



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 – 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.



Impressum

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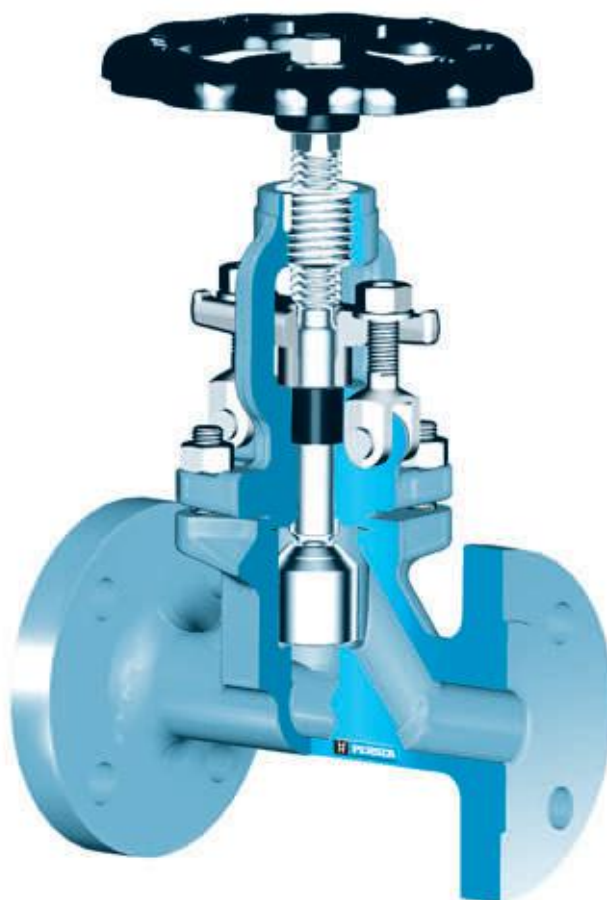
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Gate valve / VALTRA	700 JJ	300 - 1000	10 - 25	58 - 59
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Notice: The values indicated in the operating pressure and temperature tables are the max. admissible operating data for our valves. Before choosing 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	120	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 ⁵⁾	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	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) 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
- Outside screw and yoke
- Position indicator if required
- Turning and rising stem

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

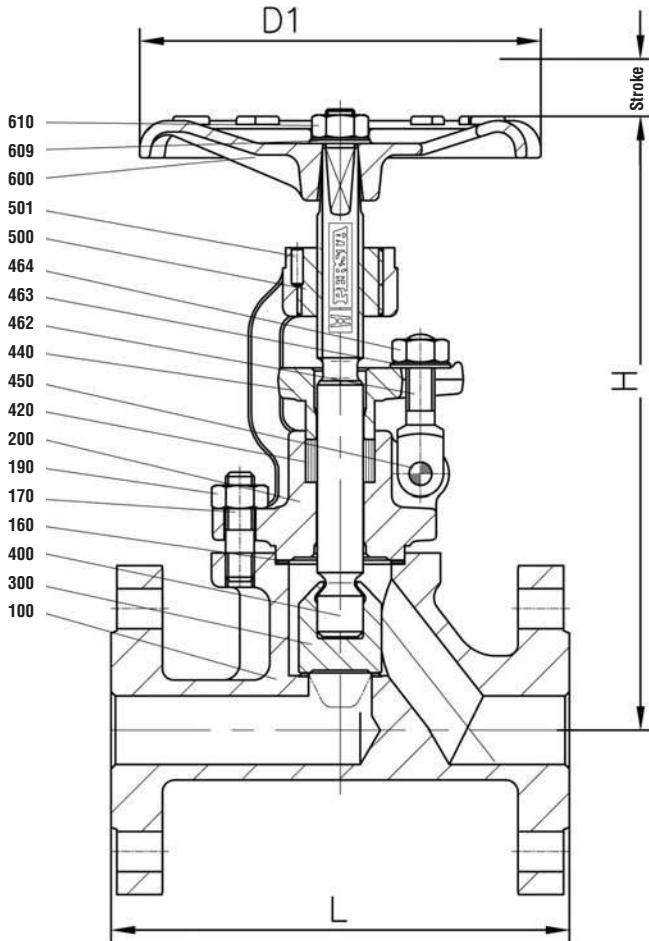
- Die-forged valve body and bonnet
- Seats are hardfaced or welded on
- Body-bonnet connection male and female
- Body and bonnet in two separate pieces with bolted connection

Benefits

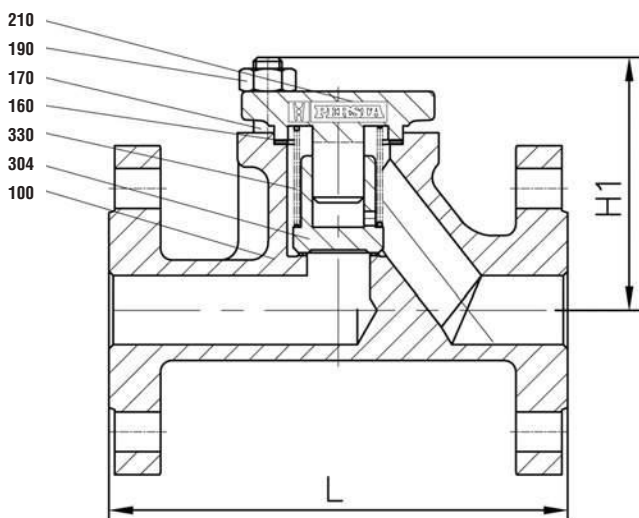
- Free from porosity and shrink holes
- Extremely resistant to wear
- Sealing blow out proof
- To ease maintenance work, e.g. regrinding of the body seats

- **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

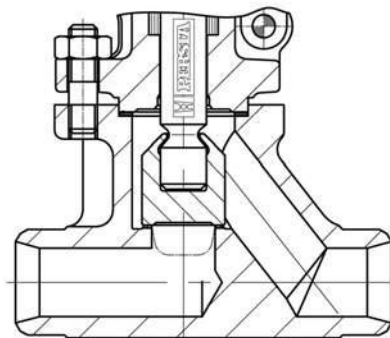
Shut-off check valve



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) ³⁾	1.0566 (25)	BW-Version 1.5415 (42)	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	1.7218	1.7218	A4-70	A4-70
190	Hexagonal nut ²⁾	1.7218	A4-70	1.7218	1.7218	A4-70	A4-70
200	Bonnet	1.0460	1.0566	1.7335	1.7335	1.4571	1.4571
210	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
462	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 9) DN 50 PN 10-40 Flange Version with 1.0619 hard faced with Cr17

Dimensions/mm

PN	DN	FL L	BW 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	
63-160	50	230	210	260	18	120	180	
	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	
63-100	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	
		FL	BW	FL	BW
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
63-160	50	15,5	11,0	12,1	7,9
	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
63-100	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 (m3/h)

Line	PN 10-40							PN 63-160						
	DN 10	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 10	DN 15	DN 20	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	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																					
		-200	-50	-10	20	100	120	150	200	250	300	350	400	425	450	475	500	510	520	530	540	550	
1.0619	10-16			16	16	16	16	15	14	13	11	10	8										
	25			25	25	25	25	23	22	20	17	16	13										
	40			40	40	40	40	37	35	32	28	24	21										
	63			63	63	63	63	53	50	45	40	36	32										
	100			100	100	100	100	83	80	70	60	56	50										
	160 ³⁾			160	160	160	160	135	130	112	96	90	80										
1.5419	10			10	10	9	9	9	8	7	7	7	6	6	6	6	3	3	2	2			
	25			25	25	23	23	22	20	19	17	16	16	16	15	15	9	7	6	4			
	40			40	40	36	36	35	31	29	27	26	25	24	24	23	14	11	9	7			
	63			63	63	59	59	58	51	48	45	42	41	40	39	38	22	18	14	12			
	100			100	100	92	92	90	80	74	69	65	63	62	61	59	35	28	22	18			
	160 ³⁾			160	160	148	148	143	128	119	111	104	101	100	98	94	55	44	35	29			
1.7221	10-16 ²⁾			16	16	16	16	15,1	15	14	13	11											
	25 ²⁾			25	25	25	25	23,6	23	22	20	17											
	40 ²⁾			40	40	40	40	37,7	37	35	32	28											
	63 ²⁾			63	63	63	63	55	54	53	50	45	40										
	100 ²⁾			100	100	100	100	87	84	83	80	70	60										
	160 ²⁾			160	160	160	160	140	136	135	130	112	96										
1.7357	10-16			16	16	16	16	15	14	13	11	10	8										
	25			25	25	25	25	25	25	25	25	25	24	23	22	21	20	18	15	12	9		
	40			40	40	40	40	40	40	40	40	40	38	36	35	34	33	29	24	19	15		
	63			63	63	63	63	63	63	63	63	63	61	58	57	56	51	47	40	32	25		
	100 ⁴⁾			100	100	100	100	100	100	100	100	100	95	91	89	87	80	74	62	49	38		
1.4308	10-16	16	16	16	16	13	12,6	12	11	8	8												
	25	25	25	25	25	21	19,8	18	17	13	12												
	40	40	40	40	40	34	32,4	30	24	21	20												
1.4581	10-16			16	16	15	14,6	14	13	13	12	12	11	10	8	7,5	7	7	7	7	7	6,5	
	25			25	25	24	23,2	22	21	20	19	18	17	16	13	12,5	12	11	11	11	11	11	
	40			40	40	38	36,8	35	33	32	30	28	26	24	21	20	19	19	19	19	18	18	

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.

Permissible differential pressure (pressure inlet below the disc) acc. to EN 13709.

- **Globe valves** ▪ **Lift check valve** ▪ **240 MT** ▪ **PN 10-160** ▪ **DN 65-200**
- **Globe valves** ▪ **Lift check valve** ▪ **240 MT** ▪ **PN 10-160** ▪ **DN 65-200**

Version

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

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 plant, ship building and other

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
- 1.7221
- 1.7357
- 1.4581
- 1.4308

Further materials on request

Design Highlights

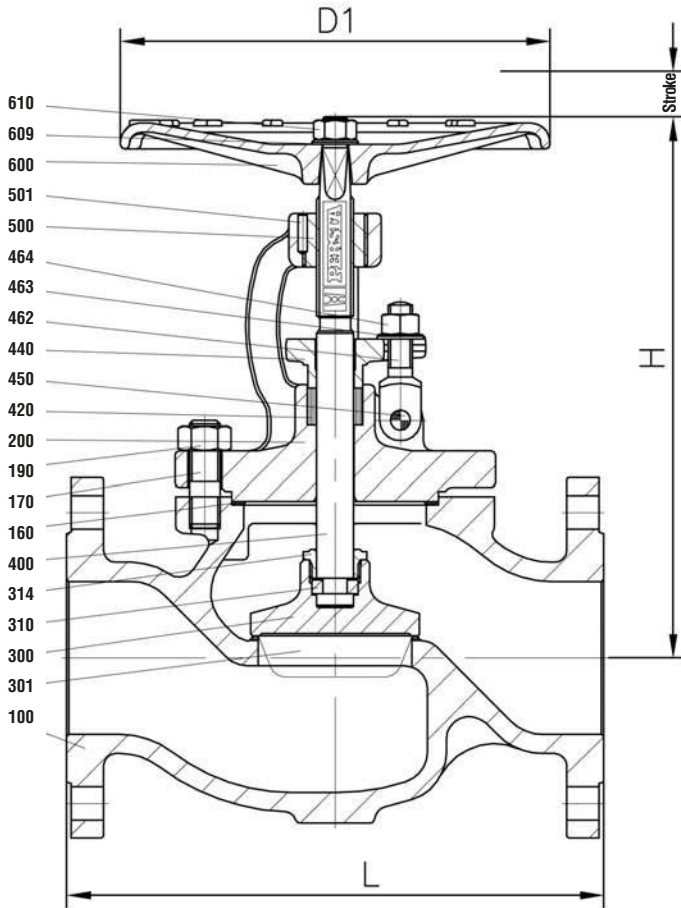
- Seats are welded on
- Body-bonnet connection male and female
- Body and bonnet in two pieces with bolted connection

Benefits

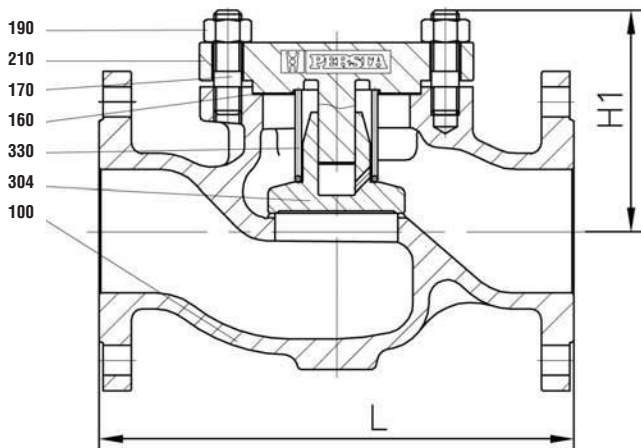
- Extremely resistant to wear
- Sealing blow out proof
- To ease maintenance work, e.g. regrinding of the body seats

- **Globe valves** ▪ **Lift check valve** ▪ **240 MT** ▪ **PN 10-160** ▪ **DN 65-200**
- **Globe valves** ▪ **Lift check valve** ▪ **240 MT** ▪ **PN 10-160** ▪ **DN 65-200**

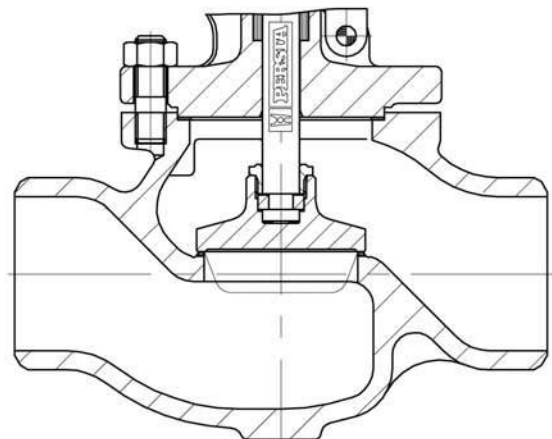
Shut-off check valve



Lift check valve



BW-Version



- **Globe valves** ▪ **Lift check valve** ▪ **240 MT** ▪ **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)	1.7221 (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	1.7218	A4-70	1.7218	A4-70	A4-70
190	Hexagonal nut ²⁾	1.7218	1.7218	A4-70	1.7218		
200	Bonnet	1.0619	1.7357	1.7221	1.7357	1.4581	1.4308
210	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
462	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
2) PN 63-160
3) Seat hard faced ≥ DN 125, 1.0460 seat hard faced with Cr17

4) Seat hard faced with Cr17
5) Seat hard faced with stellite
8) ≥ PN 63 seat hard faced with stellite

9) ≥ PN 63 seat hard faced with hastelloy

Dimensions/mm							
PN	DN	FL L	BW L	H	Stroke	H1	D1
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	FL L	BW L	H	Stroke	H1	D1
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
	200	600	600	575	65	240	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						

