

Valves for the industry

- Globe valves
- Gate valves
- Swing check valves

■ Prolog

Industrial valves made by company Stahl-Armaturen PERSTA GmbH are designed according to DIN-Standards, EN-Standards and according to the Technical Rules like AD and the European Pressure Vessel Guideline 97/23/EG.

Design, manufacture and testing of these valves was carried out on condition that the valves are operated under normal operating conditions. Normal operating conditions contain for example the following:

- Operation with liquid or gaseous media, without special corrosive, chemical or abrasive influences.
- Frequency of temperature-change of app. 3° C – 6° C per minute
- Usual flow rates, depending on the kind of medium and the range of application of the valve
- Operation without additional outer influences like pipeline-forces, vibrations, wind load stressing, earthquake, corrosive environment, fire, operation load stressing, disintegration pressure of unstable fluids, etc

If the purchaser expects stresses deviating from the normal operating conditions he has to indicate these requirements unambiguously and completely in the inquiry as well as in the order. This would allow us, as the valve manufacturer, to work out corresponding measures and to suggest them to the customer. These measures could be for example:

- Special choice of the body material
- Higher wall-thickness
- Protection of areas which are endangered by wear
- Special gaskets and bolt connections
- Special operation instructions depending on the medium and the kind of operation
- Special coatings
- Additional equipment to avoid excessive overpressure
- Special design for control operation, etc

During planning and installation of the pipeline the customer should take measures which minimize additional dangers and pressures on the valves, on the piping system and on the environment, for example by:

- Installation of vibration dampers
- Consideration of a security final position in case of break down of energy
- Taking measures to ensure the safe drainage of dangerous media in case of leakage, etc.

By marking the product with the CE-mark we declare the conformity with the European Pressure Equipment Directive 97/23/EG.

Please see our operation instruction BA 10S.002GB for further information and warnings which have to be considered for the operation of industrial valves.

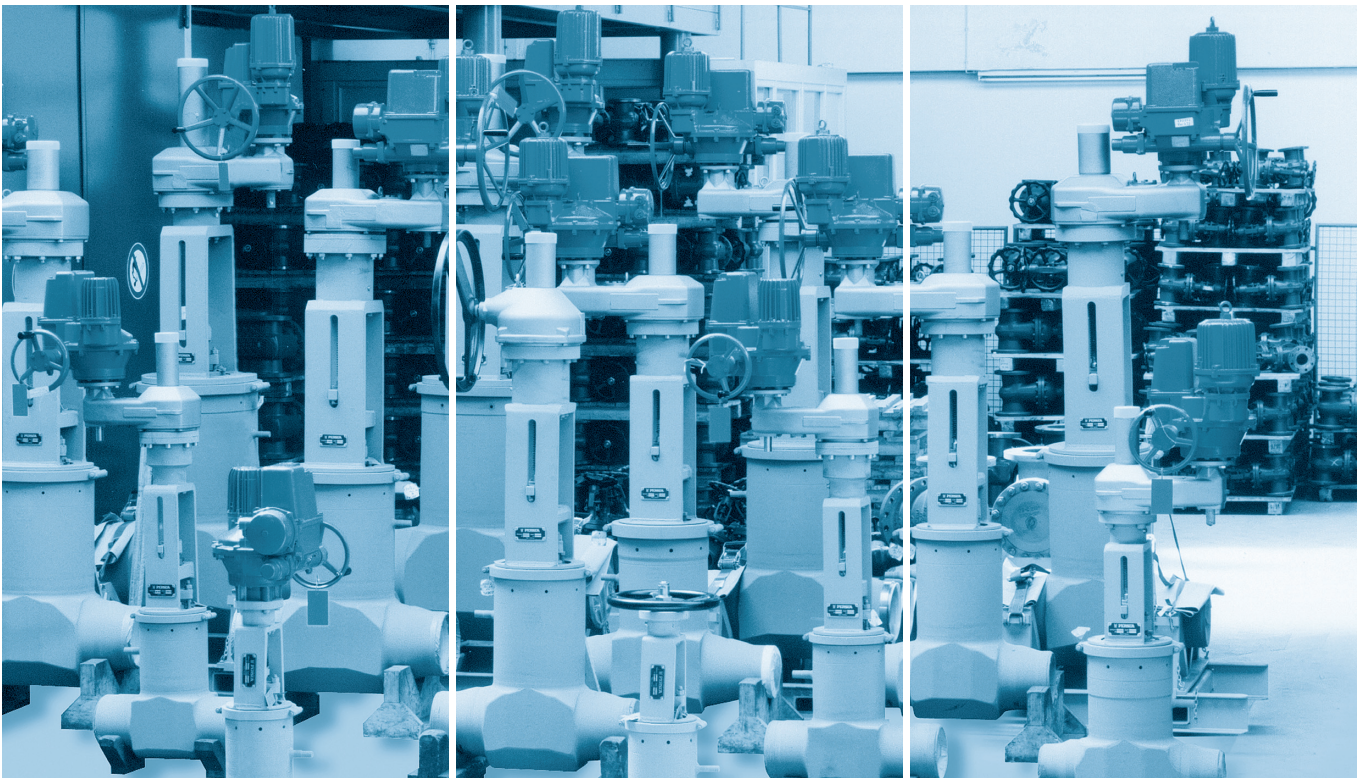


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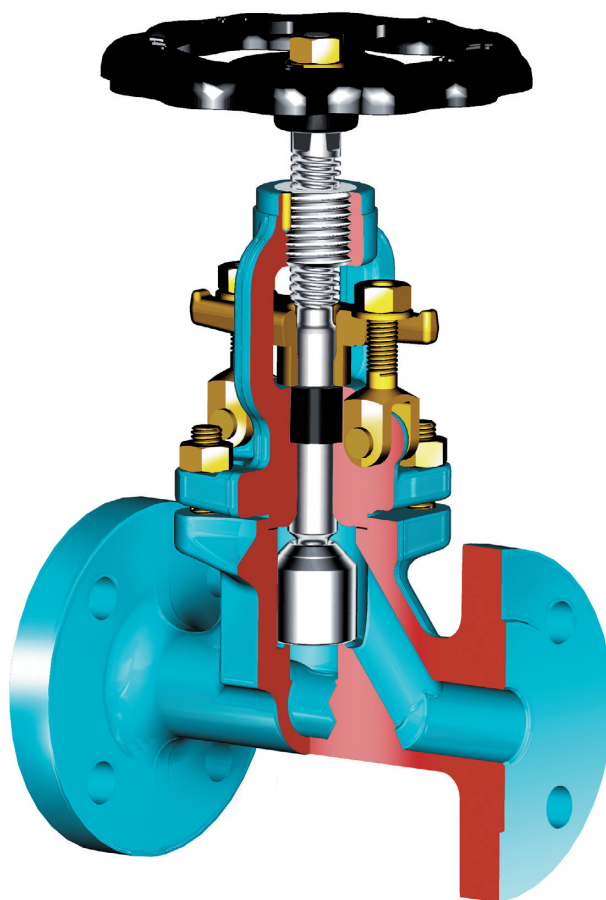
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Notice:

The values indicated in the operating pressure and temperature tables are the max. admissible operating data for our valves. Before choosing a valve, the plant-specific extent of variations of the pressure and temperature as well as possible emergency conditions have to be considered

- **Globe valves** ▪ **Shut-off check valve** ▪ **200 AE/BE** ▪ **PN 10-160** ▪ **DN 10-50**
- **Globe valves** ▪ **Lift check valve** ▪ **240 MT** ▪ **PN 10-160** ▪ **DN 10-50**



Range of application

Admissible operating pressure [bar] at design temperature [°C] ¹⁾

Material	PN	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																	
		-200	-60	-10	20	100	150	200	250	300	350	400	450	500	510	520	530	540	550
1.0460	10-40			40	40	40	37	35	32	28	24	21	10						
	63			63	63	63	58	50	45	40	36	32	24						
	100			100	100	100	90	80	70	60	56	50	38						
	160			160	160	160	145	130	112	96	90	80	60						
1.5415 ⁶⁾	10-40			40	40	40	40	40	40	35	31	30	28	18	14	11	9		
	63			63	63	63	63	63	63	56	50	47	45	29	22	16	14		
	100			100	100	100	100	100	100	87	78	74	70	45	34	27	22		
	160			160	160	160	160	160	160	139	125	118	112	72	55	43	35		
1.7335	10-40			40	40	40	40	40	40	38	36	34	29	24	19	15	12	9	
	63			63	63	63	63	63	63	61	58	56	47	40	32	25	20	15	
	100			100	100	100	100	100	100	95	91	87	74	62	49	38	31	24	
	160			160	160	160	160	160	160	153	146	139	118	100	79	62	46	35	
1.4571	10-40 ²⁾³⁾⁴⁾	40	40	40	40	40	40	40	40	38	36	34	32	32	32	31	31	31	31
	63 ²⁾³⁾⁴⁾	63	63	63	63	63	59	56	53	50	48	47							
	100 ²⁾³⁾⁴⁾	100	100	100	100	100	92	88	83	79	76	73							
	160 ²⁾³⁾⁴⁾	160	160	160	160	160	150	142	135	127	123	119							
1.0566 ⁵⁾	10-40 ⁴⁾	40	40	40	40	37	35	32	28										
	63 ⁴⁾	63	63	63	63	58	50	45	40										
	100 ⁴⁾	100	100	100	100	92	80	70	60										
	160 ⁴⁾	160	160	160	160	147	130	112	96										

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.
 2) Application at more than 400° C operating temperature only admissible if no intercrystalline corrosion has to be expected.
 3) At operating temperature 400° C the material of the screws is 1.4986.
 4) In case of screws A4-70 with > 8 x d screw-length the mechanical strength properties acc. to table 6 of DIN 267 Part 11 have been considered.
 5) At operating temperature > 50° C up to 300° C the material 1.0566 is the only applicable for short-term service.
 6) Butt welding ends

- **Globe valves** ▪ Shut-off check valve ▪ 200 AE/BE ▪ PN 10-160 ▪ DN 10-50
- **Globe valves** ▪ Lift check valve ▪ 240 MT ▪ PN 10-160 ▪ DN 10-50

Standard features

- Straight bonnet
- Die-forged valve body and bonnet
- Shut-off disc, Fig. No. 200 AE
- Throttle disc, Fig. No. 200 BE
- Turning and rising stem with outside screw
- Position indicator if required

Pressure and temperature ratings

- Pressure rating BW-Ends up to 160 bar
- Pressure rating FL up to 160 bar
- Temperature rating up to +550° C

Materials

- 1.0460
- 1.0566
- 1.5415 only with BW-Ends
- 1.7335
- 1.4571

Further materials on request

Media

Depending on the material the globe valves are suitable for water, gas, oil and other non aggressive media

Fields of application

Chemical industries, power plants, ship building and other

Design Highlights

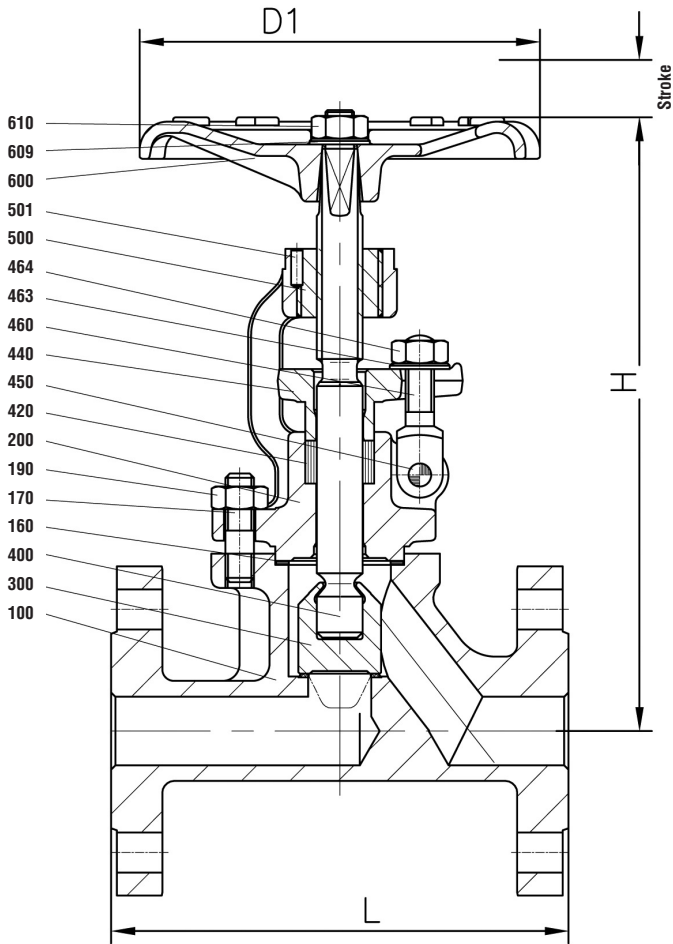
- Die-forged valve body and bonnet
- Seats are hardfaced or welded on
- Body-bonnet connection male and female
- Body and bonnet in two separate pieces with bolted connection

Benefits

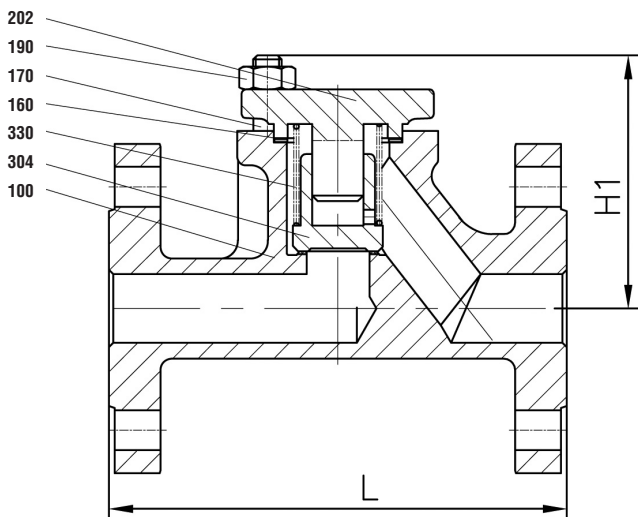
- Free from porosity and shrink holes
- Extremely resistant to wear
- Sealing blow out proof
- To ease maintenance work, e.g. regrinding of the body seats

- **Globe valves** ▪ Shut-off check valve ▪ 200 AE/BE ▪ PN 10-160 ▪ DN 10-50
- **Globe valves** ▪ Lift check valve ▪ 240 MT ▪ PN 10-160 ▪ DN 10-50

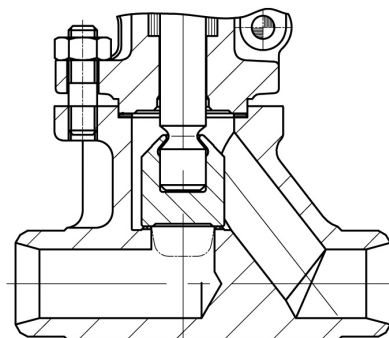
Shut-off check valve



Lift check valve



BW-Version



- **Globe valves** ■ **Shut-off check valve** ■ **200 AE/BE** ■ **PN 10-160** ■ **DN 10-50**
- **Globe valves** ■ **Lift check valve** ■ **240 MT** ■ **PN 10-160** ■ **DN 10-50**

Materials							
Pos.	Component	1.0460 (21)	1.0566 (25)	1.5415 (42) BW-Version	1.7335 (44)	1.4571 (82)	1.4571 (87)
100	Body	1.0460 ⁴⁾⁸⁾	1.0566 ⁴⁾	1.5415 ⁵⁾	1.7335 ⁵⁾	1.4571 ⁷⁾	1.4571 ⁷⁾
160	▶ Gasket	Graphite	Graphite	Graphite	Graphite	Teflon	Graphite
170	Stud ¹⁾	1.1181	A4-70	1.7709	1.7709	A4-70	A4-70
170	Stud ²⁾	1.7709	A4-70	1.4923	1.4923	A4-70	A4-70
190	Hexagonal nut ¹⁾	1.1181	A4-70	1.7258	1.7258	A4-70	A4-70
190	Hexagonal nut ²⁾	1.7258	A4-70	1.7258	1.7258	A4-70	A4-70
200	Bonnet	1.0460	1.0566	1.7335	1.7335	1.4571	1.4571
202	Bonnet	1.0460	1.0566	1.7335	1.7335	1.4571	1.4571
300	▶ Disc	1.4021 ³⁾	1.0566 ⁴⁾	1.7335 ⁵⁾	1.7335 ⁵⁾	1.4571 ⁶⁾	1.4571 ⁶⁾
304	▶ Disc	1.4021 ³⁾	1.4571 ⁶⁾	1.4571 ⁵⁾	1.4571 ⁵⁾	1.4571 ⁶⁾	1.4571 ⁶⁾
330	▶ Spring	1.4310	1.4310	1.4310	1.4310	1.4571	1.4571
400	▶ Stem	1.4021	1.4571	1.4021	1.4021	1.4571	1.4571
420	▶ Packing	Graphite	Graphite	Graphite	Graphite	Teflon	Graphite
440	Gland flange	1.0460	1.4571	1.0460	1.0460	1.4571	1.4571
450	Rivet	1.1181	A4-50	1.1181	1.1181	A4-50	A4-50
460	Gland bolt	1.1181	1.4571	1.1181	1.1181	1.4571	1.4571
463	Washer	St	A4-50	St	St	A4-50	A4-50
464	Hexagonal nut	1.1181	A4-70	1.1181	1.1181	A4-70	A4-70
500	▶ Stem nut	1.0718	1.0718	1.0718	1.0718	1.0718	1.0718
501	▶ Cylindrical Pin	St	St	St	St	St	St
600	Handwheel	0.7040	0.7040	0.7040	0.7040	0.7040	0.7040
609	Washer	St	St	St	St	A4-50	A4-50
610	Hexagonal nut	1.1181	1.1181	1.1181	1.1181	A4-70	A4-70

▶ Spare parts
Special materials on request; alterations reserved. Attention: Globe valves with butt weld ends also available in 15Mo3.

1) PN 10-40 4) Seat hard faced with Cr17 7) ≥ PN 63 seat hard faced with hastelloy
2) PN 63-160 5) Seat hard faced with stellite 8) DN 50 PN 63-160 material 1.0619 hard faced with Cr17
3) Seat hard faced 6) ≥ PN 63 seat hard faced with stellite

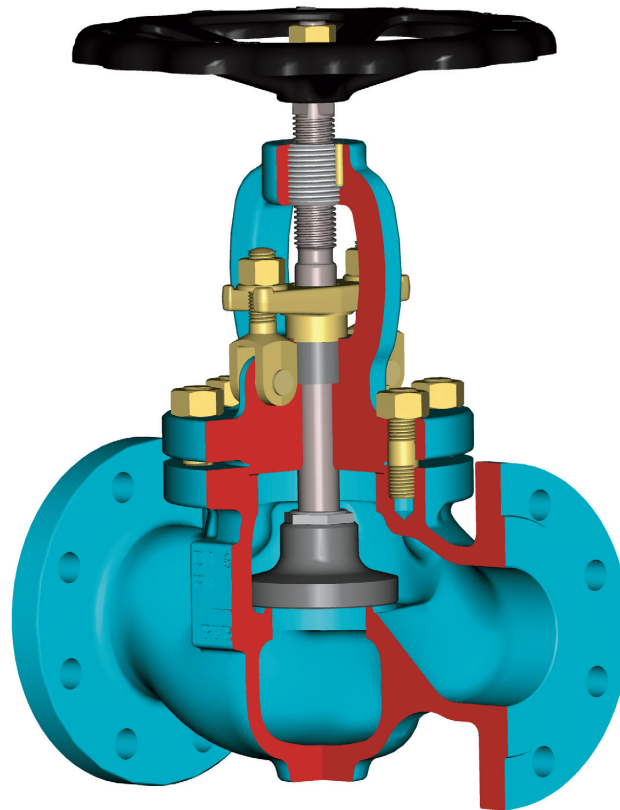
Dimensions/mm								
PN	DN	Flange L	BW-Ends L	H	Stroke	H1	D1	1.0619
								H
10-40	10	130	130	215	12	85	140	
	15	130	130	215	12	85	140	
	20	150	130	220	12	90	140	
	25	160	130	220	12	90	140	
	32	180	160	245	15	115	180	
	40	200	180	250	15	130	180	
	50	230	210	260	18	150	180	
63-160	10	210	150	220	12	100	180	
	15	210	150	220	12	100	180	
	20	230	150	220	12	100	180	
	25	230	160	220	12	100	180	
	32	260	180	285	15	140	225	
40	260	210	285	15	140	225		
63-100	50	300	250	285	18	120	225	260
160	50	300	250	285	18	120	225	260

The valves are also available in angle pattern up DN 100.

Weights/kg					
PN	DN	200 AE/BE		240 MT	
		Flange	BW-Ends	Flange	BW-Ends
10-40	10	4,5	3,8	3,2	2,4
	15	5,0	4,2	3,2	2,4
	20	5,7	3,8	3,9	2,4
	25	6,3	4,0	4,7	2,3
	32	10,0	7,3	7,9	5,5
	40	11,2	7,3	9,1	5,5
	50	15,5	11,0	12,1	7,9
63-160	10	8,7	5,9	6,0	4,0
	15	8,6	6,2	6,8	4,0
	20	10,4	5,5	9,0	4,0
	25	10,9	5,8	9,2	4,0
	32	19,0	13,2	15,6	9,0
40	21,0	12,8	16,8	9,0	
63-100	50	24,1	15,0	19,5	11,0
160	50	25,0	15,0	22,0	11,0

Kvs-values (m ³ /h)															
Line	DN 10	DN 15	DN 20	PN 10-40				DN 50	DN 10	DN 15	DN 20	PN 63-160			
				DN 25	DN 32	DN 40	DN 25					DN 32	DN 40	DN 50	
200 AE (BW)	3,0	4,5	6,2	8,6	16,0	21,0	30,0	3,0	4,5	6,2	8,6	16,0	21,0	30,0	
200 AE (FL)	1,8	3,0	5,3	8,6	13,0	21,0	37,2	1,8	4,5	5,3	8,6	13,0	21,0	37,2	
200 BE (BW)	2,8	4,2	5,9	7,6	14,5	19,5	26,9	2,8	4,2	5,9	7,6	14,5	19,5	26,9	
200 BE (FL)	1,5	2,8	4,9	7,6	11,2	19,5	34,5	2,8	4,2	5,9	7,6	14,5	19,5	34,5	
240 MT (BW)	2,7	4,1	5,7	7,9	14,6	19,2	34,0	2,7	4,1	5,7	7,9	14,6	19,2	34,0	
240 MT (FL)	1,7	2,7	5,7	7,9	11,9	19,2	25,8	1,7	2,7	5,7	7,9	11,9	19,2	25,8	

- **Globe valves** ▪ **Shut-off check valve** ▪ **200 AE/BE** ▪ **PN 10-160** ▪ **DN 65-200**
- **Globe valves** ▪ **Lift check valve** ▪ **240 MT** ▪ **PN 10-160** ▪ **DN 65-200**



Range of application

Admissible operating pressure [bar] at design temperature [°C] ¹⁾

Material	PN	-200	-50	-10	20	100	150	200	250	300	350	400	425	450	475	500	510	520	530	540	550	
1.0619	10-16				16	16	16	15	14	13	11	10	8									
	25				25	25	25	23	22	20	17	16	13									
	40				40	40	40	37	35	32	28	24	21									
	63				63	63	63	53	50	45	40	36	32									
	100				100	100	100	83	80	70	60	56	50									
	160 ³⁾				160	160	160	135	130	112	96	90	80									
1.5419	10-16				10	10	9	9	8	7	7	7	6	6	6	6,0	3	3	2	2		
	25				25	25	23	22	20	19	17	16	16	16	15	15,0	9	7	6	4		
	40				40	40	36	35	31	29	27	26	25	24	24	23,0	14	11	9	7		
	63				63	63	59	58	51	48	45	42	41	40	39	38,0	22	18	14	12		
	100				100	100	92	90	80	74	69	65	63	62	61	59,0	35	28	22	18		
	160 ³⁾				160	160	148	143	128	119	111	104	101	100	98	94,0	55	44	35	29		
1.7219	10-16 ²⁾				16	16	16	15	14	13	11											
	25 ²⁾				25	25	25	23	22	20	17											
	40 ²⁾				40	40	40	37	35	32	28											
	63 ²⁾				63	63	63	55	53	50	45	40										
	100 ²⁾				100	100	100	87	83	80	70	60										
	160 ²⁾				160	160	160	140	135	130	112	96										
1.7357	10-16				16	16	16	15	14	13	11	10	8									
	25				25	25	25	25	25	25	25	24	23	22	21	20,0	18	15	12	9		
	40				40	40	40	40	40	40	40	38	36	35	34	33,0	29	24	19	18		
	63				63	63	63	63	63	63	63	61	58	57	56	51,0	47	40	32	25		
	100 ⁴⁾				100	100	100	100	100	100	100	95	91	89	87	80,0	74	62	49	38		
1.4308	10-16	16	16	16	16	13	12	11	8	8												
	25	25	25	25	25	21	18	17	13	12												
	40	40	40	40	40	34	30	24	21	20												
1.4581	10-16				16	16	15	14	13	13	12	12	11	10	8	7,5	7	7	7	7	7	6,5
	25				25	25	24	22	21	20	19	18	17	16	13	12,5	12	11	11	11	11	11,0
	40				40	40	38	35	33	32	30	28	26	24	21	20,0	19	19	19	19	18	18,0

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.
 2) At temperature > 50° C only applicable for short-time service.
 3) PN 160 is only valid for DN 65-100.
 4) Only for globe valves DN 65-80; for lift check valves DN 65-125.

- **Globe valves** ▪ Shut-off check valve ▪ 200 AE/BE ▪ PN 10-160 ▪ DN 65-200
- **Globe valves** ▪ Lift check valve ▪ 240 MT ▪ PN 10-160 ▪ DN 65-200

Standard features

- Straight bonnet
- Cast steel body and bonnet
- Shut-off disc, Fig.No. 200 AE
- Throttle disc, Fig.No. 200 BE
- Turning and rising stem with outside screw
- Position indicator if required

Pressure and temperature ratings

- Pressure rating SW up to 160 bar
- Pressure rating BW-Ends up to 160 bar
- Temperature rating up to +550° C

Materials

- 1.0619
- 1.5419
- 1.7219
- 1.7357
- 1.4581
- 1.4308

Further materials on request

Media

Depending on the material the globe valve are suitable for water, gas, oil and other non aggressive media

Fields of application

Chemical industries, power plant, ship building and other

Design Highlights

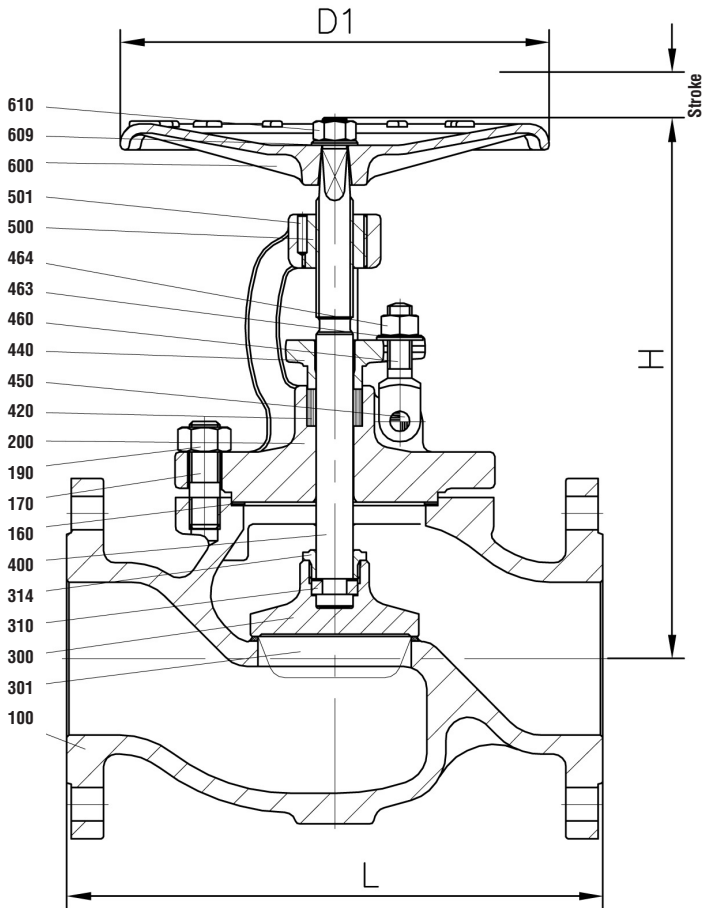
- Seats are welded on
- Body-bonnet connection male and female
- Body and bonnet in two pieces with bolted connection

Benefits

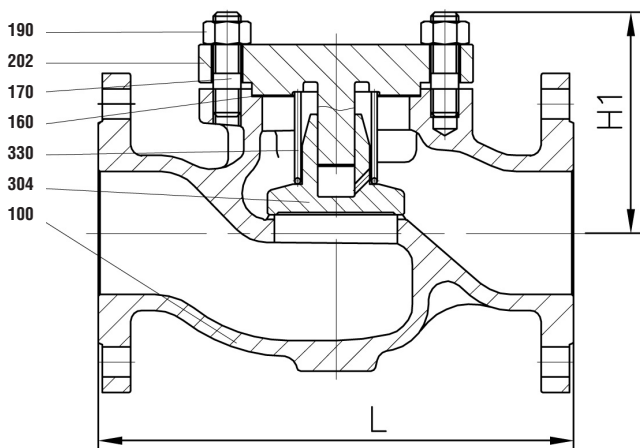
- Extremely resistant to wear
- Sealing blow out proof
- To ease maintenance work, e.g. regrinding of the body seats

- **Globe valves** ▪ Shut-off check valve ▪ 200 AE/BE ▪ PN 10-160 ▪ DN 65-200
- **Globe valves** ▪ Lift check valve ▪ 240 MT ▪ PN 10-160 ▪ DN 65-200

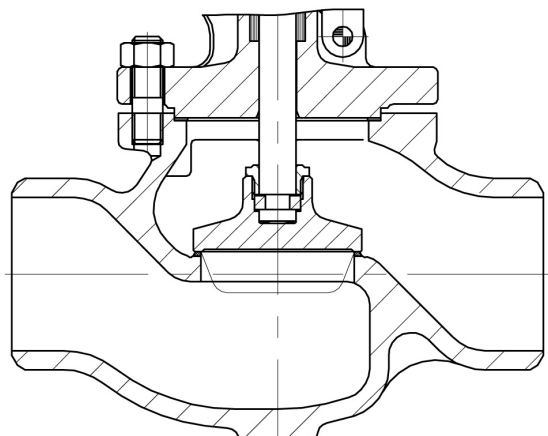
Shut-off check valve



Lift check valve



BW-Version



- **Globe valves** ▪ **Shut-off check valve** ▪ **200 AE/BE** ▪ **PN 10-160** ▪ **DN 65-200**
- **Globe valves** ▪ **Lift check valve** ▪ **240 MT** ▪ **PN 10-160** ▪ **DN 65-200**

Materials							
Pos.	Component	1.0619 (11)	1.5419 (32)	1.7219 (31)	1.7357 (34)	1.4581 (72)	1.4308 (77)
100	Body	1.0619 ⁴⁾	1.5419 ⁵⁾	1.7219 ⁴⁾	1.7357 ⁵⁾	1.4581 ⁹⁾	1.4308 ⁹⁾
160	▶ Gasket	Graphite	Graphite	Graphite	Graphite	Teflon	Graphite
170	Stud ¹⁾	1.1181	1.7709	A4-70	1.7709	A4-70	A4-70
170	Stud ²⁾	1.7709	1.4923	A4-70	1.4923	-	-
190	Hexagonal nut ¹⁾	1.1181	1.7258	A4-70	1.7258	A4-70	A4-70
190	Hexagonal nut ²⁾	1.7258	1.7258	A4-70	1.7258	-	-
200	Bonnet	1.0619	1.7357	1.7219	1.7357	1.4581	1.4308
202	Bonnet	1.0460	1.7335	1.0566	1.7335	1.4571	1.4571
300	▶ Disc	1.4021 ³⁾	1.7335 ⁵⁾	1.0566 ⁴⁾	1.7335 ⁵⁾	1.4571 ⁸⁾	1.4571 ⁸⁾
301	▶ Throttle disc	1.4021 ³⁾	1.7335 ⁵⁾	1.0566 ⁴⁾	1.7335 ⁵⁾	1.4571 ⁸⁾	1.4571 ⁸⁾
304	▶ Disc	1.0460 ³⁾	1.7335 ⁵⁾	1.0566 ⁴⁾	1.7335 ⁵⁾	1.4571 ⁸⁾	1.4571 ⁸⁾
310	▶ Filling piece	1.0035	1.0035	1.0035	1.0035	1.4571	1.4571
314	▶ Disc nut	1.0050	1.0050	1.0050	1.0050	1.4571	1.4571
330	▶ Spring	1.4310	1.4310	1.4310	1.4310	1.4571	1.4571
400	▶ Stem	1.4021	1.4021	1.4571	1.4021	1.4571	1.4571
420	▶ Packing	Graphite	Graphite	Graphite	Graphite	Teflon	Graphite
440	Gland flange	1.0460	1.0460	1.4571	1.0460	1.4571	1.4571
450	Rivet	1.1181	1.1181	A4-50	1.1181	A4-50	A4-50
460	Gland bolt	1.1181	1.1181	1.4571	1.1181	1.4571	1.4571
463	Washer	St	St	A4-50	St	A4-50	A4-50
464	Hexagonal nut	1.1181	1.1181	A4-70	1.1181	A4-70	A4-70
500	▶ Stem nut	1.0718	1.0718	1.0718	1.0718	1.0718	1.0718
501	▶ Cylindrical pin	St	St	St	St	St	St
600	Handwheel	0.7040	0.7040	0.7040	0.7040	0.7040	0.7040
609	Washer	St	St	St	St	A4-50	A4-50
610	Hexagonal nut	1.1181	1.1181	1.1181	1.1181	A4-70	A4-70
▶ Spare parts							
Special materials on request; alterations reserved.							
1) PN 10-40		4) Seat hard faced with Cr17		9) ≥ PN 63 seat hard faced with hastelloy			
2) PN 63-160		5) Seat hard faced with stellite					
3) Seat hard faced ≥ DN 125, 1.0460 Seat hard faced with Cr17		8) ≥ PN 63 seat hard faced with stellite					

Dimensions/mm							
PN	DN	Flange L	BW-Ends L		HStroke	H1	D1
			L	L			
10-40	65	290	290	310	22	105	225
	80	310	310	360	25	115	280
	100	350	350	400	30	140	280
	125	400	400	465	40	145	360
	150	480	480	530	50	170	360
200	600	600	575	65	240	450	

PN	DN	Flange L	BW-Ends L		HStroke	H1	D1
			L	L			
63-160	65	340	340	360	22	120	280
	80	380	380	400	25	145	280
	100	430	430	410	30	165	360
63	125	500	500	535	40	210	360
	150	550	550	555	50	235	450
100	125	500	500	535	40	210	360
	150	550	550	555	50	235	450

Weights/kg									
DN	200 AE/BE								
	PN 10-16 FL	PN 25-40 FL	PN 10-40 BW	PN 63 FL	PN 63 BW	PN 100 FL	PN 100 BW	PN 160 FL	PN 160 BW
65	27,5	27,5	16,0	34,0	24,0	34,0	24,0	39,0	24,0
80	37,0	37,0	28,0	47,0	36,0	47,0	36,0	51,0	36,0
100	52,0	53,0	41,0	72,0	56,0	72,0	56,0	80,0	56,0
125	69,0	69,0	55,0	117,0	93,0	120,0	93,0		
150	103,0	110,5	97,0	160,0	125,0	166,0	125,0		
200	171,0	175,0	156,0						

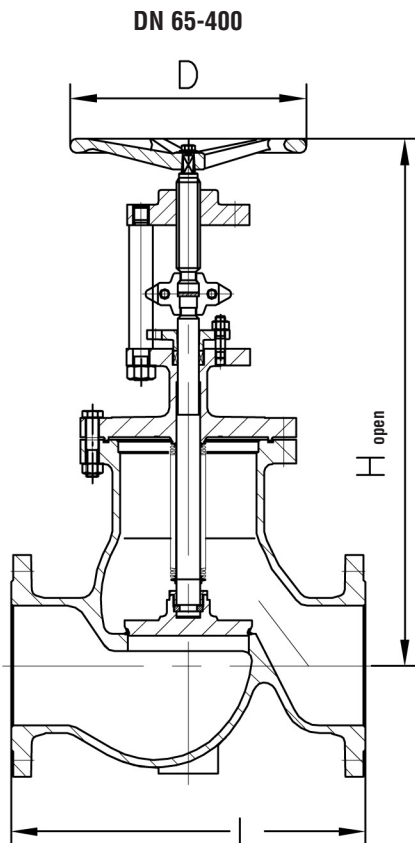
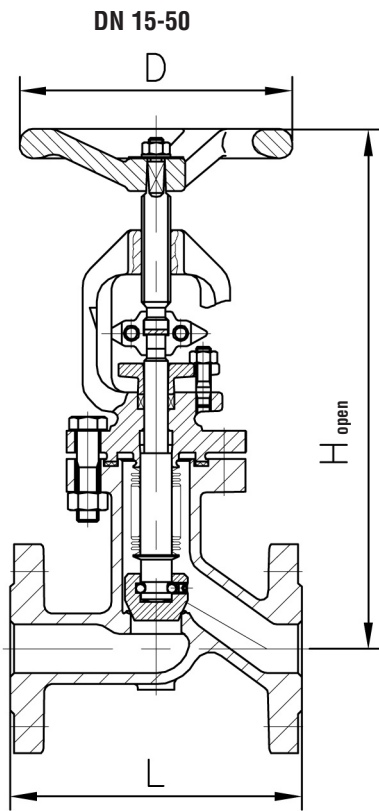
DN	240 MT								
	PN 10-16 FL	PN 25-40 FL	PN 10-40 BW	PN 63 FL	PN 63 BW	PN 100 FL	PN 100 BW	PN 160 FL	PN 160 BW
65	18,5	18,5	11,5	29,0	13,0	29,0	13,0	33,0	13,0
80	29,6	29,6	20,4	42,0	23,0	42,0	23,0	46,0	23,0
100	35,4	35,4	29,0	63,0	38,0	63,0	38,0	71,0	38,0
125	58,0	58,0	40,0	101,0	78,0	106,0	78,0		
150	80,0	80,0	65,0	145,0	110,0	150,0	110,0		
200	145,0	160,0	148,0						

Kvs-values (m ³ /h)						
Line	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200
	PN 10-160	PN 10-160	PN 10-160	PN 10-160	PN 10-160	PN 10-40
200 AE	71,0	122,0	162,0	260,0	370,0	660,0
200 BE	61,5	78,0	104,0	171,0	250,0	422,0
240 MT	72,1	105,9	171,6	263,0	374,0	688,0

The valves are also available in angle pattern up to DN 100 nominal sizes > DN 200 on request.

