450 °C)

Body design: forged body, bolted bonnet

Gate valve can be supplied in cast design as well.

Rising stem

Connection: EN 1092-1, ISO 7005-1, GOST 33259-2015 FLANGED ENDS  
 EN 12627 WELDED ENDS



Material acc. to EN

| Component           | T <sub>max</sub> 450 °C | T <sub>max</sub> 530 °C | T <sub>max</sub> 560 °C | T <sub>max</sub> 570 °C | T <sub>max</sub> 600 °C |
|---------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Body, bonnet, wedge | P250GH (1.0460)         | 16Mo3 (1.5415)          | 13CrMo4-5 (1.7335)      | 14MoV6-3 (1.7715)       | 11CrMo9-10 (1.7383)     |
| Stem                | X39CrMo17-1 (1.4122)    |                         |                         |                         |                         |
| Seat + overlay      | 1.0460 + Stellite       | 1.5415 + Stellite       | 1.7335 + Stellite       | 1.7715 + Stellite       | 1.7383 + Stellite       |
| Wedge + overlay     | 1.0460 + Stellite       | 1.5415 + Stellite       | 1.7335 + Stellite       | 1.7715 + Stellite       | 1.7383 + Stellite       |
| Packing ring        | Graphite                |                         |                         |                         |                         |

PN 63-100

|     |     | Welded ends |        |     |      |      |     |     |          |           |  |
|-----|-----|-------------|--------|-----|------|------|-----|-----|----------|-----------|--|
| DN  | d1  | dp          |        | L   | H    | HC   | h   | Dk  | kg PN 63 | kg PN 100 |  |
|     |     | PN 63       | PN 100 |     |      |      |     |     |          |           |  |
| 50  | 62  | 54          |        | 250 | 463  | 430  | 61  | 400 | 28,2     | 32,2      |  |
| 65  | 77  | 69          |        | 290 | 624  | 420  | 77  | 400 | 40,9     | 45,9      |  |
| 80  | 91  | 81          |        | 310 | 545  | 520  | 92  | 500 | 48,7     | 49,7      |  |
| 100 | 117 | 104         |        | 350 | 590  | 530  | 115 | 500 | 70,6     | 81,6      |  |
| 125 | 144 | 130,5       | 127    | 400 | 700  | 640  | 140 | 500 | 133,9    | 135,9     |  |
| 150 | 172 | 156,5       | 154    | 450 | 760  | 700  | 160 | 700 | 215,1    | 228,1     |  |
| 200 | 223 | 204,5       | 199,5  | 550 | 920  | 85   | 225 | 700 | 260,0    | 360,0     |  |
| 250 | 278 | 255         | 248,5  | 650 | 1180 | 980  | 270 | 850 | 440,2    | 591,4     |  |
| 300 | 329 | 301         | 295,5  | 750 | 1540 | 1450 | 325 | 800 | 604,5    | 864,0     |  |
| 350 | 362 | 330         |        | 850 | 1395 | 1500 | 355 | 630 | 814,6    | 963,8     |  |

PN 63-100

| Flanged ends |     |     |       |     |     |         |    |     |      |        |     |         |    |      |
|--------------|-----|-----|-------|-----|-----|---------|----|-----|------|--------|-----|---------|----|------|
| DN           | L   | D3  | PN 63 |     |     |         |    |     |      | PN 100 |     |         |    |      |
|              |     |     | D1    |     | D2  | to x n  | g  | kg  | D1   |        | D2  | to x n  | g  | kg   |
|              |     |     | GOST  | EN  |     |         |    |     | GOST | EN     |     |         |    |      |
| 50           | 250 | 102 | 175   | 180 | 135 | 22 x 4  | 26 | 39  | 195  |        | 145 | 26 x 4  | 30 | 43   |
| 65           | 290 | 122 | 200   | 205 | 160 | 22 x 8  | 26 | 56  | 220  |        | 170 | 26 x 8  | 34 | 61   |
| 80           | 310 | 138 | 210   | 215 | 170 | 22 x 8  | 28 | 62  | 230  |        | 180 | 26 x 8  | 36 | 63   |
| 100          | 350 | 162 | 250   |     | 200 | 26 x 8  | 30 | 97  | 265  |        | 210 | 30 x 8  | 40 | 108  |
| 125          | 400 | 188 | 295   |     | 240 | 30 x 8  | 34 | 164 | 310  | 315    | 250 | 33 x 8  | 40 | 166  |
| 150          | 450 | 218 | 340   | 345 | 280 | 33 x 12 | 36 | 265 | 350  | 355    | 290 | 33 x 12 | 44 | 278  |
| 200          | 550 | 285 | 405   | 415 | 345 | 36 x 12 | 42 | 335 | 430  |        | 360 | 36 x 12 | 52 | 437  |
| 250          | 650 | 345 | 470   |     | 400 | 36 x 16 | 46 | 498 | 500  | 505    | 430 | 39 x 12 | 60 | 692  |
| 300          | 750 | 410 | 530   |     | 460 | 36 x 16 | 52 | 677 | 585  |        | 500 | 42 x 16 | 68 | 1010 |
| 350          | 850 | 465 | 595   | 600 | 525 | 39 x 16 | 56 | 914 | 655  |        | 560 | 48 x 16 | 74 | 1158 |