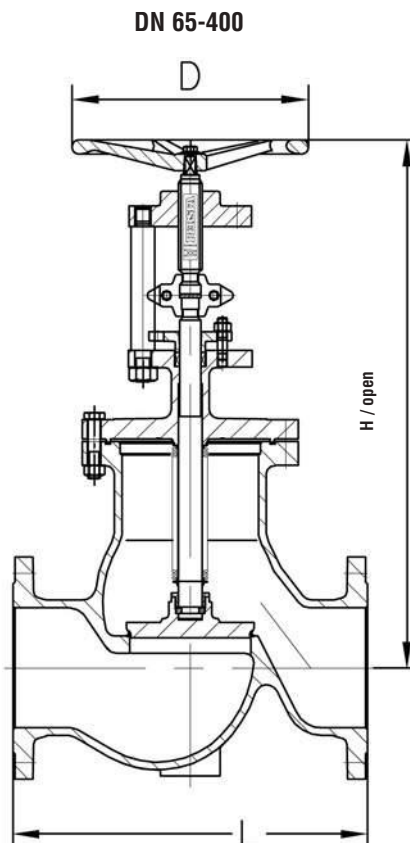
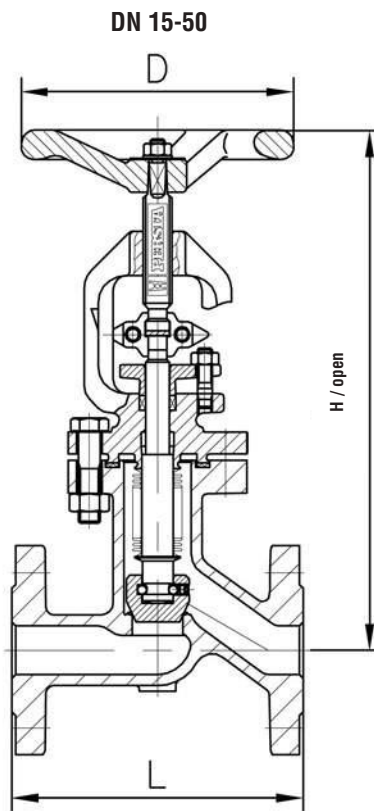
DN	240 MT								
	PN 10-16 FL	PN 25-40 FL	PN 10-40 BW	PN 63 FL	PN 63 BW	PN 100 FL	PN 100 BW	PN 160 FL	PN 160 BW
65	18,5	18,5	11,5	29,0	13,0	29,0	13,0	33,0	13,0
80	29,6	29,6	20,4	42,0	23,0	42,0	23,0	46,0	23,0
100	35,4	35,4	29,0	63,0	38,0	63,0	38,0	71,0	38,0
125	58,0	58,0	40,0	101,0	78,0	106,0	78,0		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

Kvs-values BW- and FL-Version						
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 1.7218
 5) ≥ PN 63 A4-70
 6) ≥ DN 65 1.0420

Dimensions/mm						
PN	DN	FL L	BW 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	FL	BW
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	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 ²⁾	590 ²⁾	600 ²⁾			
1.5415	160	192	192	192	192	192	192	179	165	141	137	132	131	130	129	128	127	126	125	124	109	85	64	51	41										
	250	300	300	300	300	300	300	280	258	221	213	206	205	203	202	200	199	197	196	194	170	132	101	79	64										
	320	320	320	320	320	320	320	320	320	283	273	264	262	260	258	256	255	253	251	249	217	170	129	102	81										
1.7335	160	192	192	192	192	192	192	189	174	165	156	154	152	150	148	146	145	144	143	142	129	109	86	70	57	44	36	29							
	250	300	300	300	300	300	300	294	272	258	243	240	237	234	231	228	227	225	224	222	202	170	134	109	88	69	57	46							
	320	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								
1.7383 ²⁾	160	192	192	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					
	250	300	300	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					
	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.

2) For temperatures > 570 °C, stem in 1.4923 and high-temperature-packing.

■ **Globe valves** ■ High pressure globe valve HD 91 ■ 200 JM ■ PN 320 ■ 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
- Possibility to add an actuator-flange

Pressure and temperature ratings

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

Materials

- 1.5415
- 1.7335
- 1.7383

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

High temperature steam and water, refining (catalytic reformers and hydrocrackers), petrochemical and chemical industries, power plants

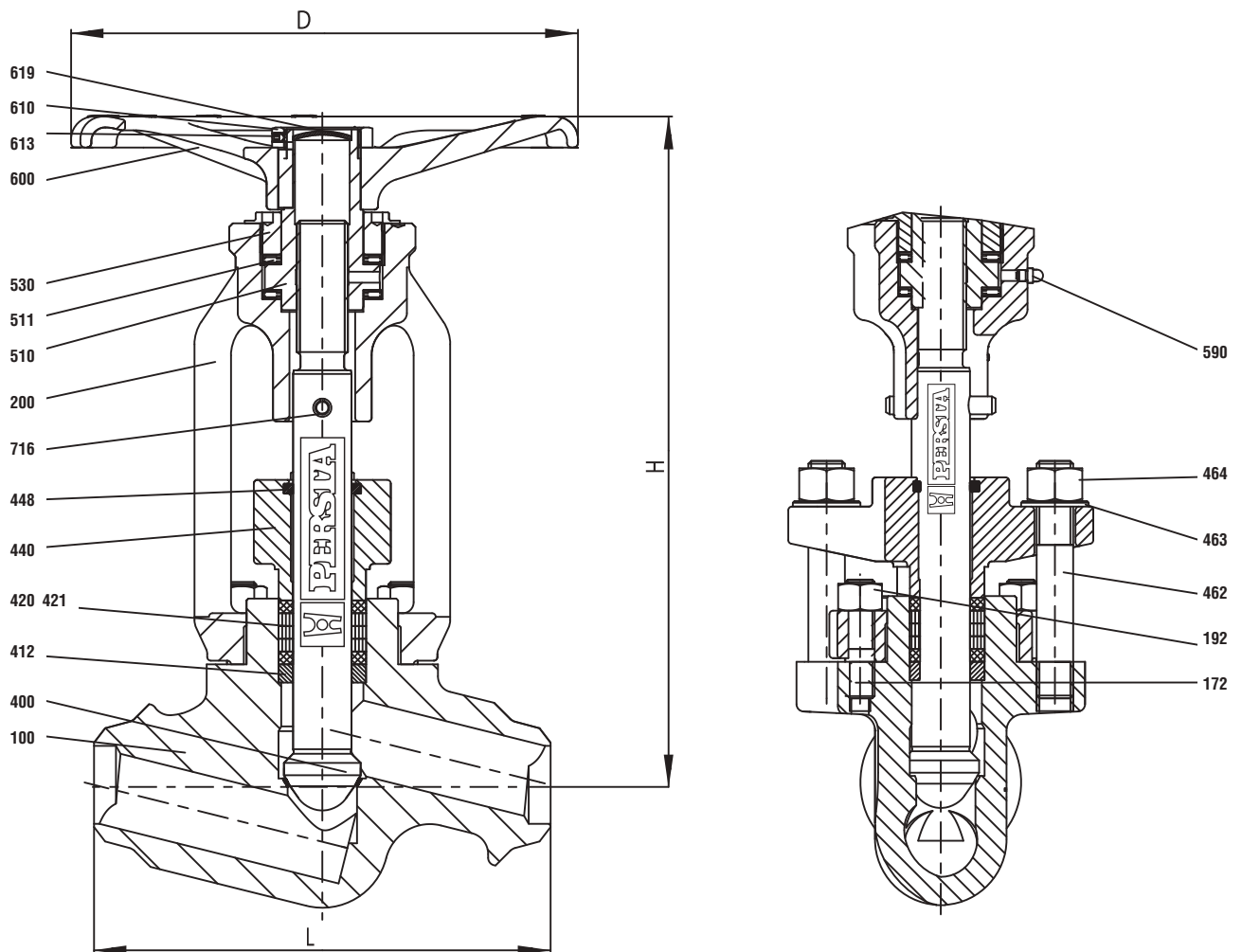
Design Highlights

- Body seat: edge seat welded on integratedly with stellite
- Disc / stem single piece of material > 570 °C with stellite edge seat
- Sealing to the outside only means of the gland packing
- Body and bonnet in two separate pieces with bolted connection
- Yoke sleeve supported by needle bearings (axial type)
- Possibility to add an actuator-flange

Benefits

- No pressed in or screwed seat ring, therefore no crevice corrosion or loosening
- No damages between disc and stem because of high flow velocity
- No bonnet gaskets, therefore reduction of possible leakage areas
- To ease maintenance work, e.g. regrinding of the body seats
- To minimize the expenditure of effort when operating valve
- Simple retrofitting of an electric actuator possible

▪ **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)	1.7383 (45)
100	Body	1.5415	1.7335	1.7383
	welded on with	Stellite	Stellite	Stellite
172	Stud	1.7709	1.7709	1.7709
192	Hexagonal nut	1.7218	1.7218	1.7218
200	Bonnet	1.7379	1.7379	1.7379
400	▶ Stem with throttle disc	1.4122 ¹⁾	1.4122 ¹⁾	1.4122 ¹⁾²⁾
412	Guide sleeve	0.7660	0.7660	0.7660
420/421	▶ Packing set	Pure graphite	Pure graphite	Pure graphite ²⁾
440	Gland flange	1.7379	1.7379	1.7379
448	▶ Dirt Scraper	Graphite plait	Graphite plait	Graphite plait
462	Stud	1.7709	1.7709	1.7709
463	Washer	St	St	St
464	Hexagonal nut	1.7218	1.7218	1.7218
510	▶ Yoke sleeve	CW 713 R	CW 713 R	CW 713 R
511	▶ Bearing	WLS	WLS	WLS
530	Yoke nut	1.0460	1.0460	1.0460
590	Grease nipple	5.8	5.8	5.8
600	Handwheel	0.7040	0.7040	0.7040
610	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
	▶ Spare parts			

1) On request stem with stellite seats in 1.4923.
2) For temperatures > 570 °C stem with stellite seats in 1.4923 and hightemperature-packing.

Dimensions/mm						
DN	L	H	Stroke	R/Stroke	D	DIN/ISO 5210
10	150	208	10	5	140	F07/F10
15	150	208	10	5	140	F07/F10
20	160	250	16	8	180	F10
25	160	250	16	8	180	F10
32 ¹⁾	250	415	27	9	280	F10/F14
40	250	415	27	9	280	F10/F14
50	250	415	27	9	280	F10/F14
65 / 50	250	415	27	9	280	F10/F14

1) DN 32 not included in DIN-Standard.

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

Weights/kg and Kvs-values		
DN	BW	Kvs (m ³ /h)
10	4	2,3
15	4	3,4
20	6,9	6,2
25	6,9	7,9
32	23	20,0
40	23	24,1
50	23	28,3
65/50	23	28,3

- **Globe valves** ▪ High pressure globe valve HD 2000 ▪ 200 LM ▪ PN 500 ▪ DN 10-65
- **Globe valves** ▪ Lift check valve ▪ HD 2000 ▪ 240 MT ▪ PN 500 ▪ DN 10-65



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 ²⁾	590 ²⁾	600 ²⁾	610 ²⁾	620 ²⁾	630 ²⁾	640 ²⁾	650 ²⁾			
1.0460	500	550	550	550	550	550	550	518	463	389	315	300	285	270	255	240	213	177	146																				
1.5415	500	550	550	550	550	550	550	550	550	537	518	514	510	507	503	500	496	493	489	426	333	253	200	160															
1.7335	500	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	500	426	338	275	222	173	142	116											
1.7383 ²⁾	500	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	500	437	381	333	289	252	214	189	163	140	124								
1.4903 ²⁾	500	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550
1.4901 ²⁾	500	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550

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

2) For temperatures > 570 °C, stem in 1.4980 and high-temperature-packing.

- **Globe valves** ▪ High pressure globe valve HD 2000 ▪ 200 LM ▪ PN 500 ▪ DN 10-65
- **Globe valves** ▪ Lift check valve ▪ HD 2000 ▪ 240 MT ▪ PN 500 ▪ DN 10-65

Version

- Disc and stem in one piece
- Die-forged valve body
- Non-turning, rising stem
- Position indicator
- Throttle disc
- Yoke sleeve supported by needle bearings
- From DN 25 with bonnet-flange
- Angle pattern type available (202 LM)

Media

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

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

Materials

- 1.0460
- 1.4901
- 1.4903
- 1.5415
- 1.7335
- 1.7383

Further materials on request.