Permissible differential pressure (pressure inlet below the disc) acc. to EN 13709. **DN** 65 80 100 125 150 200 **BAR** 110 70 44 33 21 14

- **Globe valves** ▪ VALTRA Bellow seal globe valve ▪ 200 AL ▪ PN 10-160 ▪ DN 15-50
- **Globe valves** ▪ VALTRA Bellow seal globe valve ▪ 200 AL ▪ PN 10-40 (63-160) ▪ DN 65-400 (DN 65-200)



- **Globe valves** ▪ VALTRA Bellow seal globe valve ▪ 200 AL ▪ PN 10-160 ▪ DN 15-50
- **Globe valves** ▪ VALTRA Bellow seal globe valve ▪ 200 AL ▪ PN 10-40 (63-160) ▪ DN 65-400 (DN 65-200)

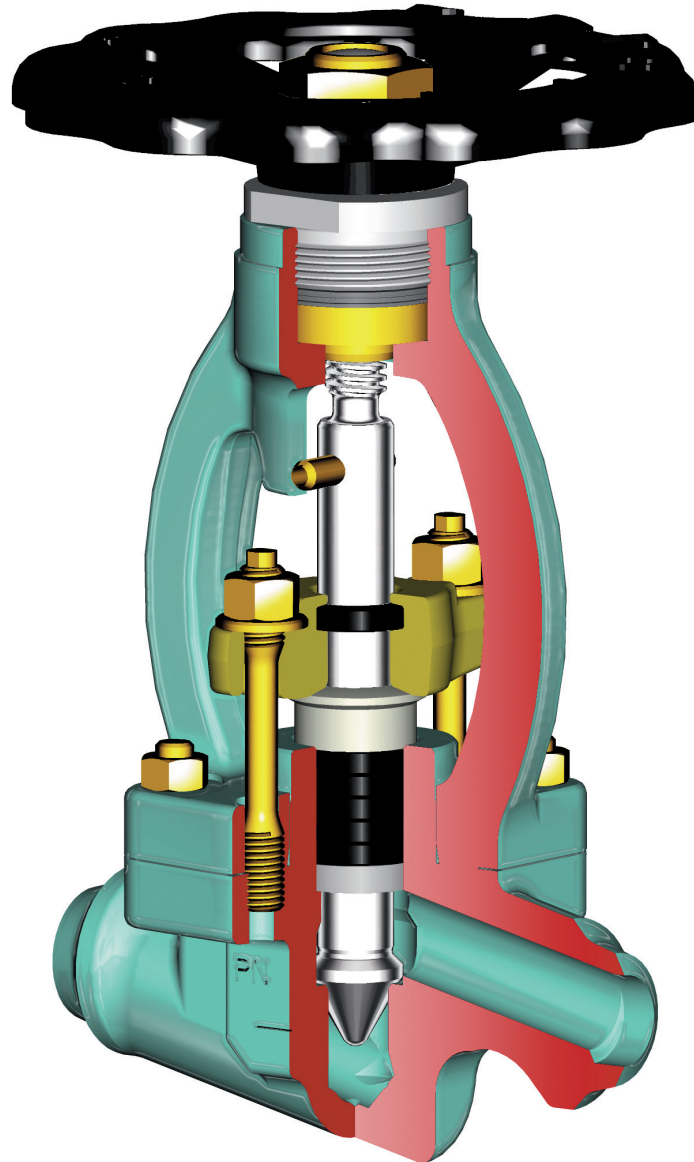
Materials				
Component	1.0619	1.4408	1.1138	
Body	1.0619	1.4408	1.1138	
welded on with	1.4370 ¹⁾	Stellite	1.4370 ¹⁾	
Bonnet	1.0619	1.4408 / 1.4571	1.1138 / 1.0566	
Bonnet	1.4021 ²⁾	1.4571	1.4571 / 1.0566	
welded on with	1.4021 ¹⁾	Stellite	Stellite	
Bellow seal	1.4571	1.4571	1.4571	
Gasket	1.4571 Graphite layer			
Bolt	A2-70 ³⁾	A2-70 ⁵⁾	A2-70 ⁵⁾	
Hexagonal nut	A2-70 ⁴⁾	A2-70 ⁵⁾	A2-70 ⁵⁾	
Stuffing box	Pure Graphite			
Gland flange	1.4408 ⁶⁾	1.4408	1.4408	
Stem upper part	1.4122	1.4122	1.4122	
Stem lower part	1.4571	1.4571	1.4571	
Handwheel	0.6020	0.6020	0.6020	

1) ≥ PN 63 Stellite
 2) ≥ PN 63 1.4571
 3) ≥ PN 63 1.7709
 4) ≥ PN 63 1.7258
 5) ≥ PN 63 A4-70
 6) ≥ DN 65 1.0420

Dimensions/mm					
PN	DN	Flange L	BW- Ends L	H/open	D
40	15	130	130	290	150
	20	150	130	290	150
	25	160	130	300	150
	32	180	160	335	175
	40	200	180	340	175
	50	230	210	360	200
	65	290	290	460	200
	80	310	310	610	250
	100	350	350	610	300
	125	400	400	615	300
	150	480	480	645	400
	200	600	600	910	400
	250	730	730	1280	600
	300	850	850	1285	600
	350	980	980	1675	600
	400	1100	1100	1685	600
63	15	210	210	300	150
	20	230	230	300	150
	25	230	230	300	150
	32	260	260	335	175
	40	260	260	340	175
	50	300	300	360	200
	65	340	340	460	200
	80	380	380	610	300
	100	430	430	610	300
	125	500	500	615	300
	150	550	550	945	400
	200	650	650	910	400
100-160	15	210	210	375	175
	20	230	230	375	175
	25	230	230	375	175
	32	260	260	410	250
	40	260	260	410	250
	50	300	300	560	250
	65	340	340		
	80	380	380	880	400
100	430	430	880	400	
125	500	500	890	400	
100	150	550	550	1080	400
	200	650	650	1045	400
160	150	550	550	1140	400
	200	650	650	1140	400

Weights/kg				
PN	DN	Flange	BW- Ends	
40	15	7	6	
	20	8	7	
	25	8	7	
	32	12	10	
	40	14	11	
	50	17	13	
	65	26	18	
	80	40	30	
	100	56	38	
	125	86	72	
	150	155	130	
	200	255	215	
	250	393	325	
	300	492	444	
350	800	720		
400	1020	890		

▪ **Globe valves** ▪ High pressure globe valve HD 91 ▪ 200 JM ▪ PN 320 ▪ DN 10-65/50



Range of application

Admissible operating pressure [bar] at design temperature [°C] ¹⁾

Material	PN	-10	20	150	200	250	300	350	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	
1.5415	320	320	320	320	320	320	283	273	264	262	260	258	256	255	253	251	249	217	170	129	102	81								
1.7335	320	320	320	320	320	320	320	320	311	307	304	300	296	292	290	289	287	285	258	217	172	140	113	88	72	59				
1.7380	320	320	320	320	320	320	320	320	320	320	320	319	315	311	307	304	300	287	255	223	194	170	147	128	109	96	83	72	63	

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

■ **Globe valves** ■ High pressure globe valve HD 91 ■ 200 JM ■ PN 320 ■ DN 10-65/50

Standard features

- Die-forged valve body and bonnet
- Disc and stem in one piece with stellite edge seat
- Non-turning, rising stem
- Position indicator
- Gland flange and gland ring in two separate pieces
- Yoke sleeve made of bronze

Fields of application

High temperature steam and water, Refining (Catalytic reformers and Hydrocrackers), Petrochemical and Chemical Industries

Pressure and temperature ratings

- Pressure rating up to 320 bar
- Temperature rating from -10° C up to +600° C

Materials

- 1.5415
- 1.7335
- 1.7380

Further materials on request

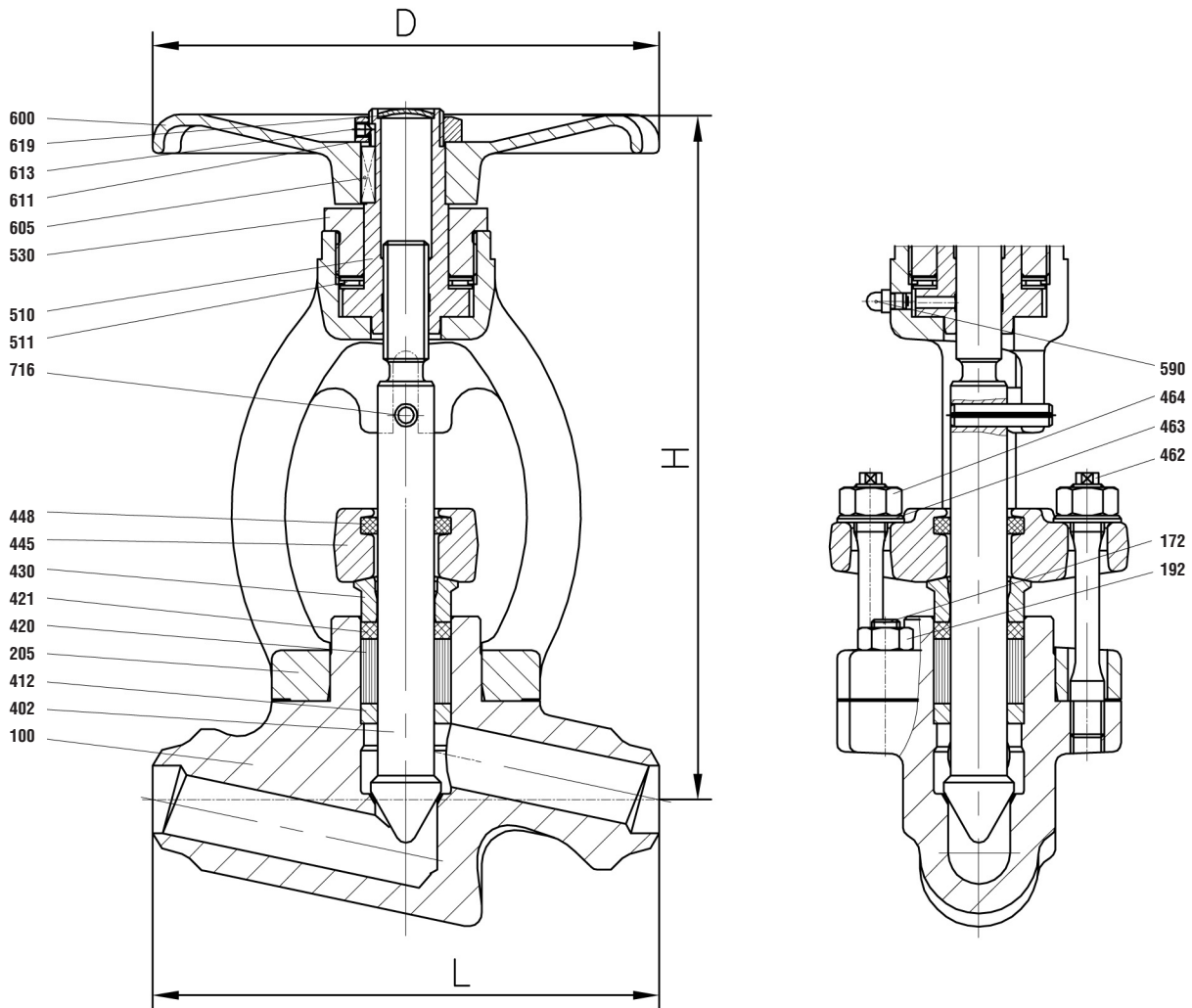
Design-Highlights

- Body and bonnet in two separate pieces with bolted connection
- Body seat: edge seat welded on integrally with stellite
- Yoke sleeve (in closing direction) supported by needle bearings (axial type)
- Sealing to the outside only means of the gland packing
- Gland flange with wiper ring

Benefits

- To ease maintenance work, e.g. regrinding of the body seats
- No pressed in or screwed seat ring, therefore no crevice corrosion or loosening
- To minimize the expenditure of effort when closing valve
- No bonnet gaskets, therefore reduction of possible leakage areas
- Prevents dirt from entering the moving thread section

▪ **Globe valves** ▪ High pressure globe valve HD 91 ▪ 200 JM ▪ PN 320 ▪ DN 10- 65/50



■ **Globe valves** ■ High pressure globe valve HD 91 ■ 200 JM ■ PN 320 ■ DN 10- 65/50

Materials				
Pos.	Component	1.5415 (42)	1.7335 (44)	1.7380 (45)
100	Body	1.5415	1.7335	1.7380
	welded on with	Stellite	Stellite	Stellite
172	Stud	1.7709	1.4923	1.4923
192	Hexagonal nut	1.7258	1.4923	1.4923
205	Bonnet	1.7380	1.7380	1.7380
402	▶ Stem with throttle disc	1.4122	1.4923	1.4923
	welded on with	inductive hardened	Stellite	Stellite
412	Guide sleeve	0.7670	0.7670	0.7670
420	▶ Packing	Graphite	Graphite	Graphite
421	▶ Ring	Graphite Plait	Graphite Plait	Graphite Plait
430	Gland ring	1.5415	1.5415	1.5415
445	Gland flange	1.7380	1.7380	1.7380
448	▶ Dirt Scraper	Graphite	Graphite	Graphite
462	Stud	1.7709	1.4923	1.4923
463	Washer	St	St	St
464	Hexagonal nut	1.7258	1.7258	1.7258
510	▶ Yoke sleeve	2.0550 *	2.0550 *	2.0550 *
511	▶ Bearing	WLS	WLS	WLS
530	Yoke nut	1.0718	1.0718	1.0718
590	Grease nipple	5.8	5.8	5.8
600	Handwheel	0.7040	0.7040	0.7040
605	Key	1.0060	1.0060	1.0060
611	Hexagonal nut	St	St	St
613	Screw pin	45H	45H	45H
619	Lock washer	St	St	St
716	▶ Tension pin	1.0904	1.0904	1.0904

*On request: GGG 40 respectively Ni-Resist.

▶ Spare parts

Dimensions/mm					
DN	L	H	Stroke	R/Stroke	D
10	150	205	12	6	140
15	150	205	12	6	140
20	180	245	18	6	180
25	180	245	18	6	180
32 ¹⁾	300	370	30	10	280
40	300	370	30	10	280
50	300	370	30	10	280
65/50	300	370	30	10	280

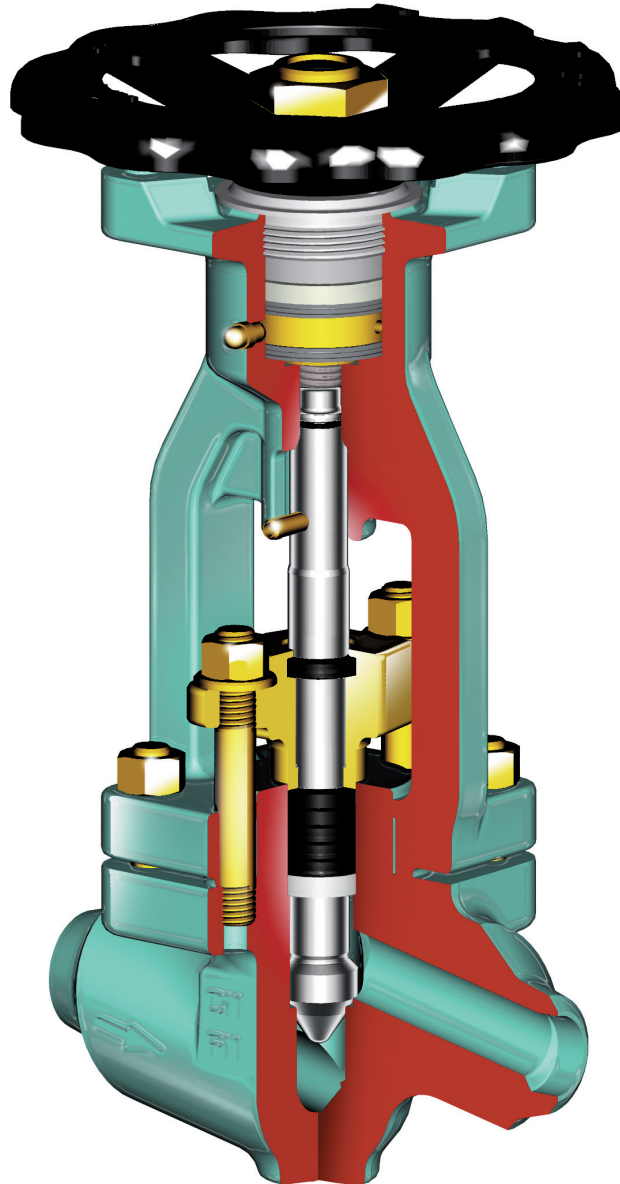
1) DN 32 not included in the DIN-Standard.

Attention: In case of welding connentions the permissible operating overpressure is valid for the corresponding tube dimensions.

Weights/kg and Kvs-values			
DN	BW-Ends	Zeta (DN rel.)	Kvs (m ³ /h)
10	4,5	3,0	2,3
15	4,3	7,0	3,4
20	8,4	4,5	7,5
25	8,2	6,9	9,5
32	27,5	6,1	16,6
40	27,0	10,2	20,0
50	26,8	9,7	32,0
65/50	26,8	7,8	32,0

* It is possible to deviate from these values taking into account the tube dimensions.

▪ **Globe valves** ▪ High pressure globe valve HD 2000 ▪ 200 LM ▪ PN 500 ▪ DN 10- 65/50



Range of application

Admissible operating pressure [bar] at design temperature [°C] ¹⁾

Material	PN	-10	50	100	120	150	200	250	300	350	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580*	590*	600*	610*	620*	630*	640*	650*				
1.5415	500	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	537,4	518,8	514,7	510,9	507,3	503,8	500,3	496,7	493,1	489,3	426,9	333,5	253,5	200,1	160,1																
1.7335	500	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	500,0	426,9	338,0	275,7	222,4	173,4	142,0	116,0													
1.7380	500	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	500,3	437,3	381,7	333,5	289,1	252,0	214,9	189,0	163,1	140,8	124,5									
1.4903	500	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	500,0	465,0	430,0	380,0	338,0	298,0	261,0	231,0	198,0	172,0				

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

*) Reduced life time of the graphite packing by oxidation (loss of volume) in case of media temperatures exceeding 570° C.

■ **Globe valves** ■ High pressure globe valve HD 2000 ■ 200 LM ■ PN 500 ■ DN 10- 65/50

Standard features

- Die-forged valve body
- Disc and stem in one piece
- Non-turning, rising stem
- Position indicator
- Throttle disc
- Yoke sleeve supported by needle bearings
- From DN 25 with bonnet-flange

Fields of application

High temperature steam and water, Refining (Catalytic reformers and Hydrocrackers, Petrochemical and Chemical Industries

*) Reduced lifetime of the graphite packing due to Oxydation (volume loss) at temperatures > +570° C

Pressure and temperature ratings

- Pressure rating up to 550 bar
- Temperature rating from -10° C up to +650° C* (depending on selected material)

Materials

- 1.5415
- 1.7335
- 1.7380
- 1.4903

Further materials, e.g. **F92** on request

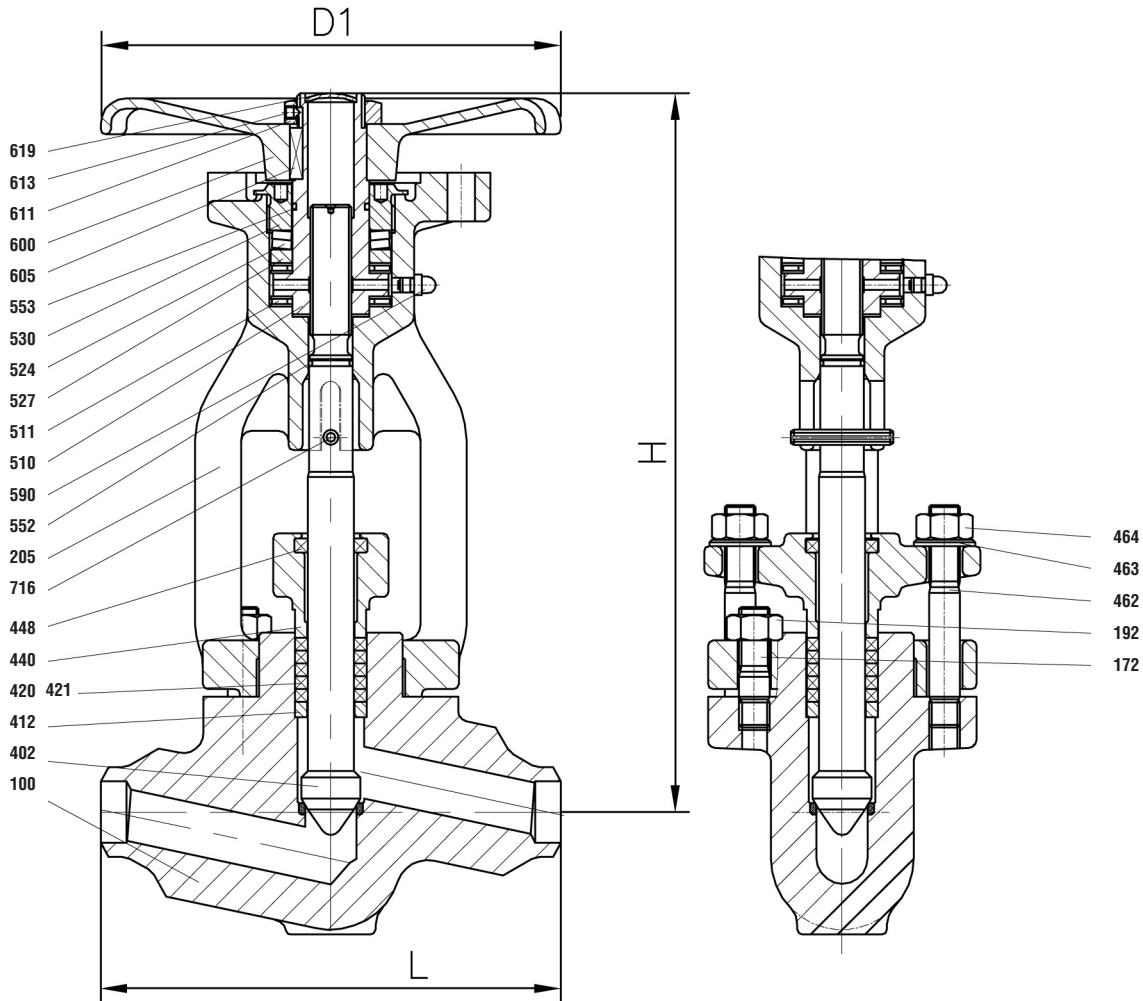
Design-Highlights

- Body seat: tapered seat welded on integratedly with stellite
- Disc and stem in one piece; up from 570° C with stellite tapered seat
- Sealing to the outside only by means of the gland packing
- Body and bonnet in two separate pieces with bolted connection
- Yoke sleeve made of bronze
- Cup springs above the upper needle bearing

Benefits

- No pressed in or screwed seat ring, therefore no crevice corrosion or loosening
- Damage between disc and stem duo to high flowrates is prevented
- No bonnet gasket, therefore reduction of possible leakage areas
- To ease maintenance work, e.g. regrinding of the body seats
- Good emergency running properties
- To maintain the necessary closing forces when dimensions change between stem and yoke arms due to thermal fluctuation.

■ **Globe valves** ■ High pressure globe valve HD 2000 ■ 200 LM ■ PN 500 ■ DN 10-65/50



■ **Globe valves** ■ High pressure globe valve HD 2000 ■ 200 LM ■ PN 500 ■ DN 10- 65/50

Materials					
Pos.	Component	1.5415 (42)	1.7335 (44)	1.7380 (45)	1.4903 (63)
100	Body welded on with	1.5415	1.7335	1.7380	1.4903
	Stud	Stellite	Stellite	Stellite	Stellite
172	Stud	1.7709	1.7709	1.7709	1.4923
192	Hexagonal nut	1.7258	1.7258	1.7258	1.4923
205	Bonnet	1.7379	1.7379	1.7379	1.7379
402	▶ Stem with disc	1.4122 ¹⁾	1.4122 ¹⁾	1.4122 ¹⁽²⁾	1.4122 ¹⁽²⁾
412	Guide sleeve	0.7670	0.7670	0.7670	0.7670
420	▶ Packing	Pure Graphite	Pure Graphite	Pure Graphite	Pure Graphite
421	▶ Ring	Graphite plait	Graphite plait	Graphite plait	Graphite plait
440	Gland flange	1.7379	1.7379	1.7379	1.7379
448	▶ Dirt Scraper	Graphite plait	Graphite plait	Graphite plait	Graphite plait
462	Stud	1.7709	1.7709	1.7709	1.4923
463	Washer	St	St	St	St
464	Hexagonal nut	1.7258	1.7258	1.7258	1.4923
510	▶ Yoke sleeve	2.0550	2.0550	2.0550	2.0550
511	▶ Bearing	WLSSt	WLSSt	WLSSt	WLSSt
524	Spring	1.8159	1.8159	1.8159	1.8159
527	Supporting ring	1.4021	1.4021	1.4021	1.4021
530	Yoke nut	1.0460	1.0460	1.0460	1.0460
552	▶ O-Ring	Viton	Viton	Viton	Viton
553	▶ O-Ring	Viton	Viton	Viton	Viton
590	Grease nipple	5.8	5.8	5.8	5.8
600	Handwheel	0.7040	0.7040	0.7040	0.7040
605	Key	1.0060	1.0060	1.0060	1.0060
611	Handwheel nut	St	St	St	St
613	Screw pin	45H	45H	45H	45H
619	Lock washer	St	St	St	St
716	Tension pin	1.0904	1.0904	1.0904	1.0904
	▶ Spare parts				

1) Stem with stellite seats, on request
2) At design temperatures about 570° C, stem in 1.4986 with stellite seats

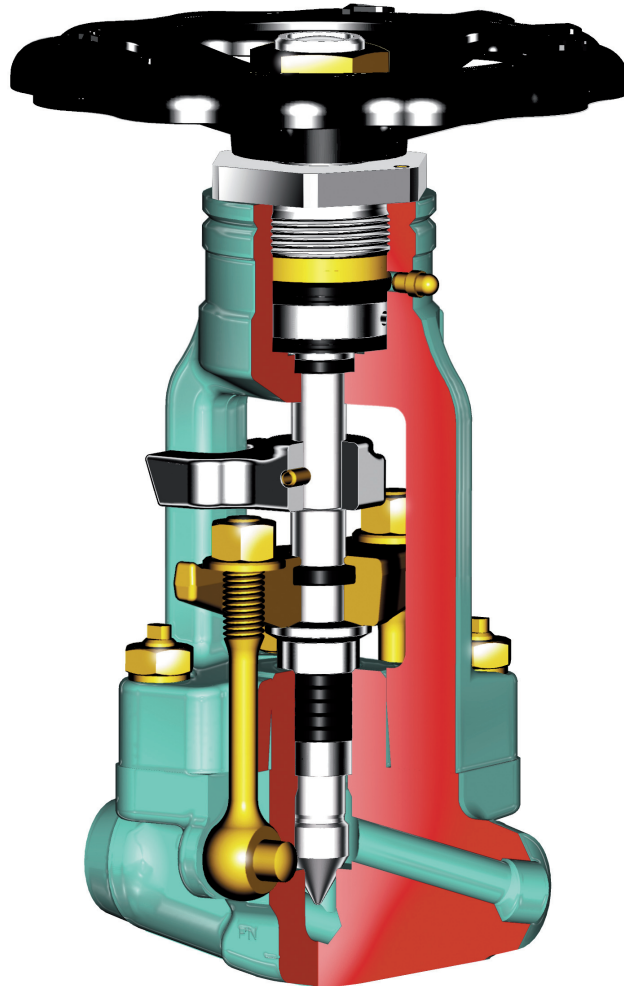
Dimensions/mm						
DN	L	H	Stroke	R/Stroke	D	DIN/ISO 5210
10	150	228	10	5	140	F07 ¹⁾
15	150	228	10	5	140	F07 ¹⁾
20	180	280	16	8	225	F10
25	180	280	16	8	225	F10
32 ³⁾	300	445	27	9	360	F10/F14 ²⁾
40	300	445	27	9	360	F10/F14 ²⁾
50	300	445	27	9	360	F10/F14 ²⁾

1) Flange connection to be specified with the purchase order.
2) F10 connection is only possible together with a intermediate flange.
3) DN 32 not included in DIN-Standard.

Attention: In case of welding connections the permissible operating overpressure is valid for the corresponding tube dimensions.

Weights/kg	
DN	BW-Ends
10	6,0
15	6,0
20	11,5
25	11,3
32	47,5
40	47,0
50	46,5

■ **Globe valves** ■ High pressure globe valve HD 92 ■ 200 BM ■ PN 630 (320) ■ DN 10-50 (65)



Range of application

Admissible operating pressure [bar] at design temperature [°C] ^{1) 3)}

Material	PN	-10	20	120	150	200	250	300	350	400	425	450	475	500	510	520	530	540	550	560	570	580	590	600	
1.5415	400 ²⁾	400	400	400	400	400	400	348	312	296	286	278	272	178	135	107	85								
	630 ²⁾	630	630	630	630	630	630	544	527	493	483	476	465	306	232	183	146								
1.7335	400	400	400	400	400	400	400	400	380	364	356	348	330	295	250	198	155	116	87	71	58				
	630	630	630	630	630	630	630	630	612	575	561	544	533	468	391	310	253	204	159	130	106				
1.7380	400	400	400	400	400	400	400	400	380	364	356	348	330	295	250	198	174	151	130	112	96	82	71	62	
	630	630	630	630	630	630	630	630	630	630	612	595	575	490	426	369	320	276	235	202	174	149	129	113	
1.4903	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	146	133	120	108	95	83	73	
	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	228	207	188	169	149	130	114	
	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	292	266	241	217	191	166	146	
	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	365	332	302	271	239	208	182	
	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	575	524	476	428	376	328	300	
1.4571	160 ⁴⁾	160	160	160	160	160	150	145	141	139	137	132	128	100	79	70	61	52							
	250 ⁴⁾	250	250	250	250	250	235	227	220	217	215	206	184	154	124	108	95	81							
	320 ⁴⁾	320	320	320	320	320	301	290	287	278	275	264	237	200	158	139	121	104							

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.
 2) At operating temperature > 450° C the material of nuts for Pos. 192 is 1.7709 respectively 1.4923.
 3) In case of calculation for valves with butt weld ends acc. to DIN 3239 part 1 for nominal pressure class PN 630 the connection d3 with the wall thickness has been considered as minimum dimension without corrosion surcharge.
 4) In case of mat. 1.4571 the application at more then 400° C is admissible if no intercrystalline corrosion has to be expected.

■ **Globe valves** ■ High pressure globe valve HD 92 ■ 200 BM ■ PN 630 (320) ■ DN 10-50 (65)

Standard features

- Die-forged valve body and bonnet
- Disc and stem in one piece with stellite edge seat
- Non-turning, rising stem
- Position indicator
- Gland flange and gland ring in two separate pieces
- Yoke sleeve made of bronze

Fields of application

High temperature steam and water, Refining (Catalytic reformers and Hydrocrackers), Petrochemical and Chemical Industries

Pressure and temperature ratings

- Pressure rating up to 630 bar
- Temperature rating from -10° C up to +600° C

Materials

- 1.5415
- 1.7335
- 1.7380
- 1.4903
- 1.4571

Further materials, e.g. **F92** on request

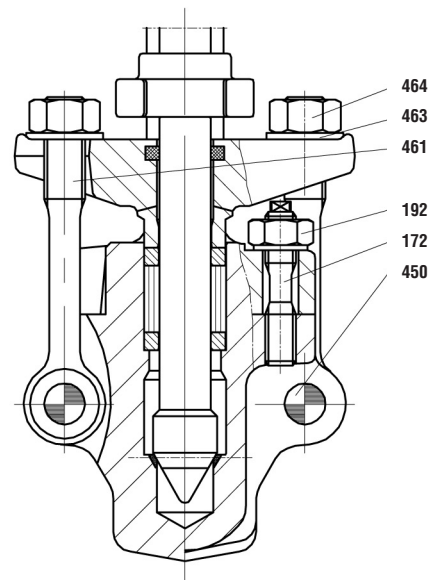
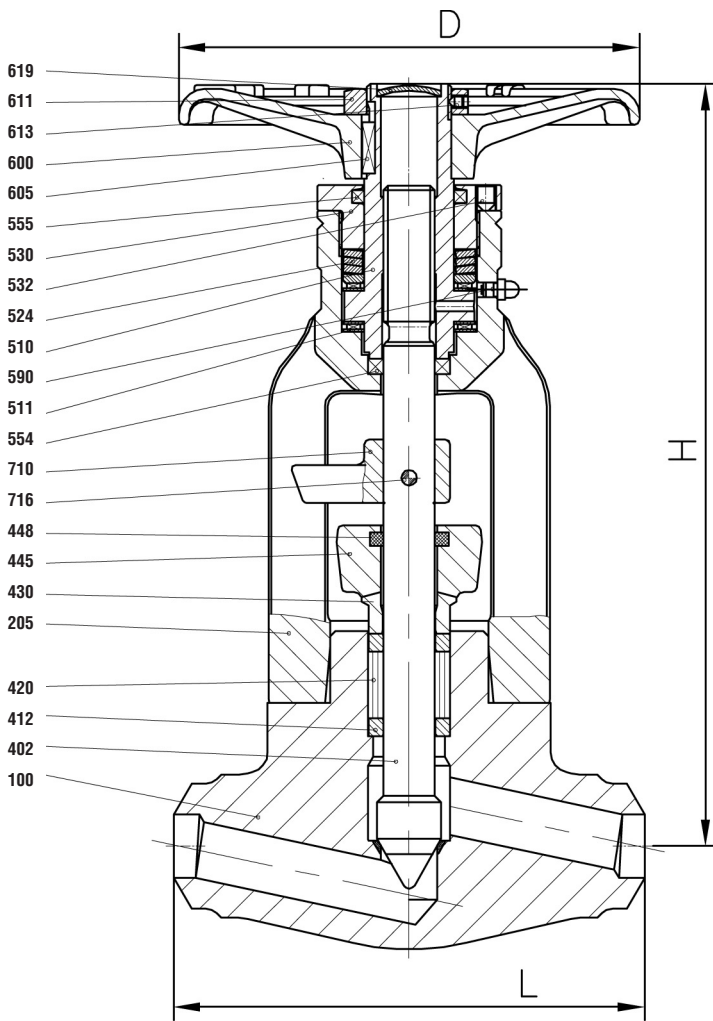
Design-Highlights

- Body and bonnet in two separate pieces with bolted connection
- Body seat: edge seat welded on integrally with stellite
- Yoke sleeve supported at the top and the bottom by means of needle bearings (axial type)
- Cup springs above the upper needle bearing
- Sealing to the outside only by means of the gland packing

Benefits

- To ease maintenance work, e.g. regrinding of the body seats
- No pressed in or screwed seat ring, therefore no crevice corrosion or loosening
- To minimize the expenditure of effort when opening and closing valve
- To maintain the necessary closing forces when dimensions change between stem and yoke arms due to thermal fluctuation. Also to protect against excess torsion when electric actuators are fitted
- No bonnet gaskets, therefore reduction of possible leakage areas

■ **Globe valves** ■ High pressure globe valve HD 92 ■ 200 BM ■ PN 630 (320) ■ DN 10-50 (65)



■ **Globe valves** ■ High pressure globe valve HD 92 ■ 200 BM ■ PN 630 (320) ■ DN 10-50 (65)

Materials						
Pos.	Component	1.5415 (42) ³⁾	1.7335 (44)	1.7380 (45)	1.4903 (63)	1.4571 (82) ¹⁾²⁾
100	Body	1.5415	1.7335	1.7380	1.4903	1.4571
	welded on with	Stellite	Stellite	Stellite	Stellite	Stellite
172	Stud	1.4923	1.4923	1.4923	1.4923	A4-70
192	Hexagonal nut	1.4923	1.4923	1.4923	1.4923	A4-70
205	Bonnet	1.7380	1.7380	1.7380	1.7380	1.7380
402	▶ Stem with throttle disc welded on with	1.4923	1.4923	1.4923	1.4923	1.4571
		Stellite	Stellite	Stellite	Stellite	Stellite
412	▶ Guide sleeve	0.7670	0.7670	0.7670	0.7670	0.7670
420	▶ Packing	Graphite	Graphite	Graphite	Graphite	Graphite
430	Gland ring	1.5415	1.5415	1.5415	1.5415	1.5415
445	Gland flange	1.7380	1.7380	1.7380	1.7380	1.7380
448	▶ Dirt Scraper	Graphite	Graphite	Graphite	Graphite	Graphite
450	Grooved pin	1.4923	1.4923	1.4923	1.4923	A4-70
461	Eye bolt	1.7709	1.7709	1.7709	1.7709	A4-50
463	Washer	St	St	St	St	A4-50
464	Hexagonal nut	1.4923	1.4923	1.4923	1.4923	A4-70
510	▶ Yoke sleeve	2.0550 *	2.0550 *	2.0550 *	2.0550 *	2.0550 *
511	▶ Bearing	WLSt	WLSt	WLSt	WLSt	WLSt
524	Spring	FSt	FSt	FSt	FSt	FSt
530	Yoke nut	1.0718	1.0718	1.0718	1.0718	1.0718
532	Screw pin	45H	45H	45H	45H	45H
554	▶ Dirt Scraper	Graphite	Graphite	Graphite	Graphite	Graphite
555	▶ Dirt Scraper	Graphite	Graphite	Graphite	Graphite	Graphite
590	Grease nipple	5.8	5.8	5.8	5.8	5.8
600	Handwheel	0.7040	0.7040	0.7040	0.7040	0.7040
605	Key	1.0060	1.0060	1.0060	1.0060	1.0060
611	Hexagonal nut	St	St	St	St	St
613	Screw pin	45H	45H	45H	45H	45H
619	Cover	St	St	St	St	St
710	Switch	0.7040	0.7040	0.7040	0.7040	0.7040
716	▶ Tension pin	1.0904	1.0904	1.0904	1.0904	1.0904
	▶ Spare parts					

* On request: GGG-40 respectively Ni-Resist.
 1) < 10° C Pos. 205, 445 = 1.4571 / > 400° C Pos. 172, 192, 451, 461, 464 = 1.4986
 2) Alternativ Pos. 205, 445 = 1.4571
 3) From 450° C Pos. 192 in 1.7709 or 1.4923

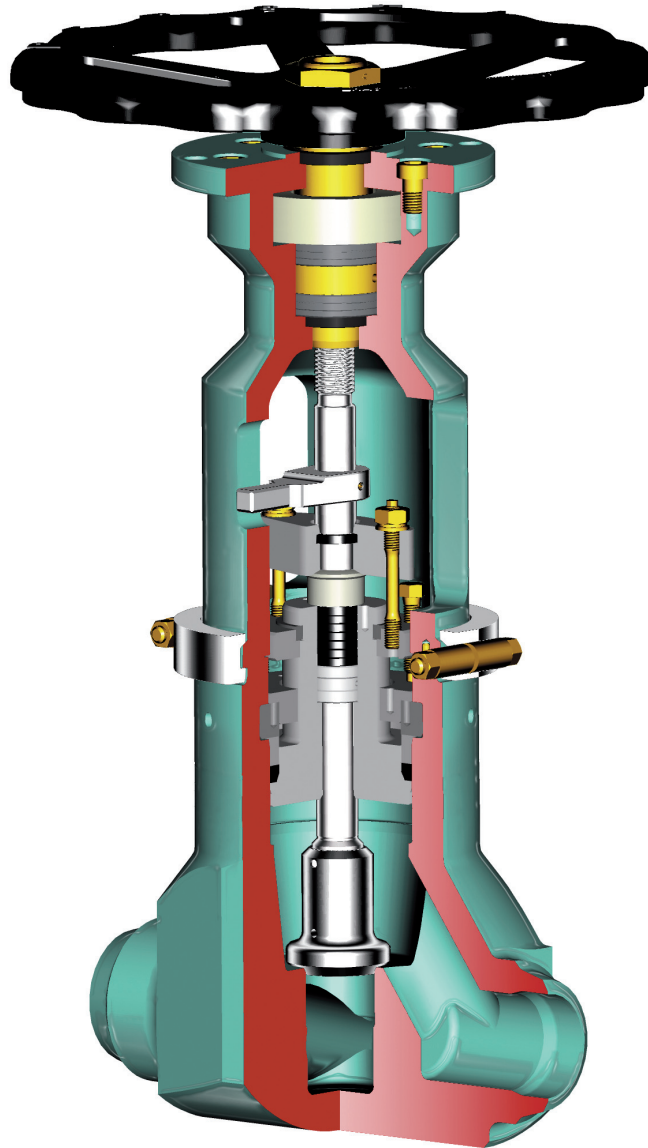
Dimensions/mm					
DN	L	H	Stroke	R/Stroke	D
10	150	260	12	4	180
15	150	260	12	4	180
20	180	300	18	6	180
25	180	300	18	6	180
32 ¹⁾	250	385	24	8	280
40	250	385	24	8	280
50	300	480	30	5	360
65 ²⁾	340	480	30	10	360

1) DN 32 not included in the to DIN-Standard.
 2) Limited down to PN 320

Attention: In case of welding connections the permissible operating overpressure is valid for the corresponding tube dimensions.

