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## Задвижки с наружной крышкой с болтовым креплением 260, 360, 360-J, 460, 460-H, 560

### Stem

In all outside screw valves the stem is provided with integral backseat as emergency device in case of packing failure. The stem is produced with special turning machinery for a high resistance and durability. The stem thread is metric type according to ISO 2901 with trapezoidal section. The thread is left hand type in the way that the valve opens rotating clockwise the handwheel.

To avoid any leakage the stem has a high finish degree and a strict diametrical clearance.

### Gasket

The standard gasket is in pure graphite stainless steel reinforced. This type of gasket is suitable for many different applications. For special applications (cryogenic gases, high corrosion acids etc.) RT can supply special gaskets designed for the specific application or according to customer specifications. All valves with round body are provided by standard with chambered gasket.

### Packing

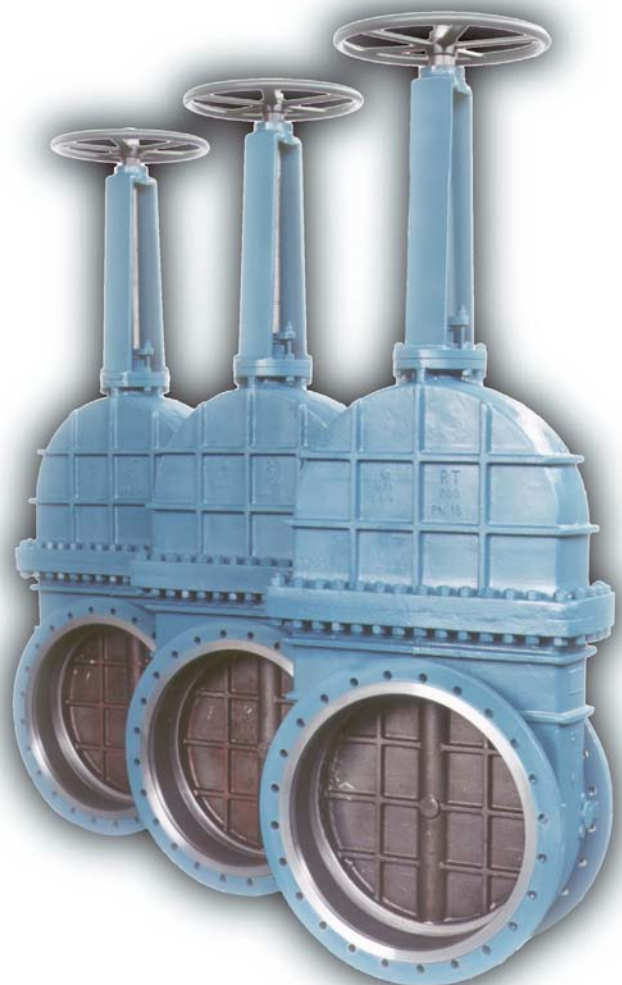
The standard packing is made of four or more pure graphite rings with square section. The first and the last ring are reinforced with stainless steel to avoid the extrusion.

Other materials like PTFE are available on request. The graphite is always treated with special corrosion inhibitors to prevent the corrosion of ferritic stainless steel stem due to galvanic cell action.

For special applications (cryogenic gases,

high corrosion acids, etc.) RT can supply special packings designed for the specific application or according to customer requirements.

To meet the TA-Luft requirements, on request, RT can supply valves with special design of stem and packing. The stuffing box housing is produced with a high finish degree and a strict clearance to guarantee a perfect tight of the packing.





## INSTALLATION

The standard installation position for the gate valves is with the vertical stem and upright (operator on the top). This position avoids many adverse influences and stresses during the functioning. Only the gate valves with split wedge can be installed also in horizontal position. The gate valves close turning the handwheel clock-wise. For a correct and easy installation please refer to the installation manual and follow the instructions there contained.