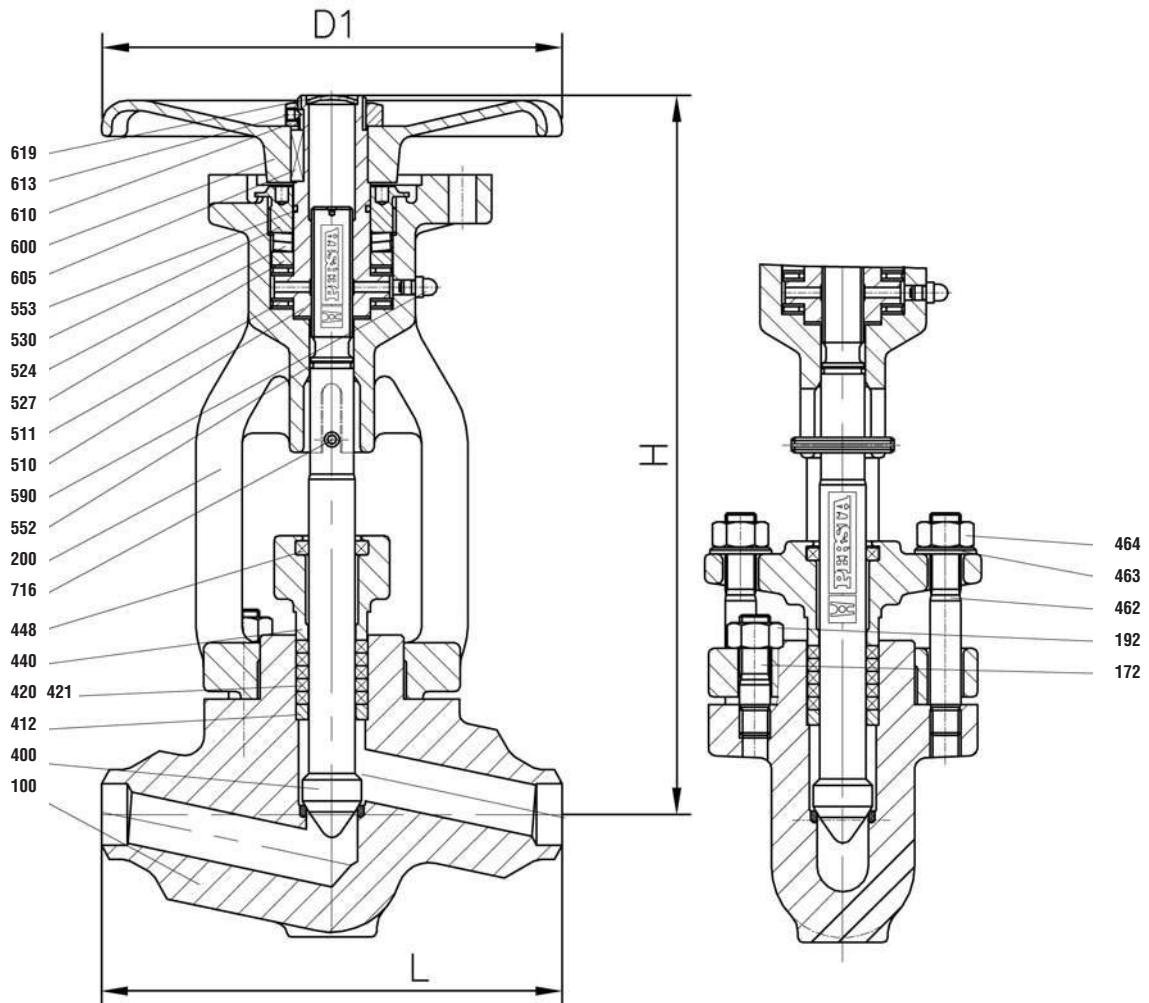
Design-Highlights

- 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

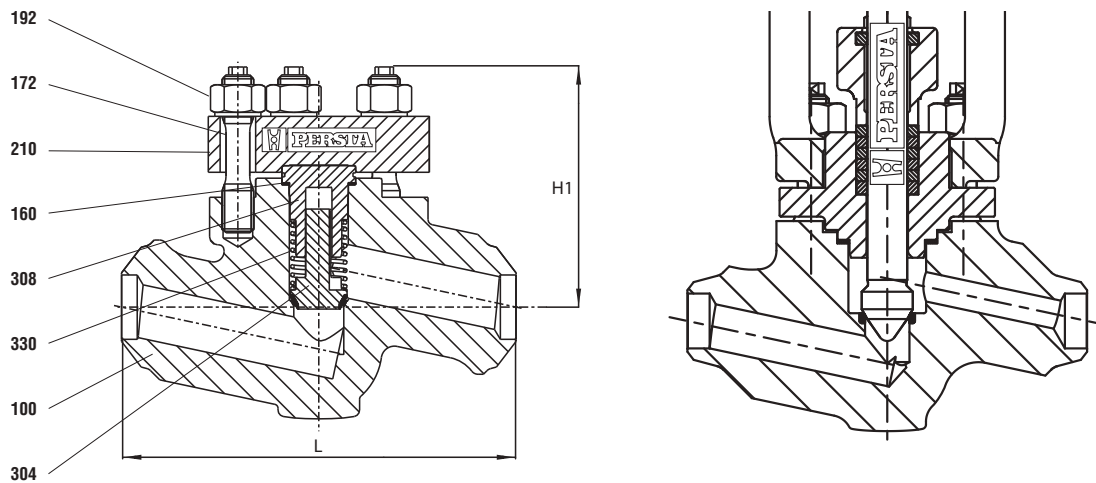
- No pressed in or screwed seat ring, therefore no crevice corrosion or loosening
- Damage between disc and stem due to high flowrates is prevented
- No bonnet gasket, therefore reduction of possible leakage areas
- To ease maintenance work, e.g. regrinding of the body seats
- Good emergency running 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
- **Globe valves** ▪ Lift check valve ▪ HD 2000 ▪ 240 MT ▪ PN 500 ▪ DN 10-65



240 MT Lift check valve

200 LJ with backseat



- **Globe valves** ▪ High pressure globe valve HD 2000 ▪ 200 LM ▪ PN 500 ▪ DN 10-65
- **Globe valves** ▪ Lift check valve ▪ HD 2000 ▪ 240 MT ▪ PN 500 ▪ DN 10-65

Materials							
Pos.	Component	1.0460 (21)	1.5415 (42)	1.7335 (44)	1.7383 (45) ²⁾	1.4903 (63) ²⁾	1.4901(66) ²⁾
100	Body welded on with	1.0460	1.5415	1.7335	1.7383	1.4903	1.4901
		Stellite	Stellite	Stellite	Stellite	Stellite	Stellite
160	▶ Gasket	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
172	▶ Stud	1.7709	1.7709	1.7709	1.7709	1.4923	1.4923
192	▶ Hexagonal nut	1.7218	1.7218	1.7218	1.7218	1.4923	1.4923
200	▶ Bonnet	1.7379	1.7379	1.7379	1.7379	1.7379	1.7379
210	▶ Bonnet	1.7380	1.7380	1.7380	1.7380	1.4903	1.4901
304	▶ Disc	1.4923	1.4923	1.4923	1.4923	1.4923	1.4923
308	▶ Guide bush	1.4923	1.4923	1.4923	1.4923	1.4980	1.4980
330	▶ Pressure spring	2.4669	2.4669	2.4669	2.4669	2.4699	2.4699
400	▶ Stem with disc	1.4122 ¹⁾	1.4122 ¹⁾	1.4122 ¹⁾	1.4122 ¹⁾²⁾	1.4122 ¹⁾²⁾	1.4122 ¹⁾²⁾
412	▶ Guide sleeve	0.7660	0.7660	0.7660	0.7660	0.7660	0.7660
420	▶ Packing	Pure graphite	Pure graphite	Pure graphite	Pure graphite	Pure graphite	Pure graphite
421	▶ Ring	Pure graphite	Pure graphite	Pure graphite	Pure graphite	Pure graphite	Pure graphite
440	▶ Gland flange	1.7379	1.7379	1.7379	1.7379	1.7379	1.7379
448	▶ Dirt scraper	Graphite plait	Graphite plait	Graphite plait	Graphite plait	Graphite plait	Graphite plait
462	▶ Stud	1.7709	1.7709	1.7709	1.7709	1.4923	1.4980
463	▶ Washer	St	St	St	St	St	St
464	▶ Hexagonal nut	1.7218	1.7218	1.7218	1.7218	1.4923	1.4923
510	▶ Yoke sleeve	CW 713 R	CW 713 R	CW 713 R	CW 713 R	CW 713 R	CW 713 R
511	▶ Bearing	WLS	WLS	WLS	WLS	WLS	WLS
524	▶ Spring	1.8159	1.8159	1.8159	1.8159	1.8159	1.8159
527	▶ Supporting ring	1.4021	1.4021	1.4021	1.4021	1.4021	1.4021
530	▶ Yoke nut	1.0460	1.0460	1.0460	1.0460	1.0460	1.4122
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	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
610	▶ Handwheel nut	St	St	St	St	St	St
613	▶ Screw pin	45H	45H	45H	45H	45H	45H
619	▶ Lock washer	St	St	St	St	St	St
716	▶ Tension pin	1.0904	1.0904	1.0904	1.0904	1.0904	1.0904

▶ Spare parts

1) Stem with stellite seats, on request
2) For temperatures > 570 °C, stem in 1.4980, body seat welded on integratedly with stellite and high-temperature-packing.

Dimensions/mm							
DN	L	H	H1	Stroke	R/Stroke	D	DIN/ISO 5210
10	150	228	99	10	5	140	F07 ¹⁾
15	150	228	99	10	5	140	F07 ¹⁾
20	180	280	122	16	8	225	F10
25	180	280	122	16	8	225	F10
32 ²⁾	300	445	182	27	9	360	F10/F14
40	300	445	182	27	9	360	F10/F14
50	300	445	182	27	9	360	F10/F14
65	360	563	208	36	12	450	F14/F16

1) Flange connection to be specified with the purchase order.
2) F10 connection is only possible together with a intermediate flange.

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

Weights/kg			
DN	BW 200 LM	BW 240 MT	Kvs (m ³ /h) 200 LM
10	6,0	3,8	2,3
15	6,0	3,8	3,4
20	11,5	7,7	6,2
25	11,3	7,7	7,9
32	47,5	28,8	20,0
40	47,0	28,8	24,1
50	46,5	36	28,3
65	107,0	72	48,5

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



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 ⁵⁾	590 ⁵⁾	600 ⁵⁾	
1.5415	400²⁾	400	400	400	400	400	400	348	312	296	286	278	272	178	135	107	85								
	630²⁾	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	380	364	356	348	330	295	250	198	155	116	87	71	58					
	630	630	630	630	630	630	630	612	575	561	544	533	468	391	310	253	204	159	130	106					
1.7383⁵⁾	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	612	595	575	490	426	369	320	276	235	202	174	149	129	113		
1.4903⁵⁾	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	228	207	188	169	149	130	114		
	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	365	332	302	271	239	208	182		
	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	160⁴⁾	160	160	160	160	160	150	145	141	139	137	132	128	100	79	70	61	52							
	250⁴⁾	250	250	250	250	250	250	235	227	220	217	215	206	184	154	124	108	95	81						
	320⁴⁾	320	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 than 400 °C is admissible if no intercrystalline corrosion has to be expected.

5) For temperatures > 570 °C, high-temperature-packing.

■ **Globe valves** ■ High pressure globe valve HD 92 ■ 200 BM ■ PN 630 (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

Pressure and temperature ratings

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

Materials

- 1.4571
- 1.4903
- 1.5415
- 1.7335
- 1.7383

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

Media

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

Fields of application

High temperature steam and water, refining (catalytic reformers and hydrocrackers), petrochemical and chemical industries

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 10-65/50

Materials

Pos.	Component	1.5415 (42) ³⁾	1.7335 (44)	1.7383 (45) ⁴⁾	1.4903 (63) ⁴⁾	1.4571 (82) ¹⁾²⁾
100	Body	1.5415	1.7335	1.7383	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	1.7383	1.7383	1.7383	1.7383	1.7383
400	▶ 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	0.7660	0.7660	0.7660	0.7660	0.7660
420	▶ Packing	Graphite	Graphite	Graphite ⁴⁾	Graphite ⁴⁾	Graphite
430	Gland ring	1.5415	1.5415	1.5415	1.5415	1.5415
440	Gland flange	1.7383	1.7383	1.7383	1.7383	1.7383
448	▶ Dirt scraper	Graphite	Graphite	Graphite	Graphite	Graphite
450	Grooved pin	1.4923	1.4923	1.4923	1.4923	A4-70
462	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	CW 713 R *	CW 713 R *	CW 713 R *	CW 713 R *	CW 713 R *
511	▶ Bearing	WLS	WLS	WLS	WLS	WLS
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
552	▶ Dirt scraper	Graphite	Graphite	Graphite	Graphite	Graphite
553	▶ 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
610	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 = 1.4571 / > 400 °C Pos. 172, 192, 464 = 1.4986
 2) Alternativ Pos. 205 = 1.4571
 3) From 450 °C Pos. 192 in 1.7709 or 1.4923
 4) For temperatures > 570 °C, hightemperature-packing

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 / 50 ²⁾	340	480	30	10	360

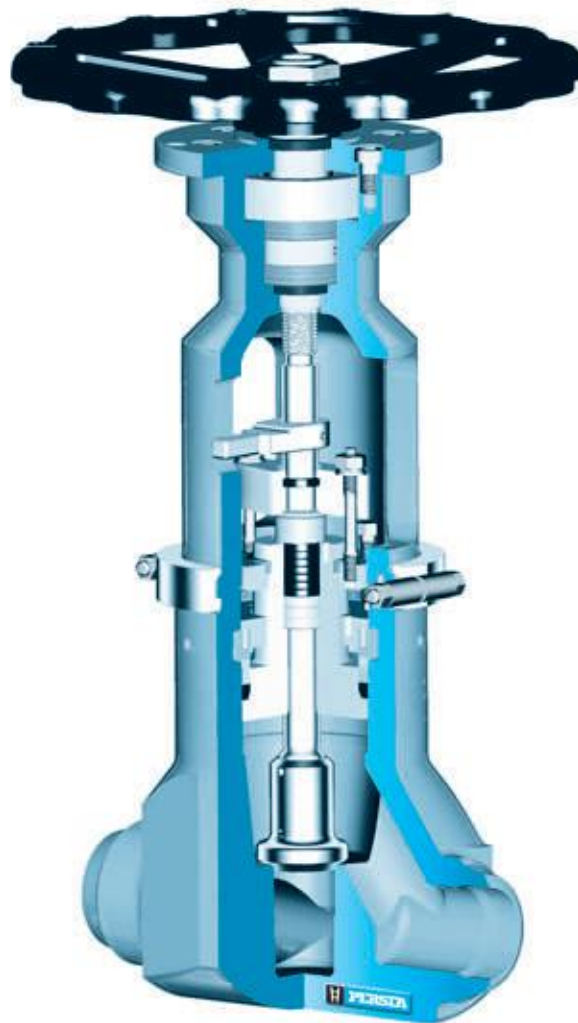
1) DN 32 not included in the DIN-Standard.
 2) Limited down to PN 320

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

Weights/kg and Kvs-values

DN	BW	Kvs (m ³ /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	60,0

- **Globe valves** ▪ High pressure globe valve DVA ▪ 200 AZ/BZ ▪ PD 25 ▪ DN 80-250



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				
1.7383	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.

■ **Globe valves** ■ High pressure globe valve DVA ■ 200 AZ/BZ ■ PD 25 ■ DN 80-250

Standard features

- Straight pattern
- 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
- 1.4903
- 1.5415
- 1.6368
- 1.7335
- 1.7383

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

Media

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

Fields of application

High temperature steam and water, refining (catalytic reformers and hydrocrackers), petrochemical and chemical industries

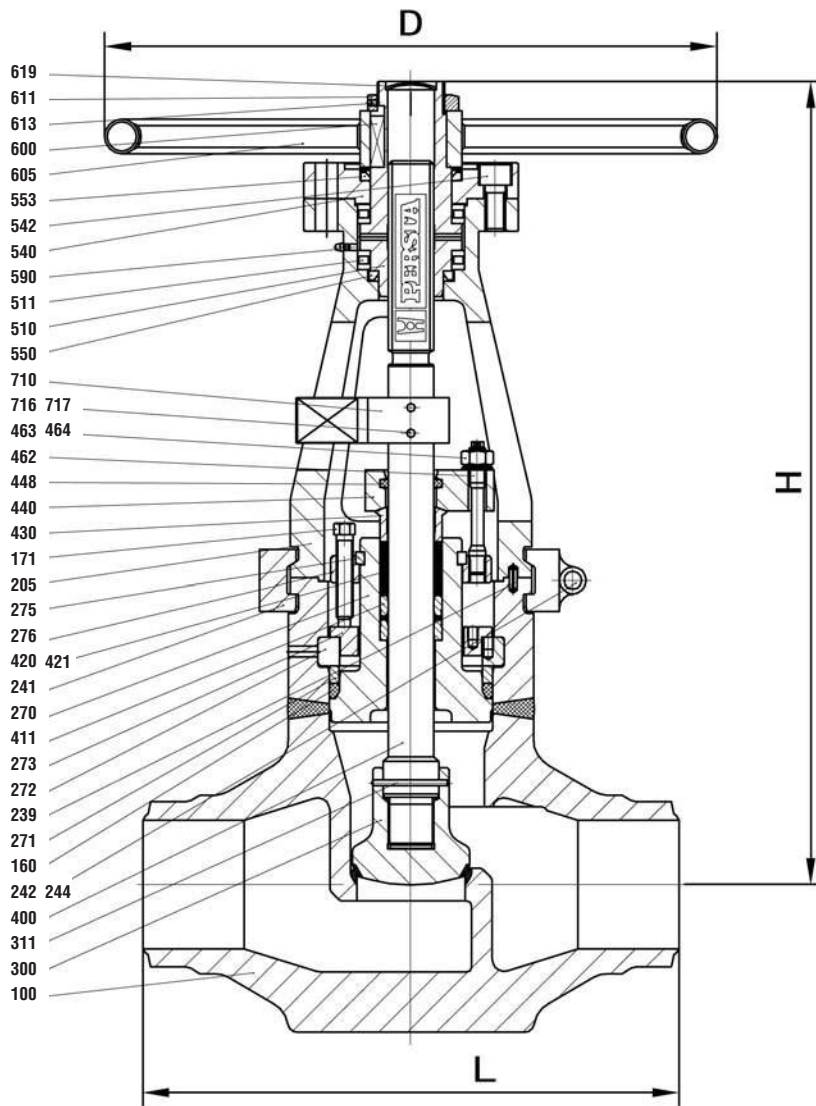
Design Highlights

- 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 actuators 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 80-250