Weights/kg and Kvs-values		
DN	BW-Ends	Kvs (m3/h)
10	8,5	2,3
15	8,3	3,4
20	14,0	7,6
25	13,8	9,5
32	31,0	16,6
40	29,0	20,0
50	54,0	34,9
65	91,0	34,9

▪ **Globe valves** ▪ High pressure globe valve DVA ▪ 200 AZ/BZ ▪ PD 25 ▪ DN 80-200



Range of application

Admissible operating pressure [bar] at design temperature [°C] ¹⁾

Material	PD	120	150	200	250	300	350	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	
1.0460	25	250	250	235	206	184	155	125	119	113	107	102	96	85	71	58													
1.5415	25	300	300	280	258	221	213	206	205	203	202	200	199	197	196	194	170	132	101	79	64								
1.7335	25	300	300	300	294	272	258	243	240	237	234	231	228	227	225	224	222	202	170	134	109	88	69	57	46	65	56	49	
1.7380	25	300	300	300	300	294	272	258	255	252	249	246	243	240	237	234	224	199	174	152	132	115	100	85	75				
1.6368	25	410	410	410	410	410	410	410	410	410	410	402	360	309	257	205	153	102											
1.4903	25	425	425	425	425	425	425	425	425	425	425	425	425	425	425	418	383	372	344	316	290	263	238	213	191	169	150	132	

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

▪ **Globe valves** ▪ High pressure globe valve DVA ▪ 200 AZ/BZ ▪ PD 25 ▪ DN 80-200

Standard features

- Die-forged valve body and bonnet
- Pressure sealing bonnet acc. to VGB-guidelines
- Shut off disc = 200 AZ
- Throttle disc = 200 BZ
- Body seat welded on integratedly
- Outside screw and yoke
- Position indicator
- Yoke sleeve supported at the top and the bottom
- By means of needle bearings
- Universal valve head for mounting actuators

Pressure and temperature ratings

- Pressure rating up to 425 bar
- Temperature rating up to +600° C

Materials

- 1.0460
- 1.5415
- 1.7335
- 1.7380
- 1.6368
- 1.4903

Further materials, e.g. **F92** on request

Fields of application

High temperature steam and water, Refining (Catalytic reformers and Hydr crackers), Petrochemical and Chemical Industries

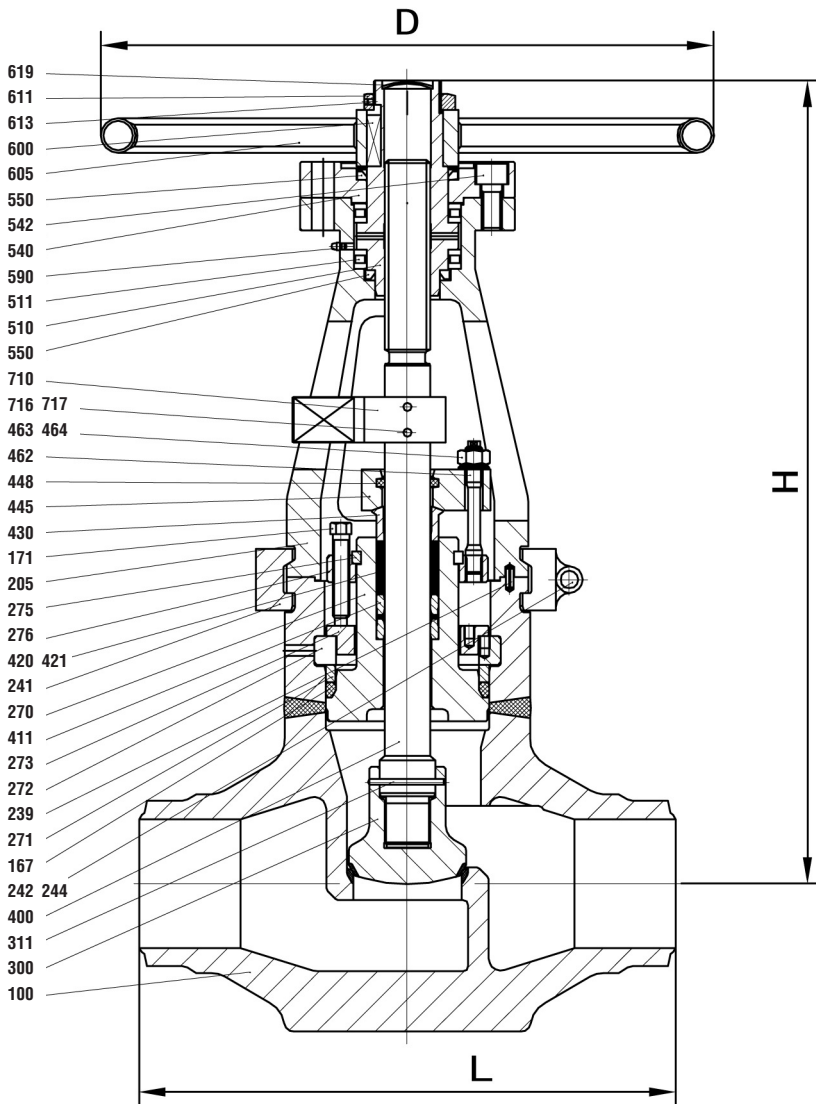
Design Highlights

- Valve body made of forged steel
- Pressure sealing bonnet
- Body seat welded on integratedly
- Bolted bonnet with reduced-shaft bolts
- Polished stem shaft with a surface roughness of max 2 µm
- Yoke sleeve made of bronze
- Cup spring above the upper needle bearing
- Valve head equipped with dirt scrapers below and above the bearings

Benefits

- Free from porosity and shrink holes
- Acc. to VGB-guidelines
- No pressed in or screwed seat, ring, therefore no crevice corrosion or loosening
- To improve the stress capability when temperature and pressure fluctuate
- Minimum wear to the gland packing compared with ground stem surfaces
- Good emergency running properties
- To maintain the necessary closing forces when dimensions change between stem and yoke arms due to thermal fluctuation. Also to protect against excess torsion when electric acutators are fitted
- To protect against dirt and to avoid the loss of lubricants

■ **Globe valves** ■ High pressure globe valve DVA ■ 200 AZ/BZ ■ PD 25 ■ DN 80-200



■ **Globe valves** ■ High pressure globe valve DVA ■ 200 AZ/BZ ■ PD 25 ■ DN 80-200

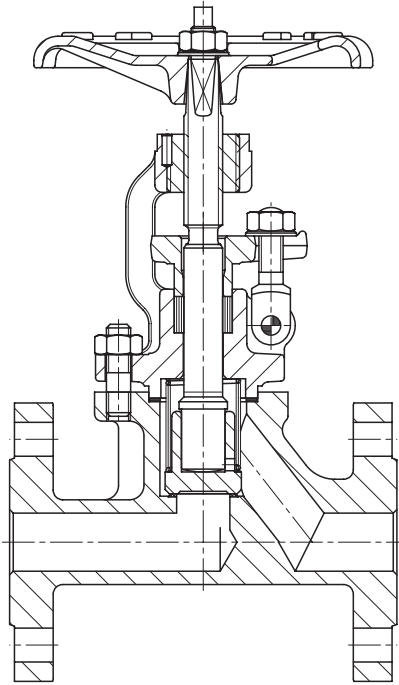
Materials							
Pos.	Component	1.0460 (21)	1.5415 (42)	1.7335 (44)	1.7380 (45)	1.6368 (46)	1.4903 (63)
100	Body welded on with	1.0460 Stellite	1.5415 Stellite	1.7335 Stellite	1.7380 Stellite	1.6368 Stellite	1.4903 Stellite
167	▶ Gasket	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
171	Stud	1.7709	1.7709	1.7709	1.7709	1.7709	1.7709
205	Bonnet	1.5415	1.5415	1.5415	1.5415	1.5415	1.5415
239	Tension pin	1.0904	1.0904	1.0904	1.0904	1.0904	1.0904
241	Clamp	1.5415	1.5415	1.5415	1.5415	1.5415	1.5415
242	Screw bolt	1.7709	1.7709	1.7709	1.7709	1.7709	1.7709
244	Hexagonal nut	1.7258	1.7258	1.7258	1.7258	1.7258	1.7258
270	Cover	1.0460	1.5415	1.7335	1.7380	1.6368	1.4903
271	Ring	1.0460	1.5415	1.7335	1.7380	1.6368	1.4903
272	Segment ring	1.0460	1.5415	1.7335	1.7380	1.6368	1.4903
273	Cover	1.7380	1.7380	1.7380	1.7380	1.6368	1.7380
275	Ring	1.7380	1.7380	1.7380	1.7380	1.6368	1.4903
276	Flange	1.7380	1.7380	1.7380	1.7380	1.6368	1.4903
300	▶ Flat disc welded on with	1.0460 Stellite	1.5415 Stellite	1.7335 Stellite	1.7380 Stellite	1.6368 Stellite	1.4903 Stellite
311	▶ Cylindrical pin	1.4571	1.4571	1.4571	1.4571	1.4571	1.4571
400	▶ Stem	1.4021	1.4923	1.4923	1.4923	1.4923	1.4923
411	▶ Guide bush	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507
420	▶ Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
421	▶ Ring	Graphite plait	Graphite plait	Graphite plait	Graphite plait	Graphite plait	Graphite plait
430	Gland ring	1.5415	1.5415	1.5415	1.5415	1.5415	1.5415
445	Gland flange	1.7380	1.7380	1.7380	1.7380	1.6368	1.4903
448	Dirt Scraper	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
462	Stud	1.7709	1.7709	1.7709	1.7709	1.4923	1.4923
463	Washer	St	St	St	St	St	St
464	Hexagonal nut	1.7258	1.7258	1.7258	1.7258	1.4923	1.4923
510	▶ Yoke sleeve	2.0550	2.0550	2.0550	2.0550	2.0550	2.0550
511	▶ Bearing	WLS	WLS	WLS	WLS	WLS	WLS
540	Flange	1.0425	1.0425	1.0425	1.0425	1.0425	1.0425
542	Cylindrical stud	8.8	8.8	8.8	8.8	8.8	8.8
550	▶ Gasket	Viton	Viton	Viton	Viton	Viton	Viton
590	Grease nipple	5.8	5.8	5.8	5.8	5.8	5.8
600	Handwheel	St	St	St	St	St	St
605	Key	1.0060	1.0060	1.0060	1.0060	1.0060	1.0060
611	Handwheel nut	St	St	St	St	St	St
613	Screw pin	45H	45H	45H	45H	45H	45H
619	Cover	St	St	St	St	St	St
710	Switch bracket	1.0425	1.0425	1.0425	1.0425	1.0425	1.0425
716	▶ Tension pin	1.0904	1.0904	1.0904	1.0904	1.0904	1.0904
717	▶ Tension pin	1.0904	1.0904	1.0904	1.0904	1.0904	1.0904
	▶ Spare parts						

Dimensions/mm				
DN	L	H	D	Stroke
80	390	680	450	32
100	450	740	600	40
125	525	900	720	50
150	600	980	900	60
200	750	1150		40

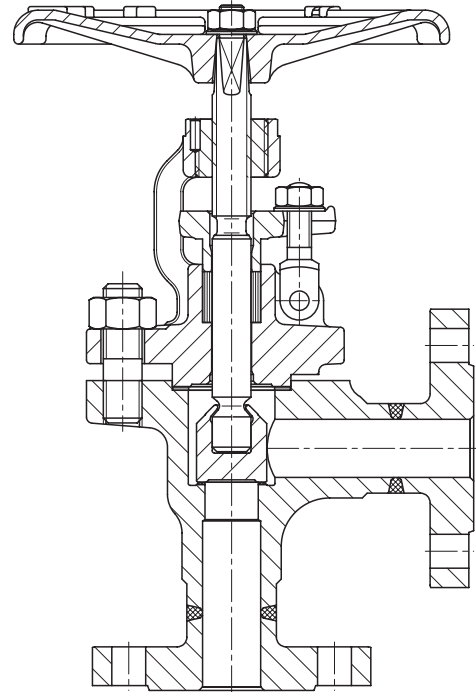
Weights/kg	
DN	BW-Ends
80	125
100	164
125	260
150	375
200	820

▪ **Globe valves** ▪ **Further standards**

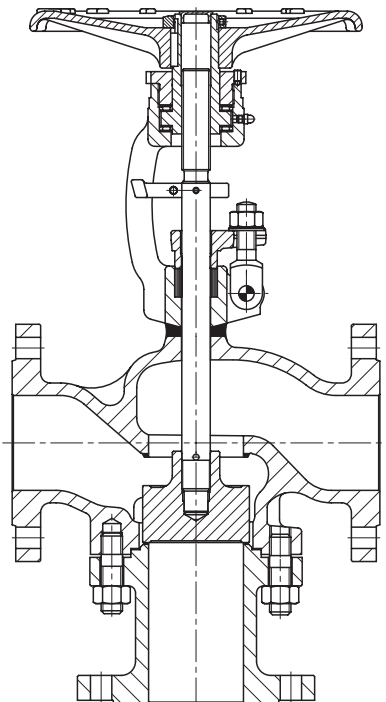
Screw down non return valve 240 ME



Angle globe valve 202 AE



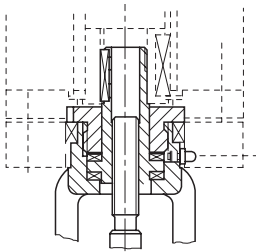
Changeover valve 203 EM



■ **Globe valves** ■ **Actuator variants**

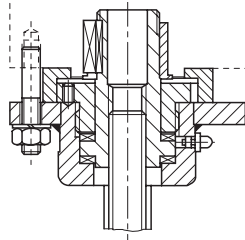
Universal Valve-Head

For subsequent assembly of E-actuators without welding



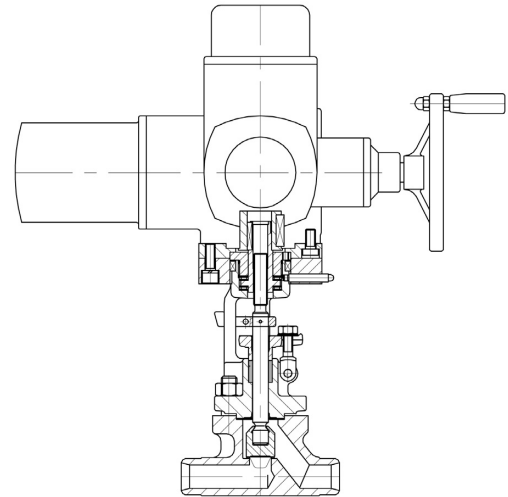
Assembly of E-actuators

Standard design DN 65



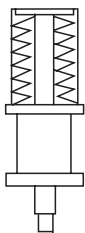
For running a particular limit of travel e.g. with air or current

Example



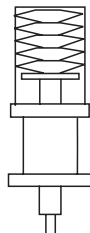
PERCON piston drive

Spring opening

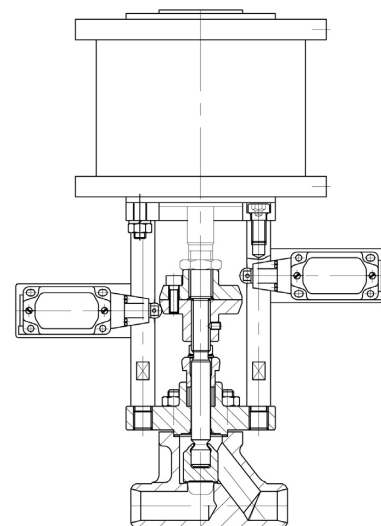


PERCON piston drive

Spring closing



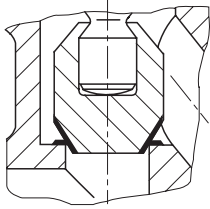
Example



■ **Globe valves** ■ **Variants**

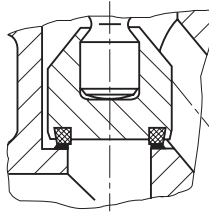
Disc with edge seat

For media with small quantities of impurities



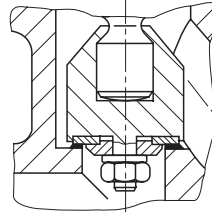
Disc with soft seat

E.g. of lead or PTFE for crystallizing media etc.



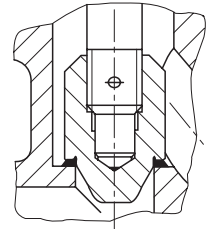
Disc with elastomer coated obturator

E.g. with PTFE spacer ring for special media up to approx. 280° C



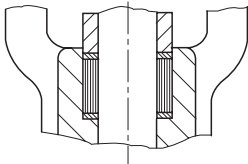
Control disc

Pinned down suitable for operating in intermediate position



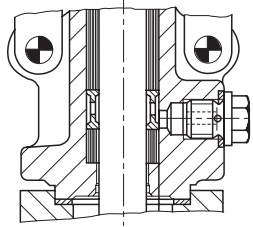
PTFE-stuffing box

With chambers for aggressive media up to approx. max. 280° C



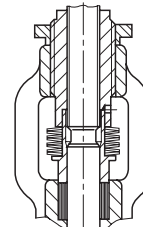
Stuffing box

With lantern and test screw plug also for sealing water or leakage suction

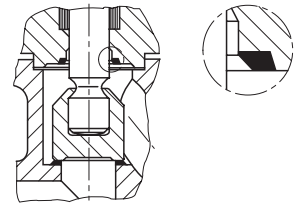


Stuffing box

With central cup spring tightening in order to minimize maintenance costs

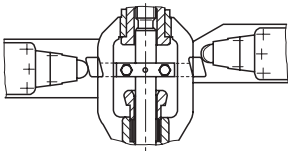


Hard faced back seat



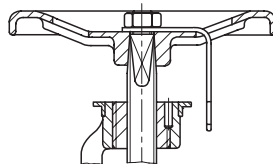
Limit switches

Can be supplied mechanically or inductively



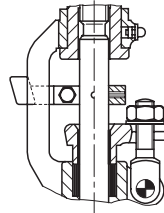
On-Off position indicator

With sheet metal bracket

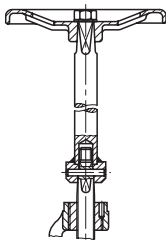


Non-rotating stem

In order to reduce packing wear

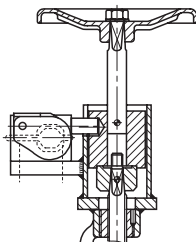


Stem extension



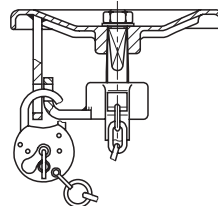
PERLOC system locking mechanism

Also for interlocking mechanism (safety circuits)



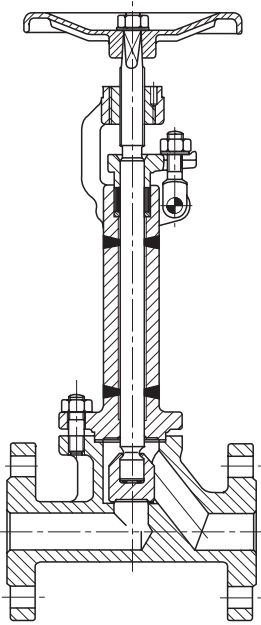
Locking mechanism

with padlock

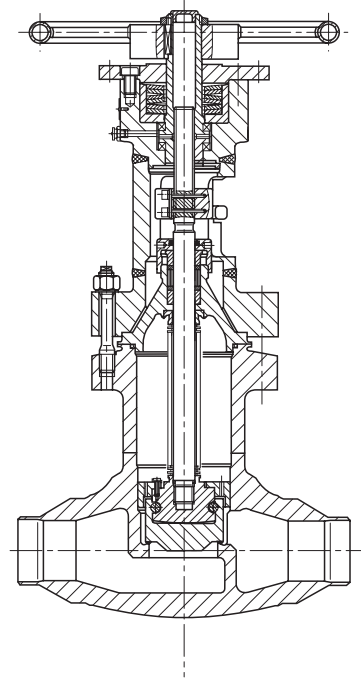


■ **Globe valves** ■ **Special valves**

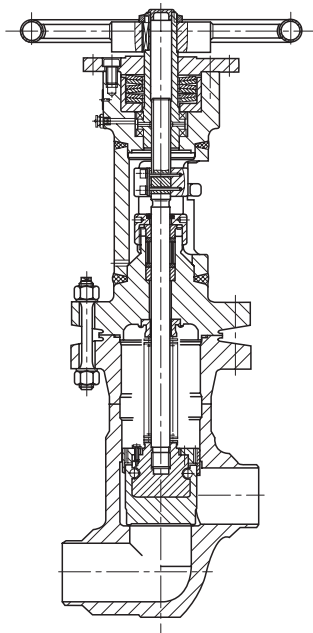
Globe valve with insulating section



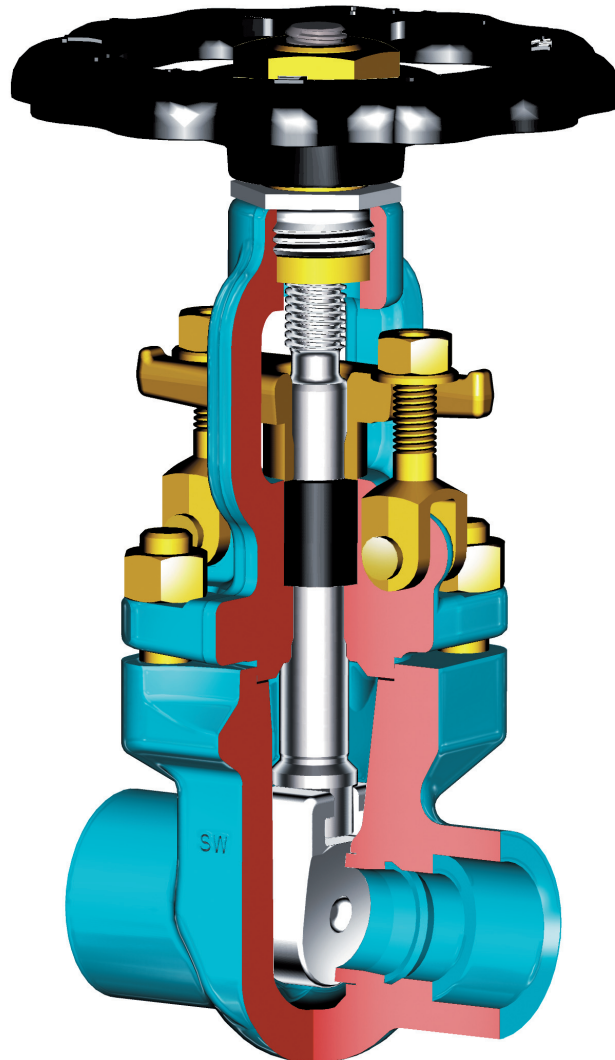
Monobloc valve



Monobloc-Z-valve



▪ Gate valves ▪ Small gate valve ▪ 808 GJ ▪ PN 10-100 ▪ DN 10-40



Range of application

Admissible operating pressure [bar] at design temperature [°C] ¹⁾

Material	PN	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																			
		-200	-60	-10	20	100	150	200	250	300	350	400	450	475	480	500	510	520	530	540	550
1.0460	10-40			40	40	40	37	35	32	28	24	21	13	8	7						
	63			63	63	63	56	50	45	40	36	32	21	13	12						
	100			100	100	100	90	80	70	60	56	50	34	21	19						
1.7335	10-40			40	40	40	40	40	40	40	38	36	34	32	31	29	24	19	15	12	9
	63			63	63	63	63	63	63	63	61	58	56	52	51	47	40	32	25	20	15
	100			100	100	100	100	100	100	100	95	91	87	81	79	74	62	49	38	30	23
1.0566 ²⁾	10-40			40	40	40	37	35	34	28											
	63			63	63	63	58	50	45	40											
	100			100	100	100	92	80	70	60											
1.4571	10-40	40	40	40	40	40	38	35	33	31	30	29									
	63	63	63	63	63	63	57	50	47	44	42	40									
	100	100	100	100	100	100	90	80	75	70	65	60									

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

2) At temperature > 50° C only applicable for short-time service.

▪ **Gate valves** ▪ **Small gate valve** ▪ **808 GJ** ▪ **PN 10-100** ▪ **DN 10-40**

Standard features

- Die-forged body and bonnet
- Full bore
- Outside screw and yoke
- Non-turning rising stem

Pressure and temperature ratings

- Pressure rating up to 100 bar
- Temperature rating up to +550° C

Materials

- 1.0460
- 1.7335
- 1.0566
- 1.4571

Further materials on request

Fields of application

Chemical industries, power plants, ship building and other

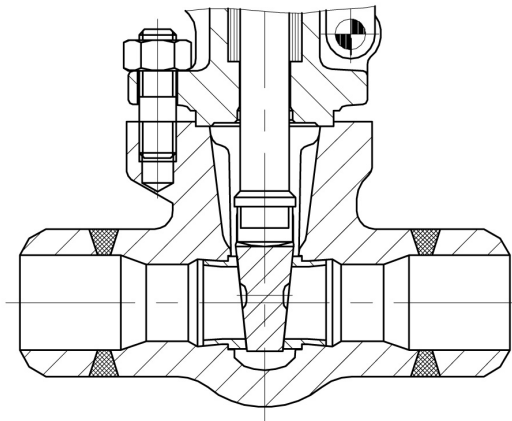
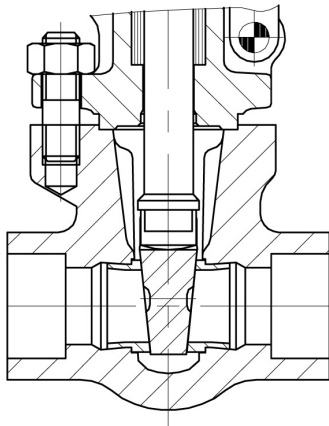
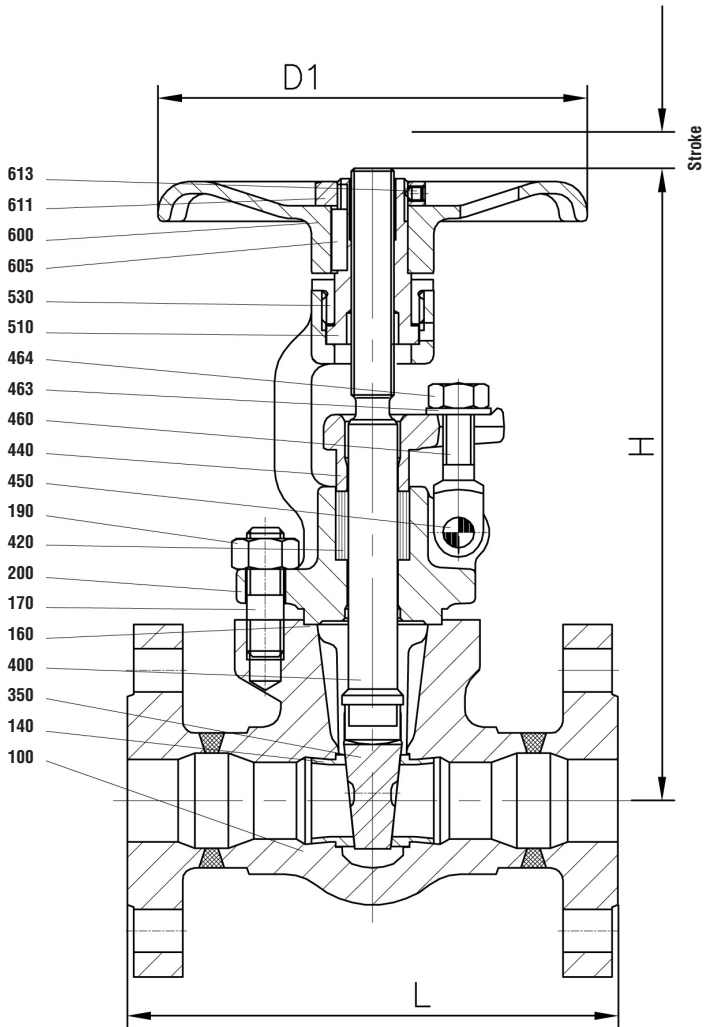
Design Highlights

- Die-forged valve body with pressed in austenitic seat rings
- Wedge made of stellite
- Hammer head connection between wedge and stem
- Polished stem shaft with a surface roughness of max 2 µm
- Hasp screws used as gland bolts

Benefits

- Free from porosity and shrink holes
- Material with optimum sliding performance in order to avoid damage to the seat
- The wedges are able to move parallel to the axis of the pipeline within the guiding groove. This protects the stem against bending moments
- Minimum wear to the gland packing compared with ground stem surface
- Greatly improved access to the stuffing box which eases maintenance

▪ Gate valves ▪ Small gate valve ▪ 808 GJ ▪ PN 10-100 ▪ DN 10-40

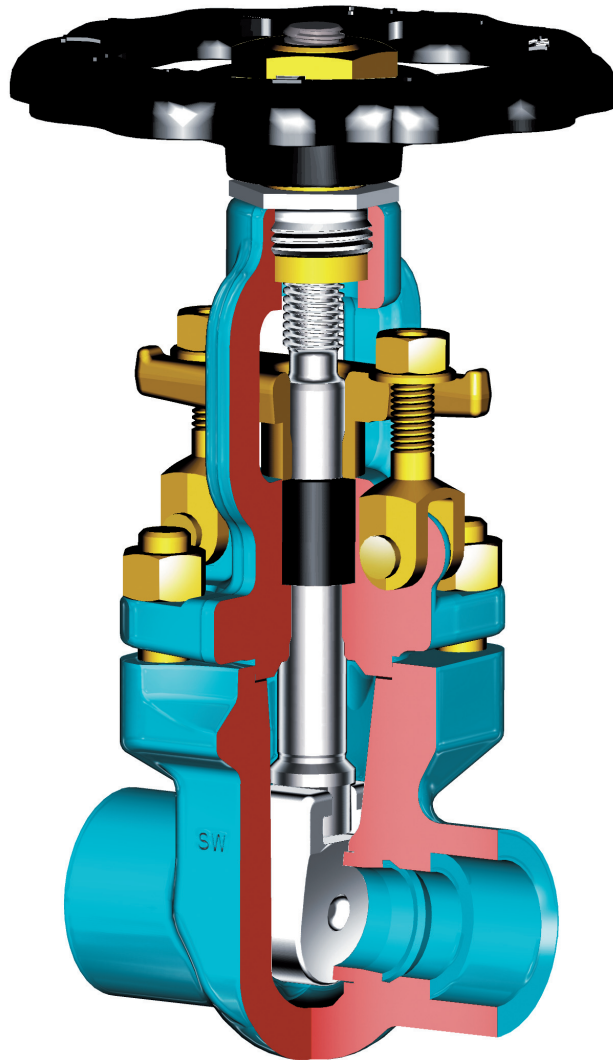


■ Gate valves ■ Small gate valve ■ 808 GJ ■ PN 10-100 ■ DN 10-40

Materials					
Pos.	Component	1.0460 (21)	1.7335 (44)	1.0566 (25)	1.4571 (87)
100	Body	1.0460	1.7335	1.0566	1.4571
140	Seat ring	1.4571	1.4571 ¹⁾	1.4571	1.4571
160	▶ Gasket	Graphite	Graphite	Graphite	Graphite
170	Stud	1.7709	1.4923	A4-70	A4-70
190	Hexagonal nut	1.7258	1.4923	A4-70	A4-70
200	Bonnet	1.0460	1.7335	1.0566	1.4571
350	Wedge	1.4021	2.5788	2.5788	2.5788
400	▶ Stem	1.4021	1.4021	1.4571	1.4571
420	▶ Packing	Graphite	Graphite	Graphite	Graphite
440	Gland flange	1.0460	1.0460	1.4571	1.4571
450	Rivet pin	1.1181	1.1181	A4-50	A4-50
460	Gland bolt	1.1181	1.1181	1.4571	1.4571
463	Washer	St	St	A4-50	A4-50
464	Hexagonal nut	1.1181	1.1181	A4-70	A4-70
510	▶ Yoke sleeve	1.0718	1.0718	1.0718	1.0718
530	Yoke nut	1.0718	1.0718	1.0718	1.0718
600	Handwheel	0.7040	0.7040	0.7040	0.7040
605	Key	1.0060	1.0060	1.0060	1.0060
611	Hexagonal pipe nut	St	St	St	St
613	Screw pin	45H	45H	45H	45H
	▶ Spare parts				
	1) Welded on with Stellite				

Dimensions/mm and Kvs values								
PN	DN	Flange L	BW L	SM L	H	Stroke	D1	Kvs (m ³ /h)
10-100	10			105	205	27	140	
	15	130	130	105	205	27	140	14,2
	20	150	150	105	205	27	140	29,2
	25	160	160	105	205	27	140	39,5
	32	180	180	115	228	35	180	74,7
	40	240	240	115	228	35	180	95,3

▪ Gate valves ▪ VALTRA Small gate valve ▪ 800/808 GJ ▪ Class 800 (PN 10-40) ▪ 1/2" - 2" (DN 15-50)



Range of application

Material	PN	Admissible operating pressure [bar] at design temperature [°C] ¹⁾												
		-10	20	100	150	200	250	300	350	400	450	475	480	
1.0460	10-40	40	40	40	37	35	32	28	24	21	13	8	7	

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

Material	Class 800	Admissible operating pressure [bar] at design temperature [°C] ¹⁾														
		-29	38	93,5	149	204,5	260	315,5	343,5	371	399	426,5	454,5	482	510	538
ASTM A105	Class 800	136,2	136,2	124,1	120,7	116,6	110,0	100,7	98,6	97,9	92,7	75,9	49,3	31,7	19,0	9,7

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

▪ **Gate valves** ▪ VALTRA Small gate valve ▪ 800/808 GJ ▪ Class 800 (PN 10-40) ▪ 1/2" - 2" (DN 15-50)

Standard features

- Die-forged body and bonnet
- Full bore
- Outside screw and yoke
- Non-turning rising stem

Fields of application

Chemical industries, power plants, ship building and other

Pressure and temperature ratings

- Pressure rating up to 136,2 bar
- Temperature rating from -10° C up to +538° C

Materials

- 1.0460
- ASTM A 105

Further materials on request

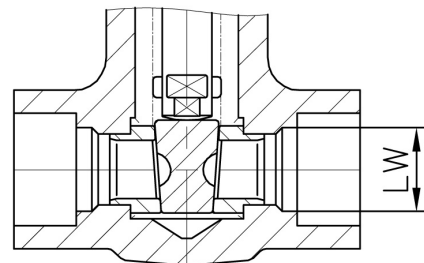
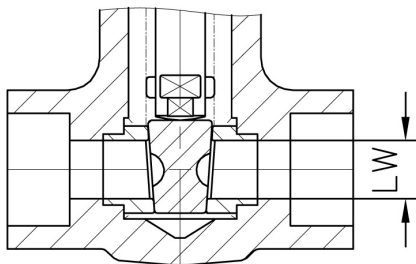
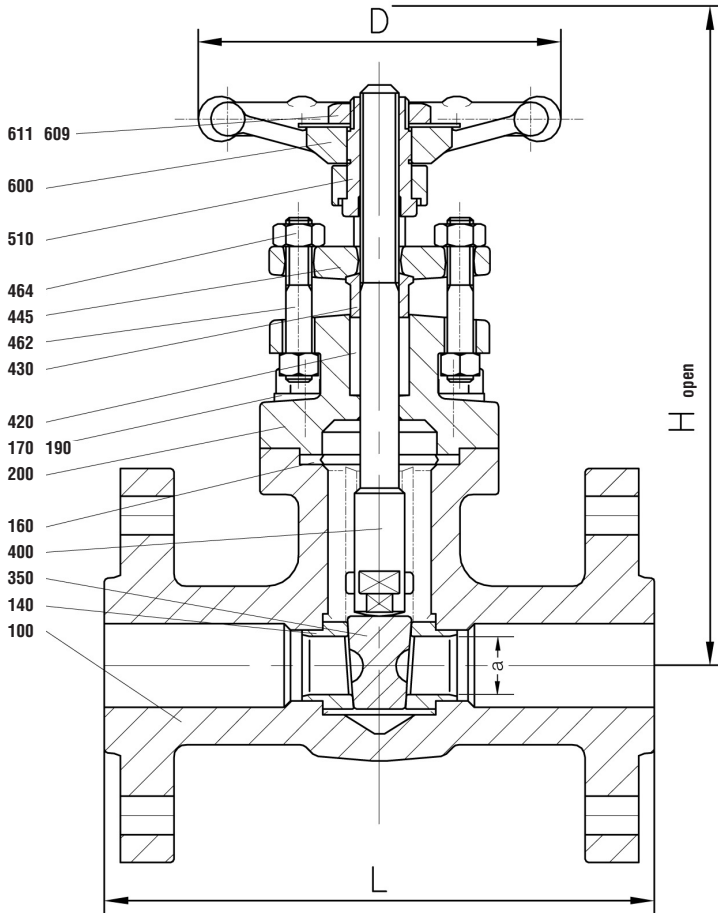
Design Highlights

- Die-forged valve body with pressed in austenitic seat rings
- Wedge made of stellite
- Hammer head connection between wedge and stem
- Polished stem shaft with a surface roughness of max 2 µm
- Hasp screws used as gland bolts

Benefits

- Free from porosity and shrink holes
- Material with optimum sliding performance in order to avoid damage to the seat
- The wedges are able to move parallel to the axis of the pipeline within the guiding groove. This protects the stem against bending moments
- Minimum wear to the gland packing compared with ground stem surface
- Greatly improved access to the stuffing box which eases maintenance

■ Gate valves ■ VALTRA Small gate valve ■ 800/808 GJ ■ Class 800 (PN 10-40) ■ 1/2" - 2" (DN 15-50)



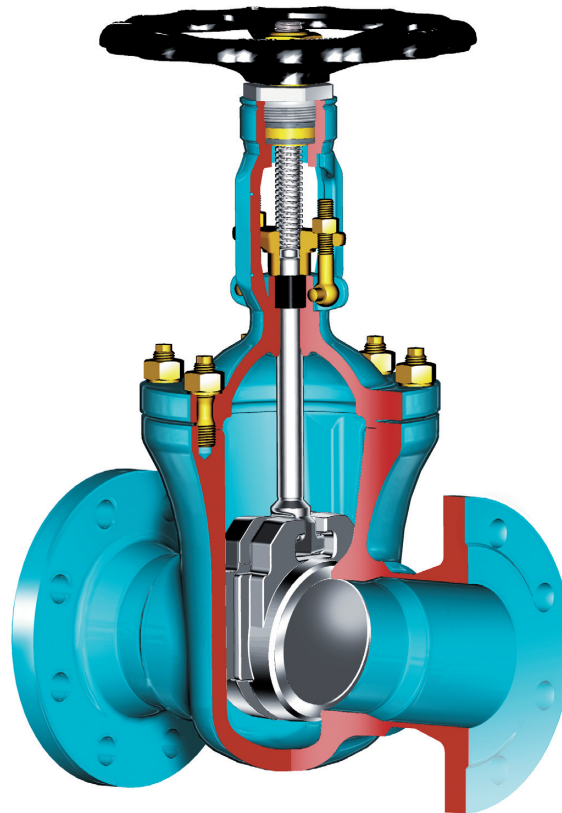
■ Gate valves ■ VALTRA Small gate valve ■ 800/808 GJ ■ Class 800 (PN 10-40) ■ 1/2" - 2" (DN 15-50)

Materials			
Pos.	Component	1.0460 (21) FL	ASTM A 105 (B1) BW/SM
100	Body	1.0460	ASTM A 105
140	Seat ring	ASTM A 276 type 410	ASTM A 276 type 410
160	▶ Gasket	Graphite SP-Wound	Graphite SP-Wound
170	Stud	AISI 410	AISI 410
190	Hexagonal nut	ASTM A 194 2H	ASTM A 194 2H
200	Bonnet	1.0460	ASTM A 105
350	Wedge	ASTM A 182 F6	ASTM A 182 F6
400	▶ Stem	ASTM A 276 type 410	ASTM A 276 type 410
420	▶ Packing	Graphite	Graphite
430	Gland ring	ASTM A 276 type 410	ASTM A 276 type 410
445	Gland flange	ASTM A 105	ASTM A 105
462	Stud	AISI 410	AISI 410
464	Hexagonal nut	ASTM A 194 2H	ASTM A 194 2H
510	▶ Yoke sleeve	ASTM A 582 type 416	ASTM A 582 type 416
600	Handwheel	St	St
609	Washer	St	St
611	Hexagonal pipe nut	St	St
	▶ Spare parts		

Dimensions/mm				
808 GJ DN	L	H	D	LW
1/2"	90	152	90	14,0
3/4"	110	182	110	19,0
1"	127	214	110	24,0
1 1/4"	127	247	130	30,0
1 1/2"	127	270	130	37,0
2"	150	333	180	48,0
800 GJ DN	L	H	D	LW
1/2"	80	145	70	10,0
3/4"	90	152	90	14,0
1"	110	182	110	19,0
1 1/4"	127	214	110	24,0
1 1/2"	127	247	130	30,0
2"	127	270	130	37,0
808 GJ DN	L	H	D	PN 10-40 a
15	130	152	90	14,0
25	50	182	110	18,0
25	160	214	110	24,0
40	240	270	130	36,5
50	250	333	180	48,0

Weights/kg and Kvs-values		
808 GJ DN	SM	Kvs (m ³ /h)
1/2"	2,2	14,2
3/4"	3,5	25,2
1"	5,0	37,2
1 1/4"	6,5	61,0
1 1/2"	8,5	95,3
2"	17,0	149,0
800 GJ DN	SM	
1/2"	1,6	7,2
3/4"	2,2	14,3
1"	3,5	26,3
1 1/4"	5,0	40,9
1 1/2"	6,5	63,9
2"	8,5	100,0
808 GJ DN	FL	
15	4,5	14,2
20	6,5	25,2
25	7,9	37,2
40	13,0	95,3
50	24,5	149,0

Gate valves Gate valve 700 HJ/JJ (GA PN 10-40) PN 10-100 DN 50-150



Range of application

Admissible operating pressure [bar] at design temperature [°C] ^{1) 3)}

Material	PN	Admissible operating pressure [bar] at design temperature [°C] ^{1) 3)}																														
		-60	-10	20	100	150	200	250	300	350	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	
1.0619 ⁴⁾	16	16,0	16,0	16,0	15,0	14,0	13,0	11,0	10,0	8,0																						
	25	25,0	25,0	25,0	23,0	22,0	20,0	17,0	16,0	13,0																						
	40	40,0	40,0	40,0	37,0	35,0	32,0	28,0	24,0	21,0																						
1.0460	10	10,0	10,0	10,0	10,0	9,7	8,5	7,5	6,3	5,1	4,9	4,6	4,4	4,2	3,9	3,5	2,9	2,4														
	16	16,0	16,0	16,0	16,0	15,1	13,2	11,8	9,9	8,0	7,6	7,3	6,9	6,5	6,1	5,4	4,5	3,7														
	25	25,0	25,0	25,0	25,0	24,5	21,5	19,2	16,1	13,0	12,4	11,8	11,2	10,6	10,0	8,8	7,4	6,1														
	40	40,0	40,0	40,0	40,0	39,5	34,6	30,9	26,0	21,0	20,0	19,0	18,0	17,1	16,1	14,2	11,9	9,8														
	63	63,0	63,0	63,0	63,0	60,3	52,7	47,1	39,6	32,0	30,5	29,0	27,5	26,0	24,5	21,7	18,1	14,9														
	100	100,0	100,0	100,0	100,0	94,0	82,0	74,0	62,0	50,0	48,0	45,0	43,0	41,0	38,0	34,0	28,0	23,0														
1.0566 ²⁾³⁾	10	10,0	10,0	10,0	10,0	10,0	9,0	8,0	7,0																							
	16	16,0	16,0	16,0	16,0	15,0	14,0	13,0	11,0																							
	25	25,0	25,0	25,0	25,0	24,0	22,0	20,0	17,0																							
	40	40,0	40,0	40,0	40,0	39,0	35,0	31,0	28,0																							
	63	63,0	63,0	63,0	63,0	61,0	55,0	49,0	44,0																							
	100	100,0	100,0	100,0	100,0	96,0	88,0	79,0	70,0																							
1.5415	10	12,0	12,0	12,0	11,5	10,6	9,1	8,8	8,5	8,4	8,3	8,3	8,2	8,2	8,1	8,0	8,0	7,0	5,4	4,1	3,3	2,6										
	16	12,0	19,0	19,0	17,9	16,5	14,2	13,7	13,2	13,1	13,0	12,9	12,8	12,7	12,6	12,5	12,5	10,9	8,5	6,5	5,1	4,1										
	25	30,0	30,0	30,0	29,1	26,8	23,0	22,2	21,5	21,3	21,2	21,0	20,9	20,7	20,5	20,4	20,2	17,7	13,8	10,5	8,3	6,6										
	40	48,0	48,0	48,0	47,0	43,2	37,1	35,8	34,6	34,4	34,1	33,9	33,6	33,4	33,1	32,9	32,6	28,5	22,2	16,9	13,3	10,7										
	63	77,0	77,0	77,0	71,6	65,9	56,5	54,6	52,7	52,4	52,0	51,6	51,2	50,9	50,5	50,1	49,7	43,4	33,9	25,8	20,3	16,3										
	100	120,0	120,0	120,0	112,0	103,0	88,0	85,0	82,0	82,0	81,0	81,0	80,0	79,0	79,0	78,0	78,0	68,0	53,0	40,0	32,0	25,0										
1.7335	10	12,1	12,1	12,1	12,1	12,1	11,2	10,6	10,0	9,8	9,7	9,6	9,5	9,4	9,3	9,2	9,2	9,1	8,3	7,0	5,5	4,5	3,6	2,8	2,3	1,9						
	16	19,0	19,1	19,0	19,0	19,0	18,9	17,5	16,5	15,4	15,2	15,0	14,8	14,6	14,5	14,4	14,3	14,2	12,9	10,9	8,6	7,0	5,7	4,4	3,6	2,9						
	25	30,0	30,0	30,0	30,0	30,0	28,4	26,8	25,3	25,0	24,7	24,4	24,1	23,8	23,6	23,5	23,3	23,2	21,0	17,7	14,0	11,4	9,2	7,2	5,9	4,8						
	40	48,0	48,0	48,0	48,0	48,0	45,7	43,3	40,8	40,3	39,8	39,3	38,8	38,8	38,1	37,8	37,6	37,3	33,9	28,5	22,5	18,4	14,8	11,6	9,5	7,7						
	63	77,0	77,0	77,0	77,0	77,0	75,3	69,7	65,9	62,2	61,4	60,6	59,9	59,1	58,4	58,0	57,6	57,3	56,9	51,6	43,4	34,4	28,0	22,6	17,6	14,5	11,8					
	100	120,0	120,0	120,0	120,0	120,0	118,0	109,0	103,0	97,0	96,0	95,0	94,0	92,0	91,0	91,0	90,0	89,0	89,0	81,0	68,0	54,0	44,0	35,0	28,0	23,0	18,8					
1.7380	10	12,0	12,0	12,0	12,0	12,0	12,0	11,2	10,6	10,4	10,3	10,2	10,1	10,0	9,8	9,7	9,6	9,2	8,2	7,1	6,2	5,4	4,7	4,1	3,5	3,1	2,7	2,3	2,0			
	16	19,0	19,0	19,0	19,0	19,0	19,0	17,0	16,0	16,0	16,0	16,0	16,0	16,0	15,0	15,0	15,0	14,0	13,0	11,0	10,0	8,0	7,0	6,0	5,0	4,0	4,0	3,0				
	25	30,0	30,0	30,0	30,0	30,0	30,0	28,0	27,0	27,0	26,0	26,0	26,0	26,0	25,0	25,0	25,0	24,0	23,0	21,0	18,0	16,0	14,0	12,0	10,0	9,0	8,0	7,0	6,0	5,0		
	40	48,0	48,0	48,0	48,0	48,0	48,0	46,0	43,0	43,0	42,0	42,0	41,0	41,0	40,0	40,0	39,0	38,0	33,0	29,0	25,0	22,0	19,0	17,0	14,0	13,0	11,0	9,0	8,0			
	63	77,0	77,0	77,0	77,0	77,0	75,0	70,0	66,0	65,0	64,0	64,0	63,0	62,0	61,0	61,0	60,0	57,0	51,0	44,0	39,0	34,0	29,0	26,0	22,0	19,0	17,0	14,0	13,0			
	100	120,0	120,0	120,0	120,0	120,0	118,0	109,0	103,0	102,0	101,0	99,0	98,0	97,0	96,0	95,0	94,0	89,0	79,0	69,0	61,0	53,0	46,0	40,0	34,0	30,0	26,0	22,0	20,0			

Attention:
The following pressure rate table is only valid on condition that correspondingly dimensioned piping connections have been applied. In case of nominal (PN) flanges respectively pressure (PN) butt weld ends the corresponding nominal pressure rate table (former DIN 2401) limits the range of application.

