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Задвижки с внутренней крышкой 210, 310, 310-J, 410, 410-H, 510

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.

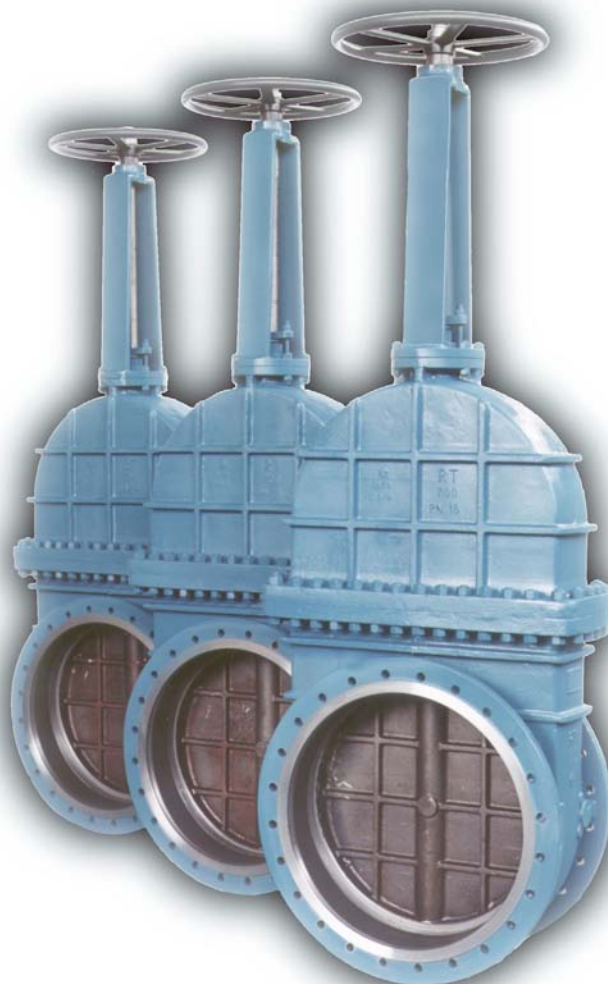
Packing

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 16 DN 50 - DN 800

Flanges PN 16 or PN 10

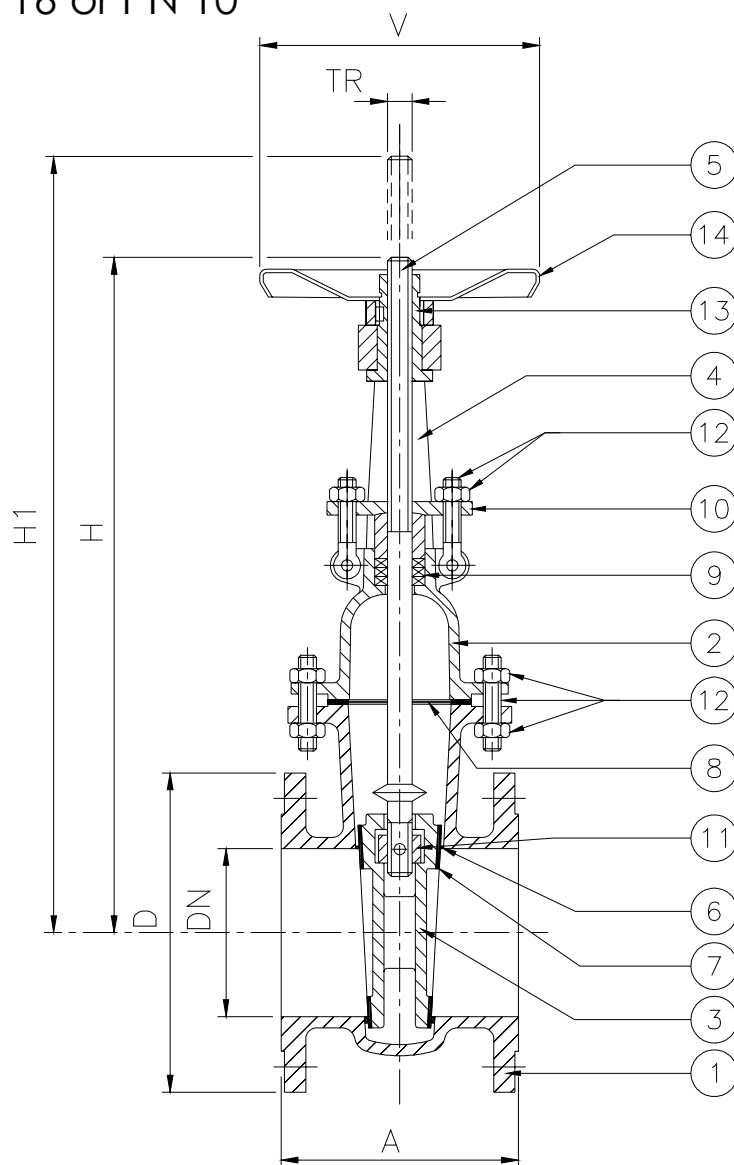


Fig. 210-510



0948

Rel. 5.0

Standard features:

- | | |
|---|------------------|
| ☒ Design | EN 12516 |
| | EN 1984 |
| ☒ Face to face | EN 558 series 14 |
| | DIN 3202 F4 |
| ☒ Flanges | EN 1092-1/21/B1 |
| ☒ 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 6 |
| ☐ 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. 210	FIG. 310	FIG. 310-J	FIG. 410	Fig. 410-H	FIG. 510
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 ⁽¹⁾	1.4571 ⁽¹⁾	1.4301 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾	1.4021 ⁽¹⁾
6	Body seats	1.4502 ⁽²⁾	1.4430 ⁽²⁾	1.4316 ⁽²⁾	1.4502 ⁽²⁾	Stellite	1.4502 ⁽²⁾
7	Wedge seats	1.4502 ⁽²⁾	1.4581 ⁽²⁾	1.4308 ⁽²⁾	1.4502 ⁽²⁾	Stellite	1.4502 ⁽²⁾
8	O Gasket	Graphite+1.4401 ⁽³⁾	Graphite+1.4401 ⁽³⁾	PTFE ⁽³⁾	Graphite+1.4401 ⁽³⁾	Graphite+1.4401 ⁽³⁾	Graphite+1.4401 ⁽³⁾
9	O Packing	Graphite+1.4401 ⁽³⁾	Graphite+1.4401 ⁽³⁾	PTFE ⁽³⁾	Graphite+1.4401 ⁽³⁾	Graphite+1.4401 ⁽³⁾	Graphite+1.4401 ⁽³⁾
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 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7711 ⁽⁴⁾	1.7711 ⁽⁴⁾	1.7225 ⁽⁴⁾