■ **Globe valves** ■ High pressure globe valve DVA ■ 200 AZ/BZ ■ PD 25 ■ DN 80-250

Materials							
Pos.	Component	1.0460 (21)	1.5415 (42)	1.7335 (44)	1.7383 (45)	1.6368 (46)	1.4903 (63)
100	Body welded on with	1.0460 Stellite	1.5415 Stellite	1.7335 Stellite	1.7383 Stellite	1.6368 Stellite	1.4903 Stellite
160	▶ 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	1.7218	1.7218	1.7218	1.7218	1.7218	1.7218
270	Cover	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903
271	Ring	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903
272	Segment ring	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903
273	Cover	1.7383	1.7383	1.7383	1.7383	1.6368	1.7383
275	Ring	1.7383	1.7383	1.7383	1.7383	1.6368	1.4903
276	Flange	1.7383	1.7383	1.7383	1.7383	1.6368	1.4903
300	▶ Flat disc welded on with	1.0460 Stellite	1.5415 Stellite	1.7335 Stellite	1.7383 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
440	Gland flange	1.7383	1.7383	1.7383	1.7383	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	1.7218	1.7218	1.7218	1.7218	1.4923	1.4923
510	▶ Yoke sleeve	CW 713 R	CW 713 R	CW 713 R	CW 713 R	CW 713 R	CW 713 R
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
553	▶ 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

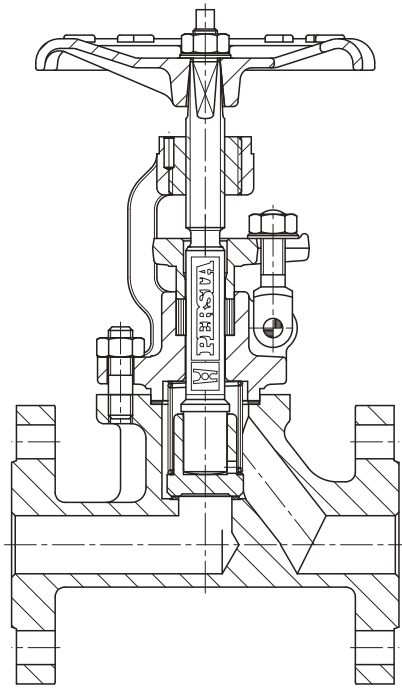
▶ Spare parts

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
250	750	1250		110

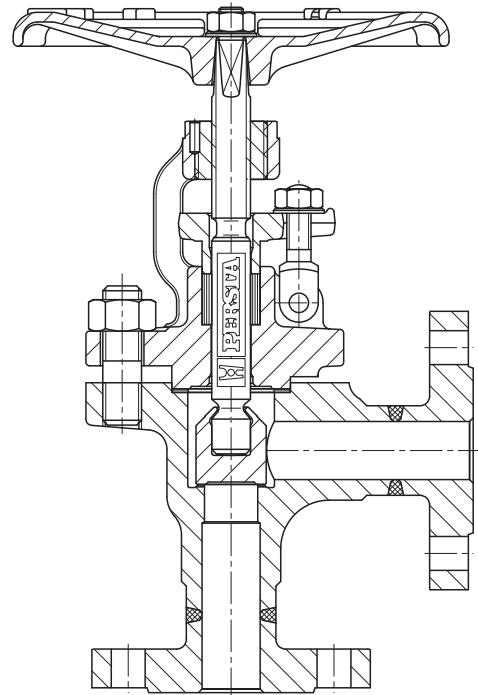
Weights/kg	
DN	BW
80	125
100	164
125	260
150	375
200	820
250	950

- **Globe valves**
- **Further standards**

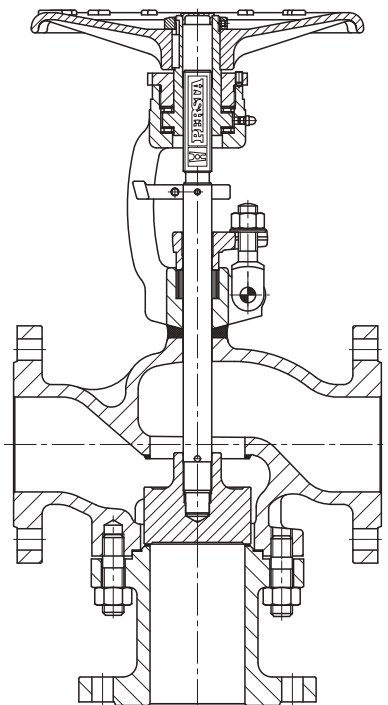
Screw down non return valve 240 ME



Angle globe valve 202 AE



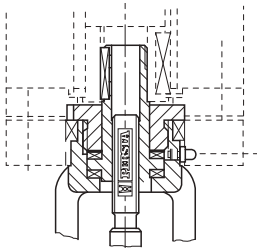
Changeover valve 203 EM



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

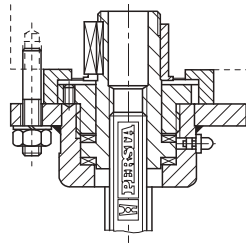
Universal Valve-Head

For subsequent assembly of E-actuators without welding



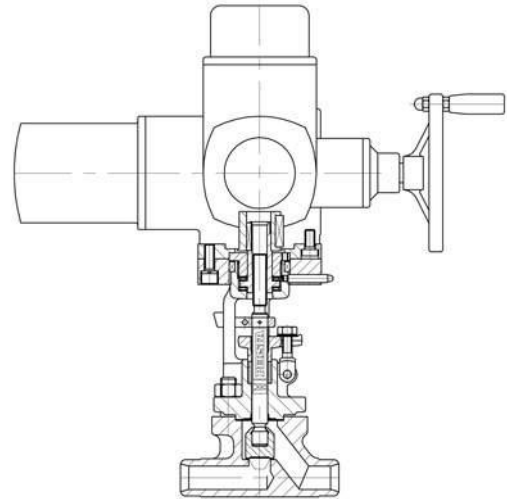
Assembly of E-actuators

Standard design DN 65



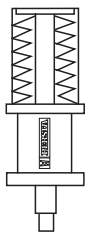
For running a particular limit of travel e.g. with air or current

Example



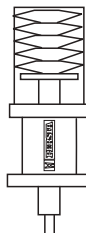
PERCON piston drive

Spring opening

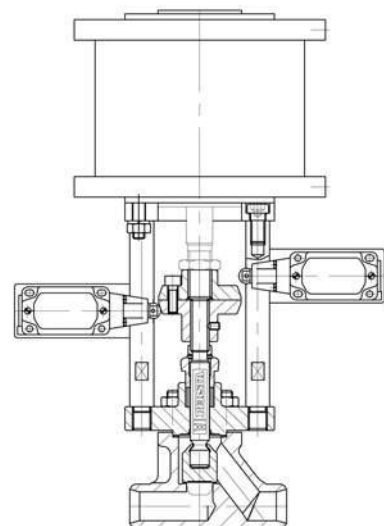


PERCON piston drive

Spring closing



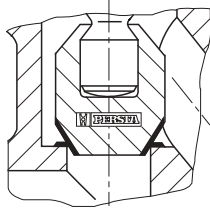
Example



■ **Globe valves** ■ **Variants**

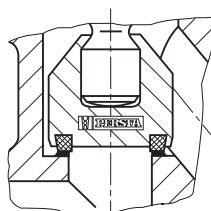
Disc with edge seat

For media with small quantities of impurities

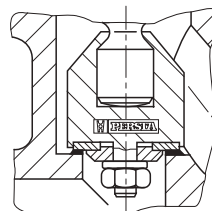


Disc with soft seat

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

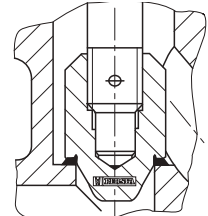


Disc with elastomer coated obturator E.g. with PTFE spacer ring for special media up to approx. 280 °C



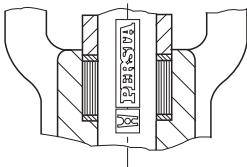
Control disc

Pinned down suitable for operating in intermediate position



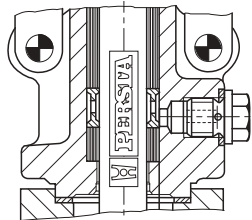
PTFE-stuffing box

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



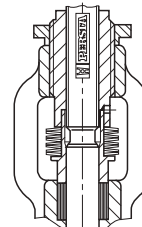
Stuffing box

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

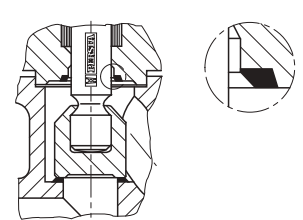


Stuffing box

With central cup spring tightening in order to minimize maintenance costs

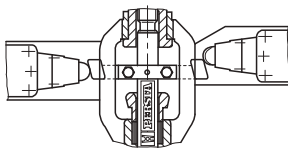


Hard faced back seat



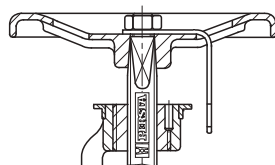
Limit switches

Can be supplied mechanically or inductively



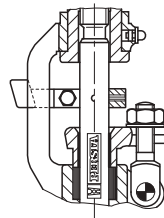
On-Off position indicator

With sheet metal bracket

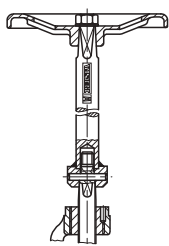


Non-rotating stem

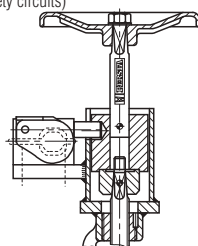
In order to reduce packing wear



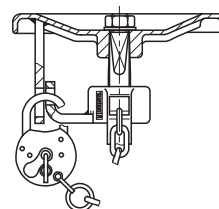
Stem extension



PERLOC system locking mechanism Also for interlocking mechanism (safety circuits)

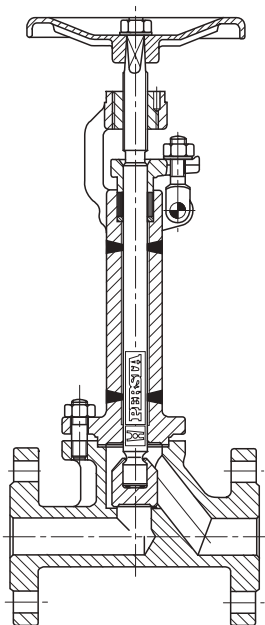


Locking mechanism with padlock

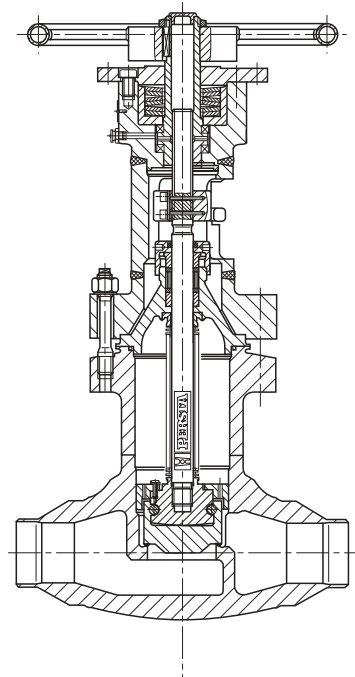


■ **Globe valves** ■ **Special valves**

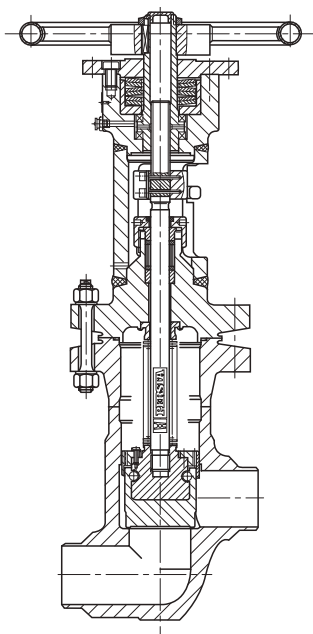
Globe valve with insulating section



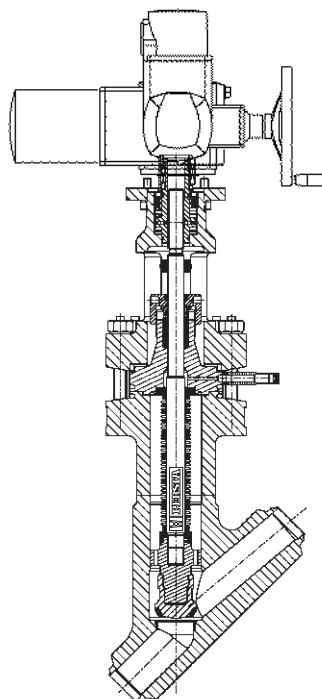
Monobloc valve



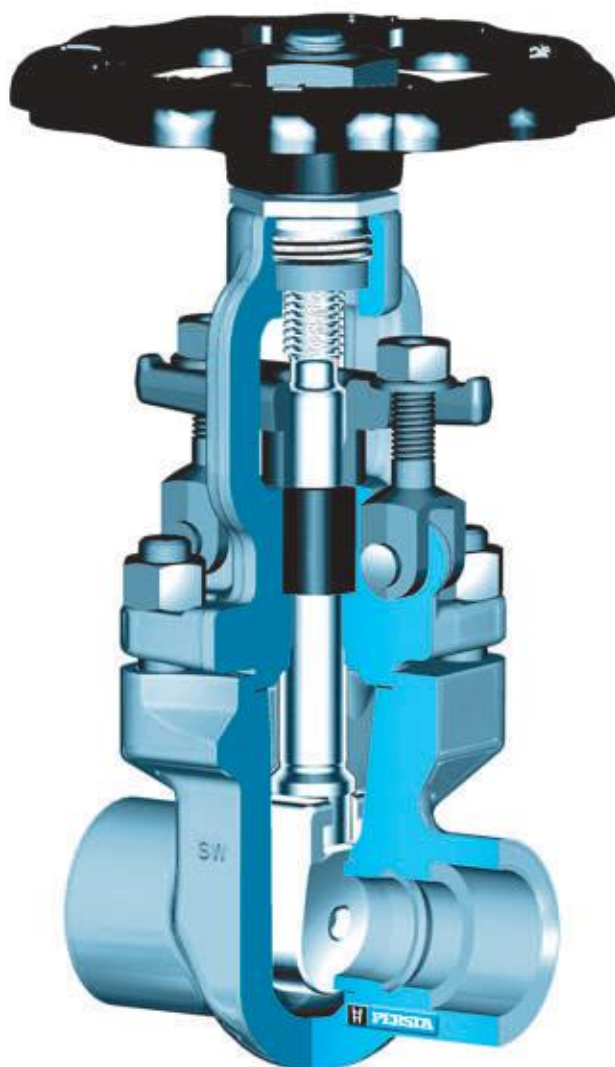
Monobloc-Z-valve



Bellow seal-Y-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	-200	-60	-10	20	120	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
- Wedge
- Outside screw and yoke
- Non-turning rising stem
- Available with flange, socket and butt-weld ends