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations. 2) At temperature > 50° C only applicable for short-time service.
3) In case of stainless steel bolts (DIN material code A4-70) with > 8 x d bolt length the strength characteristics acc. to table 6 of DIN 267 part 11 have been considered.
4) Flange version PN 10 - 40

▪ **Gate valves** ▪ Gate valve ▪ 700 HJ/JJ (GA ▪ PN 10-40) ▪ PN 10-100 ▪ DN 50-150

Standard features

- Die-forged body and bonnet
- Split wedge = Type 700 JJ
- Flexible wedge = Type 700 HJ
- Full bore, exception DN 65/50 and DN 125/100
- Outside screw and yoke
- Yoke sleeve

Option Standard features GA

- Split wedge / Flexible wedge
- Inside screw
- Non-rising turning stem

Pressure and temperature ratings

- Pressure rating up to 100 bar
- Acc. to PERSTA PD 10 up to 120 bar
- Temperature rating up to +600° C

Design Highlights

- The main valve body is one-piece die-forged incorporating the bonnet flange and the guide for the shut-off device
- Bolted bonnet with reduced shaft bolts
- Polished stem shaft with a surface roughness of max. 2 µm
- Hard faced seats (valve body and shut-off device). Hardness app. 35-37 HRC

Materials

- 1.0460
- 1.0619 only flange version PN 10 - 40
- 1.0566
- 1.5415
- 1.7335
- 1.7380

Further materials on request

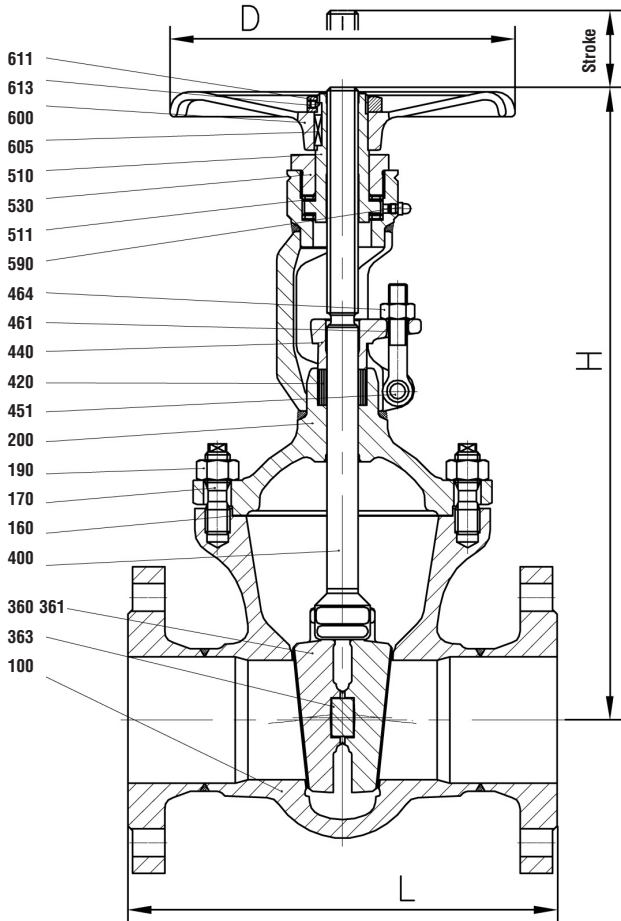
Fields of application

Chemical industries, power plants, ship building and other

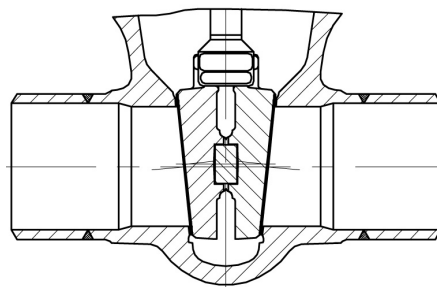
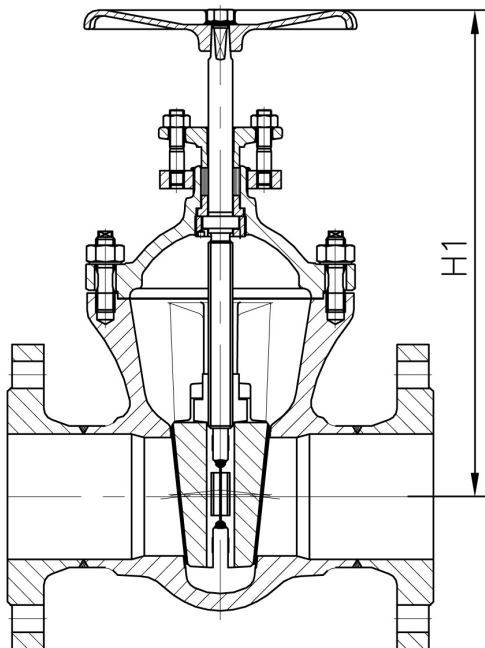
Benefits

- Die-forged parts, compared with cast steel parts are generally free from porosity and shrink holes. The special of the valve body minimizes the existence of welding seams
- To improve the stress capability when temperature and pressure fluctuate
- Minimum wear to the gland packing compared with ground stem surfaces
- Extremely resistant to wear

■ Gate valves ■ Gate valve ■ 700 HJ/JJ (GA ■ PN 10-40) ■ PN 10-100 ■ DN 50-150



700 GA



■ Gate valves ■ Gate valve ■ 700 HJ/JJ (GA ■ PN 10-40) ■ PN 10-100 ■ DN 50-150

Materials							
Pos.	Component	1.0619 (11) PN 10-40	1.0460 (21)	1.0566 (25)	1.5415 (42)	1.7335 (44)	1.7380 (45)
100	Body	1.0619 ¹⁾	1.0460 ¹⁾	1.0566 ¹⁾	1.5415 ²⁾	1.7335 ²⁾	1.7380 ²⁾
160	▶ Gasket	Graphite ⁴⁾	Graphite ⁴⁾	Graphite ⁴⁾	Graphite ⁴⁾	Graphite ⁴⁾	Graphite ⁴⁾
170	Stud	1.7709	1.7709	A4-70	1.7709	1.7709	1.7709
190	Hexagonal nut	1.7258	1.7258	A4-70	1.7258	1.7258	1.7258
200	Bonnet	1.0460	1.0460	1.0566	1.5415	1.7335	1.7380
360/361	▶ Disc	1.0460 ³⁾	1.0460 ³⁾	1.0566 ³⁾	1.5415 ²⁾	1.7335 ²⁾	1.7380 ²⁾
363	Pressure piece	1.4021	1.4021	1.4021	1.4021	1.4021	1.4021
400	▶ Stem	1.4021	1.4021	1.4571	1.4122	1.4122	1.4122
420	▶ Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
440	Gland flange	1.0460	1.0460	1.4571	1.0460	1.0460	1.0460
451	Grooved pin	St	St	1.4571	St	St	St
461	Eye bolt	1.1181	1.1181	A4-50	1.1181	1.1181	1.1181
464	Hexagonal nut	1.1181	1.1181	A4-70	1.1181	1.1181	1.1181
510	▶ Yoke sleeve	1.0718	1.0718	1.0718	1.0718	1.0718	1.0718
511	▶ Roller bearing	WLS	WLS	WLS	WLS	WLS	WLS
530	Yoke nut	1.0718	1.0718	1.0718	1.0718	1.0718	1.0718
590	Grease nipple	5.8	5.8	5.8	5.8	5.8	5.8
600	Handwheel	0.7040	0.7040	0.7040	0.7040	0.7040	0.7040
605	Key	1.0060	1.0060	1.0060	1.0060	1.0060	1.0060
611	Hexagonal pipe nut	St	St	St	St	St	St
613	Screw pin	45H	45H	45H	45H	45H	45H
	▶ Spare parts						

1) Welded on with Cr17
 2) Welded on with Stellite
 3) Welded on with 18/8
 4) DN 150 grooved with graphite layer

Attention: Ki-Gate-Valve 700 GA only in material 1.0460

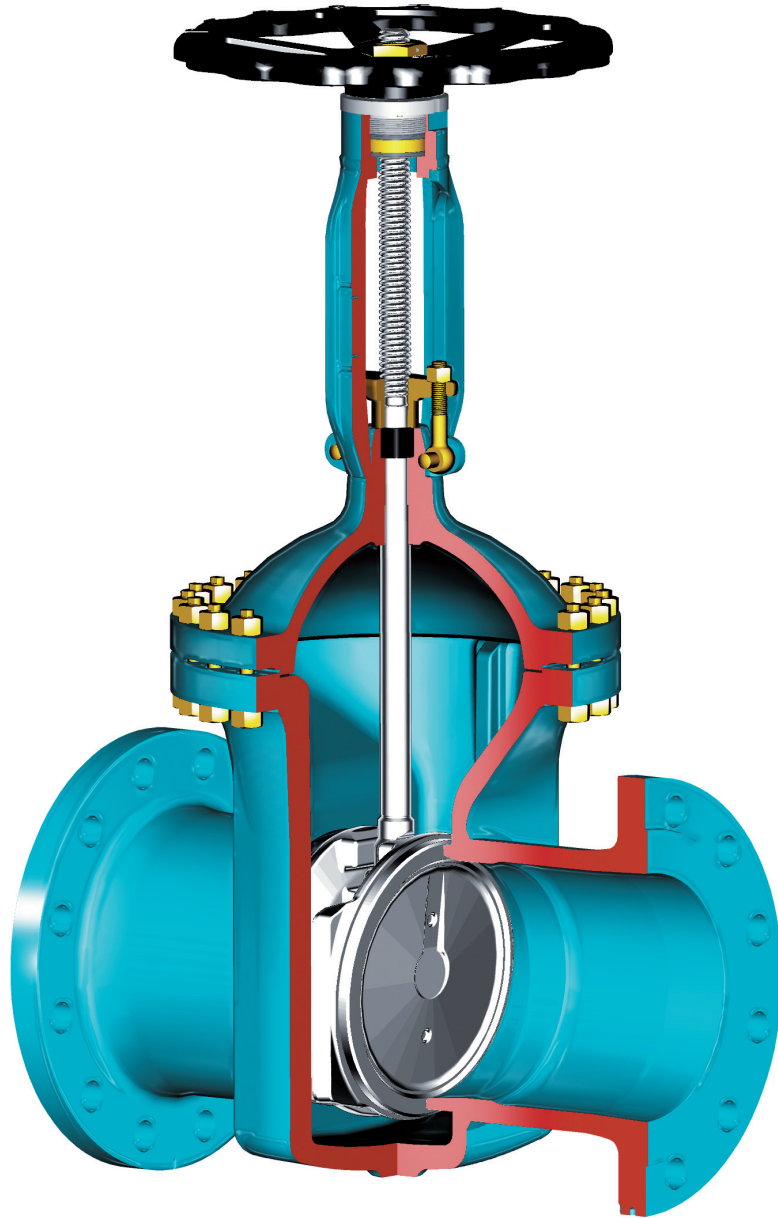
Dimensions/mm							
DN	PN 10-25	PN 40-100	PN 10-40	PN 63-100	Stroke	PN 10-40	PN 63-100
	L	L	H	H		D	D
50	250	250	337	337	63	180	180
65/50	270	290	337	337	63	180	180
80	280	310	410	410	90	225	225
100	300	350	455	505	110	280	360
125/100	325	400	455	505	110	280	360
150	350	450	655	685	165	360	450

700 GA DN	H1
50	280
65/50	280
80	345
100	405
125/100	405
150	525

Weights/kg and Kvs-values									
DN	Flange PN 10-25	Flange PN 40	Flange PN 10-25	Flange PN 40	Flange PN 63	Flange PN 100	BW PN10-40	BW PN63-100	Kvs (m ³ /h)
	GS-C25N	GS-C25N							
50	21,5	21,5	19,0	19,0	23,5	26,5	15,0	15,5	258,0
65/50	24,0	24,0	21,0	21,0	26,0	30,5	15,5	16,0	258,0
80	40,0	40,0	35,0	35,0	40,5	45,0	28,0	31,0	628,0
100	57,0	61,5	50,0	54,0	63,0	71,0	43,0	47,0	991,0
125/100	61,5	67,0	53,5	59,0	74,0	89,0	45,0	49,0	991,0
150	114,0	120,0	92,0	98,0	138,0	155,0	80,0	100,0	2323,0

700 GA DN	Flange PN 10-25	Flange PN 40	BW PN 10-40
50	19,0	19,0	15,0
65/50	21,0	21,0	28,0
80	35,0	35,0	28,0
100	50,0	54,0	43,0
125/100	53,0	59,0	45,0
150	92,0	98,0	80,0

▪ Gate valves ▪ Gate valve ▪ 700 HJ/JJ (GA) ▪ PN 10-40 ▪ DN 200-250



Range of application

Admissible operating pressure [bar] at design temperature [°C] ¹⁾

Material	PN	-60	-10	20	100	150	200	250	300	350	400	450
1.0460	10-16		16	16	16	15	14	13	11	10	8	6
	25		25	25	25	24	22	20	17	16	13	10
	40		40	40	40	38	35	32	28	24	21	10
1.0566 ²⁾	10-16		16	16	16	15	14	13	11			
	25		25	25	25	24	22	20	17			
	40		40	40	40	38	35	32	28			

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

2) At temperature > 50° C only applicable for short-time service.

▪ **Gate valves** ▪ Gate valve ▪ 700 HJ/JJ (GA) ▪ PN 10-40 ▪ DN 200-250

Standard features

- Die-forged body and bonnet
- Split wedge = Type 700 JJ
- Flexible wedge = Type 700 HJ
- Full bore
- Outside screw and yoke
- Yoke sleeve

Optional standard features GA

- Split wedge / Flexible wedge
- Inside screw
- Non-rising turning stem

Pressure and temperature ratings

- Pressure rating up to 40 bar
- Temperature rating up to +450° C

Materials

- 1.0460
- 1.0566

Further materials on request

Fields of application

Chemical industries, power plants, ship building and other

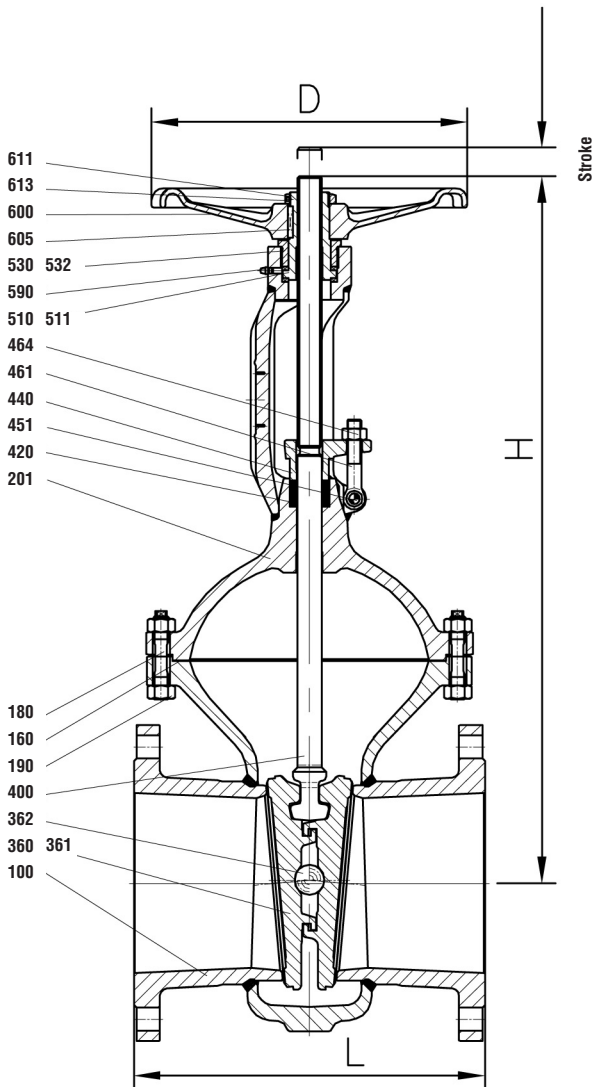
Design Highlights

- Die-forged body and bonnet
- Hard faced seats (valve body and shut-off device). Hardness app. 35-37 HRC
- Non-rising stem with polished stem shaft and a surface roughness of max. 2 µm
- Bolted bonnet with reduced shaft bolts

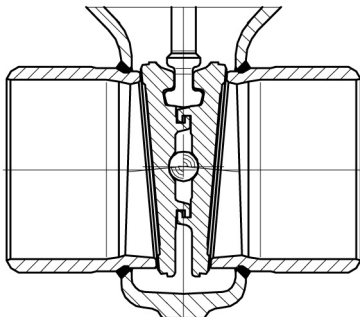
Benefits

- Free from porosity and shrink holes
- Extremely resistant to wear
- Minimum wear to the gland packing compared with ground stem surfaces
- To improve the stress capability when temperature and pressure fluctuate

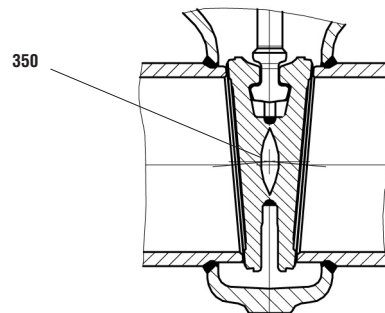
■ Gate valves ■ Gate valve ■ 700 HJ/JJ (GA) ■ PN 10-40 ■ DN 200-250



700 JJ



700 HJ



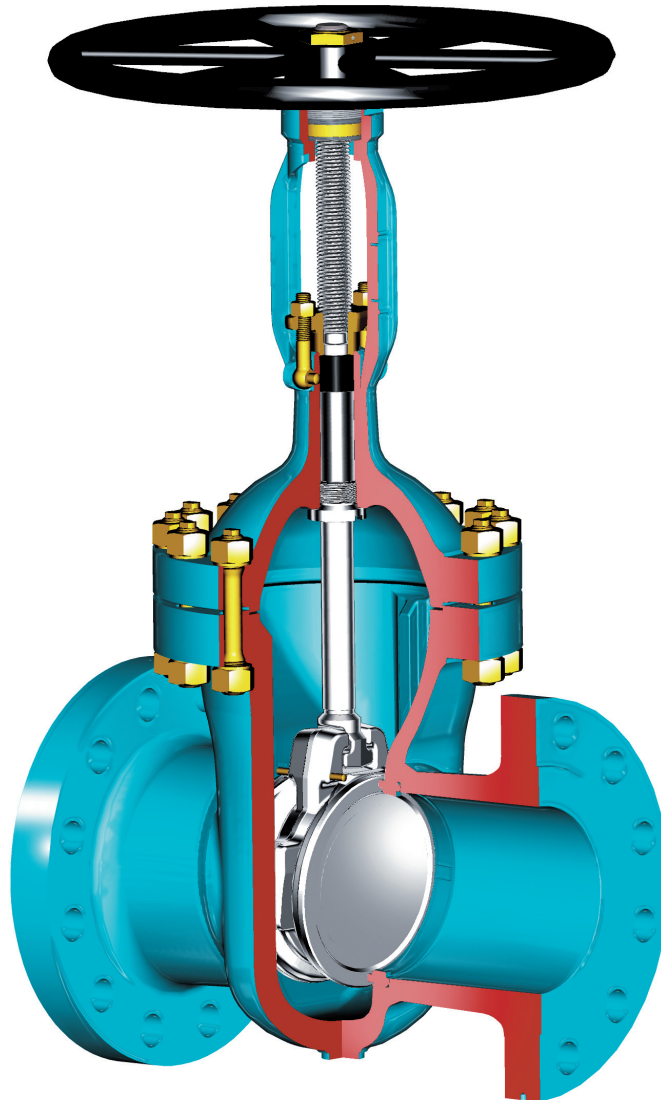
■ Gate valves ■ Gate valve ■ 700 HJ/JJ (GA) ■ PN 10-40 ■ DN 200-250

Materials			
Pos.	Component	1.0460 (21)	1.0566 (25)
100	Body	1.0460 ³⁾	1.0566 ³⁾
160	▶ Gasket	Grooved with graphite layer	Grooved with graphite layer
180	Stud	1.1181	A4-70
190	Hexagonal nut	1.1181	A4-70
201	Bonnet	1.0460	1.0566
350	▶ Wedge	1.0460 ⁴⁾	1.0566 ⁴⁾
360/361	▶ Disc	1.8507 ⁴⁾	1.0566 ⁴⁾
362	▶ Ball	WLS _t	WLS _t
400	▶ Stem	1.4021 ⁵⁾	1.4571
420	▶ Packing	Graphite	Graphite
440	▶ Gland flange	1.0460	1.4571
451	Grooved pin	St	1.4571
461	Eye bolt	1.1181	A4-50
464	Hexagonal nut	1.1181	A4-70
510	Yoke sleeve	1.0718	1.0718
511	▶ Needle bearing	WLS _t ≥ DN 250	WLS _t ≥ DN 250
530	▶ Yoke nut	1.0718	1.0718
532	Screw pin	45H	45H
590	▶ Grease nipple	5.8	5.8
600	Handwheel	0.7040	0.7040
605	Key	1.0060	1.0060
611	Hexagonal pipe nut	St	St
613	Screw pin	45H	45H
	▶ Spare parts		
	3) Welded on with 18/8 (40)		
	4) Welded on with Cr17		
	5) PN 40 DN 250 = 1.4122		
	Further materials on request.		
	Attention: Ki-Gate-Valve 700 GA only in material 1.0460.		

Maße/mm						
DN	PN 10-25		H	Stroke	PN 40	
	L	L			D	D
200	400	550	810	220	360	450
250	450	650	975	285	450	450
700 GA			H1			
200			590			
250			725			

Weights/kg and Kvs-values					
DN	Flange		BW		Kvs (m ³ /h)
	PN 10-25	PN 40	PN 10-25	PN 40	
200	151,5	185	140	140	4000
250	285,0	325	245	280	6247
700 GA					
200	138,5	170	125	125	4000
250	263,0	303	223	258	6247

▪ Gate valves ▪ Gate valve ▪ 700 HJ/JJ ▪ PN 63-100 ▪ DN 200-300



Range of application

Admissible operating pressure [bar] at design temperature [°C] ¹⁾

Material	PN	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																							
		-60	-10	20	100	150	200	250	300	350	400	450	475	480	500	510	520	530	540	550	560	570	580	590	600
1.0460	63	63	63	63	58	50	45	40	36	32	21	14,0	12												
	100	100	100	100	91	80	70	60	56	50	34	21,8	19												
1.0566 ²⁾	63	63	63	63	58	50	45	40																	
	100	100	100	100	91	80	70	60																	
1.5415	63	63	63	63	63	63	63	56	50	47	45	37,0	35	29	22	16	14								
	100	100	100	100	100	100	100	87	78	74	70	57,0	54	45	34	27	22								
1.7335	63	63	63	63	63	63	63	63	61	58	56	53,0	51	47	40	32	25	20	16	13	10				
	100	100	100	100	100	100	100	100	95	91	87	82,0	80	74	62	49	38	31	24	19	16				
1.7380	63	63	63	63	63	63	63	62	62	60	55,0	53	47	40	35	28	25	22	18	15	12	11	9		
	100	100	100	100	100	100	100	98	96	94	85,0	82	74	62	53	43	39	33	27	23	19	17	15		

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

2) At temperature > 50° C only applicable for short-time service.

▪ **Gate valves** ▪ Gate valve ▪ 700 HJ/JJ ▪ PN 63-100 ▪ DN 200-300

Standard features

- Die-forged body and bonnet
- Split wedge = Type 700 JJ
- Flexible wedge = Type 700 HJ
- > DN 350 = Type 400 JJ (without picture)
- Full bore
- Outside screw and yoke
- Yoke sleeve

Fields of application

Chemical industries, power plants, ship building and other

Pressure and temperature ratings

- Pressure rating up to 100 bar
- Temperature rating up to +600° C

Materials

- 1.0460
- 1.0566
- 1.5415
- 1.7335
- 1.7380

Further materials on request

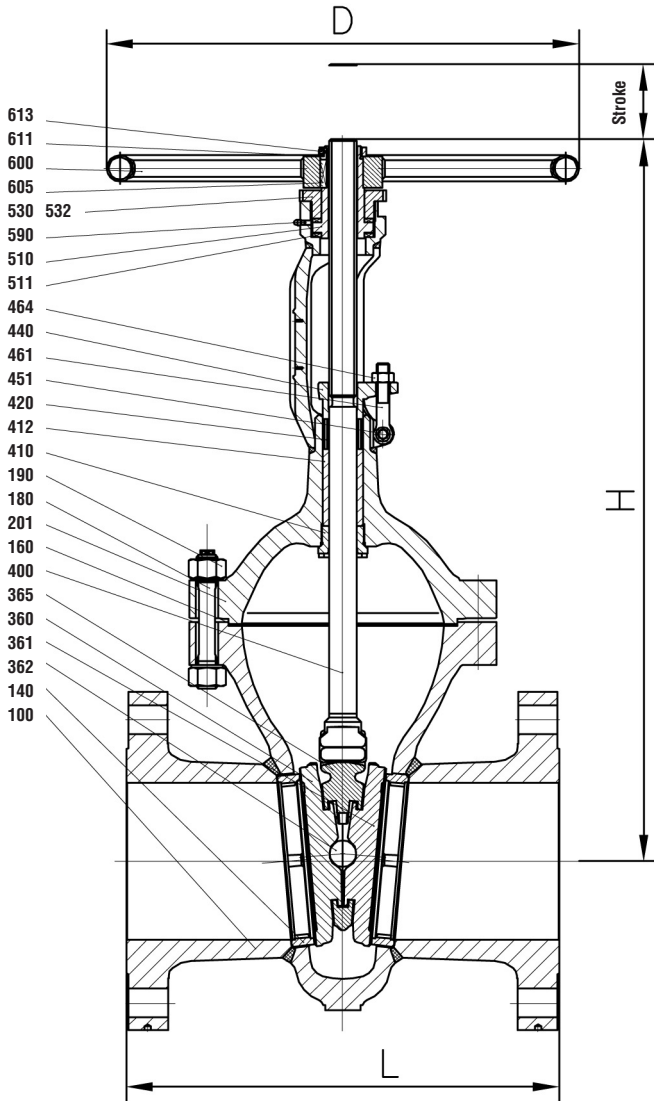
Design Highlights

- Die-forged body and bonnet
- Hard faced seats (valve body and shut-off device)
- Non-rising stem with polished stem shaft and a surface roughness of max. 2 µm
- Bolted bonnet with reduced shaft bolts

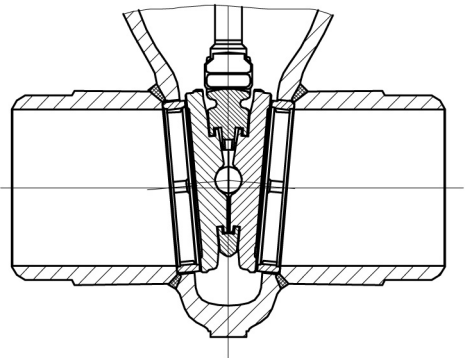
Benefits

- Free from porosity and shrink holes
- Extremely resistant to wear
- Minimum wear to the gland packing compared with ground stem surfaces
- To improve the stress capability when temperature and pressure fluctuate

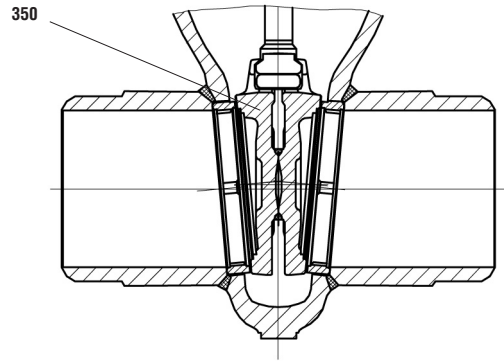
Gate valves ■ Gate valve ■ 700 HJ/JJ ■ PN 63-100 ■ DN 200-300



700 JJ



700 HJ



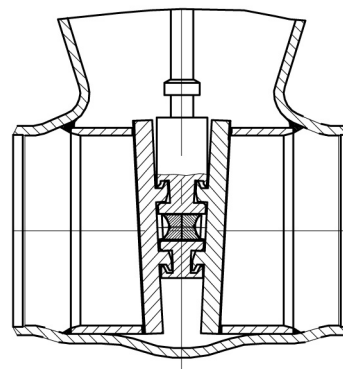
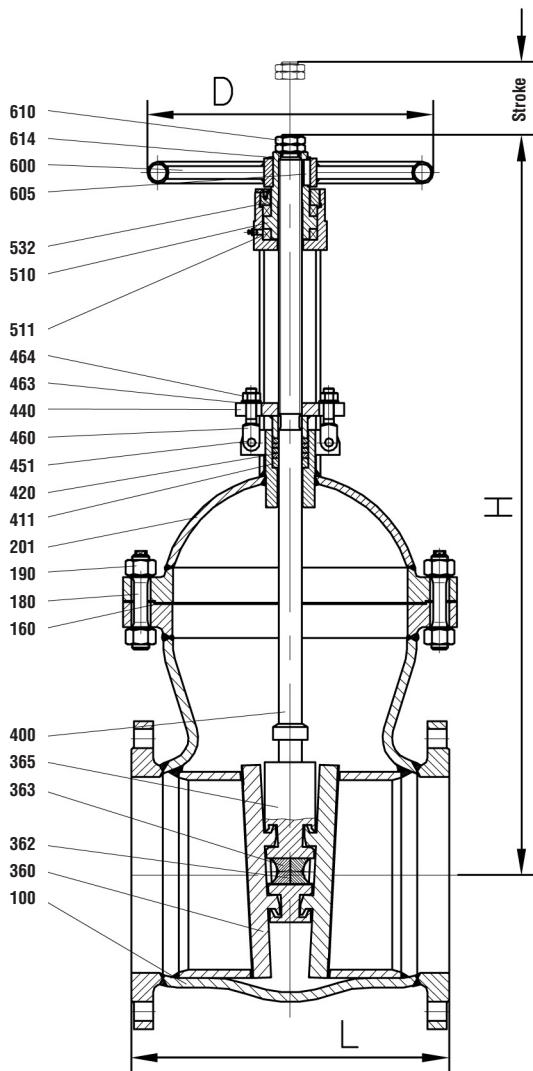
■ Gate valves ■ Gate valve ■ 700 HJ/JJ ■ PN 63-100 ■ DN 200-300

Materials						
Pos.	Component	1.0460 (21)	1.0566 (25)	1.5415 (42)	1.7335 (44)	1.7380 (45)
100	Body	1.0460	1.0566	1.5415	1.7335	1.7380
140	Seat ring	1.0460 ³⁾	1.0566 ³⁾	1.5415 ³⁾	1.7335 ⁵⁾	1.7380 ⁵⁾
160	▶ Gasket	Grooved with graphite layer	Grooved with graphite layer	Grooved with graphite layer	Grooved with graphite layer	Grooved with graphite layer
180	Stud	1.7709	A4-701 ⁷⁾	1.7709	1.7709	1.7709
190	Hexagonal nut	1.7258	A4-70	1.7258	1.7258	1.7258
201	Bonnet	1.0460	1.0566	1.5415	1.7335	1.7380
350	▶ Wedge	1.0460 ⁴⁾	1.0566 ⁴⁾	1.5415	1.7335 ⁵⁾	1.7380 ⁵⁾
360/361	▶ Disc	1.8507 ⁸⁾	1.0566 ⁴⁾	1.5415	1.8507 ¹⁵⁾	1.8507 ⁵⁾
362	▶ Ball	WLS ²⁾	WLS ²⁾	WLS ²⁾	WLS ²⁾	WLS ²⁾
365	▶ Double disc guide	1.0460	1.0566	1.5415	1.7335	1.7380
400	▶ Stem	1.4021	1.4571	1.4122	1.4122	1.4122
410	Back seat bushing	1.4006	1.4006	1.4006	1.4006	1.4006
412	Basic ring	1.0718	1.0718	1.0718	1.0718	1.0718
420	▶ Packing	Graphite	Graphite	Graphite	Graphite	Graphite
440	Gland flange	1.0460	1.4571	1.0460	1.0460	1.0460
451	Grooved pin	St ¹²⁾	1.4571	St ¹²⁾	St ¹²⁾	St ¹²⁾
461	Eye bolt	1.1181 ¹¹⁾	A4-50	1.1181 ¹¹⁾	1.1181 ¹¹⁾	1.1181 ¹¹⁾
464	Hexagonal nut	1.1181 ¹⁶⁾	A4-70	1.1181 ¹⁶⁾	1.1181 ¹⁶⁾	1.1181 ¹⁶⁾
510	▶ Yoke sleeve	1.0718 ¹⁴⁾	1.0718	1.0718 ¹⁴⁾	1.0718 ¹⁴⁾	1.0718 ¹⁴⁾
511	▶ Roller bearing	WLS ¹³⁾	WLS ¹³⁾	WLS ¹³⁾	WLS ¹³⁾	WLS ¹³⁾
530	Yoke nut	1.0718	1.0718	1.0718	1.0718	1.0718
531	Screwing	1.7335 ≥ DN 250	1.7335 ≥ DN 250	1.7335 ≥ DN 250	1.7335 ≥ DN 250	1.7335 ≥ DN 250
532	Screw pin	45H	45H	45H	45H	45H
590	Grease nipple	5.8	5.8	5.8	5.8	5.8
600	Handwheel	St	St	St	St	St
605	Key	1.0060	1.0060	1.0060	1.0060	1.0060
611	Handwheel nut	St	St	St	St	St
613	Screw pin	45H	45H	45H	45H	45H
	▶ Spare parts					
	1) ≥ DN 250 = 1.7380 welded on with Stellite					
	2) ≥ DN 250 = Pressure ring 1.4122					
	3) Welded on with 18/8 (40)					
	4) Welded on with Cr17					
	5) Welded on with Stellite					
	8) ≥ DN 250 = 1.0460 welded on with Cr17					
	11) ≥ DN 250 = 1.7709					
	12) ≥ DN 250 = 1.7258					
	13) ≥ DN 250 = Thrust ball bearing					
	14) ≥ DN 250 = 2.0550					
	16) ≥ DN 250 = 1.7258					
	17) ≥ DN 300 = 1.5680					

Dimensions/mm						
DN	Flange	BW	H	Stroke	D	
	PN 63-100	PN 63-100				
	L	L				
200	550	550	920	210	600	
250	650	650	1110	265	720	
300	750	750	1310	313	900	

Weights/kg and Kvs-values				
DN	Flange	Flange	BW	Kvs (m ³ /h)
	PN 63	PN 100	PN 63-100	
200	270	285	215	4000
250	480	538	430	6247
300	690	750	560	8997

■ Gate valves ■ VALTRA Gate valve ■ 700 JJ ■ PN 10-25 ■ DN 300-1000



Range of application

Admissible operating pressure [bar] at design temperature [°C] ¹⁾

Material	PN	-10	20	100	120	200	250	300	350	400
P265GH	10	10	10	10	10	9	8	7	6	5
	16	16	16	16	16	14	13	11	10	8
	25	25	25	25	25	22	20	17	16	13

¹⁾ Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

■ Gate valves ■ VALTRA Gate valve ■ 700 JJ ■ PN 10-25 ■ DN 300-1000

Materials

Pos.	Component	P265GH (22)
100	Body welded on with	P265GH X20CrMo171
160	▶ Gasket	Sigralflex
180	Tension screw	1.7158
190	Hexagonal nut	1.7158
201	Bonnet	P265GH
360	▶ Wedge welded on with	P265GH X8CrTi18
362	▶ Ball	1.4021
363	▶ Pressure piece	1.4021
365	▶ Double disc guide	P265GH
400	▶ Stem	1.4021
411	Guide sleeve	GG 25
420	▶ Packing	Graphite
440	Gland flange	P265GH
451	Grooved pin	1.1181
460	Gland bolt	1.1181
463	Washer	St
464	Hexagonal nut	1.0501
510	▶ Yoke sleeve	0.7040
511	▶ Thrust ball bearing	WLSt
531	Screwing	S355J2G3
532	Countersink Screw	8.8
600	Handwheel	St
605	Key	1.0050
610	Hexagonal nut	5.6
614	Retaining ring	FSt
	▶ Spare parts	
	Further materials on request.	

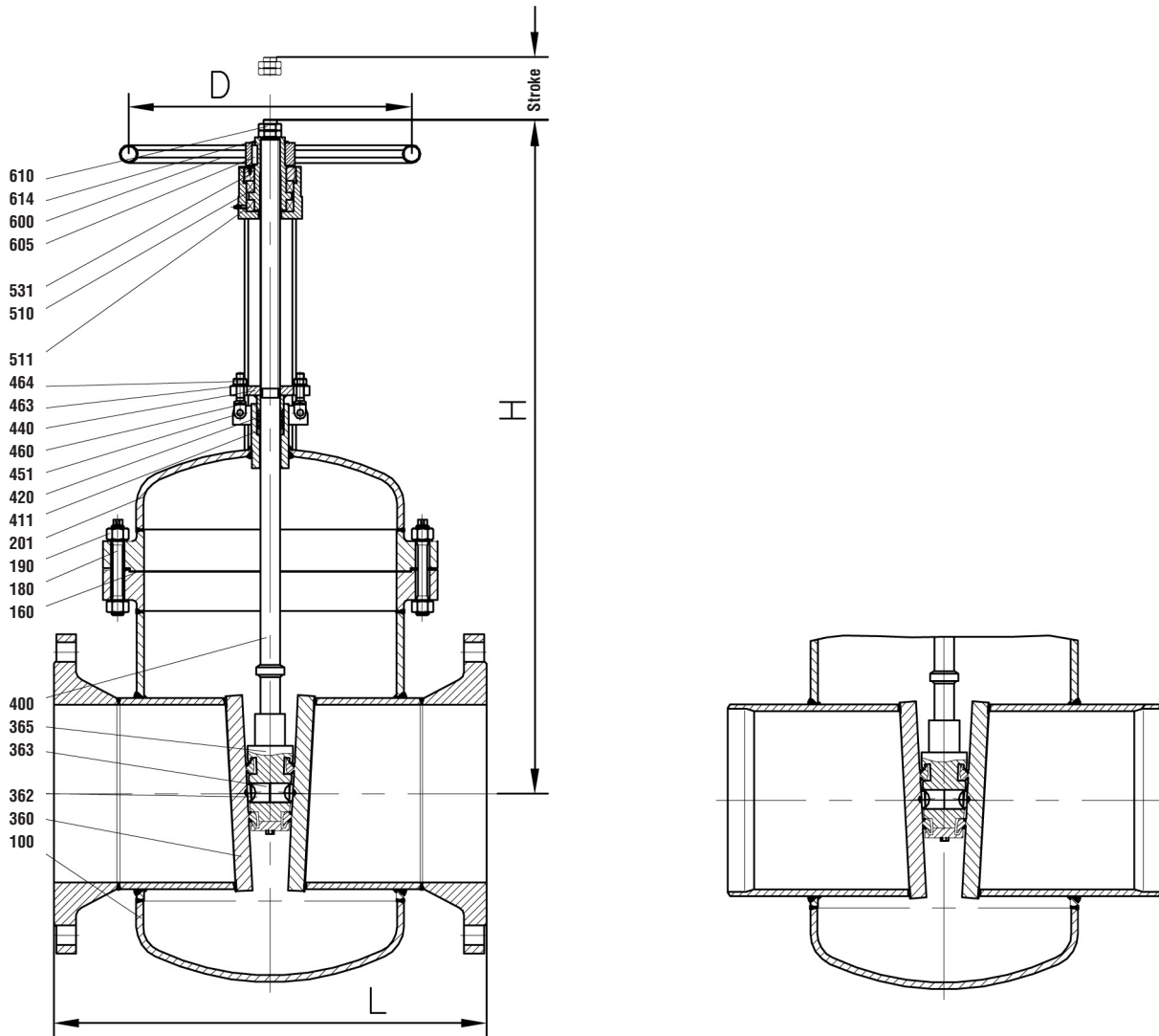
Dimensions/mm

DN	PN 10-25	PN 10-25	PN 10-16	PN 25	PN 10-25
	L	H	Stroke	Stroke	D
300	500	1165	345	345	450
350	550	1260	375	375	500
400	600	1410	420	420	600
500	700	1715	545	545	800
600	800	2035	635	655	800
700	900	2260	790		800
800	1000	2690	845		800
900					
1000					

Weights/kg and Kvs-values

DN	PN 10	PN 16	PN 25	PN 10	PN 16	PN 25	Kvs (m ³ /h)
	Flange	Flange	Flange	BW	BW	BW	
300	320	330	360	295	295	315	9230
350	390	405	445	360	360	380	11237
400	540	560	610	500	500	525	14677
500	815	860	945	765	765	850	23561
600	1210	1270	1425	1170	1170	1285	33929
700	1690	1715	1980	1630	1630	1775	46181
800	2410	2440	2750	2330	2330	2500	60318
900							
1000							

■ Gate valves ■ VALTRA Gate valve ■ 700 JJ ■ PN 40 ■ DN 300-700



Range of application

Admissible operating pressure [bar] at design temperature [°C] ¹⁾

Material	PN	-10	20	100	120	200	250	300	350	400
P265GH	40	40	40	40	40	35	32	28	24	21

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

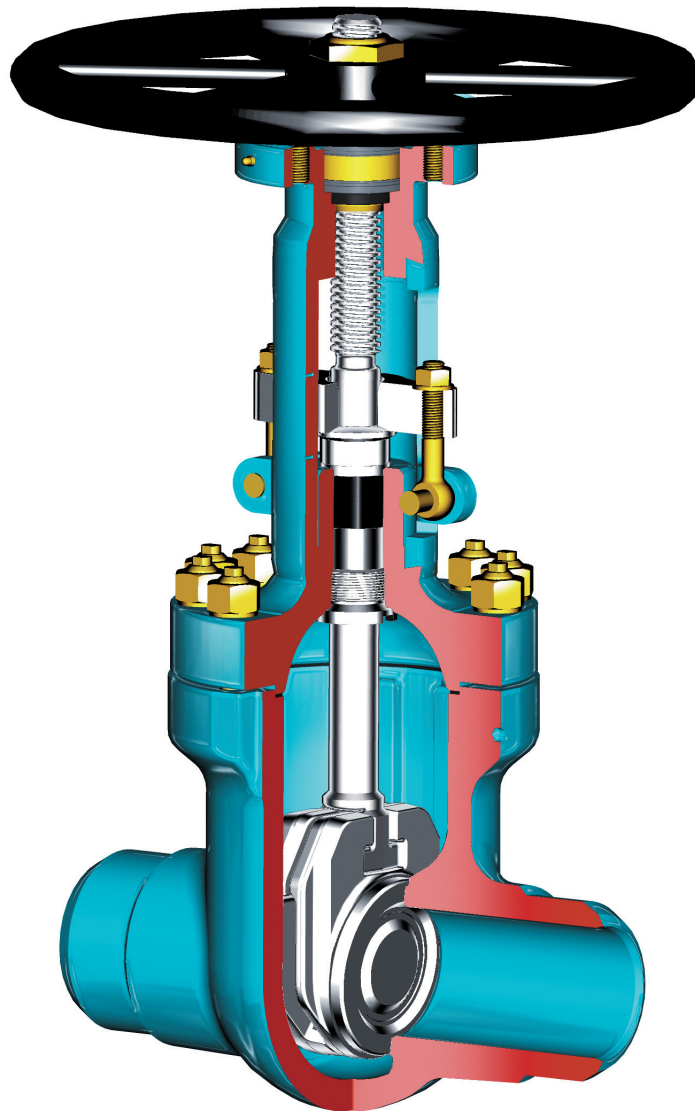
▪ Gate valves ▪ VALTRA Gate valve ▪ 700 JJ ▪ PN 40 ▪ DN 300-700

Materials		
Pos.	Component	P265GH (22)
100	Body	P265GH
	welded on with	X20CrMo171
160	▶ Gasket	Sigralflex
180	Tension screw	1.7158
190	Hexagonal nut	1.7158
201	Bonnet	P265GH
360	▶ Key	P265GH
	welded on with	X8CrTi18
362	▶ Ball	1.4021
363	▶ Pressure piece	1.4021
365	▶ Double disc guide	P265GH
400	▶ Stem	1.4021
411	Guide bushing	GG 25
420	▶ Packing	Graphite
440	Gland flange	P265GH
451	Pin	1.1181
460	Gland bolt	1.1181
463	Washer	St
464	Hexagonal nut	1.0501
510	▶ Yoke sleeve	0.7040
511	▶ Thrust ball bearing	WLS1
531	Screwing	S355J2G3
532	Countersink screw	8.8
600	Handwheel	St
605	Key	1.0050
610	Hexagonal nut	5.6
614	Retaining ring	FSt
	▶ Spare parts	
	Further materials on request.	