## WARNINGS

- § The gate valves are not designed for throttling and regulating service. A prolonged use in partially open position would generally cause some damages.
- § The gate valves are not suitable for media which tend to produce high sedimentation or encrustation, as well as fluids containing foreign solids which, due to their hardness, present the risk to damage the seat faces.
- § In case of horizontal installation the valves shall be always provided with split wedge and, for sizes over 200 mm, the yoke shall be sustained by appropriate devices.
- § The solid wedge is always required for medium that can be subjected to solidification.
- § In case of medium that, due to temperature gradient, can change his physical phase from liquid to gas or vapour, the gate valves shall be provided by appropriate safety device.



# Gate Valve Outside Screw

PN 100 DN 50 - DN 300

Flanges PN 100

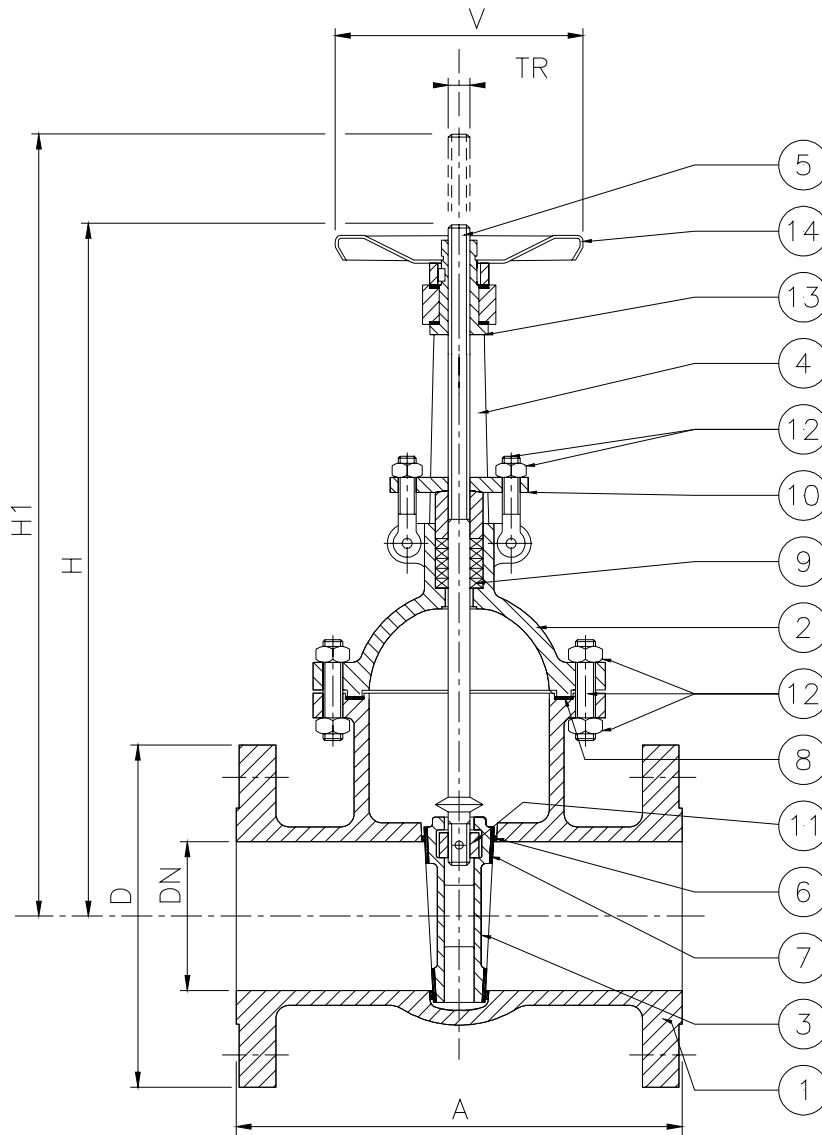
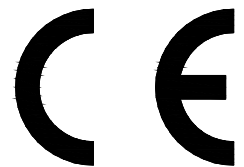