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

Media

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

Fields of application

Chemical industries, power plants, ship building and other

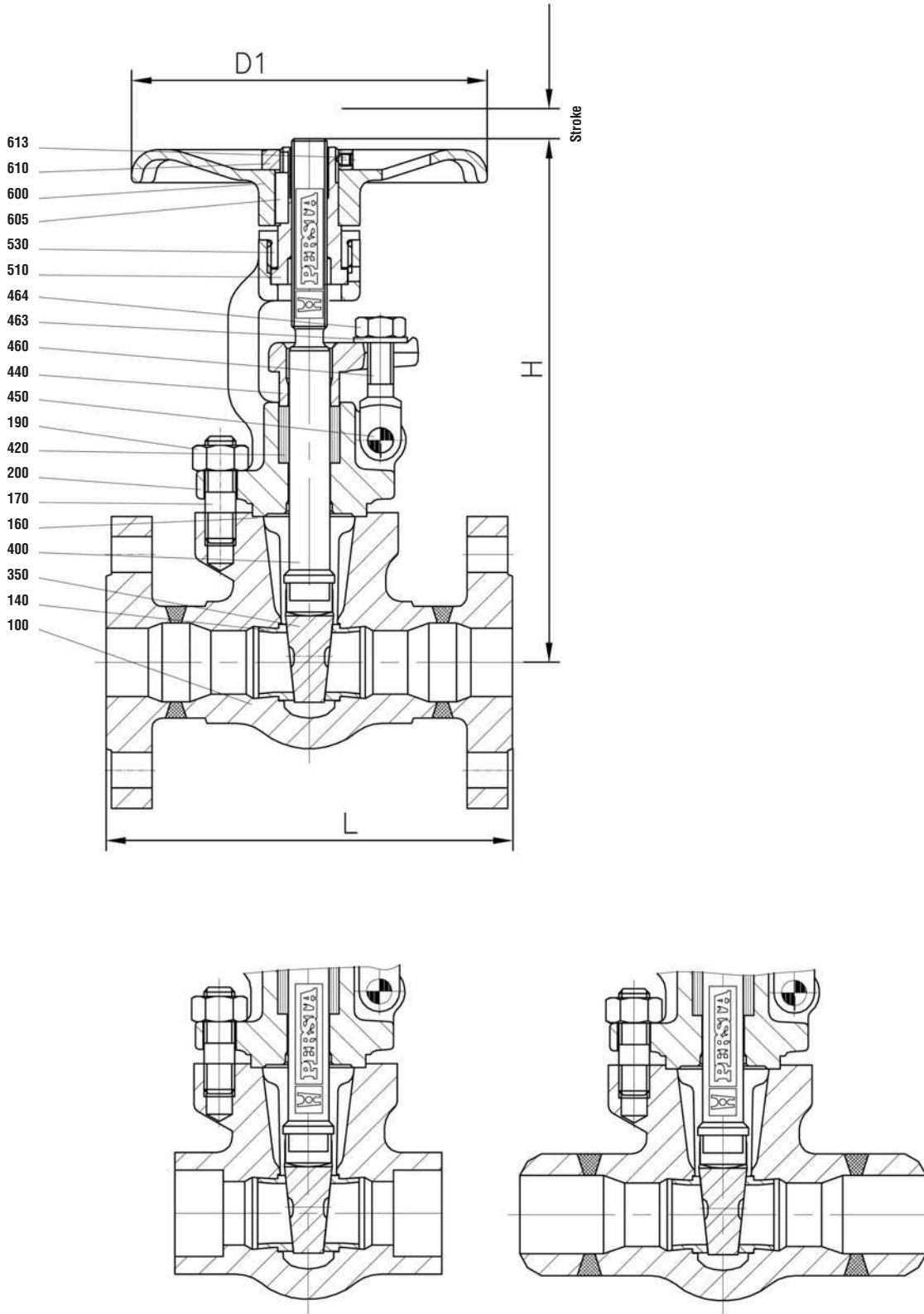
Design Highlights

- Die-forged valve body 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

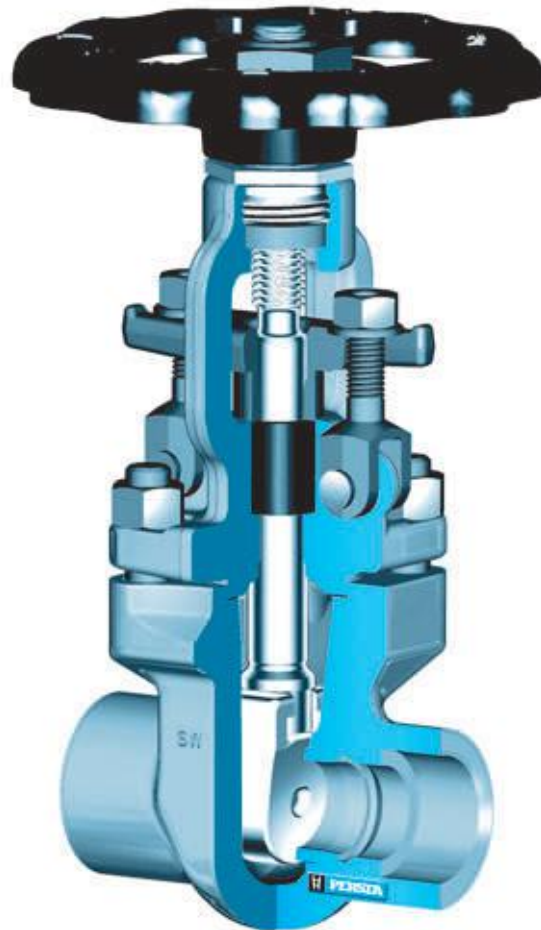


■ Gate valves ■ Small gate valve ■ 808 GJ ■ PN 10-100 ■ DN 10-40

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	1.7218	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
610	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	FL 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

		Admissible operating pressure [bar] at design temperature [°C] ¹⁾											
Material	PN	-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.

		Admissible operating pressure [bar] at design temperature [°C] ¹⁾														
Material		-29	38	93,5	149	204,5	260	315,5	343,5	371	399	426,5	454,5	482	510	538
ASTM A 105	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)**

Version

- Die-forged body and bonnet
- Full bore
- Wedge
- Outside screw and yoke
- Non-turning rising stem
- Available with flange, socket and butt-weld ends

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

Media

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

Fields of application

Chemical industries, power plants, ship building and other

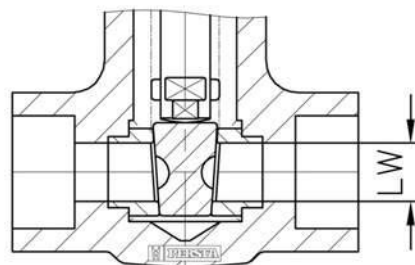
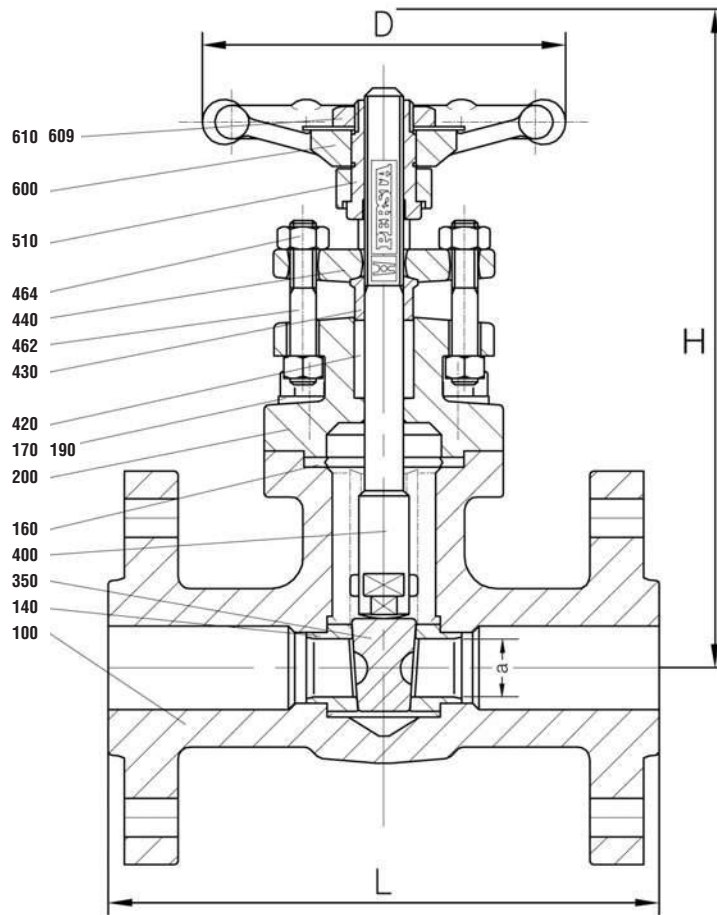
Design Highlights

- Die-forged valve body 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
440	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
610	Hexagonal pipe nut	St	St

▶ Spare parts

Dimensions/mm				
808 GJ NPS	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 NPS	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
20	150	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 NPS	SM	Kvs (m3/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 NPS	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



Pressure rate table acc. DIN 2401

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

Material	PN	-60	-10	20	120	150	200	250	300	350	400	425	450	475	500	510	520	530	540	550	
1.0619	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 ²⁾	10,0	10,0	10,0	9,6	8,8	8,1	6,9	6,3	5,0											
	16	16,0	16,0	16,0	15,3	14,0	13,0	11,0	10,0	8,0											
	25	25,0	25,0	25,0	23,9	22,0	20,0	17,0	16,0	13,0											
	40	40,0	40,0	40,0	38,1	35,0	32,0	28,0	24,0	21,0											
	63	63,0	63,0	63,0	58,1	50,0	45,0	40,0	36,0	32,0											
1.0566 ^{3,4)}	100	100,0	100,0	100,0	92,5	80,0	70,0	60,0	56,0	50,0											
	10 ²⁾	10,0	10,0	10,0	10,0	9,0	8,0	7,0													
	16 ²⁾	16,0	16,0	16,0	16,0	15,0	14,0	13,0	11,0												
	25 ²⁾	25,0	25,0	25,0	25,0	24,0	22,0	20,0	17,0												
	40 ²⁾	40,0	40,0	40,0	40,0	39,0	35,0	31,0	28,0												
	63 ²⁾	63,0	63,0	63,0	63,0	61,0	55,0	49,0	44,0												
1.5415	100 ²⁾	100,0	100,0	100,0	100,0	96,0	88,0	79,0	70,0												
	10 ²⁾	10,0	10,0	10,0	10,0	10,0	10,0	8,8	8,0	7,6	7,2	6,8									
	16 ²⁾	16,0	16,0	16,0	16,0	16,0	16,0	14,1	12,8	12,2	11,5	10,9									
	25	25,0	25,0	25,0	25,0	25,0	25,0	22,0	20,0	19,0	18,0	17,0									
	40	40,0	40,0	40,0	40,0	40,0	40,0	35,0	31,0	30,0	29,0	28,0									
	63	63,0	63,0	63,0	63,0	63,0	63,0	56,0	50,0	47,0	46,0	45,0									
1.7335	100	100,0	100,0	100,0	100,0	100,0	100,0	87,0	78,0	74,0	72,0	70,0									
	10 ²⁾	10,0	10,0	10,0	10,0	10,0	10,0	9,6	9,2	8,8	8,4	8,0	7,2	6,0	4,8	3,6					
	16 ²⁾	16,0	16,0	16,0	16,0	16,0	16,0	15,4	14,7	14,1	13,4	12,8	11,5	9,6	7,7	5,8					
	25	25,0	25,0	25,0	25,0	25,0	25,0	24,0	23,0	22,0	21,0	20,0	18,0	15,0	12,0	9,0					
	40	40,0	40,0	40,0	40,0	40,0	40,0	38,0	36,0	35,0	34,0	33,0	29,0	24,0	19,0	15,0					
	63	63,0	63,0	63,0	63,0	63,0	63,0	61,0	58,0	57,0	56,0	53,0	47,0	40,0	32,0	25,0					
1.7383	100	100,0	100,0	100,0	100,0	100,0	100,0	95,0	91,0	89,0	87,0	82,0	74,0	62,0	49,0	38,0					
	10 ²⁾	10,0	10,0	10,0	10,0	10,0	10,0	9,5	9,1	8,9	8,7	8,3	7,4	6,3	5,0	4,4	3,8	3,3			
	16 ²⁾	16,0	16,0	16,0	16,0	16,0	16,0	15,2	14,6	14,2	13,9	13,2	11,8	10,0	7,9	7,0	6,0	5,2			
	25 ²⁾	25,0	25,0	25,0	25,0	25,0	25,0	23,8	22,8	22,3	21,8	20,6	18,4	15,6	12,4	10,9	9,4	8,1			
	40 ²⁾	40,0	40,0	40,0	40,0	40,0	40,0	38,0	36,4	35,6	34,8	33,0	29,5	25,0	19,8	17,4	15,1	13,0			
	63 ²⁾	63,0	63,0	63,0	63,0	63,0	63,0	60,8	58,2	57,0	55,7	52,8	47,2	40,0	31,7	27,8	24,2	20,8			
100 ²⁾	100,0	100,0	100,0	100,0	100,0	100,0	95,0	91,0	89,0	87,0	82,5	73,8	62,5	49,5	43,5	37,8	32,5				

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

2) Pressure rating not applicable in design code

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

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

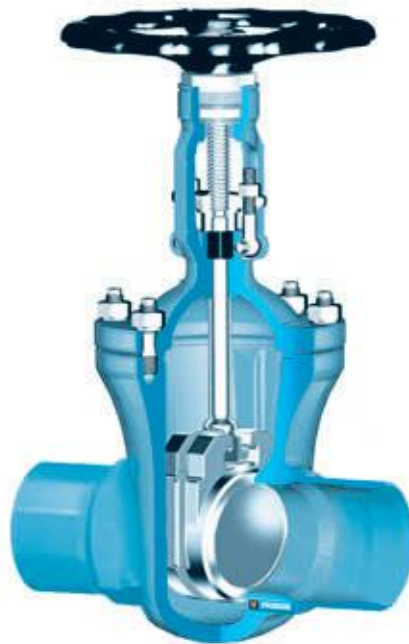


Pressure rate table acc. DIN EN 1092-1

Material	PN	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																										
		-10	20	50	100	150	200	250	300	350	400	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	
1.0619	16	160	160	160	148	140	133	121	110	102	95	52																
	25	250	250	250	232	220	208	190	172	160	148	82																
	40	400	400	400	371	352	333	304	276	257	238	131																
1.0460	10	100	100	100	92	88	83	76	69	64	59	32																
	16	160	160	160	148	140	133	121	110	102	95	52																
	25	250	250	250	232	220	208	190	172	160	148	82																
	40	400	400	400	371	352	333	304	276	257	238	131																
	63	630	630	630	585	555	525	480	435	405	375	207																
100	1000	1000	1000	928	880	833	761	690	642	595	328																	
1.5415	10	100	100	100	100	100	100	97	85	80	74	69	64	59	54	49	44	35	28	22								
	16	160	160	160	160	160	160	156	137	129	119	110	102	94	86	78	70	56	44	35								
	25	250	250	250	250	250	250	244	214	202	186	172	160	147	135	123	110	88	70	55								
	40	400	400	400	400	400	400	390	342	323	299	276	256	236	216	197	177	140	112	89								
	63	630	630	630	630	630	630	615	540	510	471	435	403	372	341	310	279	222	177	141								
100	1000	1000	1000	1000	1000	1000	976	857	809	747	690	640	591	542	492	442	352	280	223									
1.7335	10	100	100	100	100	100	100	100	95	90	84	80	76	72	68	65	55	44	37	29	23	19	15					
	16	160	160	160	160	160	160	160	152	144	134	128	121	115	108	104	88	71	59	46	37	30	25					
	25	250	250	250	250	250	250	250	238	225	210	200	190	180	170	163	138	111	93	72	58	47	39					
	40	400	400	400	400	400	400	400	380	360	337	320	304	288	272	260	220	179	148	116	93	76	62					
	63	630	630	630	630	630	630	630	600	567	531	505	479	454	428	411	348	282	234	183	147	120	99					
100	1000	1000	1000	1000	1000	1000	1000	952	900	842	802	761	720	680	652	552	447	371	290	233	190	157						
1.7383	10	100	100	100	100	100	100	100	97	92	88	83	78	73	69	64	56	49	42	37	32	27	24	20	18	16		
	16	160	160	160	160	160	160	160	156	148	140	133	125	118	110	102	89	78	68	59	51	44	38	33	28	25		
	25	250	250	250	250	250	250	250	244	232	220	208	196	184	172	160	140	122	107	92	80	69	60	52	45	40		
	40	400	400	400	400	400	400	400	390	371	352	333	314	295	276	257	224	196	171	148	129	110	97	83	72	64		
	63	630	630	630	630	630	630	630	615	585	555	525	495	465	435	405	354	309	270	234	204	174	153	132	114	102		
100	1000	1000	1000	1000	1000	1000	1000	976	928	880	833	785	738	690	642	561	490	428	371	323	276	242	209	180	161			