Dimensions/mm				
DN	L	H	Stroke	D
300	750	1260	345	500
350	850	1295	375	600
400	950	1575	445	800
500	1150	1795	525	800
600	1350	2155	640	800
700	1550	2595	770	800
800				

Weights/kg and Kvs-values			
DN	Flange	BW-Ends	Kvs (m ³ /h)
300	440	370	9230
350	610	460	11237
400	890	710	14677
500	1270	1050	23561
600	2310	1980	33929
700	3210	2960	46181
800			

▪ Gate valves ▪ Gate valve ▪ 700 JJ ▪ PN 160 / PD 18 ▪ DN 50-300/250



Range of application

FL- Version Material	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																	
	PN	-10	20	100	150	200	250	300	350	400	450	500	510	520	530	540	550	
1.5415	160	160	160	160	160	160	160	139	125	118	112	72	55	43	35			
1.7335	160	160	160	160	160	160	160	160	160	153	146	139	118	100	79	62	46	35
1.7380	160	160	160	160	160	160	160	160	160	153	146	139	118	100	79	70	61	52

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

BW- Ends Material	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																										
	PD	120	150	200	250	300	350	400	420	430	440	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	
1.5415	18	219	204	185	170	146	141	136	134	133	132	130	129	128	112	88	67	53	42								
1.7335	18	228	219	205	194	180	170	161	156	155	153	150	149	148	147	133	112	89	72	58	46	37	30				
1.7380	18	233	224	210	205	194	180	170	166	164	162	159	156	155	153	131	115	100	88	76	66	56	50	43	37	33	

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

▪ **Gate valves** ▪ Gate valve ▪ 700 JJ ▪ PN 160 / PD 18 ▪ DN 50-300/250

Standard features

- Die-forged body
- Flexible wedge
- Incorporated seats
- Outside screw
- Yoke sleeve with needle bearings
- Universal valve head for mounting actuators

Fields of application

Chemical industries, power plants, ship building and other

Pressure and temperature ratings

- Pressure rating BW up to 233 bar (PD 18)
- Pressure rating FL up to 160 bar
- Temperature ratings up -10° C to +600° C

Materials

- 1.5415
- 1.7335
- 1.7380

Further materials, e.g. **F92** on request

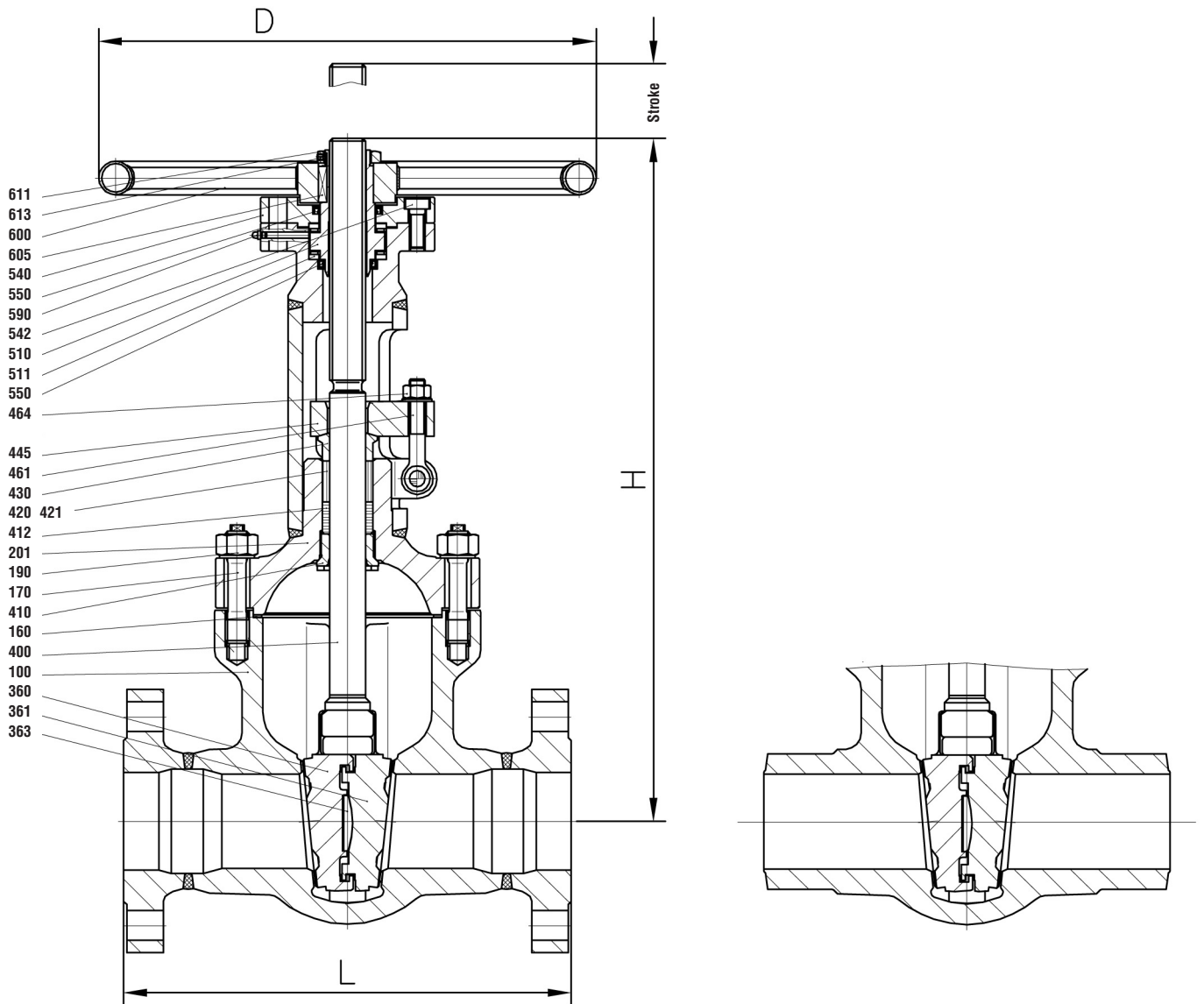
Design Highlights

- Die-forged valve body with incorporated seats
- Seats and wedge faced with stellite
- Hammer head connection between wedge and stem
- Gland ring and gland flange in two separate pieces
- Yoke sleeve supported at the top and at the bottom by means of needle bearings (axial type)
- Valve head equipped with dirt scrapers below and above the bearings

Benefits

- Free from porosity and shrink holes
- Best possible sliding performance, minimum wear
- The wedges are able to move parallel to the axis of the pipeline within the guiding groove. This protects the stem against bending moments
- Damage to the stem by irregular tightening of gland bolts is avoided
- To minimize the expenditure of effort when opening and closing the valve
- To protect against dirt and to avoid the loss of lubricants

▪ Gate valves ▪ Gate valve ▪ 700 JJ ▪ PN 160 / PD 18 ▪ DN 50-300/250



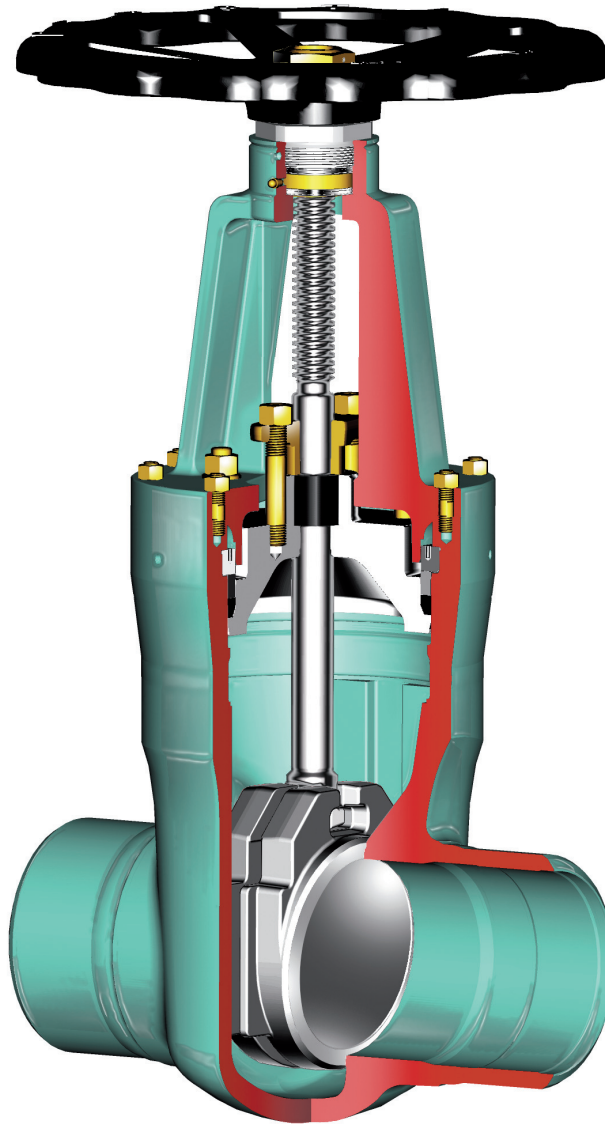
■ Gate valves ■ Gate valve ■ 700 JJ ■ PN 160 / PD 18 ■ DN 50-300/250

Materials				
Pos.	Component	1.5415 (42)	1.7335 (44)	1.7380 (45)
100	Body	1.5415 ¹⁾	1.7335 ¹⁾	1.7380 ¹⁾
160		grooved with	Grooved with	Grooved with
	▶ Gasket	graphite layer	graphite layer	graphite layer
170	Stud	1.7709	1.7709 ²⁾	1.7709 ²⁾
189	Expansion shaft	--	1.7709 ²⁾	1.7709 ²⁾
190	Hexagonal nut	1.7258	1.7258	1.7258
201	Bonnet	1.5415	1.7335	1.7380
360/361	▶ Double disc	1.5415 ¹⁾	1.7335 ¹⁾	1.7380 ¹⁾
363	▶ Pressure piece	1.4122	1.4122	1.4122
400	▶ Stem	1.4923	1.4923	1.4923
410	Back seat bushing	1.4006	1.4006	1.4006
412	Bottom ring	1.0718	1.0718	1.0718
420	▶ Packing	Graphite	Graphite	Graphite
430	Gland ring	1.5415	1.5415	1.5415
445	Gland flange	1.5415	1.5415	1.5415
450	Rivet pin	1.7258	1.7258	1.7258
461	Eye bolt	1.7709	1.7709	1.7709
464	Hexagonal nut	1.7258	1.7258	1.7258
510	▶ Yoke sleeve	2.0550	2.0550	2.0550
511	▶ Roller bearing	WLS	WLS	WLS
540	Flange	1.0425	1.0460	1.0460
542	Headcap screw	8.8	8.8	8.8
550	▶ Gasket	NBR	Viton	Viton
590	Grease nipple	5.8	5.8	5.8
600	Handwheel	St	St	St
605	Key	1.0060	1.0060	1.0060
611	Hexagonal pipe nut	St	St	St
613	Screw pin	45H	45H	45H
	▶ Spare parts			
		1) Welded on with Stellite		
		2) Working temperature > 550° C = Material 1.4923		

Dimensions/mm					
DN	Flange L	BW L	H	Stroke	D
50	300	300	490	80	350
65/50	360	360	490	80	350
80	390	390	610	105	400
100	450	450	695	130	500
125/100	525	525	695	130	500
150	600	600	890	185	800
200	750	750	1090	235	1000
250	900	900	1275	280	1000
300/250	1050	1050	1275	280	1000

Weights/kg and Kvs-values			
DN	Flange	BW	Kvs (m ³ /h)
50	60	45	228
65/50	66	52	
80	116	100	565
100	148	125	930
125/100	165	130	
150	320	270	1995
200	610	520	3458
250	1050	930	5367
300/250	1180	980	5041

▪ Gate valves ▪ High pressure gate valve DSK 10 ▪ 700 JT ▪ PD 10 ▪ DN 50-150



Range of application

BW-Ends Material	PD	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																											
		120	150	200	250	300	350	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	
1.0460	10	100	100	94	82	74	62	50	48	45	43	41	38	34	28	23													
1.5415	10	120	120	112	103	88	85	82	82	81	81	80	79	79	78	78	68	53	40	32	25								
1.7335	10	120	120	120	118	109	103	97	96	95	94	92	91	91	90	89	89	81	68	54	44	35	28	23	18				
1.7380	10	120	120	120	120	118	109	103	102	101	99	98	97	96	95	94	89	79	69	61	53	46	40	34	30	26	22	20	

¹⁾ Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

▪ Gate valves ▪ High pressure gate valve DSK 10 ▪ 700 JT ▪ PD 10 ▪ DN 50-150

Standard features

- Split wedge type
- Die-forged body and bonnet
- Full bore
- Outside screw and yoke
- Pressure sealing bonnet acc. VGB-guidelines

Pressure and temperature ratings

- Pressure rating up to 120 bar
- Temperature rating up to +600° C

Materials

- 1.0460
- 1.5415
- 1.7335
- 1.7380

Further materials, e.g. **F92** on request

Fields of application

Chemical industries, power plants, ship building and other

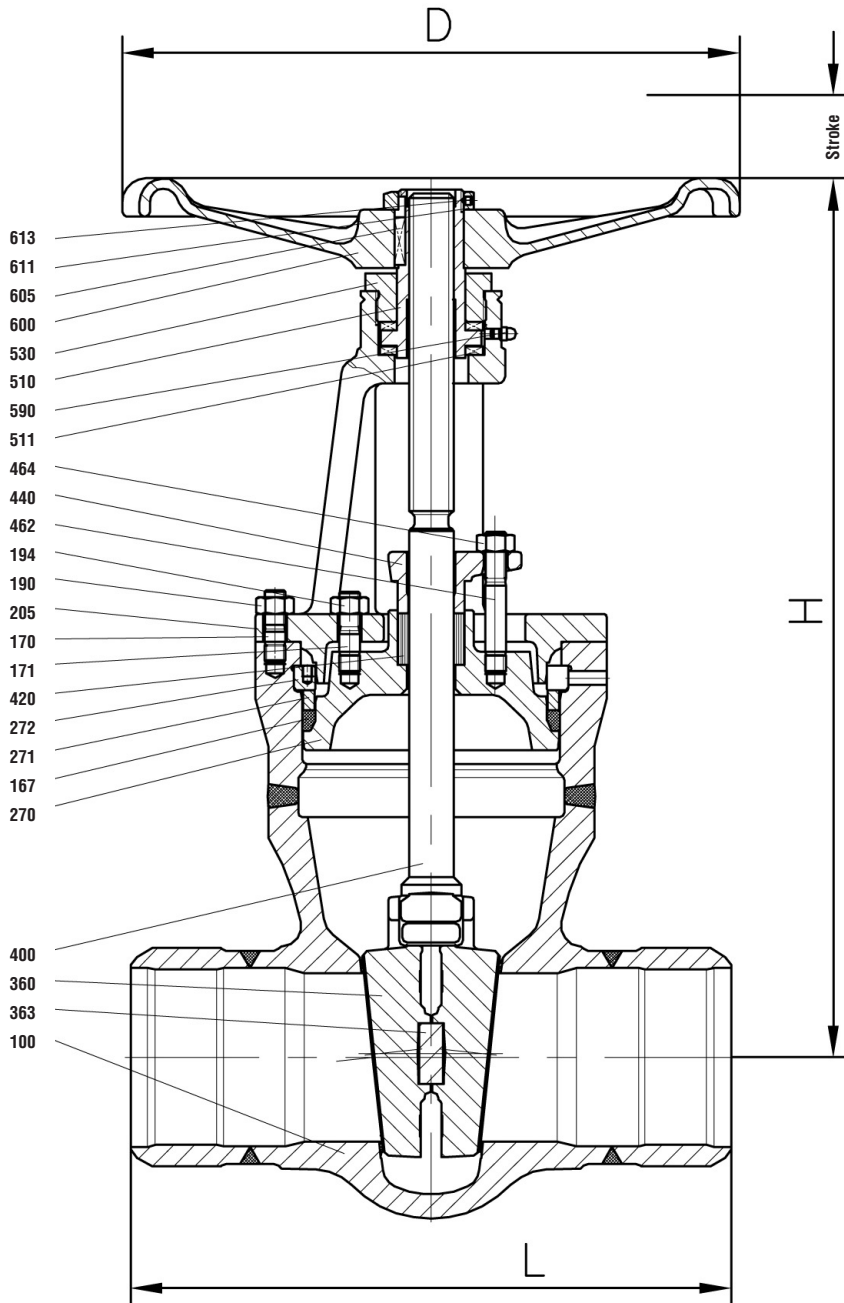
Design Highlights

- Die-forged body and bonnet
- Seats and wedge faced with stellite
- Hammer head connection between wedge and stem
- Gland ring and gland flange in two separate pieces
- Yoke sleeve supported at the top and at the bottom by means of needle bearings (axial type)
- Valve head equipped with dirt scrapers below and above the bearings

Benefits

- Free from porosity and shrink holes
- Best possible sliding performance, minimum wear
- The wedges are able to move parallel to the axis of the pipeline within the guiding groove. This protects the stem against bending moments
- Damage to the stem by irregular tightening of gland bolts is avoid
- To minimize the expenditure of effort when opening and closing the valve
- To protect against dirt and to avoid the loss of lubricants

■ Gate valves ■ High pressure gate valve DSK 10 ■ 700 JT ■ PD 10 ■ DN 50-150



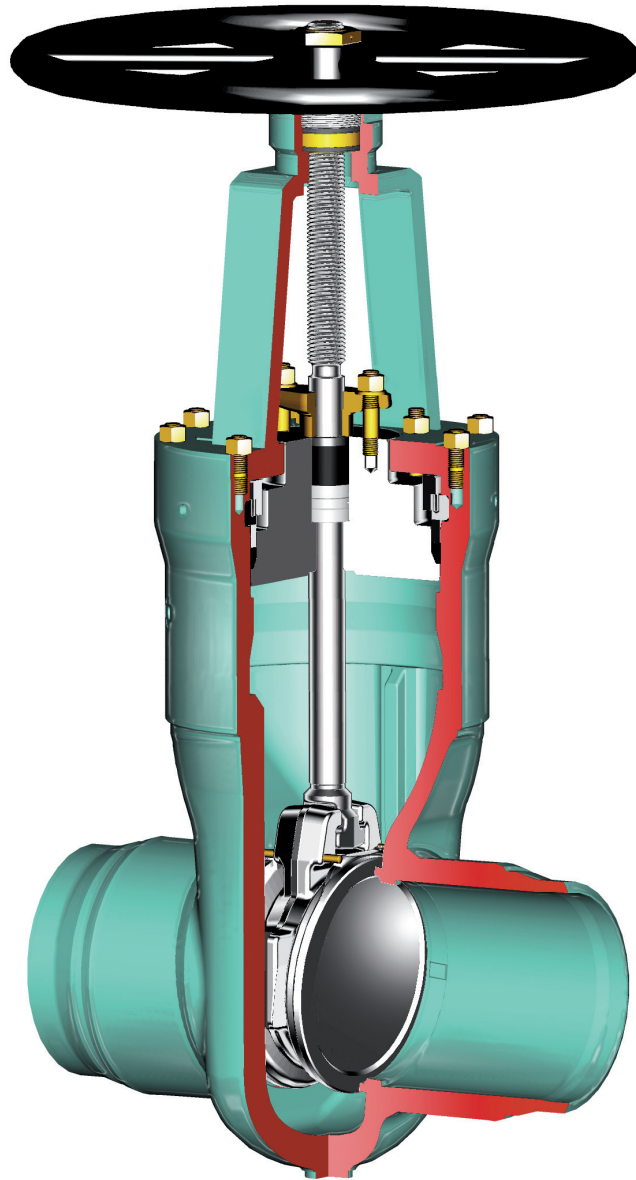
■ Gate valves ■ High pressure gate valve DSK 10 ■ 700 JT ■ PD 10 ■ DN 50-150

Materials					
Pos.	Component	1.0460 (21)	1.5415 (42)	1.7335 (44)	1.7380 (45)
100	Body welded on with	1.0460 Cr 17	1.5415 Stellite	1.7335 Stellite	1.7380 Stellite
167	▶ Gasket	Graphite	Graphite	Graphite	Graphite
170	Stud	1.7709	1.7719	1.7709	1.7709
171	Stud	1.7709	1.7719	1.7709	1.7709
190	Hexagonal nut	1.7258	1.7258	1.7258	1.7258
194	Hexagonal nut	1.7258	1.7258	1.7258	1.7258
205	Bonnet	1.5419	1.5419	1.5419	1.5419
270	Cover	1.0460	1.5415	1.7335	1.7380
271	Ring	1.0460	1.5415	1.7335	1.7380
272	Segment ring	1.0460	1.5415	1.7335	1.7380
360	▶ Disc welded on with	1.0460 18/8 (40)	1.5415 Stellite	1.7335 Stellite	1.7380 Stellite
363	▶ Pressure piece	1.4021	1.4021	1.4021	1.4021
400	▶ Stem	1.4021	1.4122	1.4122	1.4122
420	▶ Packing	Graphite	Graphite	Graphite	Graphite
440	Gland flange	1.0460	1.0460	1.0460	1.0460
462	Stud	1.7709	1.7709	1.7709	1.7709
464	Hexagonal nut	1.7258	1.7258	1.7258	1.7258
510	▶ Yoke sleeve	1.0718	1.0718	1.0718	1.0718
511	▶ Roller bearing	WLS	WLS	WLS	WLS
530	Yoke nut	1.0718	1.0718	1.0718	1.0718
590	Grease nipple	5.8	5.8	5.8	5.8
600	Handwheel	0.7040	0.7040	0.7040	0.7040
605	Key	1.0060	1.0060	1.0060	1.0060
611	Hexagonal pipe nut	St	St	St	St
613	Screw pin	45H	45H	45H	45H
	▶ Spare parts				

Dimensions/mm					
DN	DS	L	H	Stroke	D
50	50	250	337	63	180
65/50	50	290	337	63	180
80	78	310	410	90	280
100	98	350	515	110	360
125/100	98	400	515	110	360
150	150	450	685	165	450

Weights/kg and Kvs-values			
DN	Flange	BW-Ends	Kvs (m ³ /h)
50	26,5	15,5	258
65/50	30,5	16,0	258
80	45,0	31,0	628
100	71,0	47,0	991
125/100	89,0	49,0	991
150	155,0	100,0	2323

- Gate valves
- High pressure gate valve DSK 10
- 700 JT
- PD 10
- DN 200-350/300



Range of application

BW-Ends Material	PD	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																											
		120	150	200	250	300	350	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	
1.0460	10	100	100	94	82	74	62	50	48	45	43	41	38	34	28	23													
1.5415	10	120	120	112	103	88	85	82	82	81	81	80	79	79	78	78	68	53	40	32	25								
1.7335	10	120	120	120	118	109	103	97	96	95	94	92	91	91	90	89	89	81	68	54	44	35	28	23	18				
1.7380	10	120	120	120	120	118	109	103	102	101	99	98	97	96	95	94	89	79	69	61	53	46	40	34	30	26	22	20	

¹⁾ Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

■ Gate valves ■ High pressure gate valve DSK 10 ■ 700 JT ■ PD 10 ■ DN 200-350/300

Standard features

- Split wedge type
- Die-forged body and bonnet
- Full bore
- Outside screw and yoke
- Pressure sealing bonnet acc. VGB-guidelines

Fields of application

Chemical industries, power plants, ship building and other

Pressure and temperature ratings

- Pressure rating up to 120 bar
- Temperature rating up to +600° C

Materials

- 1.0460
- 1.5415
- 1.7335
- 1.7380

Further materials, e.g. **F92** on request

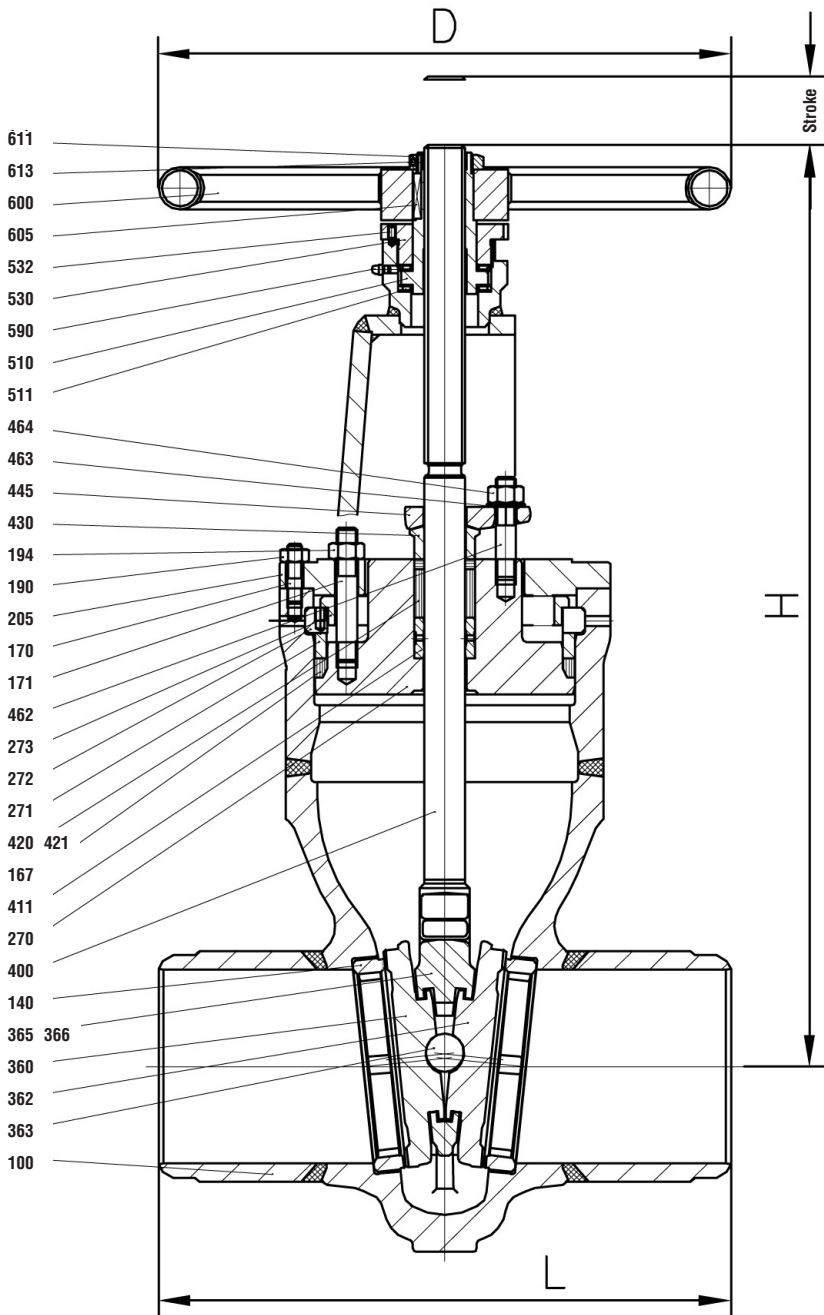
Design Highlights

- Die-forged body and bonnet
- Seats and wedge faced with stellite
- Hammer head connection between wedge and stem
- Gland ring and gland flange in two separate pieces
- Yoke sleeve supported at the top and at the bottom by means of needle bearings (axial type)
- Valve head equipped with dirt scrapers below and above the bearings

Benefits

- Free from porosity and shrink holes
- Best possible sliding performance, minimum wear
- The wedges are able to move parallel to the axis of the pipeline within the guiding groove. This protects the stem against bending moments
- Damage to the stem by irregular tightening of gland bolts is avoid
- To minimize the expenditure of effort when opening and closing the valve
- To protect against dirt and to avoid the loss of lubricants

■ Gate valves ■ High pressure gate valve DSK 10 ■ 700 JT ■ PD 10 ■ DN 200-350/300



■ Gate valves ■ High pressure gate valve DSK 10 ■ 700 JT ■ PD 10 ■ DN 200-350/300

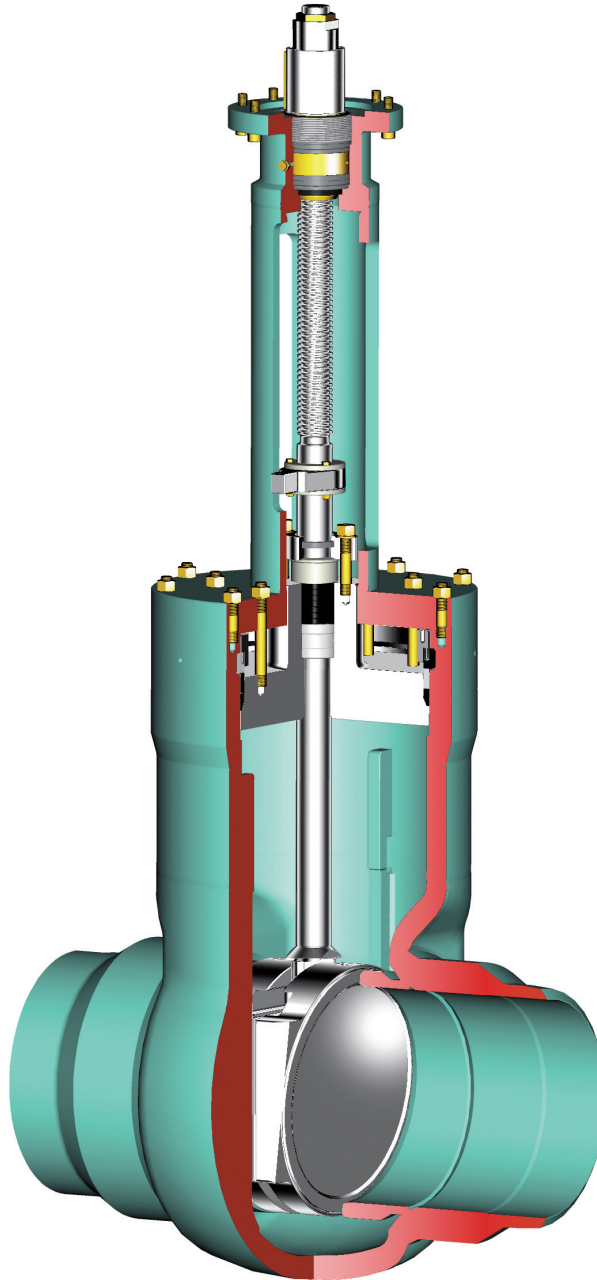
Materials					
Pos.	Component	1.0460 (21)	1.5415 (42)	1.7335 (44)	1.7380 (45)
100	Body	1.0460	1.5415	1.7335	1.7380
140	Seat ring	1.0460	1.5415	1.7335	1.7380
	welded on with	18/8 (40)	Stellite	Stellite	Stellite
167	▶ Gasket	Graphite	Graphite	Graphite	Graphite
170	Stud	1.7709	1.7709	1.7709	1.7709
171	Stud	1.7709	1.7709	1.7709	1.7709
190	Hexagonal nut	1.7258	1.7258	1.7258	1.7258
194	Hexagonal nut	1.7258	1.7258	1.7258	1.7258
205	Bonnet	1.5415	1.5415	1.5415	1.5415
270	Cover	1.0460	1.5415	1.7335	1.7380
271	Ring	1.0460	1.5415	1.7335	1.7380
272	Segment ring	1.0460	1.5415	1.7335	1.7380
273	Cover	1.7380	1.5415	1.7335	1.7380
360	▶ Double disc welded on with	1.0460	1.5415	1.7335	1.7380
		Cr 17	Stellite	Stellite	Stellite
362	▶ Ball	WLS ²⁾	WLS ²⁾	WLS ²⁾	WLS ²⁾
365	▶ Double disc guide	1.0460	1.5415	1.7335	1.7380
366	▶ Grooved pin	1.4104	1.4104	1.4104	1.4104
400	▶ Stem	1.4021	1.4122	1.4122	1.4122
411	▶ Guide bushing	1.8507	1.8507	1.8507	1.8507
420	▶ Packing	Graphite	Graphite	Graphite	Graphite
421	▶ Ring	Graphite	Graphite	Graphite	Graphite
430	Gland ring	1.0718	1.0718	1.0718	1.0718
445	Gland flange	1.0460	1.0460	1.0460	1.0460
462	Stud	1.7709	1.7709	1.7709	1.7709
463	Washer	St	St	St	St
464	Hexagonal nut	1.7258	1.7258	1.7258	1.7258
510	▶ Yoke sleeve	2.0550	2.0550	2.0550	2.0550
511	▶ Roller bearing	WLS ²⁾	WLS ²⁾	WLS ²⁾	WLS ²⁾
530	Yoke nut	1.0718	1.0718	1.0718	1.0718
532	Screw pin	45H	45H	45H	45H
590	Grease nipple	5.8	5.8	5.8	5.8
600	Handwheel	0.7040	0.7040	0.7040	0.7040
605	Key	1.0060	1.0060	1.0060	1.0060
611	Hexagonal pipe nut	St	St	St	St
613	Screw pin	45H	45H	45H	45H
	▶ Spare parts				

2) DN 250 = Pressure ring 1.4122

Dimensions/mm					
DN	DS	L	H	Stroke	D
200	198	550	920	210	600
225/200	198	600	920	210	600
250/200	198	650	920	210	600
225/250	235	600	1130	265	720
250	235	650	1130	265	720
300/250	235	750	1130	265	720
300	276	750	1300	310	900
350/300	276	850	1300	310	900

Weights/kg and Kvs-values		
DN	BW-Ends	Kvs (m ³ /h)
200	260	4000
225/200	270	
250/200	280	
225/250	530	
250	550	6247
300/250	580	
300	850	8997
350/300	870	9257

▪ Gate valves ▪ High pressure gate valve DSK 10 ▪ 700 JT ▪ PD 10 ▪ DN 350-700



		Range of application																										
		Admissible operating pressure [bar] at design temperature [°C] ¹⁾																										
BW-Ends Material	PD	120	150	200	250	300	350	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600
1.0425	10	100	100	94	82	74	62	50	48	45	43	41	38	34	28	23												
1.5415	10	120	120	112	103	88	85	82	82	81	81	80	79	79	78	78	68	53	40	32	25							
1.7335	10	120	120	120	118	109	103	97	96	95	94	92	91	91	90	89	89	81	68	54	44	35	28	23	18			
1.7380	10	120	120	120	120	118	109	103	102	101	99	98	97	96	95	94	89	79	69	61	53	46	40	34	30	26	22	20

¹⁾ Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

■ Gate valves ■ High pressure gate valve DSK 10 ■ 700 JT ■ PD 10 ■ DN 350-700

Standard features

- Split wedge type
- Die-forged body and bonnet
- Full bore
- Outside screw and yoke
- Pressure sealing bonnet acc. VGB-guidelines

Pressure and temperature ratings

- Pressure rating up to 120 bar
- Temperature rating up to +600° C

Materials

- 1.0425
- 1.5415
- 1.7335
- 1.7380

Further materials, e.g. **F92** on request

Fields of application

Chemical industries, power plants, ship building and other

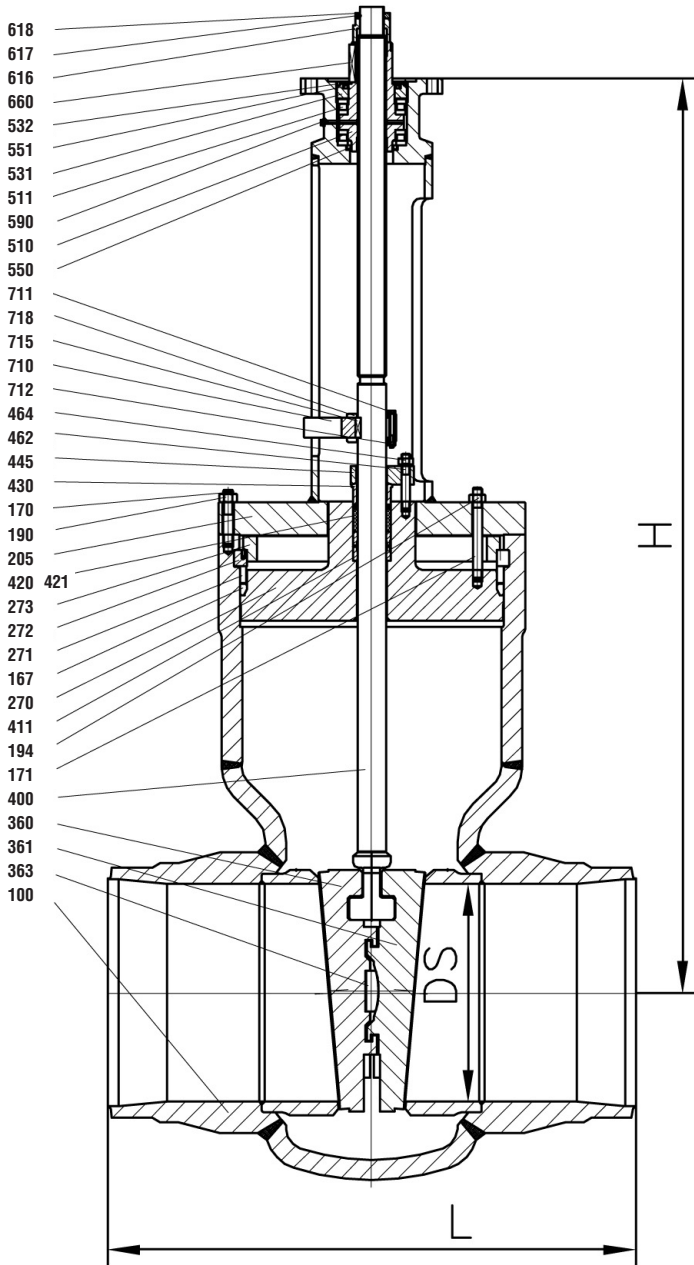
Design Highlights

- Die-forged body and bonnet
- Seats and wedge faced with stellite
- Hammer head connection between wedge and stem
- Gland ring and gland flange in two separate pieces
- Yoke sleeve supported at the top and at the bottom by means of needle bearings (axial type)
- Valve head equipped with dirt scrapers below and above the bearings

Benefits

- Free from porosity and shrink holes
- Best possible sliding performance, minimum wear
- The wedges are able to move parallel to the axis of the pipeline within the guiding groove. This protects the stem against bending moments
- Damage to the stem by irregular tightening of gland bolts is avoid
- To minimize the expenditure of effort when opening and closing the valve
- To protect against dirt and to avoid the loss of lubricants

■ Gate valves ■ High pressure gate valve DSK 10 ■ 700 JT ■ PD 10 ■ DN 350-700



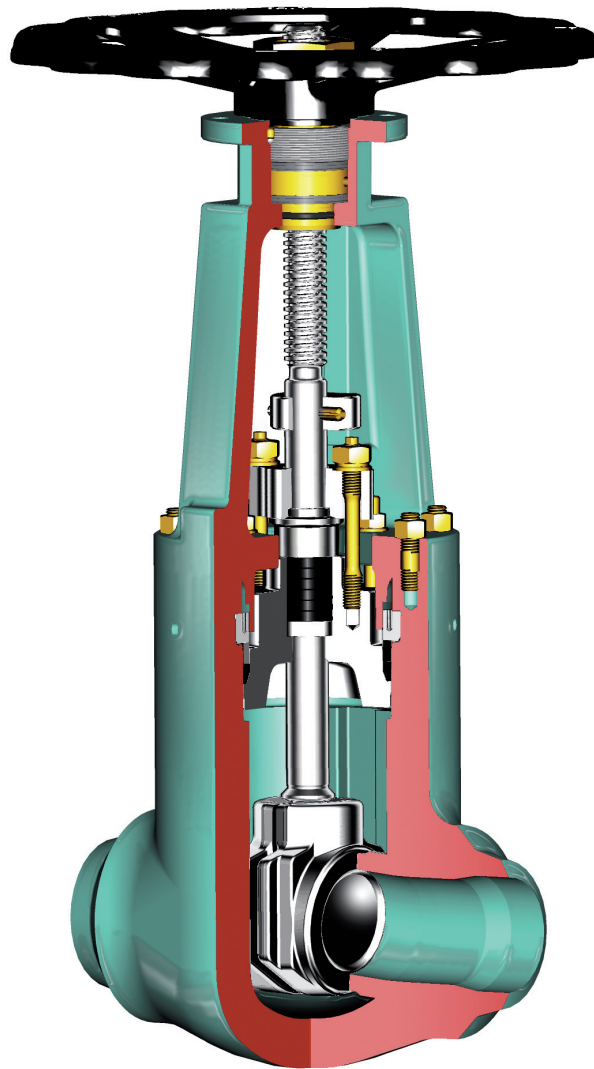
■ Gate valves ■ High pressure gate valve DSK 10 ■ 700 JT ■ PD 10 ■ DN 350-700