Fig. 260-560



0948

Rel. 5.0

## Standard features:

- ☒ Design EN 12516  
EN 1984
- ☒ Face to face EN 558 series 26  
DIN 3202 F7
- ☒ Flanges EN 1092-1/21/B2
- ☒ Materials EN 10213  
EN 10269  
EN 10088
- ☒ Bolts and nuts EN 1515-1
- ☒ Welding overlay AD-M HP 0
- ☒ Testing EN 1984  
EN 12266
- ☒ Marking EN 19
- ☒ Certificates EN 10204

## Optional versions:

- ☐ AD 2000 – A4
- ☐ TRD 110
- ☐ DIN 3230 Part 4
- ☐ DIN 3230 Part 5
- ☐ DIN 3230 Part 6
- ☐ TRbF 131
- ☐ TRbF 301 or 302
- ☐ ATEX
- ☐ TA-Luft
- ☐ With flanges PN 63
- ☐ With flanges form A, B2, C, D, E, F, G, H
- ☐ With butt welding ends (EN 12982 / EN 12627)
- ☐ With special devices (see pages 34 – 35)

|    | DESCRIPTION   | FIG. 260                     | FIG. 360                     | FIG. 360-J            | FIG. 460                     | FIG. 460-H                   | FIG. 560                     |
|----|---------------|------------------------------|------------------------------|-----------------------|------------------------------|------------------------------|------------------------------|
| 1  | Body          | 1.0619                       | 1.4581                       | 1.4308                | 1.7357                       | 1.7379                       | 1.1138                       |
| 2  | Bonnet        | 1.0619                       | 1.4581                       | 1.4308                | 1.7357                       | 1.7379                       | 1.1138                       |
| 3  | x Wedge       | 1.0619                       | 1.4581                       | 1.4308                | 1.7357                       | 1.7379                       | 1.1138                       |
| 4  | Yoke          | 1.0619                       | 1.4581                       | 1.4308                | 1.7357                       | 1.7379                       | 1.1138                       |
| 5  | x Stem        | 1.4021 <sup>(1)</sup>        | 1.4571 <sup>(1)</sup>        | 1.4301 <sup>(1)</sup> | 1.4021 <sup>(1)</sup>        | 1.4021 <sup>(1)</sup>        | 1.4021 <sup>(1)</sup>        |
| 6  | Body seats    | 1.4502 <sup>(2)</sup>        | 1.4430 <sup>(2)</sup>        | 1.4316 <sup>(2)</sup> | 1.4502 <sup>(2)</sup>        | Stellite                     | 1.4502 <sup>(2)</sup>        |
| 7  | Wedge seats   | 1.4502 <sup>(2)</sup>        | 1.4581 <sup>(2)</sup>        | 1.4308 <sup>(2)</sup> | 1.4502 <sup>(2)</sup>        | Stellite                     | 1.4502 <sup>(2)</sup>        |
| 8  | O Gasket      | Graphite + SS <sup>(3)</sup> | Graphite + SS <sup>(3)</sup> | PTFE <sup>(3)</sup>   | Graphite + SS <sup>(3)</sup> | Graphite + SS <sup>(3)</sup> | Graphite + SS <sup>(3)</sup> |
| 9  | O Packing     | Graphite + SS <sup>(3)</sup> | Graphite + SS <sup>(3)</sup> | PTFE <sup>(3)</sup>   | Graphite + SS <sup>(3)</sup> | Graphite + SS <sup>(3)</sup> | Graphite + SS <sup>(3)</sup> |
| 10 | x Gland       | 1.0402                       | 1.4571                       | 1.4301                | 1.0402                       | 1.0402                       | 1.4301                       |
| 11 | x Boss        | 1.4571                       | 1.4571                       | 1.4301                | 1.4571                       | 1.4571                       | 1.4571                       |
| 12 | Bolts         | 1.7225 <sup>(4)</sup>        | 1.4301 <sup>(4)</sup>        | 1.4301 <sup>(4)</sup> | 1.7711 <sup>(4)</sup>        | 1.7711 <sup>(4)</sup>        | 1.7225 <sup>(4)</sup>        |
| 12 | Nuts          | 1.1191 <sup>(4)</sup>        | 1.4301 <sup>(4)</sup>        | 1.4301 <sup>(4)</sup> | 1.7225 <sup>(4)</sup>        | 1.7225 <sup>(4)</sup>        | 1.7225 <sup>(4)</sup>        |
| 13 | x Yoke sleeve | 1.0511 NHT                   | 1.0511 NHT                   | 1.0511 NHT            | 1.0511 NHT                   | 1.0511 NHT                   | 1.0511 NHT                   |
| 14 | x Handwheel   | Pressed steel                | Pressed steel                | Pressed steel         | Pressed steel                | Pressed steel                | Pressed steel                |