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

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



Pressure rate table only valid for buttweild ends

		Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																
Material	PD	-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			
1.0460	1,0	100	100	100	100	97	85	75	64	59	49	46	44	42	39	35	29	24																
	1,6	160	160	160	160	151	132	118	102	95	76	73	69	65	61	54	45	37																
	2,5	250	250	250	250	245	215	192	161	148	124	118	112	106	100	88	74	61																
	4,0	400	400	400	400	395	346	309	276	238	200	190	180	171	161	142	119	98																
	6,3	630	630	630	630	603	527	471	405	375	305	290	275	260	245	217	181	149																
	10,0	1000	1000	1000	1000	940	820	740	642	595	480	450	430	410	380	340	280	230																
1.0566 ²⁾	1,0	100	1021	1021	100	100	90	80	70																									
	1,6	160	163	163	160	150	140	130	110																									
	2,5	250	255	255	250	240	220	200	170																									
	4,0	400	408	408	400	390	350	310	280																									
	6,3	630	643	643	630	610	550	490	440																									
	10,0	1000	1021	1021	1000	960	880	790	700																									
1.5415	1,0	120	120	120	120	115	106	91	88	85	84	83	83	82	82	81	80	80	70	54	41	33	26											
	1,6	190	190	190	190	179	165	142	137	132	131	130	129	128	127	126	125	125	109	85	65	51	41											
	2,5	300	300	300	300	291	268	230	222	215	213	212	210	209	207	205	204	202	177	138	105	83	66											
	4,0	480	480	480	480	470	432	371	358	346	344	341	339	336	334	331	329	326	285	222	169	133	107											
	6,3	770	770	770	770	716	659	565	546	527	524	520	516	512	509	505	501	497	434	339	258	203	163											
	10,0	1200	1200	1200	1200	1120	1030	880	850	820	820	810	810	800	790	790	780	780	680	530	400	320	250											
1.7335	1,0	120	120	120	120	120	121	112	106	100	98	97	96	95	94	93	92	92	91	83	70	55	45	36	28	23	19							
	1,6	190	190	190	190	189	175	165	156	154	152	150	148	146	145	144	143	142	129	109	86	70	57	44	36	29								
	2,5	300	300	300	300	300	300	284	268	253	250	247	244	241	238	236	235	233	232	210	177	140	114	92	72	59	48							
	4,0	480	480	480	480	480	480	457	433	408	403	398	393	388	383	381	378	376	373	339	285	225	184	148	116	95	77							
	6,3	770	770	770	770	770	753	697	659	622	614	606	599	591	584	580	576	573	569	516	434	344	280	226	176	145	118							
	10,0	1200	1200	1200	1200	1200	1180	1090	1030	970	960	950	940	920	910	910	900	890	890	810	680	540	440	350	280	230	180							
1.7383	1,0	120	120	120	120	120	120	112	106	104	103	102	101	100	98	97	96	92	82	71	62	54	47	41	35	31	27	23	20					
	1,6	190	190	190	190	190	190	170	170	160	160	160	160	160	150	150	150	140	130	110	100	80	70	60	50	40	30							
	2,5	300	300	300	300	300	300	280	270	270	260	260	260	250	250	250	240	230	210	180	160	140	120	100	90	80	70	60	50					
	4,0	480	480	480	480	480	480	460	430	430	420	420	410	410	400	400	390	380	330	290	250	220	190	170	140	130	110	90	80					
	6,3	770	770	770	770	770	770	750	700	660	650	640	640	630	620	610	610	600	570	510	440	390	340	290	260	220	190	170	140	130				
	10,0	1200	1200	1200	1200	1200	1180	1090	1030	1020	1010	990	980	970	960	960	940	940	880	790	690	610	530	460	400	340	300	260	220	200				

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

2) At temperatures > 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.

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

Standard features

- Split wedge = Type 700 JJ
- Flexible wedge = Type 700 HJ
- Die-forged body and bonnet
- Full bore, exception DN 65/50 and DN 125/100
- Outside screw and yoke
- Non turning, rising stem
- Yoke sleeve
- Available with flange and buttweld ends

Option Version 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

Materials

- 1.0460
- 1.0619 just for flange type PN 10-40
- 1.0566
- 1.5415
- 1.7335
- 1.7383

Further materials on request

Media

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

Fields of application

Chemical industries, power plants, ship building and other

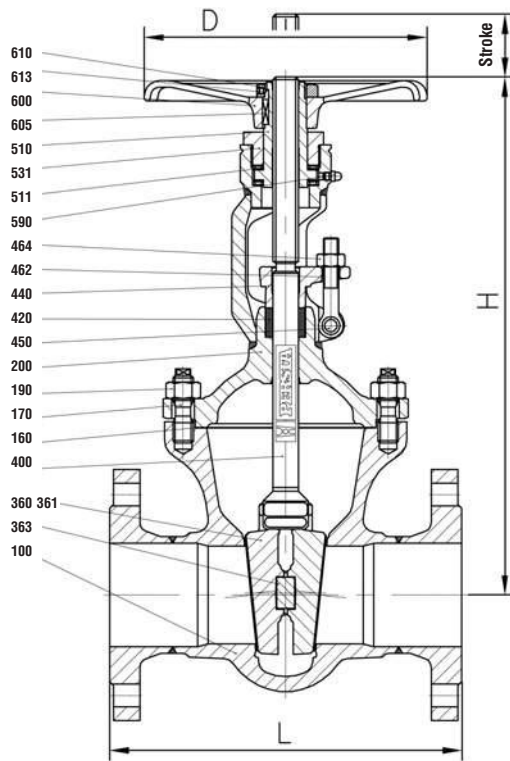
Design Highlights

- The main valve body is one-piece die-forged incorporating the bonnet flange and the guide for the shut-off device
- Hard faced seats (valve body and shut-off device). Hardness app. 35-37 HRC
- Bolted bonnet with reduced shaft bolts
- Full bore, except DN 65/50 and DN 125/100
- Non - turning rising stem
- Type GA, turning non-rising stem

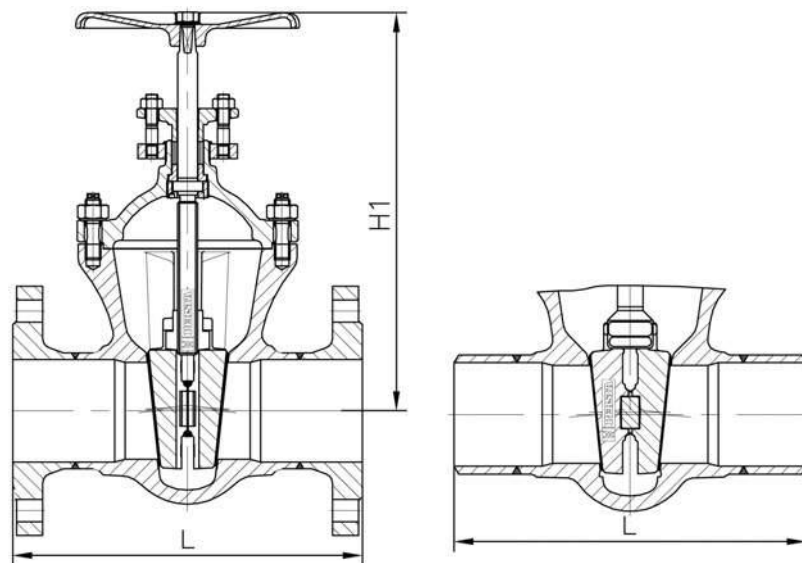
Benefits

- 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
- Extremely resistant to wear
- To improve the stress capability when temperature and pressure fluctuate
- No reduction in seat area
- Minimum wear to the gland packing compared with ground stem surfaces
- Small dimensions

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



700 GA

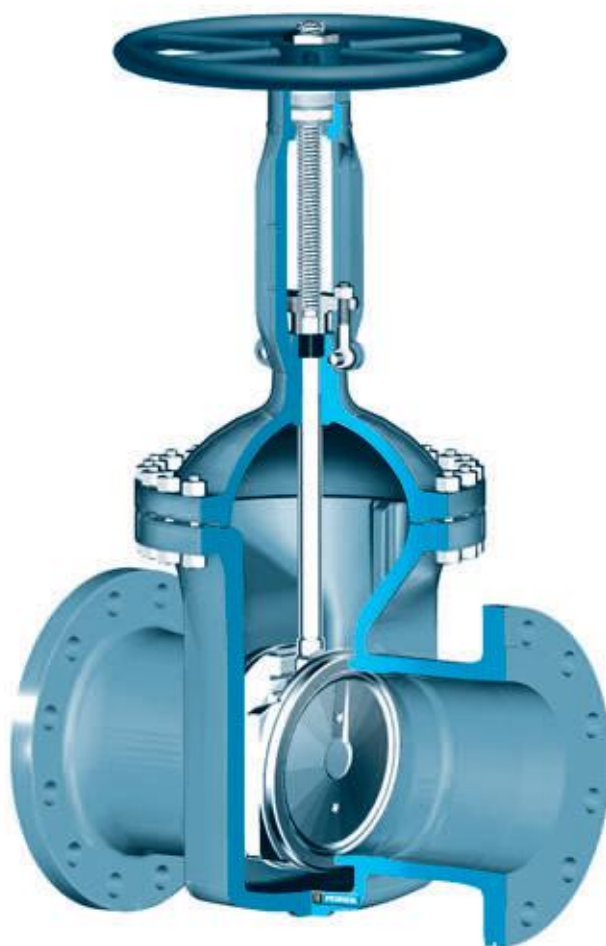


■ Gate valves ■ Gate valve ■ 700 HJ/JJ (GA ■ PN 10-40) ■ PN 10-100 ■ DN 50-150

Materials							
Pos.	Component	1.0619 (11) PN 10-40	1.0460 (21)	1.0566 (25)	1.5415 (42)	1.7335 (44)	1.7383 (45)
100	Body	1.0619 ¹⁾	1.0460 ¹⁾	1.0566 ¹⁾	1.5415 ²⁾	1.7335 ²⁾	1.7383 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	1.7218	1.7218	A4-70	1.7218	1.7218	1.7218
200	Bonnet	1.0460	1.0460	1.0566	1.5415	1.7335	1.7383
360/361	▶ Disc	1.0460 ³⁾	1.0460 ³⁾	1.0566 ³⁾	1.5415 ²⁾	1.7335 ²⁾	1.7383 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
450	Grooved pin	St	St	1.4571	St	St	St
462	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
531	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
610	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								Weights/kg and Kvs-values												
PN DN							700 GA		GS-C25N				700 GA				Kvs (m ³ /h)			
	10-25 L	40-100 L	10-40 H	63-100 H	Stroke	10-40 D	63-100 D	H1	10-25 FL	40 FL	10-25 FL	40 FL	63 FL	100 FL	10-40 BW	63-100 BW		10-25 FL	40 FL	10-40 BW
50	250	250	337	337	63	180	180	280	21,5	21,5	19,0	19,0	23,5	26,5	15,0	15,5	19,0	19,0	15,0	258,0
65 / 50	270	290	337	337	63	180	180	280			21,0	21,0	26,0	30,5	15,5	16,0	21,0	21,0	28,0	258,0
80	280	310	410	410	90	225	225	345	40,0	40,0	35,0	35,0	40,5	45,0	28,0	31,0	35,0	35,0	28,0	628,0
100	300	350	455	505	110	280	360	405	57,0	61,5	50,0	54,0	63,0	71,0	43,0	47,0	50,0	54,0	43,0	991,0
125 / 100	325	400	455	505	110	280	360	405			53,5	59,0	74,0	89,0	45,0	49,0	53,0	59,0	45,0	991,0
150	350	450	655	685	165	360	450	525	114,0	120,0	92,0	98,0	138,0	155,0	80,0	100,0	92,0	98,0	80,0	2323,0

▪ 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	120	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	16	15	14	13	11			
	25	25	25	25	25	24	22	20	17			
	40	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

- Split wedge = Type 700 JJ
- Flexible wedge = Type 700 HJ
- Die-forged body and bonnet
- Full bore
- Outside screw and yoke
- Non-turning rising stem
- Yoke sleeve
- Available with flange and butt-weld ends

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

Media

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

Fields of application

Chemical industries, power plants, ship building and other

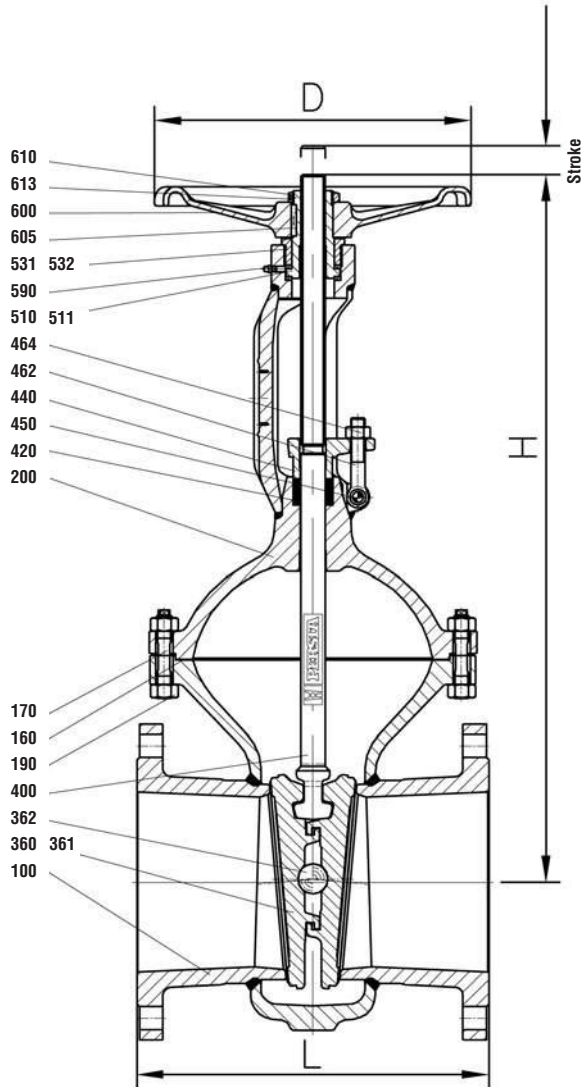
Design Highlights

- Die-forged body and bonnet
- Hard faced seats (valve body and shut-off device)
Hardness app. 35-37 HRC
- Bolted bonnet with reduced shaft bolts
- Full bore
- Non-turning, rising stem
- Type GA, rotating non-rising stem
- Possibility to add an actuator-flange