Materials					
Pos.	Component	1.0425 (22)	1.5415 (42)	1.7335 (44)	1.7380 (45)
100	Body welded on with	1.0425	1.5415	1.7335	1.7380
167	▶ Gasket	Stellite	Stellite	Stellite	Stellite
170	▶ Stud	Graphite	Graphite	Graphite	Graphite
171	▶ Stud	1.7709	1.7709	1.7709	1.7709
190	▶ Hexagonal nut	1.7258	1.7258	1.7258	1.7258
194	▶ Hexagonal nut	1.7255	1.7258	1.7258	1.7258
205	▶ Bonnet	1.5415	1.5415	1.5415	1.5415
270	▶ Cover	1.0460	1.5415	1.7335	1.7380
271	▶ Ring	1.0460	1.5415	1.7335	1.7380
272	▶ Segment ring	1.0460	1.5415	1.7335	1.7380
273	▶ Cover	1.0460	1.0460	1.0460	1.0460
360/361	▶ Double disc welded on with	1.0460	1.5415	1.7335	1.7380
363	▶ Pressure piece	Stellite	Stellite	Stellite	Stellite
400	▶ Stem	1.4122	1.4122	1.4122	1.4122
411	▶ Guide bush	1.4021	1.4923	1.4923	1.4923
420	▶ Packing	1.8507	1.8507	1.8507	1.8507
421	▶ Ring	Graphite	Graphite	Graphite	Graphite
430	▶ Gland ring	Graphite	Graphite	Graphite	Graphite
445	▶ Gland flange	1.5415	1.5415	1.5415	1.5415
462	▶ Stud	1.0460	1.5415	1.7335	1.7380
464	▶ Hexagonal nut	1.7709	1.7709	1.7709	1.7709
510	▶ Yoke sleeve	1.7258	1.7258	1.7258	1.7258
511	▶ Bearing	2.0550	2.0550	2.0550	2.0550
531	▶ Screwing	WLS1	WLS1	WLS1	WLS1
532	▶ Screw pin	1.7335	1.7335	1.7335	1.7335
550	▶ Gasket	45H	45H	45H	45H
551	▶ Gasket	NBR	NBR	NBR	NBR
590	▶ Grease nipple	NBR	NBR	NBR	NBR
616	▶ Stop ring	5.8	5.8	5.8	5.8
617	▶ Screw pin	1.0460	1.0460	1.0460	1.0460
618	▶ Handwheel nut	45H	45H	45H	45H
660	▶ Key	St	St	St	St
710	▶ Switch bracket	1.0060	1.0060	1.0060	1.0060
711	▶ Hexagonal screw	1.0425	1.0425	1.0425	1.0425
712	▶ Hexagonal nut	8.8	8.8	8.8	8.8
715	▶ Key	8	8	8	8
718	▶ Washer	1.4021	1.4021	1.4021	1.4021
	▶ Spare parts	1.0038	1.0038	1.0038	1.0038

Dimensions/mm				
DN	DS	L	H	Stroke
350	330	850	1730	365
400	375	950	1850	415
450	419	1050	2070	465
500	464	1150	2300	515
600	559	1350	2765	625
700	640	1550	2895	690

Weights/kg and Kvs-values		
DN	BW-Ends	Kvs (m ³ /h)
350	995	11243
400	1600	14521
450	2000	18105
500	2490	22353
600	4550	32188
700		41773

▪ Gate valves ▪ High pressure gate valve DSK 26 ▪ 700 JT ▪ PD 25 ▪ DN 65-300/250



Range of application

BW- Ends Material	PD	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																
		120	150	200	250	300	350	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600						
1.0460	25	250	250	235	206	184	155	125	119	113	107	102	96	85	71	58																		
1.5415	25	300	300	280	258	221	213	206	205	203	202	200	199	197	196	194	170	132	101	79	64													
1.7335	25	300	300	300	294	272	258	243	240	237	234	231	228	227	225	224	222	202	170	134	109	88	69	57	46									
1.7380	25	300	300	300	300	294	272	258	255	252	249	246	243	240	237	234	224	199	174	152	132	115	100	85	75	65	56	49						
1.6368	25	410	410	410	410	410	410	410	410	410	410	402	360	309	257	205	153	102																
1.4903	25	425	425	425	425	425	425	425	425	425	425	425	425	425	425	418	383	372	344	316	290	263	238	213	191	169	150	132						

¹⁾ Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

■ **Gate valves** ■ **High pressure gate valve DSK 26** ■ **700 JT** ■ **PD 25** ■ **DN 65-300/250**

Standard features

- One-piece valve body made of forged steel with welded seat rings
- Split wedge
- High bonnet
- Position indicator
- Yoke sleeve supported at the top and at the bottom with needle bearing (axial type) and cylindrical roller bearing
- Pressure sealing bonnet acc. to VGB-guidelines

Pressure and temperature ratings

- Pressure rating up to 425 bar
- Temperature rating up to +600° C

Materials

- 1.0460
- 1.5415
- 1.7335
- 1.7380
- 1.6368
- 1.4903

Further materials, e.g. **F92** on request

Fields of application

High temperature steam and water, Refining (Catalytic reformers and Hydrocrackers), Petrochemical and Chemical Industries

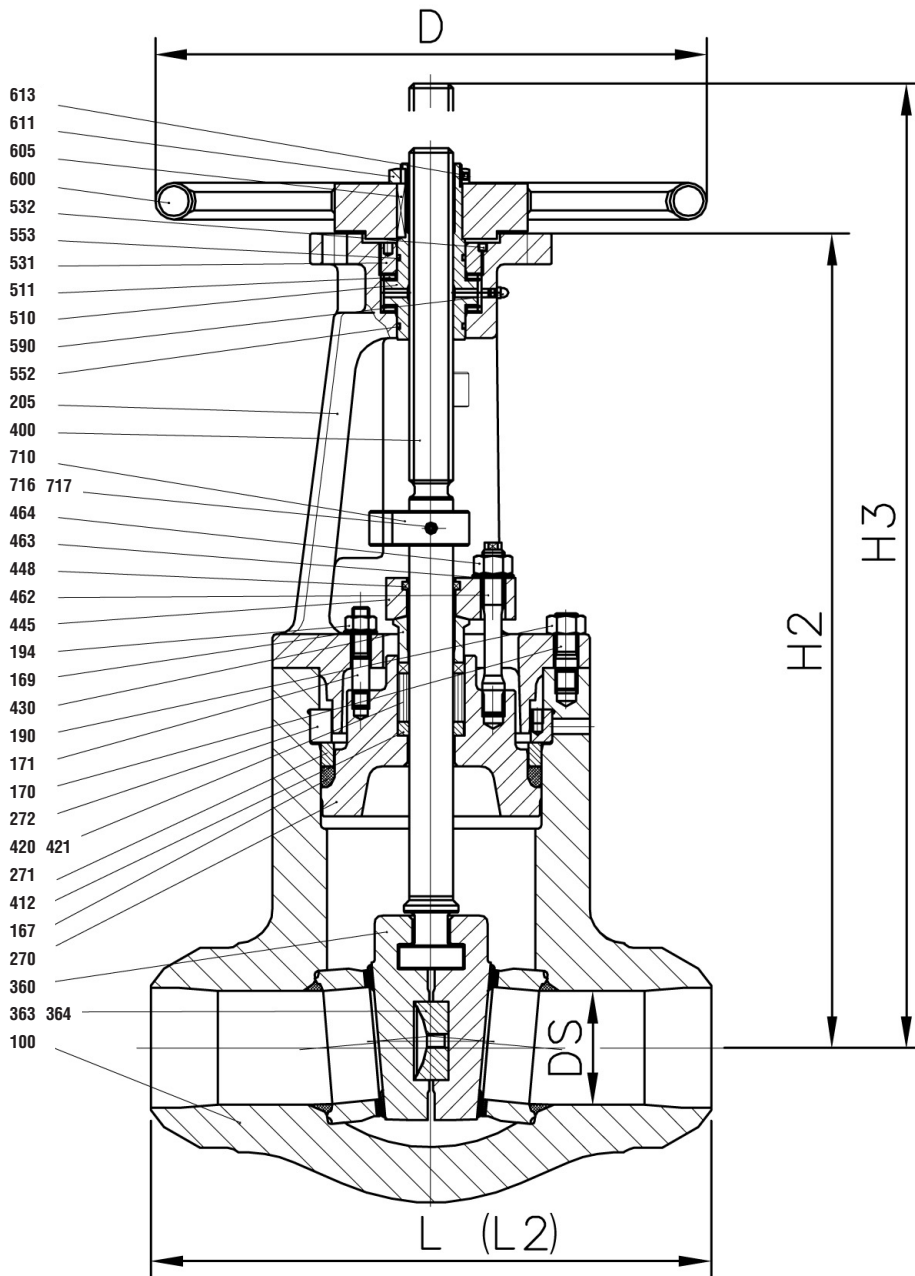
Design Highlights

- Seats of the shut-off device and of the valve body generally faced with stellite
- Hammer head connection between shut-off device and stem
- Valve head equipped with dirt scrapers below and above the bearings
- A crosshead screwed to the stem gives protection against torsion
- The segment rings are not fixed in their position by the valve cover but secured by a separate supporting cap

Benefits

- Best possible sliding performance and minimum wear
- The wedges are able to move parallel to the axis of the pipeline within the guiding groove. This protects the stem against bending moments
- To protect against dirt and to avoid the loss of lubricants
- This is to prevent the shut-off device against operating forces, at the same time the crosshead serves as position indicator and offers the possibility to fit limit switches
- This version eases the maintenance work considerably. In case of dismantling it is not necessary to press the valve cover in closing direction in order to remove the segment rings

■ Gate valves ■ High pressure gate valve DSK 26 ■ 700 JT ■ PD 25 ■ DN 65-300/250



■ Gate valves ■ High pressure gate valve DSK 26 ■ 700 JT ■ PD 25 ■ DN 65-300/250

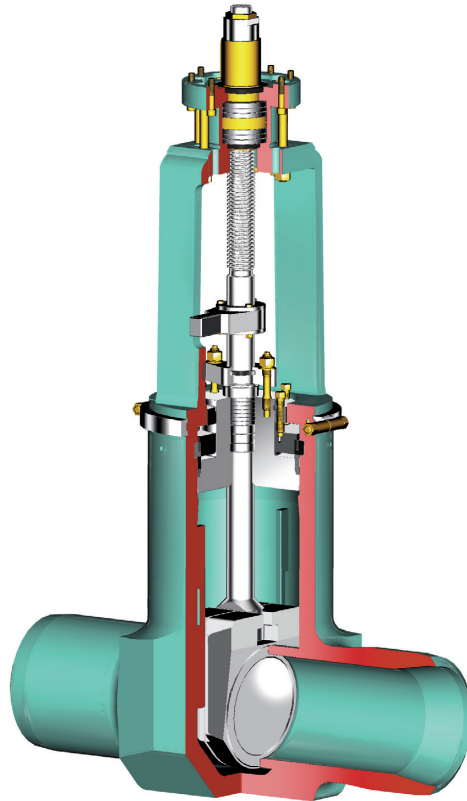
Materials							
Pos.	Component	1.0460 (21)	1.5415 (42)	1.7335 (44)	1.7380 (45)	1.6368 (46)	1.4903 (63)
100	Body welded on with	1.0460	1.5415	1.7335	1.7380	1.6368	1.4903
167	▶ Gasket	Stellite	Stellite	Stellite	Stellite	Stellite	Stellite
169	▶ Washer	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
170	▶ Stud	St	St	St	St	St	St
171	▶ Stud	1.7709	1.7709	1.7709	1.7709	1.7709	1.7709
171	▶ Stud	8.8	8.8	8.8	8.8	8.8	8.8
190	▶ Hexagonal nut	1.7258	1.7258	1.7258	1.7258	1.7258	1.7258
194	▶ Hexagonal nut	8	8	8	8	8	8
205	▶ Bonnet	1.5419	1.5419	1.5419	1.5419	1.5419	1.5419
270	▶ Cover	1.0460	1.5415	1.7335	1.7380	1.6368	1.4903
271	▶ Ring	1.0460	1.5415	1.7335	1.7380	1.6368	1.4903
272	▶ Segment ring	1.0460	1.5415	1.7335	1.7380	1.6368	1.4903
360	▶ Disc welded on with	1.7380	1.7380	1.7380	1.7380	1.4903	1.4903
363	▶ Pressure piece	Stellite	Stellite	Stellite	Stellite	Stellite	Stellite
364	▶ Pressure ring	1.4021	1.4021	1.4021	1.4021	1.4021	1.4021
400	▶ Stem	1.4021	1.4021	1.4923	1.4923	1.4923	1.4923
412	▶ Basic ring	0.7670	0.7670	0.7670	0.7670	0.7670	0.7670
420	▶ Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
421	▶ Ring	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
430	▶ Gland ring	1.5415	1.5415	1.5415	1.5415	1.5415	1.5415
445	▶ Gland flange	1.7380	1.7380	1.7380	1.7380	1.7380	1.7380
448	▶ Dirt Scraper	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
462	▶ Stud	1.7709	1.7709	1.7709	1.7709	1.7709	1.7709
463	▶ Washer	St	St	St	St	St	St
464	▶ Hexagonal nut	1.7258	1.7258	1.7258	1.7258	1.7258	1.7258
510	▶ Yoke sleeve	2.0550	2.0550	2.0550	2.0550	2.0550	2.0550
511	▶ Roller Bearing	WLSt	WLSt	WLSt	WLSt	WLSt	WLSt
531	▶ Screwing	1.4021	1.4021	1.4021	1.4021	1.4021	1.4021
532	▶ Screw pin	45H	45H	45H	45H	45H	45H
552	▶ O-Ring	Viton	Viton	Viton	Viton	Viton	Viton
553	▶ O-Ring	Viton	Viton	Viton	Viton	Viton	Viton
590	▶ Grease nipple	5.8	5.8	5.8	5.8	5.8	5.8
600	▶ Handwheel	St	St	St	St	St	St
605	▶ Key	1.0060	1.0060	1.0060	1.0060	1.0060	1.0060
611	▶ Hexagonal pipe nut	St	St	St	St	St	St
613	▶ Screw pin	45H	45H	45H	45H	45H	45H
710	▶ Switch bracket	1.0425	1.0425	1.0425	1.0425	1.0425	1.0425
716	▶ Tension pin	1.0904	1.0904	1.0904	1.0904	1.0904	1.0904
717	▶ Tension pin	1.0904	1.0904	1.0904	1.0904	1.0904	1.0904
	▶ Spare parts						

Dimensions/mm							
DN	DS	L	L2*	H2	H3	D	R/Stroke
65	51	254	425				
80/65	51	254	425				
80	64	305	470	540	625	360	16
100/80	64	305	470	540	625	360	16
100	82	406	550	630	755	450	17
125/100	82	406	550	630	755	450	17
125	100	483	650	730	880	450	21
150/125	100	483	650	730	880	450	21
150	122	559	750	840	1025	600	21
200/150	122	559	750	840	1025	600	21
200	160	711	950	1070	1310	720	25
250/200	160	711	950	1070	1310	720	25
250	200	864	1150	1260	1570	900	27
300/250	200	864	1150	1260	1570	900	27

* Long Version

Weights/kg and Kvs-values		
DN	BW-Ends	Kvs (m3/h)
65		
80/65		
80	75	422
100/80		
100	136	694
125/100		
125	225	1027
150/125		
150	380	1543
200/150		
200	770	2630
250/200		
250	1300	4109
300/250		

■ Gate valves ■ High pressure gate valve DSK 16-63 ■ 700 JT ■ PD 16-63 ■ DN 50-600



Range of application

BW-Ends Material	PD	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																				
		120	150	200	250	300	350	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650					
1.0460	16	160	160	151	132	118	99	80	76	73	69	65	61	54	45	37																						
	25	250	250	235	206	184	155	125	119	113	107	102	96	85	71	58																						
	32	320	320	302	264	236	198	160	153	145	138	130	123	109	91	75																						
	40	400	400	377	330	25	248	200	191	182	172	163	153	136	113	93																						
	63*																																					
1.5415	16	192	192	179	165	141	137	132	131	130	129	128	127	126	125	124	109	85	64	51	41																	
	25	300	300	280	258	221	213	206	205	203	202	200	199	197	196	194	170	132	101	79	64																	
	32	385	385	358	330	283	273	264	262	260	258	256	255	253	251	249	217	170	129	102	81																	
	40	480	480	448	413	354	342	330	328	325	323	321	318	316	314	311	272	212	161	127	102																	
	63*																																					
1.7335	16	192	192	192	189	174	165	156	154	152	150	148	146	145	144	143	142	129	109	86	70	57	44	36	29													
	25	300	300	300	294	272	258	243	240	237	234	231	228	227	225	224	222	202	170	134	109	88	69	57	46													
	32	385	385	385	377	349	330	311	307	304	300	296	292	290	289	287	285	258	217	172	140	113	88	72	59													
	40	481	481	481	471	436	413	389	384	380	375	370	365	363	364	358	356	323	272	215	175	141	110	91	74													
	63*																																					
1.7380	16	192	192	192	192	189	174	165	163	161	159	157	156	154	152	150	143	127	111	97	85	74	64	55	48	41	36	32										
	25	300	300	300	300	294	272	258	255	252	249	246	243	240	237	234	224	199	174	152	132	115	100	85	75	65	56	49										
	32	384	384	384	384	377	349	330	326	322	319	315	311	307	304	300	287	255	223	194	170	147	128	109	96	83	72	63										
	40	480	480	480	480	471	436	413	408	403	398	384	389	384	379	375	358	318	278	243	212	184	160	137	120	104	90	79										
	63*																																					
1.6368	16	263	263	263	263	263	263	263	263	263	263	257	231	198	165	131	98	65																				
	25	410	410	410	410	410	410	410	410	410	410	402	360	309	257	205	153	102																				
	32	525	525	525	525	525	525	525	525	525	525	515	482	396	330	262	196	130																				
	40	657	657	657	627	657	657	657	657	657	657	643	577	495	412	328	245	163																				
	63*																																					
1.4903	16	272	272	272	272	272	272	272	272	272	272	272	272	272	272	268	245	239	221	203	186	169	153	137	123	108	96	85	74	64	55	48	41					
	25	425	425	425	425	425	425	425	425	425	425	425	425	425	425	418	383	372	344	316	290	263	238	213	191	169	150	132	115	100	85	75	65	55	45			
	32	544	544	544	544	544	544	544	544	544	544	544	544	544	544	536	490	477	441	405	371	338	305	273	245	217	192	170	147	128	109	96	83	72	63	53		
	40	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	669	613	596	552	507	464	422	382	342	306	271	240	212	184	160	137	120	104	88	79		
	63*																																					

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations. * Design according to working data

▪ **Gate valves** ▪ **High pressure gate valve DSK 16-63** ▪ **700 JT** ▪ **PD 16-63** ▪ **DN 50-600**

Standard features

- Valve body made of forged steel with welded seat rings and welded guiding groove with full penetration welding seams
- Split wedge
- High bonnet
- Position indicator
- Yoke sleeve supported at the top and at the bottom with needle bearing (axial type) and cylindrical roller bearing
- Pressure sealing bonnet acc. to VGB-guidelines

Pressure and temperature ratings

- Pressure rating up to 680 bar
- Temperature rating up to +650° C

Materials

- 1.0460
- 1.5415
- 1.7335
- 1.7380
- 1.6368
- 1.4903

Further materials, e.g. **F92** on request

Fields of application

High temperature steam and water, Refining (Catalytic reformers and Hydrocrackers), Petrochemical and Chemical Industries

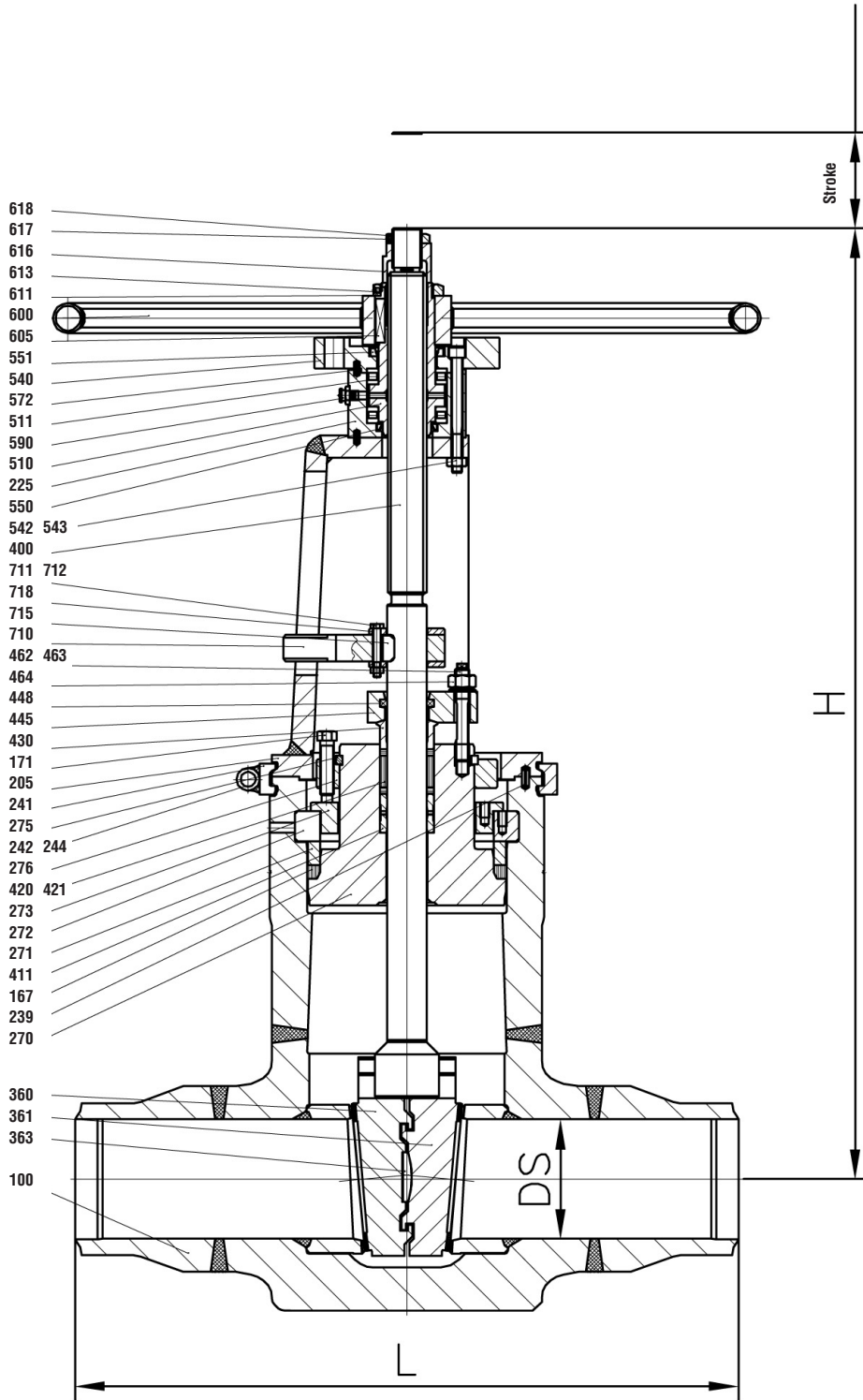
Design-Highlights

- Seats and wedge faced with stellite
- Hammer head connection between shut-off device and stem
- Valve head equipped with dirt scrapers below and above the bearings
- A crosshead screwed to the stem gives protection against torsion
- The segment rings are not fixed in their position by the valve cover but secured by a separate supporting cap
- The bonnet is joined to the body by means of a clamp connection

Benefits

- Best possible sliding performance and minimum wear
- The wedges are able to move parallel to the axis of the pipeline within the guiding groove. This protects the stem against bending moments
- To protect against dirt and to avoid the loss of lubricants
- This is to prevent the shut-off device against operating forces, at the same time the crosshead serves as position indicator and offers the possibility to fit limit switches
- This version eases the maintenance work considerably. In case of dismantling it is not necessary to press the valve cover in closing direction in order to remove the segment rings
- Eases maintenance work in contrast to a screwed connection

■ Gate valves ■ High pressure gate valve DSK 16-63 ■ 700 JT ■ PD 16-63 ■ DN 50-600



■ Gate valves ■ High pressure gate valve DSK 16-63 ■ 700 JT ■ PD 16-63 ■ DN 50-600

Materials							
Pos.	Component	1.0460 (21)	1.5415 (42)	1.7335 (44)	1.7380 (45)	1.6368 (46)	1.4903 (63)
100	Body	1.0460	1.5415	1.7335	1.7380	1.6368	1.4903
	welded on with	Stellite	Stellite	Stellite	Stellite	Stellite	Stellite
167	▶ Gasket	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
171	Stud	1.7709	1.7709	1.7709	1.7709	1.7709	1.7709
205	Bonnet	1.5415	1.5415	1.5415	1.5415	1.5415	1.5415
225	Yoke head	1.0460	1.0460	1.0460	1.0460	1.0460	1.0460
239	Tension pin	1.0904	1.0904	1.0904	1.0904	1.0904	1.0904
241	Clamp	1.5415	1.5415	1.5415	1.5415	1.5415	1.5415
242	Screw bolt	1.7709	1.7709	1.7709	1.7709	1.7709	1.7709
244	Hexagonal nut	1.7258	1.7258	1.7258	1.7258	1.7258	1.7258
270	Cover	1.0460	1.5415	1.7335	1.7380	1.6368	1.4903
271	Ring	1.0460	1.5415	1.7335	1.7380	1.6368	1.4903
272	Segment ring	1.0460	1.5415	1.7335	1.7380	1.6368	1.4903
273	Cover	1.0460	1.5415	1.7335	1.7380	1.6368	1.4903
275	Ring	1.0460	1.5415	1.7335	1.7380	1.6368	1.4903
276	Flange	1.0460	1.5415	1.7335	1.7380	1.6368	1.4903
360/361	▶ Double disc	1.0460	1.5415	1.7335	1.7380	1.6368	1.4903
	welded on with	Stellite	Stellite	Stellite	Stellite	Stellite	Stellite
363	▶ Pressure piece	1.4122	1.4122	1.4122	1.4122	1.4122	1.4122
400	▶ Stem	1.4921	1.4021	1.4923	1.4923	1.4923	1.4923
411	▶ Guide bush	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507
420	▶ Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
421	▶ Ring	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
430	Gland ring	1.5415	1.5415	1.5415	1.5415	1.5415	1.5415
445	Gland flange	1.0460	1.5415	1.7335	1.7380	1.6368	1.4903
448	▶ Dirt Scraper	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
462	Stud	1.7709	1.7709	1.7709	1.7709	1.4923	1.4923
463	Washer	St	St	St	St	St	St
464	Hexagonal nut	1.7258	1.7258	1.7258	1.7258	1.4923	1.4923
510	▶ Yoke sleeve	2.0550	2.0550	2.0550	2.0550	2.0550	2.0550
511	▶ Bearing	WLS	WLS	WLS	WLS	WLS	WLS
540	Flange	1.0425	1.0425	1.0425	1.0425	1.0425	1.0425
542	Cylindrical screw	8	8	8	8	8	8
543	Hexagonal nut	8	8	8	8	8	8
550	▶ Gasket	NBR	NBR	NBR	NBR	NBR	NBR
551	▶ Gasket	NBR	NBR	NBR	NBR	NBR	NBR
572	Tension pin	1.0904	1.0904	1.0904	1.0904	1.0904	1.0904
590	Grease nipple	5.8	5.8	5.8	5.8	5.8	5.8
600	Handwheel	St	St	St	St	St	St
605	Key	1.0060	1.0060	1.0060	1.0060	1.0060	1.0060
611	Handwheel nut	St	St	St	St	St	St
613	Screw pin	45H	45H	45H	45H	45H	45H
616	Stop ring	1.0460	1.0460	1.0460	1.0460	1.0460	1.0460
617	Screw pin	45H	45H	45H	45H	45H	45H
618	Hexagonal pipe nut	St	St	St	St	St	St
710	Switch bracket	1.0425	1.0425	1.0425	1.0425	1.0425	1.0425
711	Hexagonal screw	8.8	8.8	8.8	8.8	8.8	8.8
712	Hexagonal nut	8	8	8	8	8	8
715	Key	1.4021	1.4021	1.4021	1.4021	1.4021	1.4021
718	Washer	1.0038	1.0038	1.0038	1.0038	1.0038	1.0038
	▶ Spare parts						

Dimensions/mm, Weights/kg and Kvs-values																	
DN	DS	DSK 16				DSK 25				DSK 32			DSK 40		DSK 63		Kvs (m ³ /h)
		L	H	Stroke	kg	L	H	Stroke	kg	L	H	Stroke	kg	H	Stroke	kg	
50/65	59,0									350	700	75		700	75		
65	59,0									425	700	75	90	700	75	90	353
80/65	59,0									470	700	75		700	75		
80	72,0									470	815	95	180	815	95	180	533
100/80	72,0									550	815	95		815	95		
100	90,0									550	980	115	325	980	115	325	834
125/100	90,0									650	980	115		980	115		
125	112,5									650	1030	140	525	1030	140	525	1303
150/125	112,5									750	1030	140		1030	140		
150	135,0									750	1275	170	580	1340	175	610	1876
175/150	135,0									850	1275	170		1340	175		
175	157,5									850	1360	190	800	1430	195	1050	2554
200/175	157,5									950	1360	190		1430	195		
200	180,0									950	1425	215	1050	1500	220	1250	3335
225/200	180,0									1050	1425	215		1500	220		
225	202,5									1050	1590	240	1250	1670	245	1480	4221
250/225	202,5									1150	1590	240		1670	245		
250	225,0									1150	1980	270	2050	2080	275	2550	5211
300/250	225,0									1350	1980	270		2080	275		
300	270,0	1050	1800	305	1450	1350	2070	305	1900	1350	2195	305	3200	2300	310	3600	7504
350/300	270,0	1200	1800	305		1550	2070	305		1550	2195	305		2300	310		
350	315,0	1200	2140	350	1980	1550	2280	350	3000	1550	2400	350	4000				10214
400/350	315,0	1350	2140	350		1750	2280	350		1750	2400	350					
400	360,0	1350	2320	400	3200	1750	2565	410	4500	1750	2700	410	5200				13340
450/400	360,0	1500	2320	400		1950	2565	410		1950	2700	410					
450	405,0	1500	2485	445		1950	2850	460									16884
500/450	405,0	1650	2485	445		2150	2850	460									
500	450,0	1650	2850	495		2150	3140	515									20844
600/500	540,0		2850	495			3140	515									
600	540,0																30015

■ Gate valves ■ Overpressure-safety-devices

If a closed gate valve filled with a medium (e.g. water) (fig. 18.1) is heated, an unacceptably high pressure may develop in the body. The level of increase in pressure that may occur depends upon the percentage volumes of the fluid and vapour phases and on the increase in the temperature of the medium. Overpressure in the body can adversely affect the operation of the gate valve. Moreover an unacceptably high pressure load can result in the failure of the pressure-retaining components.

Figure 18.2 shows the increase of pressure according to percentage volume and temperature changes, when water is in the body.

Attention: If there is a possibility of an unacceptable pressure load of this kind developing in the valve because of the way it has been fitted or the way it is used, the piping designer or operator must provide a suitable safety device.

Simple and effective protection against overpressure can be achieved by means of a hole in the seat ring or in the wedge on the side facing the pressure (Fig. 18.4). This hole prevents the pressure in the body from exceeding the operating pressure; however, the gate valve can then only provide a seal in one direction. If this is the case, the direction of flow is shown by an arrow on the body. Another possibility is to by-pass the third room (Fig. 18.5) to the side facing the pressure.

In case an outside overpressure safety device should be assigned body has to be ordered with an appropriate closed stud (Fig. 18.1 and 18.3).

Fig. 18.1

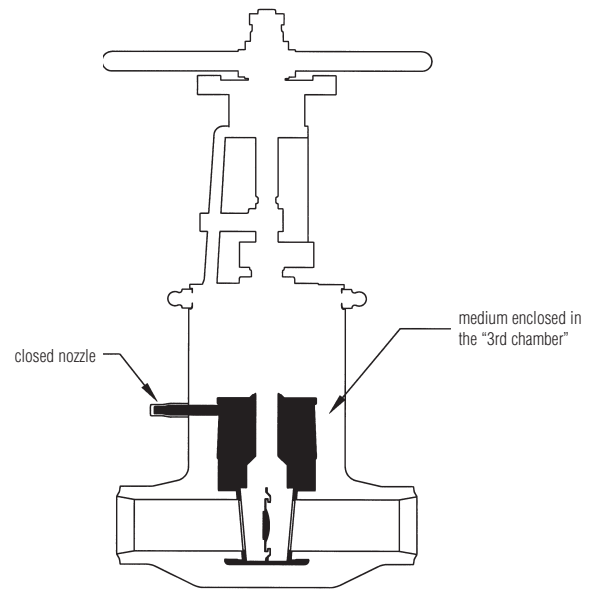


Fig. 18.2

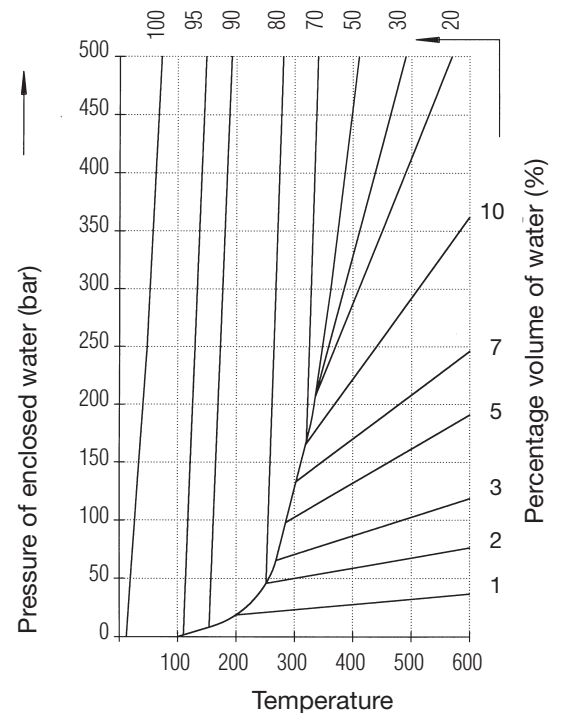
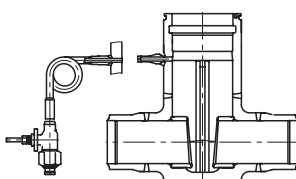


Fig. 18.3 with safety valve



Drawing rotated by 45°

Fig. 18.4 with hole in the wedge

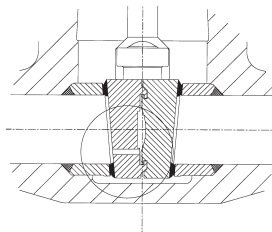
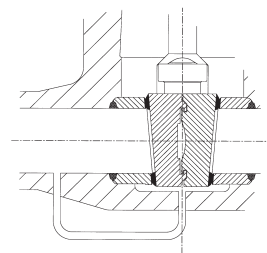


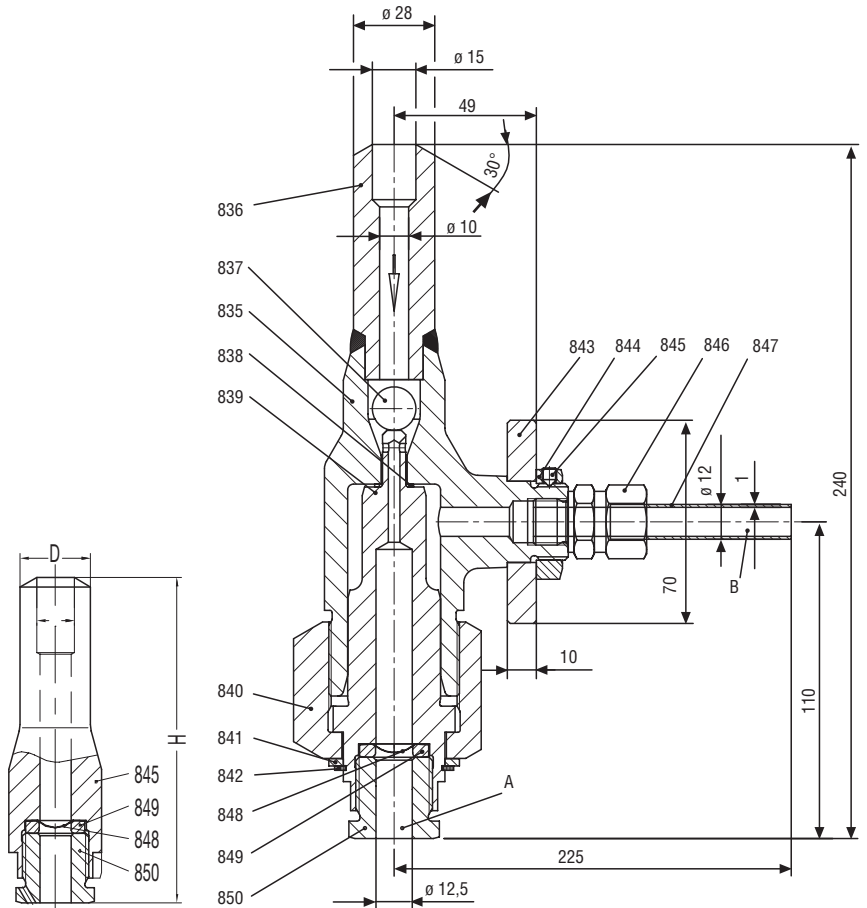
Fig. 18.5 with hole in the seat ring



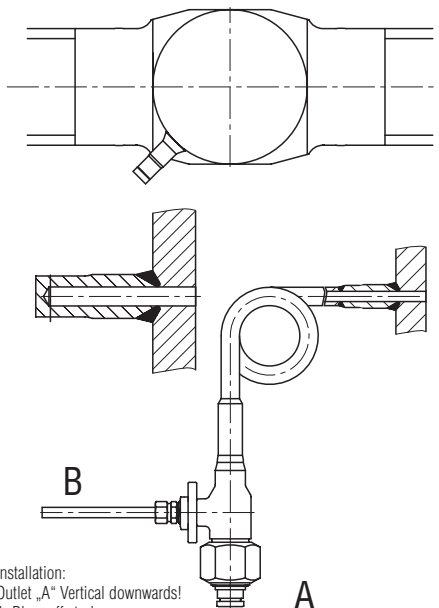
■ Gate valves ■ Overpressure-safety-devices ■ PERSTA Typ SV 98 + SV 99

Materials		
Pos.	Component	Material
835	Housing	1.4571
836	Connection stud	1.7335
837	Ball	WLSt
838	Gasket	2.4066
839	Valve body	1.4923
840	Union nut	2.0550
841	Supporting ring	FSt
842	Safety ring	FSt
843	Mechanism plate	1.0038
844	Hexagonal pipe nut	St
845	Screw pin	45H
846	Pipe screwing	1.4571
847	Steam-releasing pipe	1.4571
848	Burst disc	316 SS / Inconell 600
849	Pressure ring	1.4122
850	Pressure screw	1.4571

Materials		
Pos.	Component	Material
845	Housing	1.7335
848	Burst disc	316 SS / Inconell 600
849	Pressure ring	1.4122
850	Pressure screw	1.4571

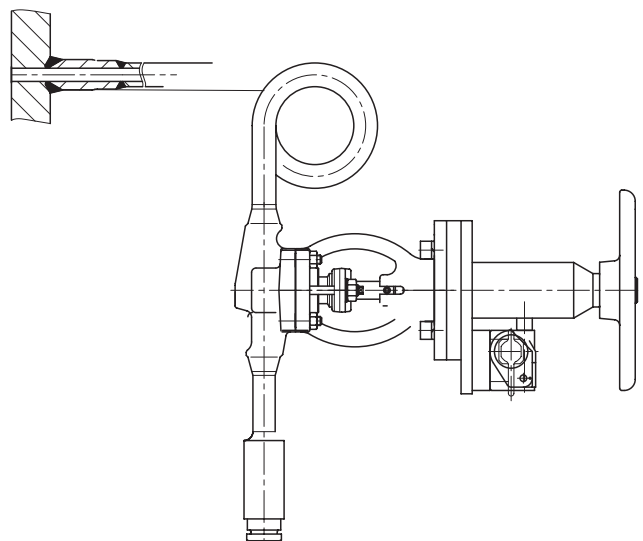


Assembly Sketch SV 98



Installation:
 Outlet „A“ Vertical downwards!
 A: Blow-off stud
 B: Steam-releasing-pipe

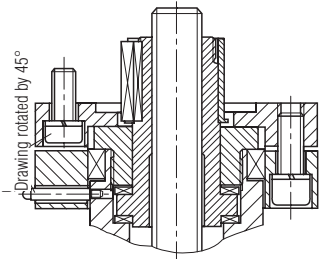
Assembly Sketch SV 99



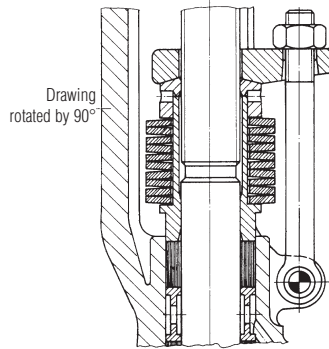
With lockable
 High-pressure-globe valve

■ Gate valves ■ Varianten

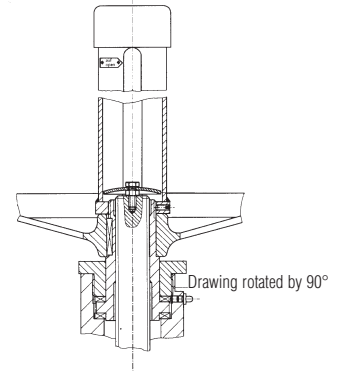
Universal valve head for mounting actuators



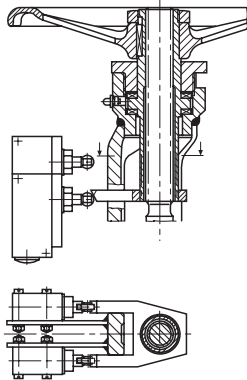
Stuffing box with central plate-spring tightening