12	Nuts	1.1191 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.4301 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾	1.7225 ⁽⁴⁾
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

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

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

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

⁽⁴⁾ 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	$\Delta p^{(5)}$	Wedge ⁽⁶⁾
PN 16	50	150	165	315	375	18 x 4	200	15	16	Split
	65	170	185	370	450	20 x 4	200	25	16	Split
	80	180	200	410	500	20 x 4	200	27	16	Split
	100	190	220	450	560	22 x 5	200	35	16	Split
	125	200	250	525	660	24 x 5	250	40	16	Split
	150	210	285	600	765	24 x 5	250	55	16	Flexible
	200	230	340	760	975	28 x 5	300	82	16	Flexible
	250	250	405	990	1255	32 x 6	400	155	16	Flexible
	300	270	460	1095	1415	32 x 6	400	225	13	Flexible
	350	290	520	1245	1610	32 x 6	400	265	10	Flexible
	400	310	580	1350	1770	36 x 6	500	320	8	Flexible
	450	330	640	1180	2100	40 x 7	500	490	8	Flexible
	500	350	715	1660	2180	40 x 7	500	630	8	Flexible
	600	390	840	1965	2585	40 x 7	500	990	6	Flexible
	700	430	910	2185	2905	50 x 8	600	1150	1	Flexible
	800	470	1025	2500	3320	50 x 8	600	1550	0	Flexible
	900	510	1125	2820	3720	60 x 9	600	1800	0	Flexible
	1000	550	1255	3150	4150	60 x 9	600	2160	0	Flexible