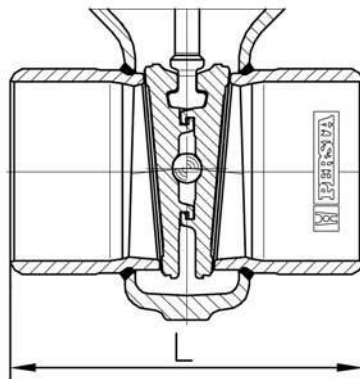
Benefits

- Free from porosity and shrink holes
- Extremely resistant to wear
- To improve the stress capability when temperature and pressure fluctuate
- No reduction at seat area
- Minimum wear to the gland packing compared with ground stem surfaces
- Small dimensions
- Simple retrofitting of an actuator possible

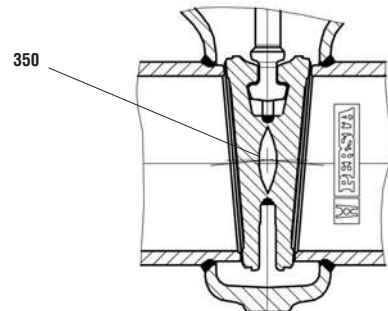
▪ Gate valves ▪ Gate valve ▪ 700 HJ/JJ (GA) ▪ PN 10-40 ▪ DN 200-250



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
170	Stud	1.1181	A4-70
190	Hexagonal nut	1.1181	A4-70
200	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
450	Grooved pin	St	1.4571
462	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	WLS _t
531	▶ 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
610	Hexagonal pipe nut	St	St
613	Screw pin	45H	45H
	▶ Spare parts		
	3) Welded on with 18/8		
	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		

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

Weights/kg and Kvs-values					
DN	FL PN 10-25	FL PN 40	BW PN 10-25	BW PN 40	Kvs (m ³ /h)
	200	151,5	185	140	
250	285,0	325	245	280	6247
700 GA DN					
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	-60	-10	20	120	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													
1.5415	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					
1.7383	63	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	100	98	96	94	85,0	82	74	62	53	43	39	33	27	23	19	17	15		

1) Betriebstemperatur = Berechnungstemperatur minus Temperaturzuschlag nach Regelwerk.

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

Standard features

- Split wedge = Type 700 JJ
- Flexible wedge = Type 700 HJ
- Die-forged body and bonnet
- Full bore
- Outside screw and yoke
- Non-turning, rising stem
- Yoke sleeve
- Available with flange and buttweld ends

Pressure and temperature ratings

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

Materials

- 1.0460
- 1.5415
- 1.7335
- 1.7383

For low temperature service available as casting.
Other materials on request.

Fields of application

Chemical industries, power plants, ship building and other

Media

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

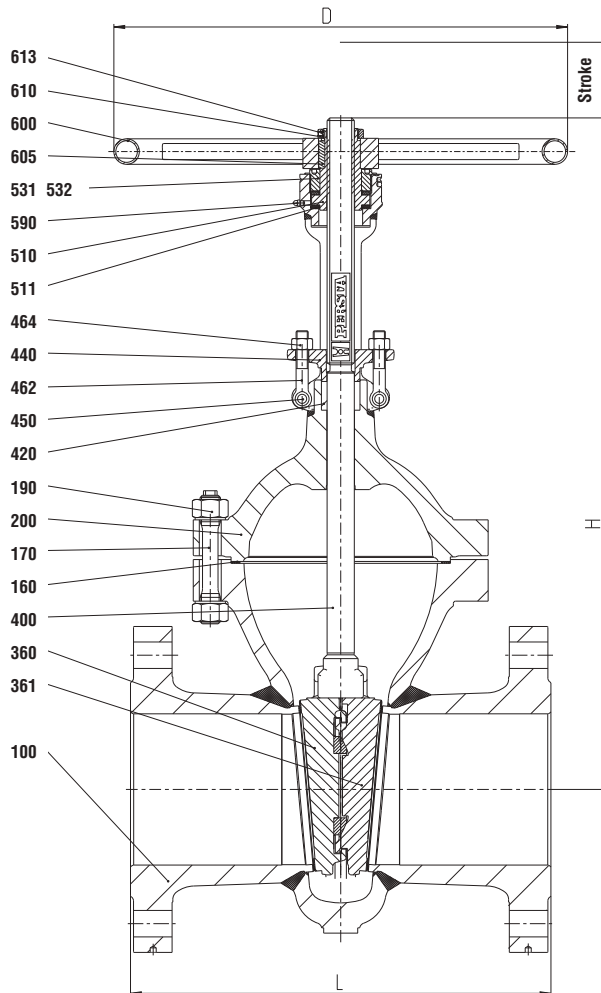
Design Highlights

- Die-forged body and bonnet
- Hard faced seats (valve body and shut-off device)
- Gasket located in gap
- Full bore
- Non-rising stem

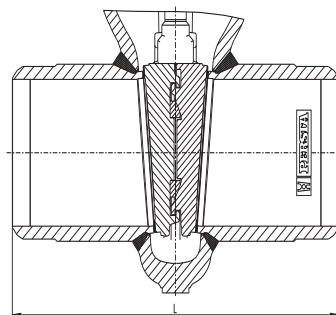
Benefits

- Free from porosity and shrink holes
- Extremely resistant to wear
- Blow out protection
- No reduction in seat area
- Minimum wear to the gland packing compared with ground stem surfaces

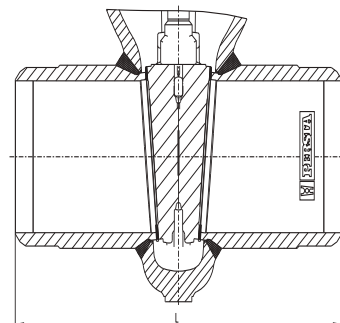
▪ Gate valves ▪ Gate valve ▪ 700 HJ/JJ ▪ PN 63-100 ▪ DN 200-300



700 JJ



700 HJ



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

Materials					
Pos.	Component	1.0460 (21)	1.5415 (42)	1.7335 (44)	1.7383 (45)
100	Body	1.0460	1.7383/1.5415	1.7383/1.7335	1.7383
160	▶ Seat ring	Grooved with graphite layer	Grooved with graphite layer	Grooved with graphite layer	Grooved with graphite layer
170	Stud	1.7709	1.7709	1.7709	1.7709
190	Hexagonal nut	1.7218	1.7218	1.7218	1.7218
200	Bonnet	1.7383	1.7383	1.7383	1.7383
360/361	▶ Disc	1.7383 ⁴⁾	1.7383	1.7383 ¹³⁾	1.8507 ³⁾
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
450	Grooved pin	St ⁶⁾	St ⁶⁾	St ⁶⁾	St ⁶⁾
462	Eye bolt	1.1181 ⁵⁾	1.1181 ⁵⁾	1.1181 ⁵⁾	1.1181 ⁵⁾
464	Hexagonal nut	1.1181 ⁹⁾	1.1181 ⁹⁾	1.1181 ⁹⁾	1.1181 ⁹⁾
510	▶ Yoke sleeve	1.0718 ⁸⁾	1.0718 ⁸⁾	1.0718 ⁸⁾	1.0718 ⁸⁾
511	▶ Roller bearing	WLS1 ⁷⁾	WLS1 ⁷⁾	WLS1 ⁷⁾	WLS1 ⁷⁾
531	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	St	St	St	St
605	Key	1.0060	1.0060	1.0060	1.0060
610	Handwheel nut	St	St	St	St
613	Screw pin	45H	45H	45H	45H
	▶ Spare parts				
	1)	≥ DN 250 = 1.7383 welded on with Stellite			
	2)	welded on with Cr17			
	3)	welded on with Stellite			
	4)	≥ DN 250 = 1.0460 welded on with Cr17			
	5)	≥ DN 250 = 1.7709			
	6)	≥ DN 250 = 1.7218			
	7)	≥ DN 250 = Roller bearing			
	8)	≥ DN 250 = CW 713 R			
	9)	≥ DN 250 = 1.7218			

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

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

▪ Gate valves ▪ Gate valve ▪ 400 JJ ▪ PN 63-100 ▪ DN 350-700



Range of application

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

Material	PN	-10	20	120	150	200	250	300	350	400	450	475	480	500	510	520	530	540	550	560	570	580	590	600	
1.0425	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												
1.5415	63	63	63	63	63	63	63	56	50	47	45	37,0	35	29	22	16	14								
	100	100	100	100	100	100	87	78	74	74	70	57,0	54	45	34	27	22								
1.7335	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	95	91	87	82,0	80	74	62	49	38	31	24	19	16						
1.7383	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	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.

■ **Gate valves** ■ Gate valve ■ 400 JJ ■ PN 63-100 ■ DN 350-700

Standard features

- Split wedge type
- Die-forged body and bonnet
- Outside screw and yoke
- Possibility to add an actuator

Pressure and temperature ratings

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

Materials

- 1.0425
- 1.5415
- 1.7335
- 1.7383

Media

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

Fields of application

Chemical industries, power plants, ship building and other

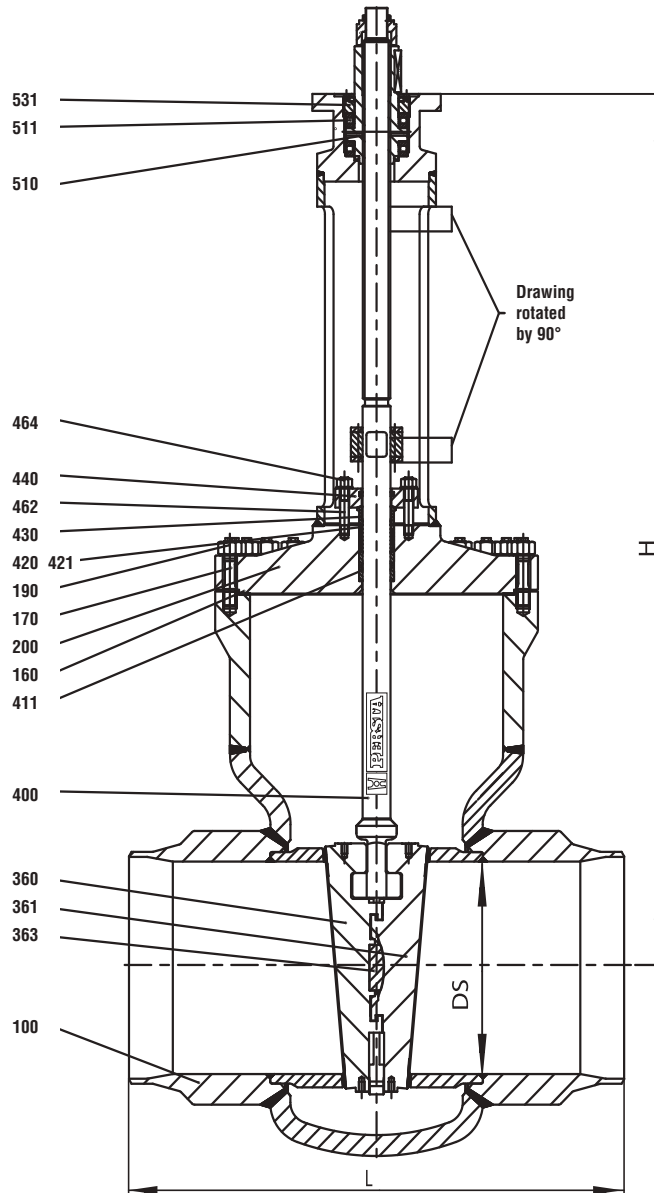
Design Highlights

- Seats and wedge faced with stellite
- Non-turning, rising stem
- Gland flange and gland ring in two separate pieces
- Yoke sleeve supported by needle bearing

Benefits

- Best possible sliding performance, minimum wear
- Minimum wear to the gland packing
- Damage to the stem by irregular tightening of gland bolts is avoided
- Minimize the expenditure of effort when operating valve

▪ Gate valves ▪ Gate valve ▪ 400 JJ ▪ PN 63-100 ▪ DN 350-700



■ Gate valves ■ Gate valve ■ 400 JJ ■ PN 63-100 ■ DN 350-700

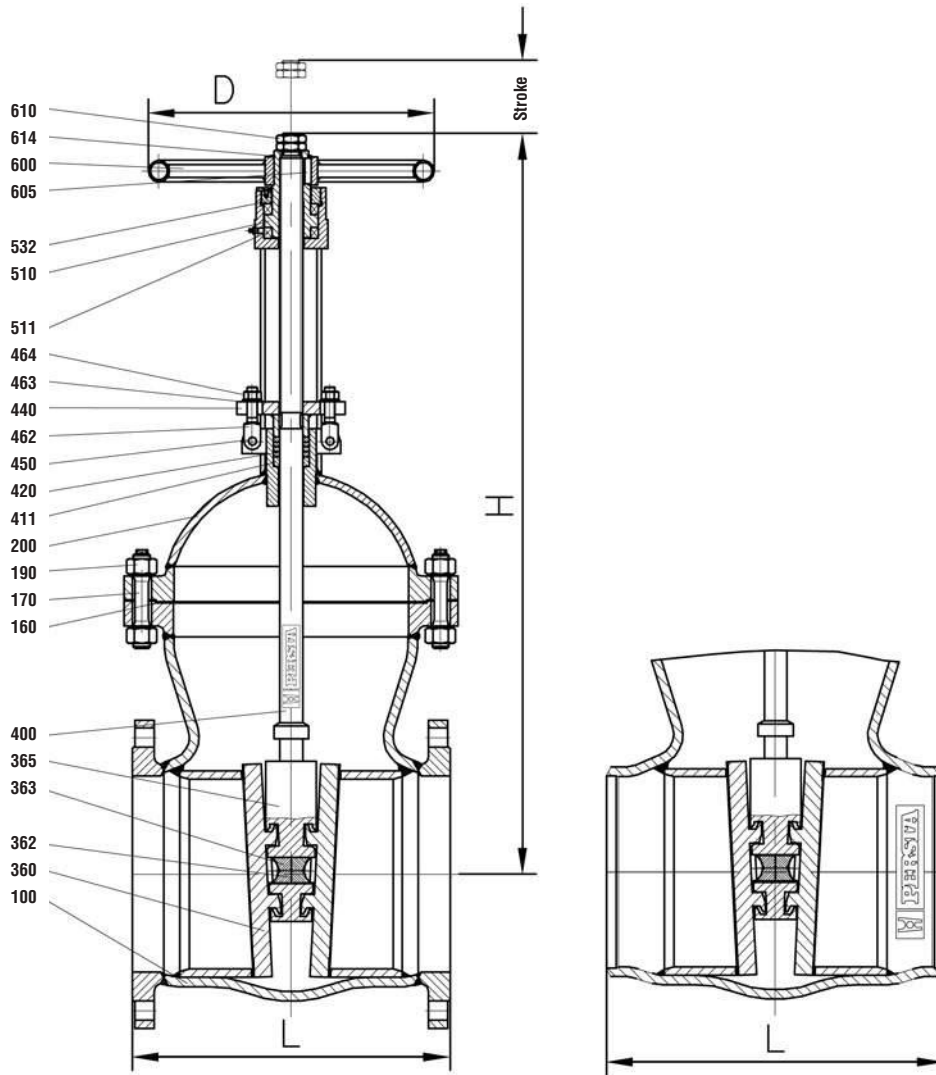
Materials					
Pos.	Component	1.0425 (22)	1.5415 (42)	1.7335 (44)	1.7383 (45)
100	Body welded on with	1.0425	1.5415	1.7335	1.7383
160	▶ Gasket	Stellite	Stellite	Stellite	Stellite
170	▶ Stud	Graphite	Graphite	Graphite	Graphite
190	Hexagonal nut	1.7709	1.7709	1.7709	1.7709
200	Bonnet	1.7218	1.7218	1.7218	1.7218
360/361	▶ Double disc welded on with	1.0460	1.5415	1.7335	1.7383
363	▶ Pressure piece	1.7383	1.7383	1.7383	1.7383
400	▶ Stem	Stellite	Stellite	Stellite	Stellite
411	▶ Guide bushing	1.4122	1.4122	1.4122	1.4122
420/421	▶ Packing	1.4021	1.4122	1.4122	1.4122
430	Gland ring	1.8507	1.8507	1.8507	1.8507
440	Gland flange	1.8507	1.8507	1.8507	1.8507
462	Stud	Graphite	Graphite	Graphite	Graphite
464	Hexagonal nut	1.5415	1.5415	1.5415	1.5415
510	▶ Yoke sleeve	1.5415	1.5415	1.7383	1.7383
511	▶ Roller bearing	1.7709	1.7709	1.7709	1.7709
531	Screwing	1.7218	1.7218	1.7218	1.7218
		CW 713 R	CW 713 R	CW 713 R	CW 713 R
		WLS1	WLS1	WLS1	WLS1
		1.7335	1.7335	1.7335	1.7335