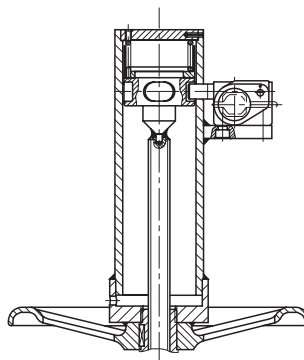
Position indicator / Stem protection cap



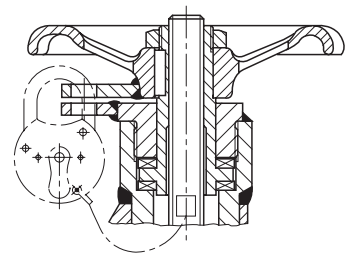
Limit switch actuation



PERLOC-system locking device

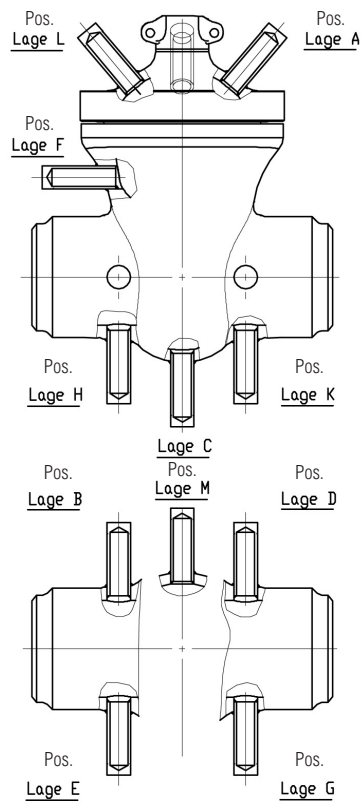
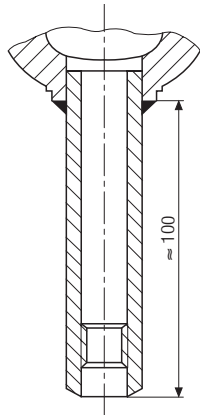


Interlocking device

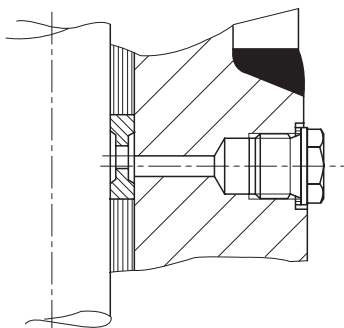


■ Gate valves ■ Variants

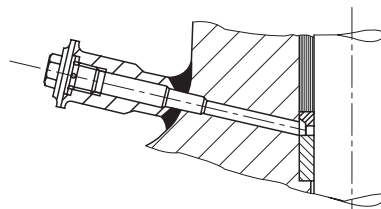
**Drainage stud / DN 15,
variable position**



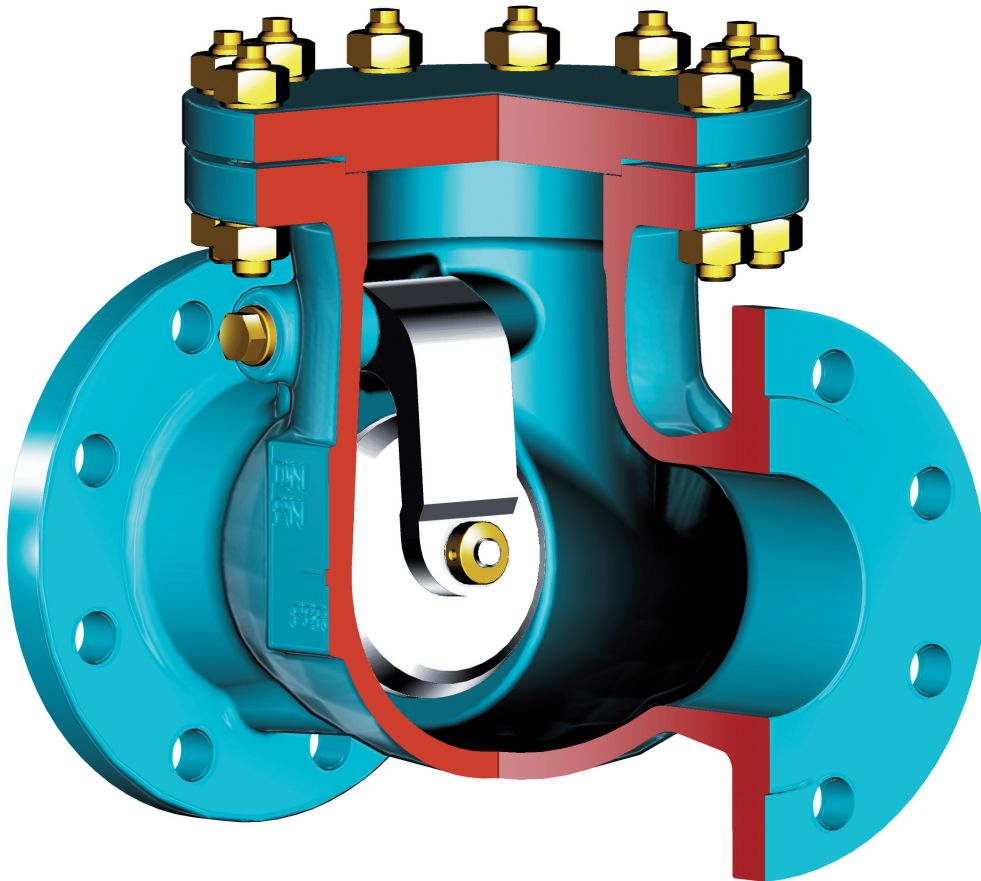
**Water gland ring / leakage
suction**



Stuffing box extrusion



▪ **Swing check valves** ▪ 640 AA ▪ PN 10-40 ▪ DN 50-250



Range of application

Admissible operating pressure [bar] at design temperature [°C] ¹⁾

Material	PN	-10	20	100	150	200	250	300	350	400	450
1.0619	10-16	16	16	16	15	14	13	11	10	8	5
	25	25	25	25	23	22	20	17	16	13	8
	40	40	40	40	37	35	32	28	24	21	10

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

▪ **Swing check valves** ▪ 640 AA ▪ PN 10-40 ▪ DN 50-250

Standard features

- Body cast steel

Pressure and temperature ratings

- Pressure rating up to 40 bar
- Temperature rating up to +450° C

Materials

- 1.0619

Further materials on request

Fields of application

Chemical industries, power plants, ship building and other

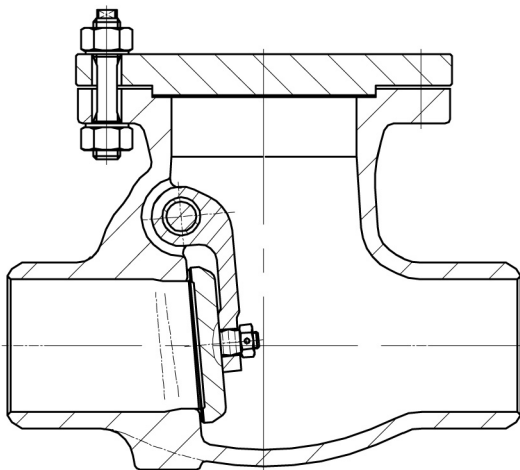
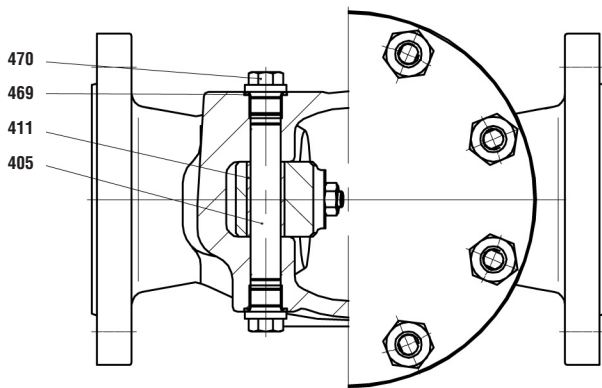
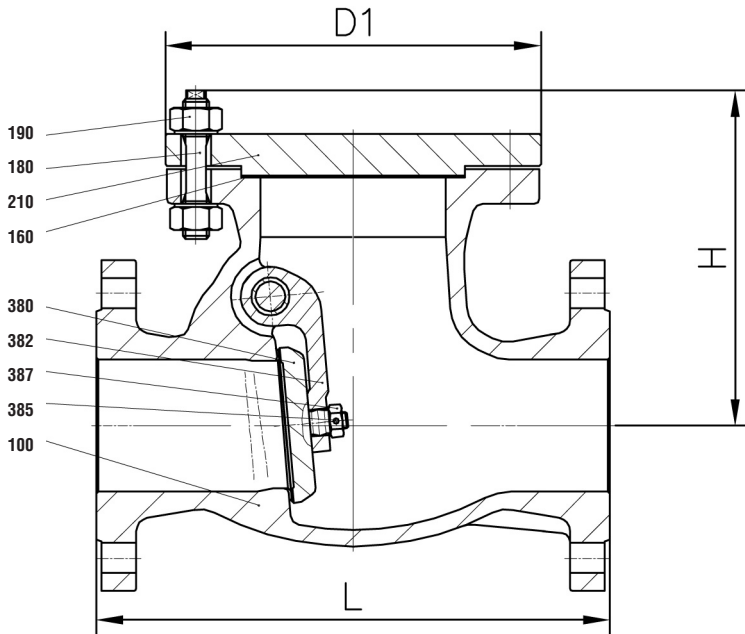
Design Highlights

- Hard faced integral body seat with 13 % or 17 % Cr-steel
- Shut-off disc with curved journal within the lever
- The lever rests on the hinge pin by means of a separate bearing bush

Benefits

- Extremely resistant to wear
- To improve movability and therefore to improve the adjustment of the disc to the body seat
- Improved resistance to wear by means of proper material selection

▪ **Swing check valves** ▪ 640 AA ▪ PN 10-40 ▪ DN 50-250



■ **Swing check valves** ■ **640 AA** ■ **PN 10-40** ■ **DN 50-250**

Materials

Pos.	Component	1.0619 (11)
100	Body welded on with	1.0619 Cr17
160	▶ Gasket	Graphite ²⁾
180	Screw bolt	1.1181
190	Hexagonal nut	1.1181
210	Cover	1.0460
380	▶ Disc welded on with	1.4021 ¹⁾
382	▶ Hinge	1.0425
385	▶ Pint	1.4370
387	▶ Hexagonal nut	1.1181
405	▶ Hinge pin	1.4021
411	▶ Guide bushing	1.4006
469	▶ Gasket	2.4066
470	Screw plug	1.7709
	▶ Spare parts	
	Further materials on request.	
	1) ≥ DN 125 1.0460 welded on with Cr17	
	2) ≥ DN 150 grooved with graphite layer	

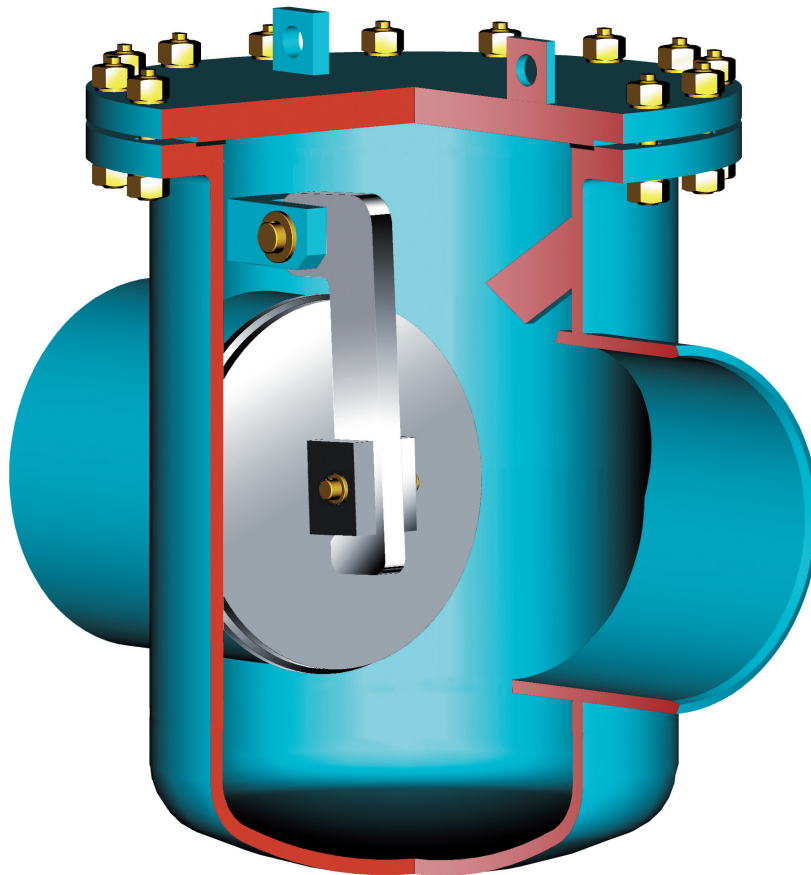
Dimensions/mm

DN	L	H	D
50	230	165	172
65	290	185	212
80	310	210	227
100	350	225	257
125	400	255	292
150	480	310	327
200	600	370	412
250	730	435	462

Weights/kg and Kvs-values

DN	Flange	BW-Ends	Kvs (m ³ /h)
50	19	13	
65	31	23	170
80	36	27	256
100	52	39	400
125	70	53	625
150	104	82	900
200	146	108	1600
250	289	249	2500

▪ **Swing check valves** ▪ VALTRA Swing check valve ▪ 640 AA ▪ PN 10-40 ▪ DN 300-800



Range of application

Admissible operating pressure [bar] at design temperature [°C] ¹⁾

Material	PN	-10	20	100	120	200	250	300	350	400
P265GH	10	10	10	10	10	9	8	7	6	5
	16	16	16	16	16	14	13	11	10	8
	25	25	25	25	25	22	20	17	16	13
	40	40	40	40	40	35	32	28	24	21

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

▪ **Swing check valves** ▪ VALTRA Swing check valve ▪ 640 AA ▪ PN 10-40 ▪ DN 300-800

Standard features

- Disc with inside shaft
- Body pressed-plate welding construction

Fields of application

Chemical industries, power plants, ship building and other

Pressure and temperature ratings

- Pressure rating up to 40 bar
- Temperature rating up to +400° C

Werkstoff

- P265GH

Further materials on request

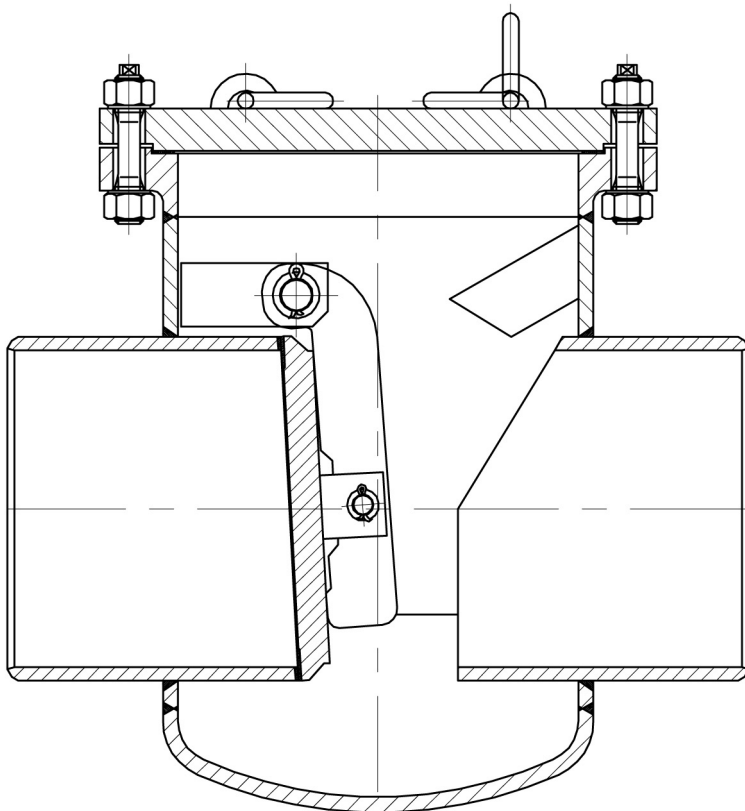
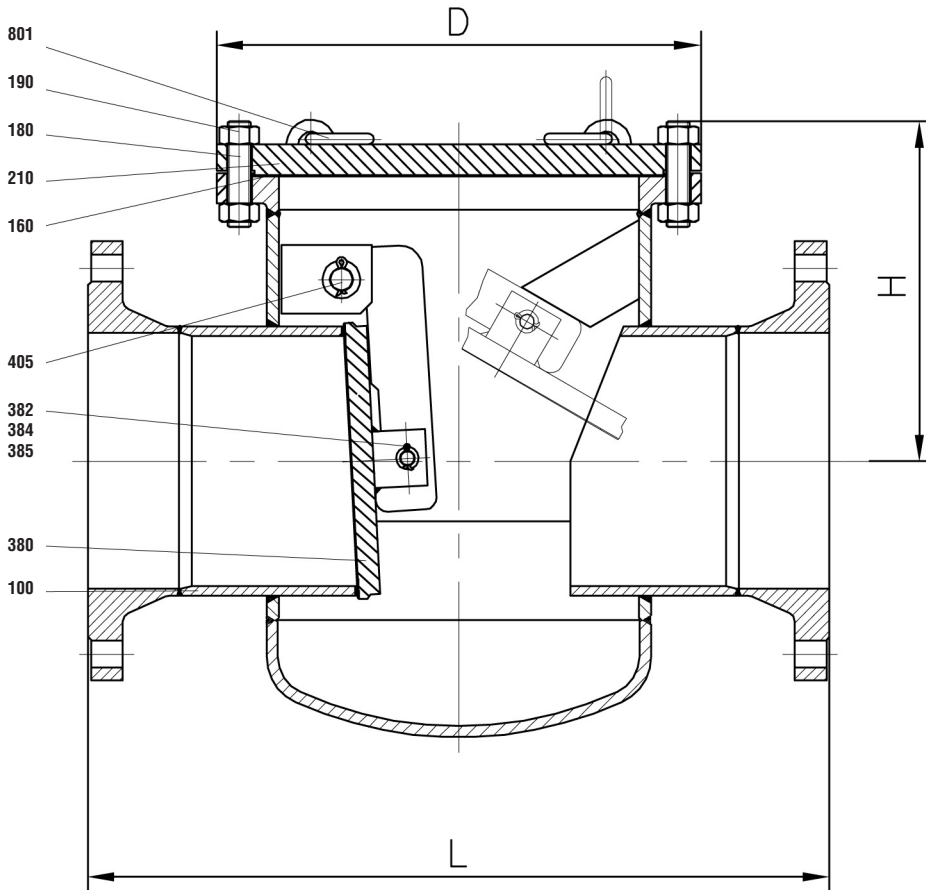
Design Highlights

- Body- and disc seat welded on
- Disc with flexible shaft at the hinge
- Lever rests on the hinge pin by means of a separate bushing
- Inside shaft

Benefits

- Extremely resistant to wear
- Optimum adjustment of the disc to the body seat
- Improved resistance to wear by means of an optimal material selection
- Limited leakage due to less sealings

▪ **Swing check valves** ▪ VALTRA Swing check valve ▪ 640 AA ▪ PN 10-40 ▪ DN 300-800



■ **Swing check valves** ■ VALTRA Swing check valve ■ 640 AA ■ PN 10-40 ■ DN 300-800

Materials

Pos.	Component	P265GH (22)
100	Body welded on with	P265GH
160	▶ Gasket	X20CrMo171 grooved with graphite layer
180	Screw bolt	1.4541
190	Hexagonal nut	1.7158
210	Cover	P265GH
380	▶ Disc	P265GH
382	welded on with	X8CrTi18
384	▶ Hinge	S235JRG2
385	▶ Bushing	GG 25
405	▶ Pint	A2-70
801	▶ Hinge pin	1.4021
	Lifting eye bolt	S355J2G3
	▶ Spare parts	
	Further materials on request.	

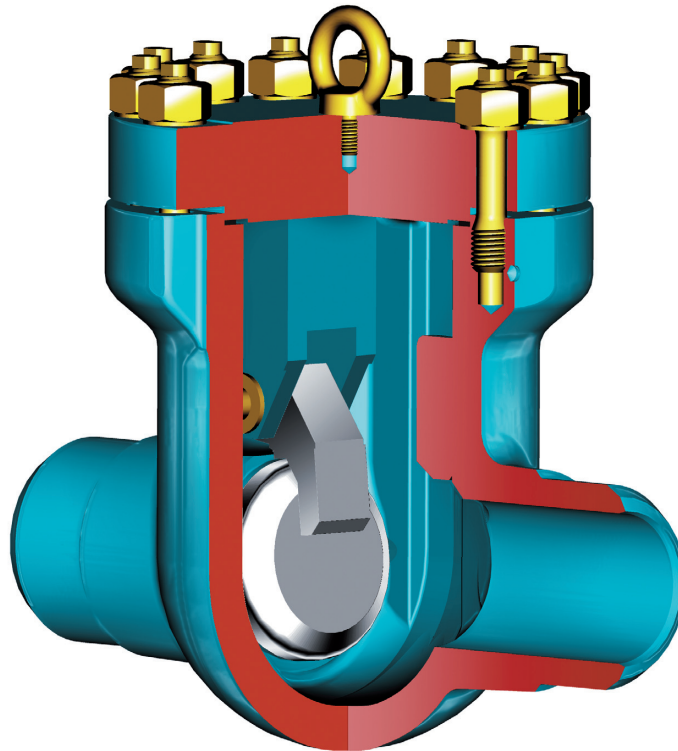
Dimensions/mm

DN	PN 10-16		PN 25-40	PN 10-16		PN 25	PN 40	PN 10-16	PN 25	PN 40
	L	L	H	H	H	D	D	D	D	D
300	700	850	385	415	435	525				525
350	800	980	430	450	485	630				640
400	900	1100	500	540	595	745				755
500	1100	1250	585	615	670	870	870			890
600	1300	1450				1040				1040
700										
800										

Weights/kg and Kvs-values

DN	PN 10		PN 16	PN 25	PN 40	PN 10		PN 16	PN 25	PN 40	Kvs (m ³ /h)
	FL	FL	FL	FL	BW	BW	BW	BW	BW		
300	275	285	350	430	255	255	305	355			3600
350	380	395	475	550	335	345	395	445			4900
400	560	575	735	895	525	525	365	745			6400
500	910	945	1180	1300	860	860	1040	1125			9996
600											14395
700											19593
800											25591

▪ **Swing check valves** ▪ 640 AA ▪ PN 63-160 (PD 18) ▪ DN 50-300/250



Range of application

FL-Version Material	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																
	PN	-10	20	100	150	200	250	300	350	400	450	500	510	520	530	540	550
1.5415	63	63	63	63	63	63	63	53	50	47	45	29	22	16	14		
1.7335	63	63	63	63	63	63	63	63	61	58	56	47	40	32	25	20	15
1.7380	63	63	63	63	63	63	63	63	61	58	56	47	40	32	28	24	20

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

FL-Version Material	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																
	PN	-10	20	100	150	200	250	300	350	400	450	500	510	520	530	540	550
1.5415	100	100	100	100	100	100	100	87	78	74	70	45	34	27	22		
1.7335	100	100	100	100	100	100	100	95	91	87	74	62	49	38	31	24	
1.7380	100	100	100	100	100	100	100	95	91	87	74	62	49	43	37	31	

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

FL-Version Material	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																
	PN	-10	20	100	150	200	250	300	350	400	450	500	510	520	530	540	550
1.5415	160	160	160	160	160	160	160	139	125	118	112	72	55	43	35		
1.7335	160	160	160	160	160	160	160	160	153	146	139	118	100	79	62	46	35
1.7380	160	160	160	160	160	160	160	153	146	139	118	100	79	70	61	52	

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

BW-Ends Material	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																										
	PD	120	150	200	250	300	350	400	420	430	440	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	
1.5415	18	219	204	185	170	146	141	136	134	133	132	130	129	128	112	88	67	53	42								
1.7335	18	228	219	205	194	180	170	161	156	155	153	150	149	148	147	133	112	89	72	58	46	37	30				
1.7380	18	233	224	210	205	194	180	170	166	164	262	159	156	155	153	131	115	100	88	76	66	56	50	43	37	33	

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

▪ **Swing check valves** ▪ 640 AA ▪ PN 63-160 (PD 18) ▪ DN 50-300/250

Standard features

- Die-forged body
- Disc with inside shaft

Fields of application

Chemical industries, power plants, ship building and other

Pressure and temperature ratings

- Pressure rating BW-Ends up to 233 bar (PD 18)
- Pressure rating FL up to 160 bar
- Temperature rating up -10° C to +600° C

Materials

- 1.5415
- 1.7335
- 1.7380

Further materials, e.g. **F92** on request

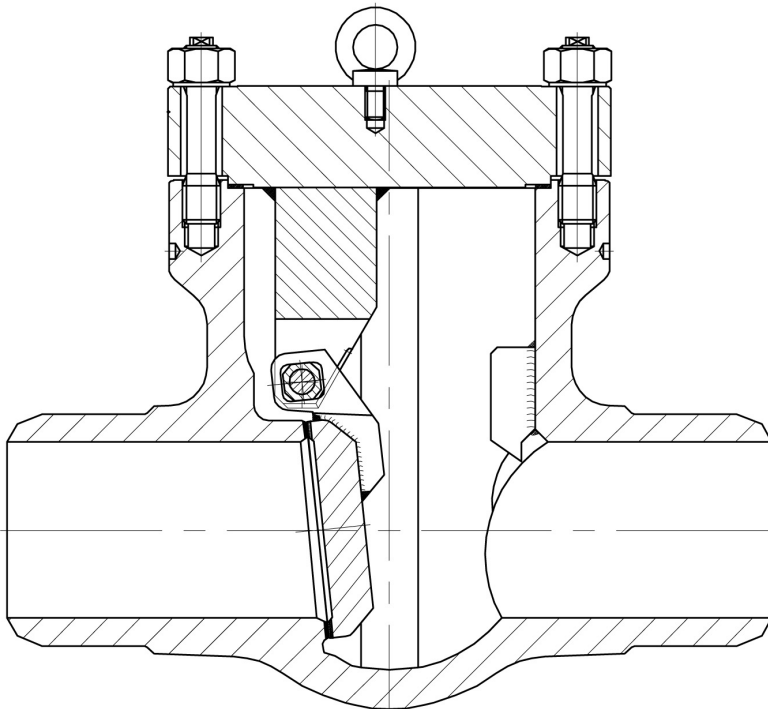
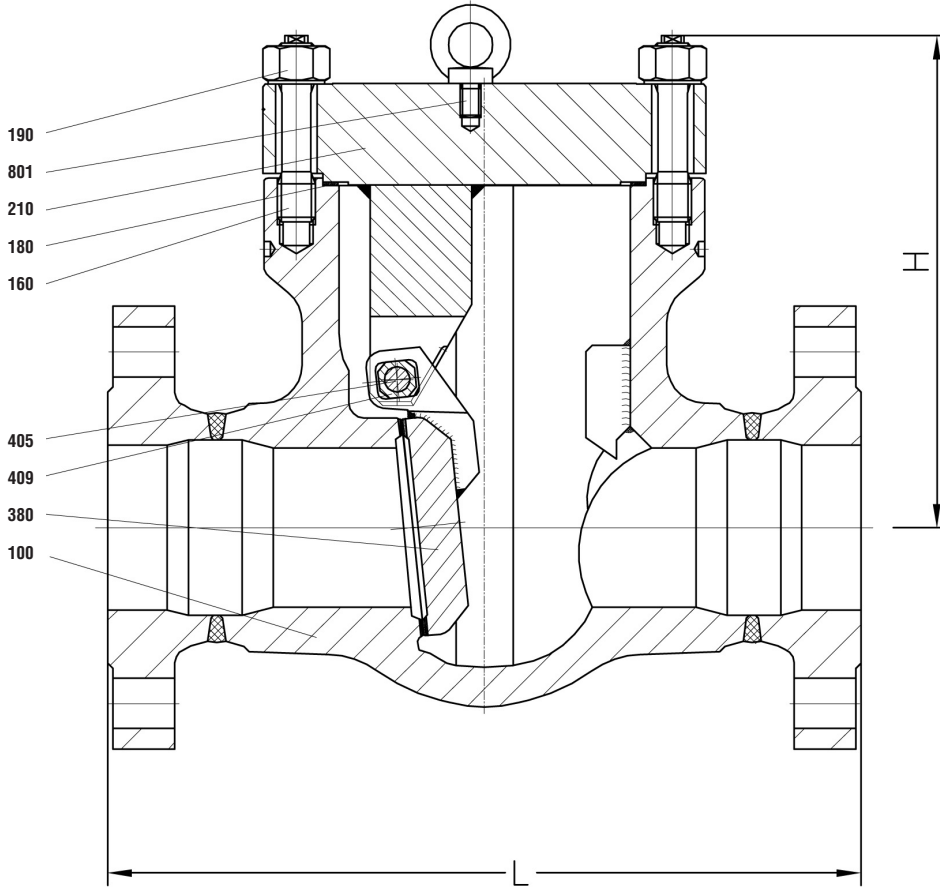
Design Highlights

- Die-forged body
- Seats welded on integrately with stellite
- Lever rests on the hinge pin by means of the guide bush
- Bolted bonnet with reduced-shaft bolts

Benefits

- Free from porosity and shrink holes
- No crevice corrosion between seat and valve body
- Optimum adjustment of the disc to the body seat by means of the movability the guide bushing of
- To improve the stress capacity when temperature and pressure changes

■ **Swing check valves** ■ 640 AA ■ PN 63-160 (PD 18) ■ DN 50-300/250



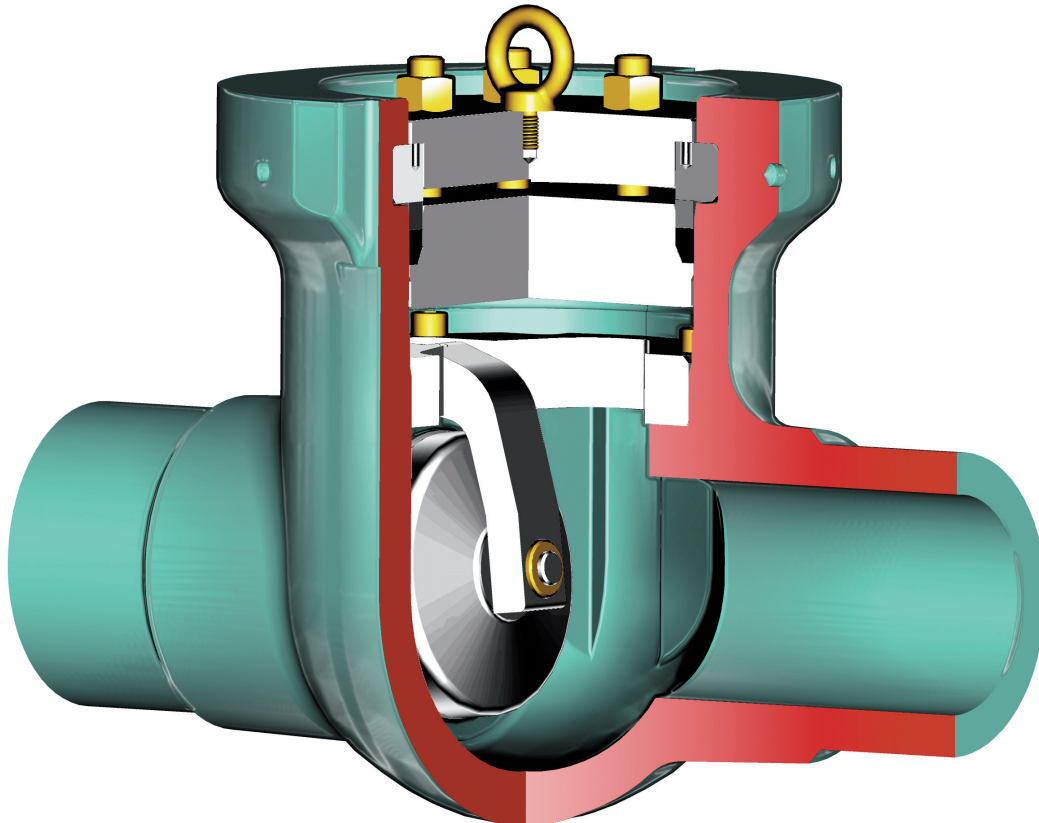
■ **Swing check valves** ■ **640 AA** ■ **PN 63-160 (PD 18)** ■ **DN 50-300/250**

Materials				
Pos.	Component	1.5415 (42)	1.7335 (44)	1.7380 (45)
100	Body welded on with	1.5415 Stellite	1.7335 Stellite	1.7380 Stellite
160	▶ Gasket	Graphite	Graphite	Graphite
180	Screw bolt	1.7709	1.7709	1.7709
190	Hexagonal nut	1.7258	1.7258	1.7258
210	Cover	1.5415	1.7335	1.7380
380	▶ Disc welded on with	1.5415 Stellite	1.7335 Stellite	1.7380 Stellite
405	▶ Hinge pin	1.4021	1.4021	1.4021
409	▶ Guide bush	0.7040	0.7040	0.7040
801	Lifting eye bolt	1.0401	1.0401	1.0401
	▶ Spare parts			

Dimensions/mm						
DN	PN	PN	PN	PN	H	D
	63-100 L-FL	160 L-FL	63-100 L-BW	160 L-BW		
50	300	300	250	300	220	192
65/50	340	360	340	360	220	192
80	380	390	380	390	280	236
100	430	450	430	450	320	265
125/100	500	525	500	525	320	265
150	550	600	550	600	410	350
200	650	750	650	750	510	440
250	775	900	775	900	595	550
300/250	900	1050	900	1050	595	550

Weights/kg		
DN	Flange	BW
50	45	35
65/50	53	43
80	83	63
100	105	100
125/100	111	106
150	270	220
200	425	365
250	525	750
300/250	610	800

- High pressure swing check valves
- DRI 21
- 640 AB
- PD 21
- DN 50-300/250



Range of application

BW-Ends Material	PD	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																											
		120	150	200	250	300	350	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	
1.5415	21	259	241	219	201	173	169	167	160	158	157	156	155	154	153	151	132	104	79	63	50								
1.7335	21	270	259	242	230	213	201	190	188	184	183	181	179	177	176	175	174	157	132	105	85	69	54	44	35				
1.7380	21	275	265	248	242	229	213	201	199	196	194	192	190	188	184	183	181	155	136	118	104	90	78	66	59	51	44	39	

¹⁾ Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

▪ **High pressure Swing check valves** ▪ DRI 21 ▪ 640 AB ▪ PD 21 ▪ DN 50-300/250

Standard features

- Valve body made of forged steel with welded seat ring, welded on with stellite
- Pressure sealing bonnet

Fields of application

High temperature steam and water, Refining (Catalytic reformers and Hydrocrackers), Petrochemical and Chemical Industries

Pressure and temperature ratings

- Pressure rating up to 275 bar
- Temperature rating up to +600° C

Materials

- 1.5415
- 1.7335
- 1.7380

Further materials, e.g. **F92** on request

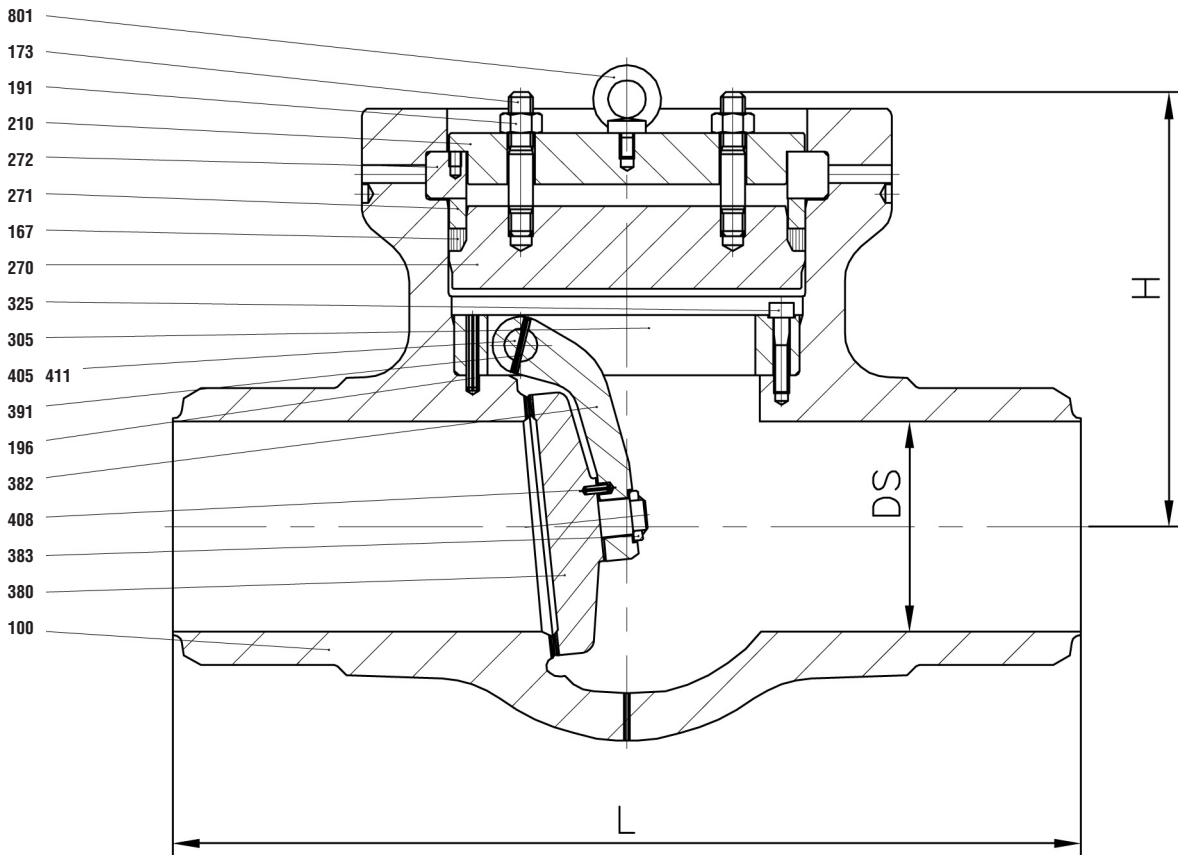
Design Highlights

- Valve body made of forged steel
- Seats faced with stellite
- Lever rests in a separate support ring

Benefits

- Free from porosity and shrink holes
- Extremely resistant to wear
- The setting of the disc can be examined before installing the bonnet cover

■ High pressure swing check valves ■ DRI 21 ■ 640 AB ■ PD 21 ■ DN 50-300/250



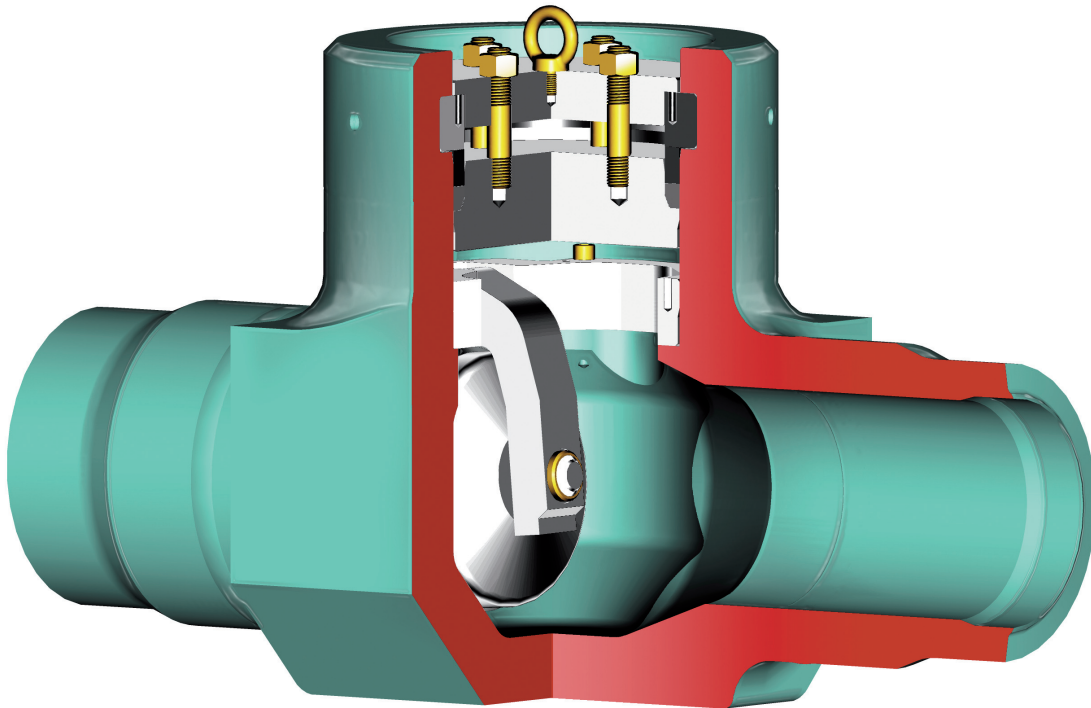
■ High pressure swing check valves ■ DRI 21 ■ 640 AB ■ PD 21 ■ DN 50-300/250

Materials				
Pos.	Component	1.5415 (42)	1.7335 (44)	1.7380 (45)
100	Body	1.5415	1.7335	1.7380
	welded on with	Stellite	Stellite	Stellite
167	Gasket	Graphite	Graphite	Graphite
173	Stud	1.7709	1.7709	1.7709
191	Hexagonal nut	1.7258	1.7258	1.7258
196	Tension pin	1.4370	1.4370	1.4370
210	Cover	1.5415	1.7335	1.7380
270	Cover	1.5415	1.7335	1.7380
271	Ring	1.5415	1.7335	1.7380
272	Segment ring	1.5415	1.7335	1.7380
305	▶ Body	1.5415	1.7335	1.7380
325	Cylindrical screw	A4	A4	A4
380	▶ Disc	1.5415	1.7335	1.7380
	welded on with	Stellite	Stellite	Stellite
382	▶ Hinge	1.5415	1.7335	1.7380
383	▶ Washer	1.0460	1.7335	1.7380
391	Tension pin	1.4310	1.4310	1.4310
405	▶ Hinge pin	1.4923	1.4923	1.4923
408	Tension pin	1.4310	1.4310	1.4310
411	Guide bush	0.7040	0.7040	0.7040
801	Lifting eye bolt	1.0401	1.0401	1.0401
	▶ Spare parts			