<sup>(1)</sup> Also available on request 1.4571, 1.4301, 1.3964, Hastelloy, or other materials.

<sup>(2)</sup> Also available on request stellite, 1.4462 (duplex), 1.4430, 1.4316, Hastelloy, or other materials.

<sup>(3)</sup> Also available on request PTFE, Gore-tex, graphite, or other materials and different desing (e.g. cam-profile).

<sup>(4)</sup> Also available on request 1.7225 / 1.1191, 1.7711 / 1.7225, 1.4401, 1.4301, A4-70 or other materials.

O recommended spare parts for 2 years standard service; x recommended spare parts for 5 years standard service.

## Dimensions

|           | DN  | A   | D   | H    | H1   | TR       | V   | Kg   | Δp <sup>(5)</sup> | Wedge <sup>(6)</sup> |
|-----------|-----|-----|-----|------|------|----------|-----|------|-------------------|----------------------|
| PN<br>100 | 50  | 250 | 195 | 380  | 440  | 20 x 4   | 200 | 35   | 100               | Split                |
|           | 65  | 290 | 220 | 520  | 595  | 22 x 4   | 200 | 70   | 100               | Split                |
|           | 80  | 310 | 230 | 540  | 630  | 24 x 5   | 250 | 76   | 100               | Split                |
|           | 100 | 350 | 265 | 590  | 700  | 28 x 5   | 300 | 110  | 100               | Split                |
|           | 125 | 400 | 315 | 770  | 905  | 32 x 6   | 400 | 144  | 100               | Split                |
|           | 150 | 450 | 355 | 795  | 960  | 32 x 6   | 400 | 185  | 100               | Flexible             |
|           | 200 | 550 | 430 | 1000 | 1215 | 36 x 6   | 400 | 325  | 62                | Flexible             |
|           | 250 | 650 | 505 | 1150 | 1415 | 40 x 7   | 500 | 535  | 43                | Flexible             |
|           | 300 | 750 | 585 | 1300 | 1615 | 60 x 9   | 600 | 800  | 0                 | Flexible             |
|           | 400 | 850 | 715 | 1450 | 1880 | 100 x 12 | 600 | 1250 | 0                 | Flexible             |

<sup>(5)</sup> Maximum differential pressure for manoeuvre without gear box or by-pass according to EN 12570 (if equal to 0 the gearbox is recommended).

<sup>(6)</sup> Standard wedge type. Other execution available on request.