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

⁽⁶⁾ 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. 210	16					16.0	16.0	15.8	14.9	13.7	12.4	11.4	10.3	9.6	9.2	7.6	5.9						
Fig. 310 ⁽⁸⁾	16			16.0	16.0	16.0	16.0	15.4	13.2	12.3	11.4	10.8	10.3	9.8	9.2	9.1	8.9	8.7	8.5	8.4	8.2		
Fig. 310-J	16	16.0	16.0	16.0	16.0	16.0	16.0	15.1	11.4	10.1	8.9	8.4	7.8										
Fig. 410 ⁽⁸⁾ (⁹)	16					16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	15.3	14.2	13.9	13.5	10.9	8.3	6.1	3.9		
Fig. 410-H(⁹)	16					16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	15.8	15.5	12.6	9.7	7.2	4.7	3.3	2.0
Fig. 510	16				16.0	16.0	16.0	15.6	14.2	13.5	12.8	12.4	12.1										

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

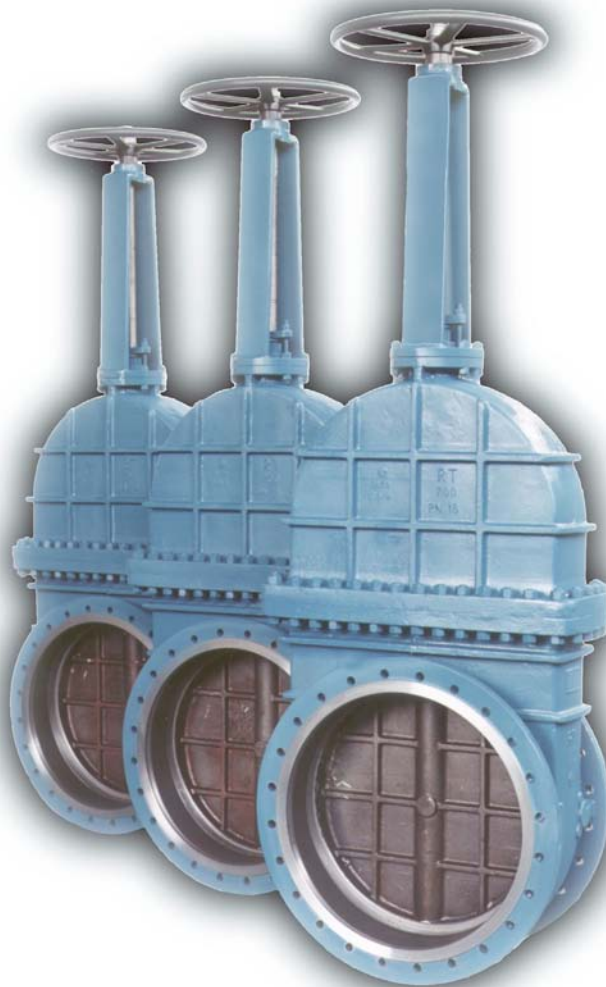
If the valves are provided with flanged connection PN 10 or PN 6 the maximum allowable pressure must be proportionally reduced.

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

Due to short face to face depending on DN and required execution some flange holes can be treaded.

General sale and delivery conditions and product guarantee as specified at pages 56 and 57.

Due to constant improvement all data and details contained in this catalogue are purely indicative and they can be subjected to change without notice.



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