Dimensions/mm			
DN	DS	L	H
50	47	300	150
65/50	47	360	150
65/80	74	390	190
80	74	390	190
100/80	74	450	190
100	95	450	215
125/100	95	525	215
125/150	139	525	280
150	139	600	280
175/150	139	675	280
200/150	139	750	280
175/200	183	675	360
200	183	750	360
225/200	183	852	360
250/200	183	900	360
225/250	228	825	435
250	228	900	435
275/250	228	975	435
300/250	228	1050	435

Weights/kg	
DN	BW-Ends
50	35
65/50	
65/80	
80	63
100/80	
100	100
125/100	
125/150	
150	220
175/150	
200/150	
175/200	
200	365
225/200	
250/200	
225/250	
250	750
275/250	
300/250	

▪ High pressure swing check valves ▪ DRI 25-63 ▪ 640 AB ▪ PD 25-63 ▪ DN 50-500



Range of application

BW- Ends Material	PD	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																	
		120	150	200	250	300	350	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650		
1.5415	25	300	300	280	258	221	213	206	205	203	202	200	199	197	196	194	170	132	101	79	64														
	32	385	385	358	330	283	273	264	262	260	258	256	255	253	251	249	217	170	129	102	81														
	40	480	480	448	413	354	342	330	328	325	323	321	318	316	314	311	272	212	161	127	102														
	63*																																		
1.7335	25	300	300	300	294	272	258	243	240	237	234	231	228	227	225	224	222	202	170	134	109	88	69	57	46										
	32	385	385	385	377	349	330	311	307	304	300	296	292	290	289	287	285	258	217	172	140	113	88	72	59										
	40	481	481	481	471	436	413	389	384	380	375	370	365	363	364	358	356	323	272	215	175	141	110	91	74										
	63*																																		
1.7380	25	300	300	300	300	294	272	258	255	252	249	246	243	240	237	234	224	199	174	152	132	115	100	85	75	65	56	49							
	32	384	384	384	384	377	349	330	326	322	319	315	311	307	304	300	287	255	223	194	170	147	128	109	96	83	72	63							
	40	480	480	480	480	471	436	413	408	403	398	384	389	384	379	375	358	318	278	243	212	184	160	137	120	104	90	79							
	63*																																		
1.6368	25	410	410	410	410	410	410	410	410	410	410	402	360	309	257	205	153	102																	
	32	525	525	525	525	525	525	525	525	525	525	515	482	396	330	262	196	130																	
	40	657	657	657	627	657	657	657	657	657	657	643	577	495	412	328	245	163																	
	63*																																		
1.4903	25	425	425	425	425	425	425	425	425	425	425	425	425	425	425	418	383	372	344	316	290	263	238	213	191	169	150	132	115	100	85	75	65		
	32	544	544	544	544	544	544	544	544	544	544	544	544	544	544	536	490	477	441	405	371	338	305	273	245	217	192	170	147	128	109	96	83		
	40	680	680	680	680	680	680	680	680	680	680	680	680	680	680	669	613	596	552	507	464	422	382	342	306	271	240	212	184	160	137	120	104		
	63*																																		

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations. * Design according to working data

▪ **High pressure swing check valves** ▪ DRI 25-63 ▪ 640 AB ▪ PD 25-63 ▪ DN 50-500

Standard features

- Valve body made of forged steel with welded seat ring, welded on with stellite
- Pressure sealing bonnet

Fields of application

High temperature steam and water, Refining (Catalytic reformers and Hydrocrackers), Petrochemical and Chemical Industries

Pressure and temperature ratings

- Pressure rating up to 680 bar
- Temperature rating up to 650° C

Materials

- 1.5415
- 1.7335
- 1.7380
- 1.6368
- 1.4903

Further materials, e.g. **F92** on request

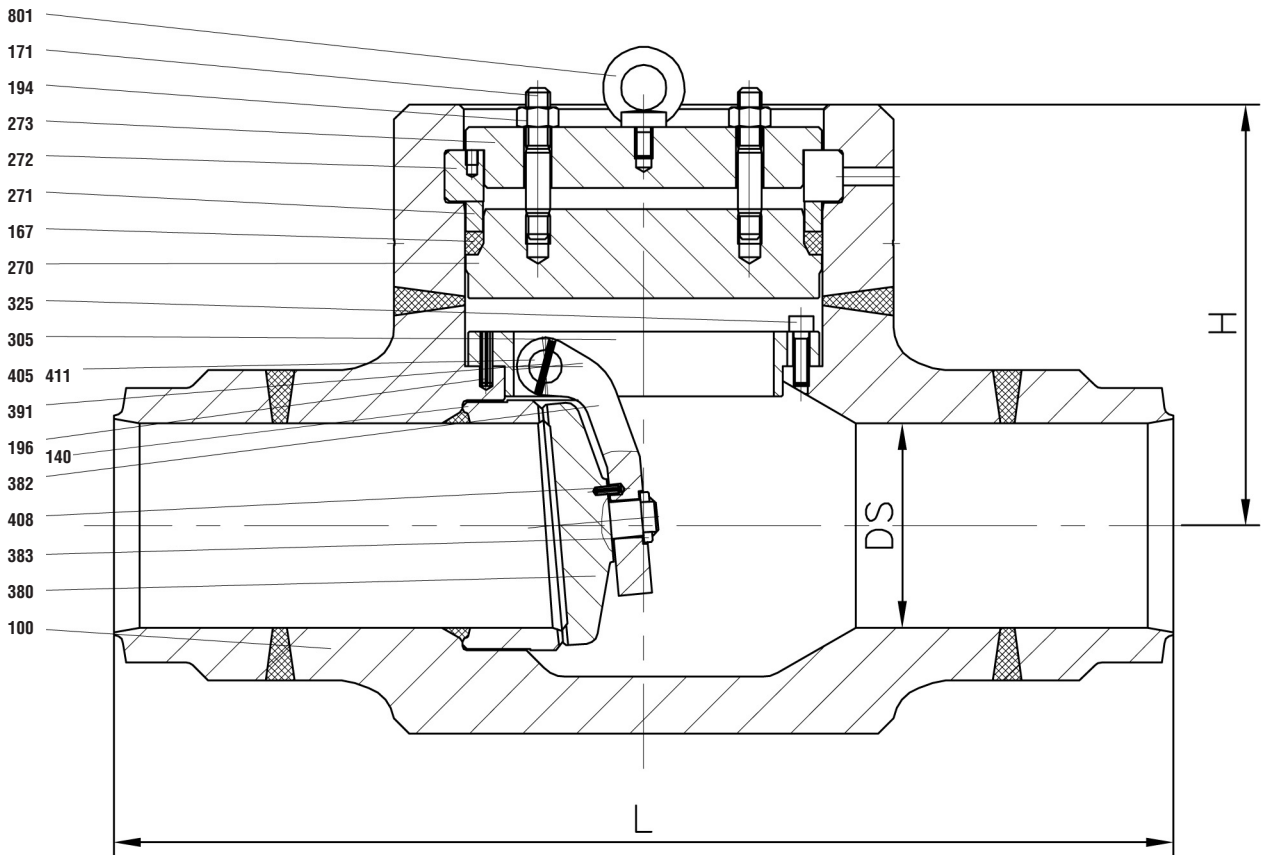
Design Highlights

- Valve body made of forged steel
- Seats faced with stellite
- Lever rests in a separate support ring

Benefits

- Free from porosity and shrink holes
- Extremely resistant to wear
- The setting of the disc can be examined before installing the bonnet cover

▪ High pressure swing check valves ▪ DRI 25-63 ▪ 640 AB ▪ PD 25-63 ▪ DN 50-500



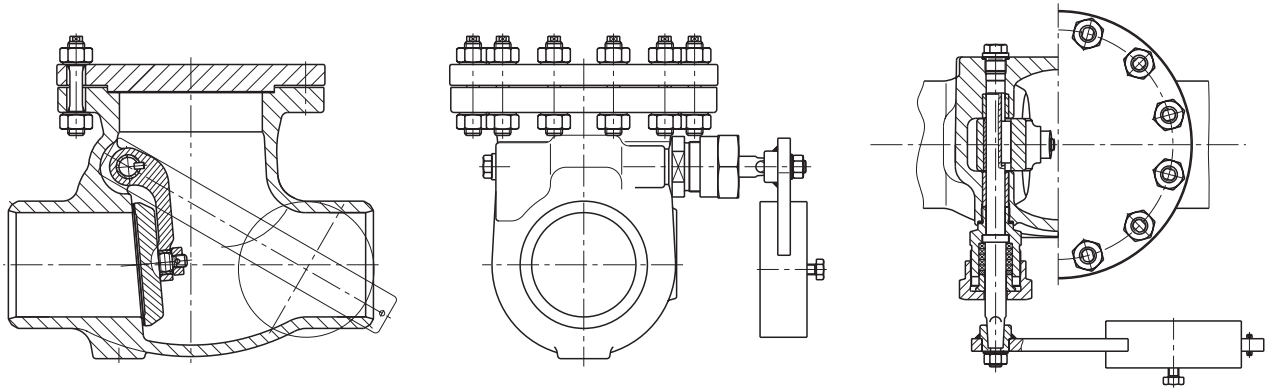
■ High pressure Swing check valves ■ DRI 25-63 ■ 640 AB ■ PD 25-63 ■ DN 50-500

Materials						
Pos.	Component	1.5415 (42)	1.7335 (44)	1.7380 (45)	1.6368 (46)	1.4903 (63)
100	Body	1.5415	1.7335	1.7380	1.6368	1.4903
140	Seat ring	1.5415	1.7335	1.7380	1.6368	1.4903
	welded on with	Stellite	Stellite	Stellite	Stellite	Stellite
167	▶ Gasket	Graphite	Graphite	Graphite	Graphite	Graphite
171	Stud	1.7709	1.7709	1.7709	1.7709	1.7709
194	Hexagonal nut	1.7258	1.7258	1.7258	1.7258	1.7258
196	Tension pin	1.4310	1.4310	1.4310	1.4310	1.4310
270	Cover	1.5415	1.7335	1.7380	1.6368	1.4903
271	Ring	1.5415	1.7335	1.7380	1.6368	1.4903
272	Segment ring	1.5415	1.7335	1.7380	1.6368	1.4903
273	Cover	1.5415	1.7335	1.7380	1.7380	1.7380
305	▶ Body	1.5415	1.7335	1.7380	1.7380	1.4903
325	Cylindrical screw	A4	A4	A4	A4	A4
380	▶ Disc	1.5415	1.7335	1.7380	1.6368	1.4903
	welded on with	Stellite	Stellite	Stellite	Stellite	Stellite
382	▶ Hinge	1.5415	1.7335	1.7380	1.7380	1.4903
383	▶ Washer	1.0460	1.7335	1.7380	1.6368	1.4923
391	Tension pin	1.4310	1.4310	1.4310	1.4310	1.4310
405	▶ Hinge pin	1.4923	1.4923	1.4923	1.4923	1.4923
408	Tension pin	1.4310	1.4310	1.4310	1.4310	1.4310
411	▶ Guide bush	0.7040	0.7040	0.7040	0.7040	0.7040
801	Lifting eye bolt	1.0401	1.0401	1.0401	1.0401	1.0401
	▶ Spare parts					

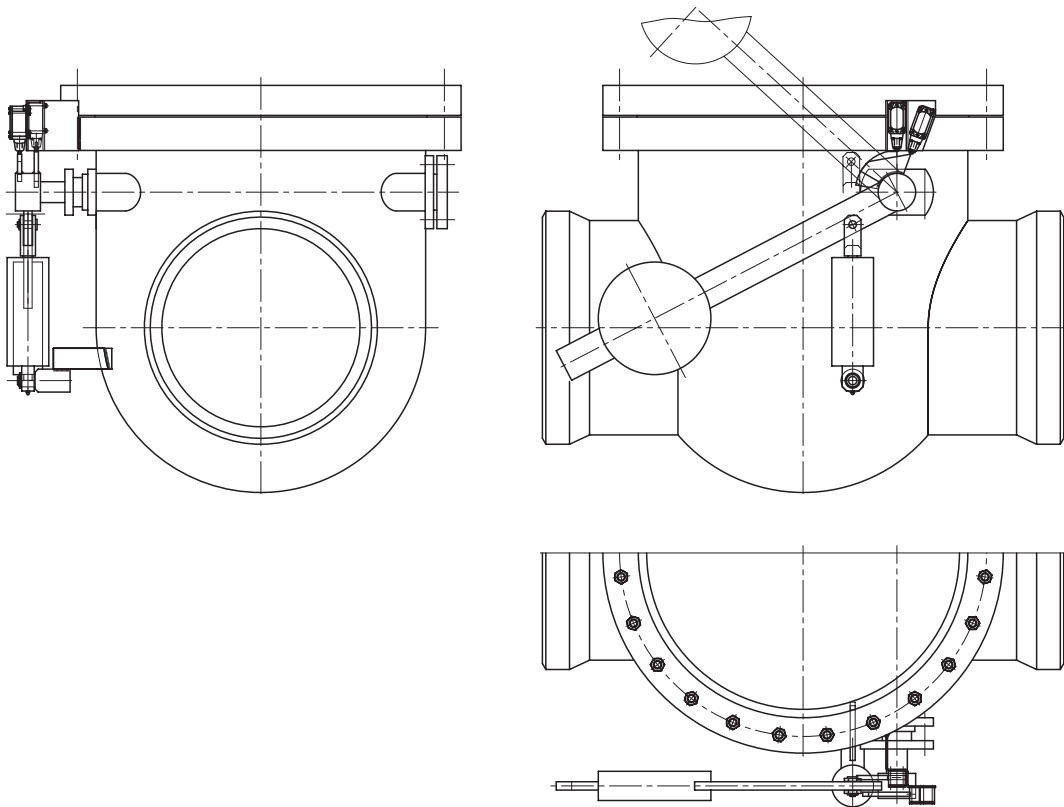
Dimensions/mm and Weights/kg										
DN	DS	L	DRI 25		DRI 32		DRI 40		DRI 63	
			H	kg	H	kg	H	kg	H	kg
50/65	59,0	350	205		205		205			
65	59,0	425	205	65	205	65	205	65	On request	
80/65	59,0	470	205		205		205			
80	72,0	470	240	110	240	110	240	110		
100/80	72,0	550	240		240		240			
100	90,0	550	285	140	285	140	285	140		
125/100	90,0	650	285		285		285			
125	112,5	650	355	180	355	180	355	180		
150/125	112,5	750	355		355		355			
150	135,0	750	420	240	420	240	420	240		
175/150	135,0	850	420		420		420			
175	157,5	850	330	365	390	365	420	620		
200/175	157,5	950	330		390		420			
200	180,0	950	365	460	420	620	450	735		
225/200	180,0	1050	365		420		450			
225	202,5	1050	420	675	450	735	480	870		
250/225	202,5	1150	420		450		510			
250	225,0	1150	470	835	480	1210	510	1500		
300/250	225,0	1350	470		480		590			
300	270,0	1350	535	1115	540	1880	590	2120		
350/300	270,0	1550	535		540		680			
350	315,0	1550	580	1765	640	2350	680	2820		
400/350	315,0	1750	580		640		780			
400	360,0	1750	660	3150	740	3050	780	3520		
450/400	360,0	1950	660		740					
450	405,0	1950	750		820					
500/450	405,0	2150	750		820					
500	450,0	2150								

▪ **Swing check valves** ▪ **Variants**

Swing check valve with lever and weight



Swing check valve with damping unit



■ Technical appendix ■ Pressure-rate tables PD 10-63

PERSTA pressure ratings (PD) have been developed close to the standardized PN 100-630 pressure ratings and apply to valves with accordingly designed butt weld ends only. Valves with standard flanges are always marked with the corresponding pressure ratings and can be used within these limits only. The figures refer to all pressure – retaining components including the obturators.

Differential pressure and operation

PERSTA gate valves can be operated with a differential pressure up to 50 % of the design pressures given in table 8.1. Always check with PERSTA first if they are to be used with higher differential pressures. The operating conditions (as specified by the customer) determine the

design of the operating elements such as the handwheel and actuators or gear-boxes.

Notice:

The maximum differential pressures to which gate valves with bodies made of 1.4903 and 1.6368 can be operated have to be always obtained from PERSTA.

Attention:

The wall thickness for butt weld ends may vary for different piping materials and must be checked carefully for every application.

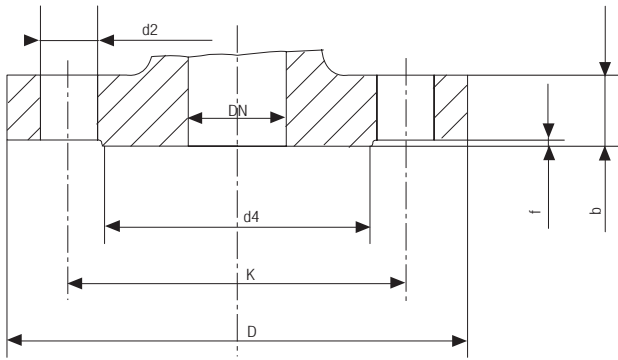
The valves will be marked as working pressure valves.

PERSTA - pressure ratings (PD) for butt weld valves																																	
Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																	
Material	PD	120	150	200	250	300	350	400	420	430	440	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650		
1.0460	10	100	100	94	82	74	62	50	45	43	41	34	28	23																			
	16	160	160	151	132	118	99	80	73	69	65	54	45	37																			
	18	206	194	170	151	131	112	88	80	76	72	55	47	38																			
	21	244	229	201	179	155	132	104	95	90	85	65	56	45																			
	25	250	250	235	206	184	155	125	113	107	102	85	71	58																			
	32	320	320	302	264	236	198	160	145	138	130	109	91	75																			
	40	400	400	377	330	295	248	200	182	172	163	136	113	93																			
	63*																																
	1.5415	10	120	120	112	103	88	85	82	81	81	80	79	78	78	68	53	40	32	25													
		16	192	192	179	165	141	137	400	130	129	128	126	125	124	109	85	64	51	41													
18		219	204	185	170	146	141	136	134	133	132	130	129	128	112	88	67	53	42														
21		259	241	219	201	173	169	167	158	157	156	154	153	151	132	104	79	63	50														
25		300	300	280	258	221	213	206	203	201	200	197	196	194	170	132	101	79	64														
32		385	385	358	330	283	273	264	260	258	256	253	251	249	217	170	129	102	81														
40		480	480	448	413	354	342	330	325	323	321	316	314	311	272	212	161	127	102														
63*																																	
1.7335		10	120	120	120	118	109	103	97	95	94	92	91	90	89	89	81	68	54	44	35	28	23	18									
		16	192	192	192	189	174	165	156	152	150	148	145	144	143	142	129	109	86	70	57	44	36	29									
	18	228	219	205	194	180	170	161	156	155	153	150	149	148	147	133	112	89	72	58	46	37	30										
	21	270	259	242	230	213	201	190	184	183	181	177	176	175	174	157	132	105	85	69	54	44	35										
	25	300	300	300	294	272	258	243	237	234	231	227	225	224	222	202	170	134	109	88	69	57	46										
	32	385	385	385	377	349	330	311	304	300	296	290	289	287	285	258	217	172	140	113	88	72	59										
	40	481	481	481	471	436	413	389	380	375	370	363	361	358	356	323	272	215	175	141	117	91	74										
	63*																																
	1.7380	16	192	192	192	192	189	174	165	161	159	157	154	152	150	143	127	111	97	85	74	64	55	48	41	36	32						
		18	233	224	210	205	194	180	170	166	164	162	159	156	155	153	131	115	100	88	76	66	56	50	43	37	33						
21		275	265	248	242	229	213	201	196	194	192	188	184	183	181	155	136	118	104	90	78	66	59	51	44	39							
25		300	300	300	300	294	272	258	252	249	246	240	237	234	224	199	174	152	132	115	100	85	75	65	56	49							
32		384	384	384	385	377	349	330	322	319	315	307	304	300	287	255	223	194	170	147	128	109	96	83	72	63							
40		480	480	480	480	471	436	413	403	398	394	384	379	375	358	315	278	243	212	184	160	137	117	104	90	79							
63*																																	
1.4903		16	272	272	272	272	272	272	272	272	272	272	272	272	268	245	239	221	203	186	169	153	137	123	108	96	85	74	64	55	48	41	
		25	425	425	425	425	425	425	425	425	425	425	425	425	418	383	372	344	316	290	263	238	213	191	169	150	132	115	100	85	75	65	
		32	544	544	544	544	544	544	544	544	544	544	544	544	536	490	477	441	405	371	338	305	273	245	217	192	170	147	128	109	96	83	
	40	680	680	680	680	680	680	680	680	680	680	680	680	669	613	596	552	507	464	422	382	345	306	271	240	212	184	160	137	120	104		
	63*																																
	1.6368	16	263	263	263	263	263	263	263	263	263	257	198	165	131	98	65																
		25	410	410	410	410	410	410	410	410	410	402	309	257	205	153	102																
		32	525	525	525	525	525	525	525	525	525	515	396	330	262	196	130																
		40	667	657	657	657	657	657	657	657	657	643	495	412	328	245	163																
		63*																															

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations.

* Design according to working data

■ Technical appendix ■ Flange dimensions



Raised face to DIN 2526 resp. pr EN 1092 (other flange-types possible).

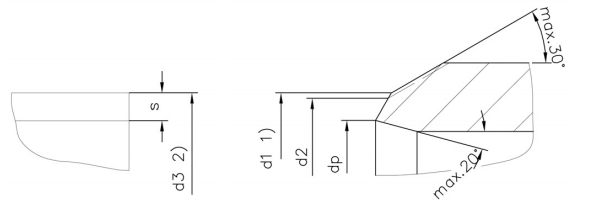
		Flange dimensions																				
Nom.- Press.	DN Dim.	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	500	600	700	800	
10	Flange D	95	105	115	140	150	165	185	200	220	250	285	340	395	445	505	565	670	780	895	1015	
	b	16	18	18	18	18	20	22	24	24	26	22	24	26	26	26	26	28	28	30	32	
	k	65	75	85	100	110	125	145	160	180	210	240	295	350	400	460	515	620	725	840	950	
	Raised face d4	45	58	68	78	88	102	122	138	158	188	212	268	320	370	430	482	585	685	800	905	
	f	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	5	5	5
	No. of bolts Thread d2	4 M12 14	4 M12 14	4 M12 14	4 M16 18	4 M16 18	4 M16 18	4 M16 18	4 M16 18	4 M16 18	8 M16 18	8 M16 18	8 M20 22	8 M20 22	8 M20 22	12 M20 22	12 M24 26	16 M24 26	16 M24 26	20 M27 30	24 M27 30	24 M30 33
16	Flange D	95	105	115	140	150	165	185	200	220	250	285	340	405	460	520	580	715	840	910	1025	
	b	16	18	18	18	18	20	22	24	24	26	22	24	26	28	30	32	34	36	36	38	
	k	65	75	85	100	110	125	145	160	180	210	240	295	355	410	470	525	650	770	840	950	
	Raised face d4	45	58	68	78	88	102	122	138	158	188	212	268	320	378	438	490	610	725	795	900	
	f	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	5	5	5	
	No. of bolts Thread d2	4 M12 14	4 M12 14	4 M12 14	4 M16 18	4 M16 18	4 M16 18	4 M16 18	8 M16 18	8 M16 18	8 M16 18	8 M20 22	12 M20 22	12 M24 26	12 M24 26	16 M24 26	16 M27 30	20 M30 33	20 M33 36	24 M33 36	24 M36 39	24 M36 39
25	Flange D	95	105	115	140	150	165	185	200	235	270	300	360	425	485	555	620	730	845	960	1085	
	b	16	18	18	18	18	20	22	24	24	26	28	30	32	34	38	40	44	46	46	50	
	k	65	75	85	100	110	125	145	160	190	220	250	310	370	430	490	550	660	770	875	990	
	Raised face d4	45	58	68	78	88	102	122	138	162	188	218	278	335	395	450	505	615	720	820	930	
	f	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	5	5	5	
	No. of bolts Thread d2	4 M12 14	4 M12 14	4 M12 14	4 M16 18	4 M16 18	4 M16 18	8 M16 18	8 M16 18	8 M20 22	8 M24 26	8 M24 26	12 M24 26	12 M27 30	16 M27 30	16 M30 33	16 M33 36	20 M33 36	20 M36 39	24 M36 39	24 M39 42	24 M45 48
40	Flange D	95	105	115	140	150	165	185	200	235	270	300	375	450	515	580	660	755	890	995	1140	
	b	16	18	18	18	18	20	22	24	24	26	28	34	38	42	46	50	52	60	64	72	
	k	65	75	85	100	110	125	145	160	190	220	250	320	385	450	510	585	670	795	900	1030	
	Raised face d4	45	58	68	78	88	102	122	138	162	188	218	285	345	410	465	535	615	735	840	960	
	f	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	5	5	5	
	No. of bolts Thread d2	4 M12 14	4 M12 14	4 M12 14	4 M16 18	4 M16 18	4 M16 18	8 M16 18	8 M16 18	8 M20 22	8 M24 26	8 M24 26	12 M27 30	12 M30 33	16 M30 33	16 M33 36	16 M36 39	20 M39 42	20 M45 48	24 M45 48	24 M52 56	
63	Flange D	105	130	140	155	170	180	205	215	250	295	345	415	470	530							
	b	20	24	24	24	28	28	30	32	30	34	36	42	46	52							
	k	75	90	100	110	125	135	160	170	200	240	280	345	400	460							
	Raised face d4	45	60	68	78	88	102	122	138	162	188	218	285	345	410							
	f	2	2	2	2	3	3	3	3	3	3	3	3	3	4							
	No. of bolts Thread d2	4 M12 14	4 M16 18	4 M16 18	4 M20 22	4 M20 22	4 M20 22	8 M20 22	8 M20 22	8 M24 26	8 M27 30	8 M30 33	12 M33 36	12 M33 36	16 M33 36							
100	Flange D	105	130	140	155	170	195	220	230	265	315	355	430	505	585							
	b	20	24	24	24	28	28	30	32	36	40	44	52	60	68							
	k	75	90	100	110	125	145	170	180	210	250	290	360	430	500							
	Raised face d4	45	60	68	78	88	102	122	138	162	188	218	285	345	410							
	f	2	2	2	2	3	3	3	3	3	3	3	3	3	4							
	No. of bolts Thread d2	4 M12 14	4 M16 18	4 M16 18	4 M20 22	4 M20 22	4 M24 26	8 M24 26	8 M24 26	8 M27 30	8 M30 33	12 M30 33	12 M33 36	16 M36 39	16 M39 42							
160	Flange D	105	130	140	155	170	195	220	230	265	315	355	430	515	585							
	b	20	24	24	24	28	28	30	32	36	40	44	50	60	68							
	k	75	90	100	110	125	145	170	180	210	250	290	360	430	500							
	Raised face d4	45	60	68	78	88	102	122	138	162	188	218	285	345	410							
	f	2	2	2	2	3	3	3	3	3	3	3	3	3	4							
	No. of bolts Thread d2	4 M12 14	4 M16 18	4 M16 18	4 M20 22	4 M20 22	4 M24 26	8 M24 26	8 M24 26	8 M27 30	8 M30 33	12 M30 33	12 M33 36	16 M39 42	16 M39 42							

■ Technical appendix ■ Pipe and valve dimensions

Pipe (DIN 2448) and valve dimensions rel. DIN 3239 and 2559									
DN		Butt welding ends							
		Line 1 up to PN 40	Line 2 PN 63	Line 3 PN 100	Line 4 PN 160	Line 5 PN 250	Line 6 PN 320	Line 7 PN 400	Line 8 PN 630
10	d1	20,0	20,0	20,0	20,0	20,0	20,0	20,0	24,0
	d2	18,0	18,0	18,0	18,0	18,0	18,0	18,0	22,0
	dp (DIN2559)	13,0	13,0	13,0	13,0	12,0	12,0	10,0	11,5
	d3	17,2	17,2	17,2	17,2	17,2	17,2	17,2	21,3
	s	2,0	2,0	2,0	2,0	2,6	2,6	3,6	5,0
15	d1	24,0	24,0	24,0	24,0	24,0	24,0	31,0	37,0
	d2	22,0	22,0	22,0	22,0	22,0	22,0	28,0	34,0
	dp (DIN2559)	17,0	17,0	17,0	17,0	16,0	15,0	17,0	18,5
	d3	21,3	21,3	21,3	21,3	21,3	21,3	26,9	33,7
	s	2,0	2,0	2,0	2,0	2,6	3,2	5,0	8,0
20	d1	31,0							
	d2	28,0							
	dp (DIN2559)	22,0							
	d3	26,9							
	s	2,3							
25	d1	37,0	37,0	37,0	37,0	39,0	39,0	48,0	54,0
	d2	34,0	34,0	34,0	34,0	35,0	35,0	44,0	49,0
	dp (DIN2559)	28,5	28,5	28,5	27,0	26,5	24,0	29,0	25,0
	d3	33,7	33,7	33,7	33,7	33,7	33,7	42,4	48,3
	s	2,6	2,6	2,6	3,2	3,6	5,0	7,1	12,5
40	d1	54,0	54,0	54,0	54,0	54,0	54,0	67,0	83,0
	d2	49,0	49,0	49,0	49,0	49,0	49,0	61,0	77,0
	dp (DIN2559)	43,0	43,0	43,0	41,0	38,5	36,0	40,0	43,5
	d3	48,3	48,3	48,3	48,3	48,3	48,3	60,3	76,1
	s	2,6	2,6	2,6	3,6	5,0	6,3	11,0	17,5
50	d1	67,0	67,0	67,0	67,0	67,0	83,0	83,0	96,0
	d2	61,0	61,0	61,0	61,0	61,0	77,0	77,0	90,0
	dp (DIN2559)	54,0	54,0	54,0	52,5	45,0	59,5	49,5	51,5
	d3	60,3	60,3	60,3	60,3	60,3	76,1	76,1	88,9
	s	3,2	3,2	3,2	4,0	8,0	8,8	14,2	20,0
65	d1	83,0	83,0	83,0	83,0	83,0	96,0	121,0	
	d2	77,0	77,0	77,0	77,0	77,0	90,0	115,0	
	dp (DIN2559)	69,0	69,0	69,0	65,0	59,5	68,0	81,0	
	d3	76,1	76,1	76,1	76,1	76,1	88,9	114,3	
	s	3,6	3,6	3,6	5,6	8,8	11,0	17,5	
80	d1	96,0	96,0	96,0	96,0	121,0	121,0	121,0	
	d2	90,0	90,0	90,0	90,0	115,0	115,0	115,0	
	dp (DIN2559)	81,0	81,0	81,0	76,5	93,0	87,5	81,0	
	d3	88,9	88,9	88,9	88,9	114,3	114,3	114,3	
	s	4,0	4,0	4,0	6,3	11,0	14,2	17,5	
100	d1	121,0	121,0	121,0	121,0				
	d2	115,0	115,0	115,0	115,0				
	dp (DIN2559)	104,0	104,0	104,0	98,5				
	d3	114,3	114,3	114,3	114,3				
	s	5,0	5,0	5,0	8,0				
125	d1	147,0	147,0	147,0	147,0				
	d2	141,0	141,0	141,0	141,0				
	dp (DIN2559)	130,5	130,5	127,0	120,5				
	d3	139,7	139,7	139,7	139,7				
	s	4,5	4,5	6,3	10,0				
150	d1	176,0	176,0	176,0	176,0				
	d2	170,0	170,0	170,0	170,0				
	dp (DIN2559)	156,5	156,5	154,0	144,5				
	d3	168,3	168,3	168,3	168,3				
	s	5,6	5,6	7,1	12,5				
200	d1	228,0	228,0	228,0	228,0				
	d2	222,0	222,0	222,0	222,0				
	dp (DIN2559)	204,5	204,5	199,5	189,0				
	d3	219,1	219,1	219,1	219,1				
	s	7,1	7,1	10,0	16,0				
250	d1	282,0	282,0	282,0					
	d2	276,0	276,0	276,0					
	dp (DIN2559)	256,5	255,0	248,5					
	d3	273,0	273,0	273,0					
	s	8,0	8,8	12,5					
300	d1	331,0	331,0	331,0					
	d2	325,0	325,0	325,0					
	dp (DIN2559)	306,5	301,0	295,5					
	d3	323,9	323,9	323,9					
	s	8,0	11,0	14,2					
350	d1	365,0	365,0	365,0					
	d2	359,0	359,0	359,0					
	dp (DIN2559)	336,5	330,0	324,0					
	d3	355,6	355,6	355,6					
	s	8,8	12,5	16,0					
400	d1	417,0	417,0						
	d2	411,0	411,0						
	dp (DIN2559)	383,0	377,0						
	d3	406,4	406,4						
	s	11,0	14,2						
500	d1	518,0							
	d2	512,0							
	dp (DIN2559)	478,0							
	d3	508,0							
	s	14,2							

Note:
The outer diameter values marked by colour are needing depend on the used material and heating diameter larger outer diameter.

Pressureratings and materials acc. DIN 2401. (Wst. 1.0460; 1.0425; 1.5415; 1.7335; 1.7380) No casting materials are listed.



- d1 is the maximal permitted scaling of the outer diameter; generally for cast steel and weldable cast iron.
- d3 is the outer diameter of the connected stealpipe Line 1 acc. ISO 4200-1985

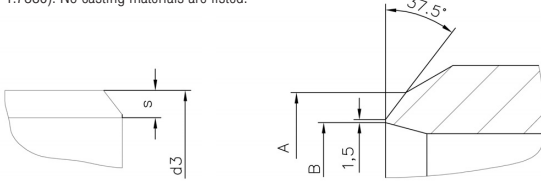
■ Technical appendix ■ Pipe and valve dimensions

Pipe (DIN 2448) and valve dimensions rel. EN 12627

DN		Butt welding ends							
		Line 1 up to PN 40	Line 2 PN 63	Line 3 PN 100	Line 4 PN 160	Line 5 PN 250	Line 6 PN 320	Line 7 PN 400	Line 8 PN 630
10	A	18,0	18,0	18,0	18,0	18,0	18,0	18,0	22,0
	B	13,2	13,2	13,2	13,2	12,0	12,0	10,0	11,3
	d3	17,2	17,2	17,2	17,2	17,2	17,2	17,2	21,3
	s	2,0	2,0	2,0	2,0	2,6	2,6	3,6	5,0
15	A	22,0	22,0	22,0	22,0	22,0	22,0	28,0	35,0
	B	17,3	17,3	17,3	17,3	16,1	14,9	16,9	17,7
	d3	21,3	21,3	21,3	21,3	21,3	21,3	26,9	33,7
	s	2,0	2,0	2,0	2,0	2,6	3,2	5,0	8,0
20	A	28,0							
	B	22,3							
	d3	26,9							
	s	2,3							
25	A	35,0	35,0	35,0	35,0	35,0	35,0	44,0	50,0
	B	28,5	28,5	28,5	27,3	26,5	23,7	28,2	23,3
	d3	33,7	33,7	33,7	33,7	33,7	33,7	42,4	48,3
	s	2,6	2,6	2,6	3,2	3,6	5,0	7,1	12,5
40	A	50,0	50,0	50,0	50,0	50,0	50,0	62,0	77,0
	B	43,1	43,1	43,1	41,1	38,3	35,7	38,3	41,1
	d3	48,3	48,3	48,3	48,3	48,3	48,3	60,3	76,1
	s	2,6	2,6	2,6	3,6	5,0	6,3	11,0	17,5
50	A	62,0	62,0	62,0	62,0	62,0	77,0	77,0	91,0
	B	53,9	53,9	53,9	52,3	44,3	58,5	47,7	48,9
	d3	60,3	60,3	60,3	60,3	60,3	76,1	76,1	88,9
	s	3,2	3,2	3,2	4,0	8,0	8,8	14,2	20,0
65	A	77,0	77,0	77,0	77,0	77,0	91,0	117,0	
	B	68,9	68,9	68,9	64,9	58,5	66,9	79,3	
	d3	76,1	76,1	76,1	76,1	76,1	88,9	114,3	
	s	3,6	3,6	3,6	5,6	8,8	11,0	17,5	
80	A	91,0	91,0	91,0	91,0	117,0	117,0	117,0	
	B	80,9	80,9	80,9	76,3	92,3	85,9	79,3	
	d3	88,9	88,9	88,9	88,9	114,3	114,3	114,3	
	s	4,0	4,0	4,0	6,3	11,0	14,2	17,5	
100	A	117,0	117,0	117,0	117,0				
	B	104,3	104,3	104,3	98,3				
	d3	114,3	114,3	114,3	114,3				
	s	5,0	5,0	5,0	8,0				
125	A	144,0	144,0	144,0	144,0				
	B	130,7	130,7	127,1	119,7				
	d3	139,7	139,7	139,7	139,7				
	s	4,5	4,5	6,3	10,0				
150	A	172,0	172,0	172,0	172,0				
	B	157,1	157,1	154,1	143,3				
	d3	168,3	168,3	168,3	168,3				
	s	5,6	5,6	7,1	12,5				
200	A	223,0	223,0	223,0	223,0				
	B	204,9	204,9	199,1	187,1				
	d3	219,1	219,1	219,1	219,1				
	s	7,1	7,1	10,0	16,0				
250	A	278,0	278,0	278,0					
	B	257,0	255,4	248,0					
	d3	273,0	273,0	273,0					
	s	8,0	8,8	12,5					
300	A	329,0	329,0	329,0					
	B	307,9	301,9	295,5					
	d3	323,9	323,9	323,9					
	s	8,0	11,0	14,2					
350	A	362,0	362,0	362,0					
	B	338,0	330,6	323,6					
	d3	355,6	355,6	355,6					
	s	8,8	12,5	16,0					
400	A	413,0	413,0						
	B	384,4	378,0						
	d3	406,4	406,4						
	s	11,0	14,2						
500	A	516,0							
	B	479,6							
	d3	508,0							
	s	14,2							

Note:
The outer diameter values marked by colour are needing depend on the used material and heating diameter larger outer diameter.

Pipe values correlated to pressureratings acc. DIN 3239. Pressureratings and materials acc. DIN 2401. (Wst. 1.0460; 1.0425; 1.5415; 1.7335; 1.7380). No casting materials are listed.



d3 is the outer diameter of the connected stealpipe Line 1 acc. ISO 4200-1985

■ Technical appendix ■ Qualification

Approvals	
Name of testing firm or organisation	Specification
TÜV Cert	DIN EN ISO 9001:1994
TÜV Nederland	DIN EN ISO 9001:1994
RW-TÜV, Essen	CE 0044
RW-TÜV, Essen	AD-HP 0
RW-TÜV, Essen	TRB801 Nr. 45
FRAMATOME/Siemens	QSP 4a
FRAMATOME/Siemens	KTA 1401
FRAMATOME/Siemens	AVS 100/50
RW-TÜV, Essen, Bauteilkz. MLV's	TÜ-30-96
RW-TÜV, Essen, Bauteilkz. HD 91	TÜ.A.269-97
RW-TÜV, Essen, Bauteilkz. HD 92	TÜVA.195-99
TÜV Hannover, Eignungsprüfung	T08-85-03
TÜV Rheinland	TA-Luft
CEZ, a.s., Prague	214/97
STOOMWEZEN	M0809
PAKS NUCLEAR POWER PLANT	KM 53/2001
Technische Prüfanstalt Piestany, Slowakei	STN
EDF Pole Industrie	EDF
URZAD DOZORU	UDT Nr. EC-167/1-02
Oil and Gas Institut Pole	10 GP/93
Kuwait Oil Company	VEC/VA/GT/15/016/97
Shell Nederland	Service Group 77DAAB
Shell Nederland	Service Group 77DPBA

And the complete documentation provided by PERSTA quality control department is laid out with a view to ensure that they meet the requirements which are set out in the approvals and satisfy the user demands for maximum operational safety. PERSTA valves are designed, produced and tested in line with the latest technology, PERSTA performs the following tests:

- Acceptance of subsupplier
- Acceptance of incoming raw materials
- Inspection of finished components and bought-in parts in production, to ensure that they are designed in accordance with the drawings
- Destructive and non-destructive testing
- Strength and tightness tests
- Function tests

Process tests with the corresponding welder qualification to AD; TRD; EN 288-3; EN 24063							
Material group ** acc. to AD - HP 0	Materials e. g.	EN	Process				
			111 E	12 UP	135 MAG	141 WIG	76 EB *
1	1.0460	1.0460	X	X	X	X	X
1	1.5415	1.5415	X	X	X	X	X
3	1.6368	1.6368	X	X	X	X	X
4,1	1.7335	1.7335	X	X	X	X	X
4,1	1.7380	1.7383	X	X	X	X	X
4,2	1.4903	1.4903	X	X	X	X	
5,1	1.4903	1.4903	X	X	X		
6	1.4571	1.4571	X	X	X	X	X

*) special electron-beam welding process

**) and combinations of these material groups

■ Technical appendix ■ Figure number code

Figure number code

XXX XX XX.X

Figure number _____
 Materials _____
 Connections _____

Example

700 HJ 21.1

Figure	
Type	PERSTA Code
Small globe valve (inside screw and yoke)	200 AB
Small globe valve (outside screw and yoke)	200 AF
Small lift check valve	240 MU
Pressure gauge valve	200 AD
Globe valve	200 AE
Globe valve with throttle disc	200 BE
Globe valve with non-rotating stem	200 AJ
Globe valve with throttle disc and non-rotating stem	200 BM
High pressure globe valve type HD 91	200 JM
High pressure globe valve type HD 92	200 BM
High pressure globe valve DVA 25	200 AZ
Lift check valve	240 MT
Screw down non return valve	240 ME
Bellow seal globe valve	200 AL
Bellow seal globe valve with throttle disc	200 BL
Changeover valve DN 10-50	203 EH
Changeover valve DN 65-200	203 EM
Swing check valve	640 AA
Swing check valve with lever and weight	640 AE
High pressure swing check valve DRI 21-63	640 AB
Gate valve, flexible wedge type	700 HJ
Gate valve, split wedge type	700 JJ
High pressure gate valve DSK 16-63	700 JT
Gate valve, flexible wedge type, inside screw and yoke	700 GA
Small gate valve, full bore	808 GJ
Small gate valve, reduced bore	800 GJ

Materials		
DIN-No.	EN-rel.	PERSTA Code
1.0425	1.0425	22
1.0460	1.0460	21
1.0566	1.0566	25
1.0619	1.0619	11
1.4308	1.4308	77
1.4571	1.4571	82
1.4571	1.4571	85
1.4581	1.4581	72
1.4903	1.4903	63
1.5415	1.5415	42
1.6368	1.6368	46
1.7219	1.7219	31
1.7335	1.7335	44
1.7357	1.7357	34
1.7380	1.7383	45

Connection type	
Designation	PERSTA Code
Flange	1
BW Ends	2
Threaded sleeves	3
Threaded journals	4
Weld nipples	5
Pressure gauge connection	6
Ermeto-connection	7
Socket weld ends	8
Special connection	9

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