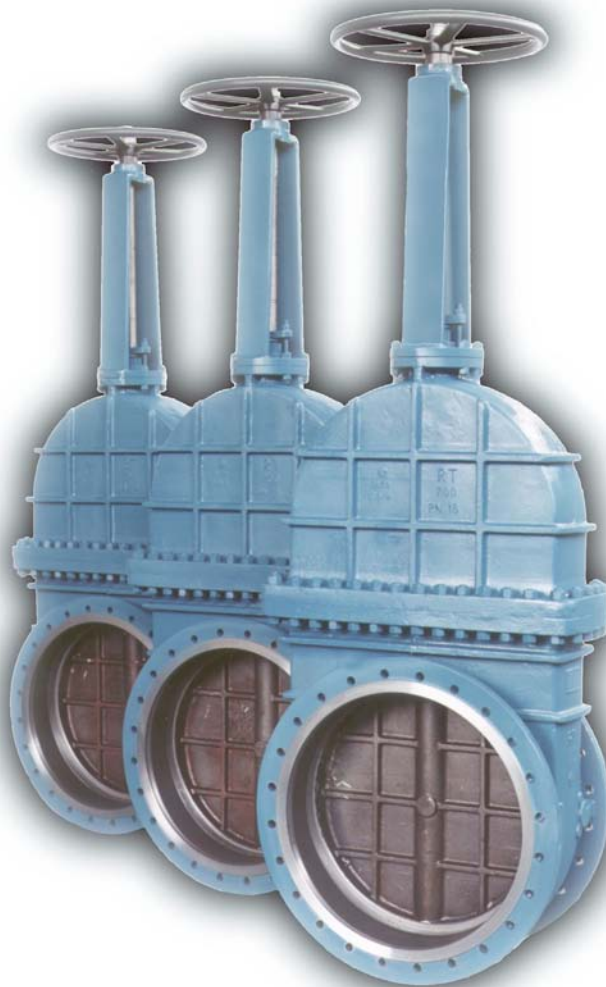
## Pressure Temperature Ratings (°C / bar)

|                                        | PN  | -195 | -150 | -100 | -50 | -10 | 0   | 20   | 100  | 150  | 200  | 250  | 300  | 350  | 400  | 425  | 450  | 475  | 500  | 525  | 550  | 575  | 600 |
|----------------------------------------|-----|------|------|------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| Fig. 260                               | 100 |      |      |      |     | 100 | 100 | 98,7 | 93,3 | 85,6 | 77,8 | 71,1 | 64,4 | 60,0 | 57,8 | 47,3 | 36,9 |      |      |      |      |      |     |
| Fig. 360 <sup>(7)</sup>                | 100 |      |      | 100  | 100 | 100 | 100 | 96,4 | 82,2 | 76,7 | 71,1 | 67,8 | 64,4 | 61,1 | 57,8 | 56,7 | 55,6 | 54,4 | 53,3 | 52,2 | 51,1 |      |     |
| Fig. 360-J                             | 100 | 100  | 100  | 100  | 100 | 100 | 100 | 94,2 | 71,1 | 63,3 | 55,6 | 52,2 | 48,9 |      |      |      |      |      |      |      |      |      |     |
| Fig. 460 <sup>(7)</sup> <sup>(8)</sup> | 100 |      |      |      |     | 100 | 100 | 100  | 100  | 100  | 100  | 100  | 100  | 95,6 | 88,9 | 86,7 | 84,4 | 68,2 | 52,0 | 38,2 | 24,4 |      |     |
| Fig. 460-H <sup>(8)</sup>              | 100 |      |      |      |     | 100 | 100 | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 98,4 | 96,9 | 78,7 | 60,4 | 44,9 | 29,3 | 20,9 | 12,4 |     |
| Fig. 560                               | 100 |      |      |      | 100 | 100 | 100 | 97,8 | 88,9 | 84,4 | 80,0 | 77,8 | 75,6 |      |      |      |      |      |      |      |      |      |     |

Please, in the inquiry and in the order, specify always the maximum service temperature when it's over 100 °C.

If the valves are provided with flanged connection PN 63 the maximum allowable pressure should be proportionally reduced.

<sup>(7)</sup> Suitable over 450 °C only if provided with stellite seats. <sup>(8)</sup> Suitable over 530 °C only if provided with 1.3964 stem.



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