▶ Spare parts

Dimensions/mm				
DN	DS	Stroke	L	H
350	330	365	850	1620
400	375	417	950	1745
450	419	455	1050	2030
500	464	515	1150	2260
600	559	625	1350	2560
700	640	690	1550	2695

Weights/kg and Kvs-values		
DN	BW	Kvs (m ³ /h)
350	950	11243
400	1500	14521
450	1850	18105
500	2350	22353
600	4300	32188
700	5100	41773

▪ 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.

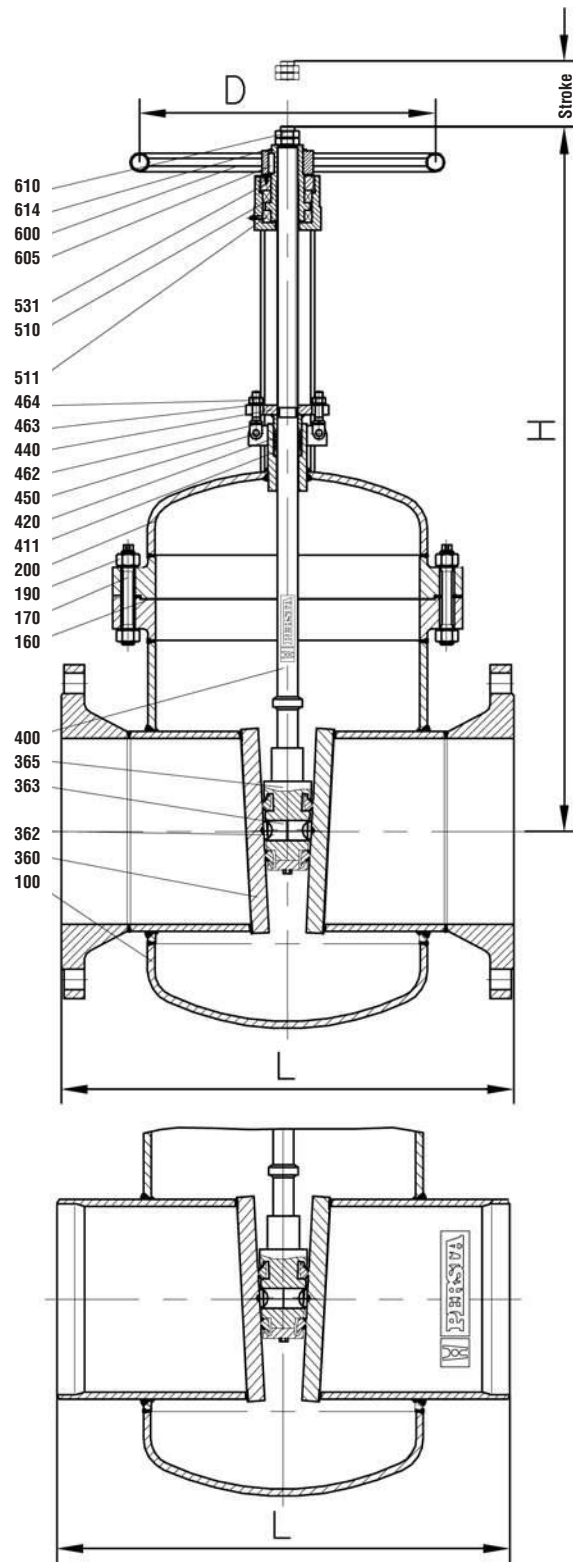
■ Gate valves ■ VALTRA Gate valve ■ 700 JJ ■ PN 10-25 ■ DN 300-1000

Materials		
Pos.	Component	P265GH (22)
100	Body welded on with	P265GH X20CrMo171
160	▶ Gasket	Sigralflex
170	Stud	1.7158
190	Hexagonal nut	1.7158
200	Bonnet	P265GH
360	▶ Key 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 bushing	GG 25
420	▶ Packing	Graphite
440	Gland flange	P265GH
450	Pin	1.1181
462	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 L	PN 10-25 H	PN 10-16 Stroke	PN 25 Stroke	PN 10-25 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 FL	PN 16 FL	PN 25 FL	PN 10 BW	PN 16 BW	PN 25 BW	Kvs (m3/h)
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 welded on with	P265GH X20CrMo171
160	▶ Gasket	Sigralflex
170	Tension screw	1.7158
190	Hexagonal nut	1.7158
200	Bonnet	P265GH
360	▶ Key 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 bushing	GG 25
420	▶ Packing	Graphite
440	Gland flange	P265GH
450	Pin	1.1181
462	Gland bolt	1.1181
463	Washer	St
464	Hexagonal nut	1.0501
510	▶ Yoke sleeve	0.7040
511	▶ Thrust ball bearing	WLS
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.	

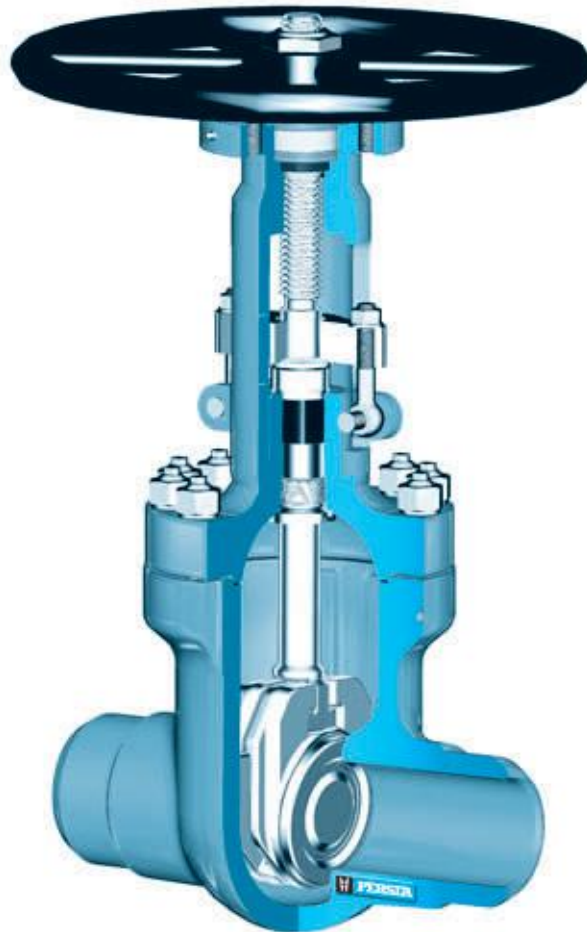
Dimensions/mm

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	FL	BW	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	PN	Admissible operating pressure [bar] at design temperature [°C] ¹⁾															
		-10	20	120	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	153	146	139	118	100	79	62	46	35	
1.7383	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-Version Material	PD	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																												
		20	50	100	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	258	246	229	219	204	185	170	146	141	136	134	133	132	130	129	128	112	88	67	53	42								
1.7335	18	258	249	234	228	219	205	194	180	170	161	156	155	153	150	149	148	147	133	112	89	72	58	46	37	30				
1.7383	18	258	250	239	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
- Gasket located in a groove
- Yoke sleeve with needle bearings
- Universal valve head for mounting actuators

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
- 1.7383

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

Media

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

Fields of application

Chemical industries, power plants, ship building and other

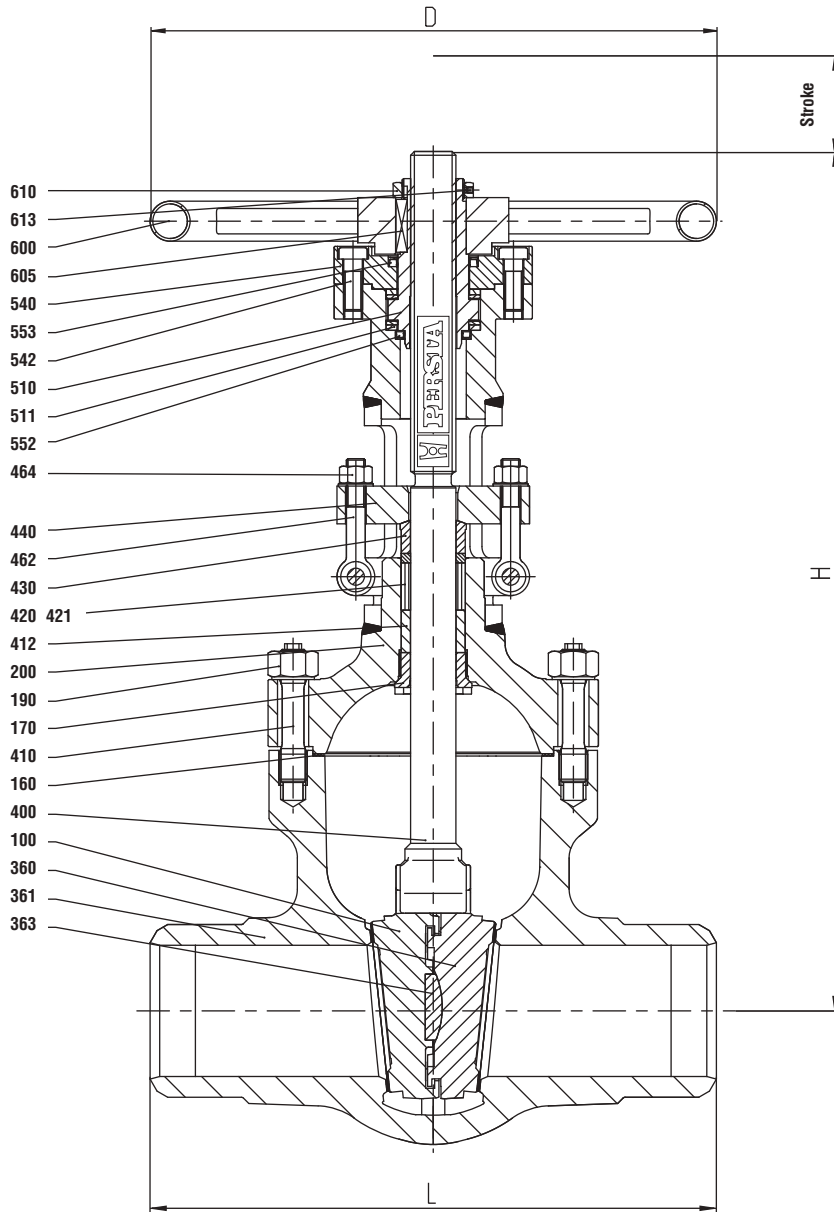
Design Highlights

- Die-forged valve body with incorporated seats
- Seats and wedge faced with stellite
- Non-rising handwheel
- Non-turning, rising stem
- 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

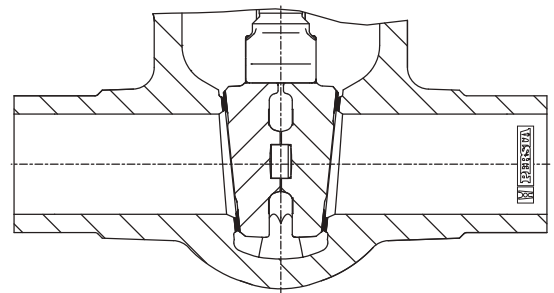
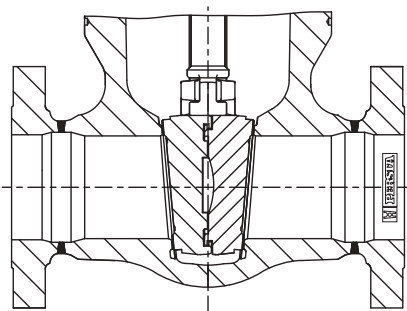
Benefits

- Free from porosity and shrink holes
- Best possible sliding performance, minimum wear
- Small dimensions
- Minimum wear to the gland packing
- 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



Version DN 50 - 80



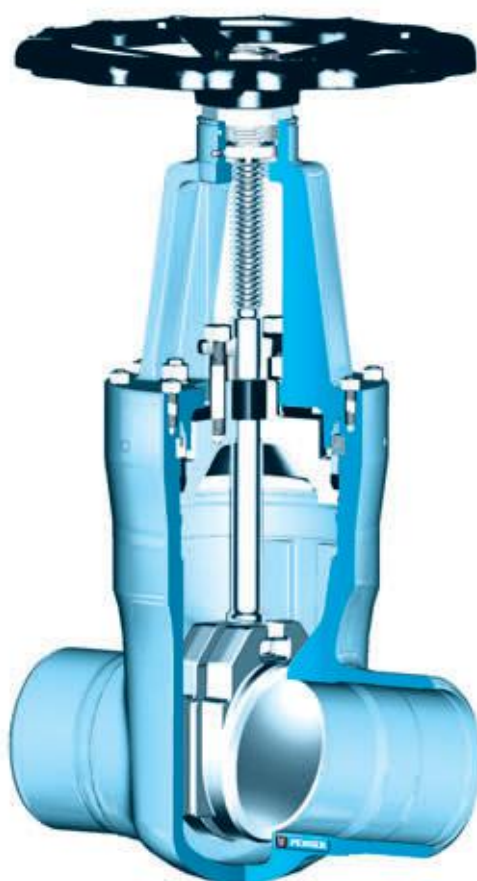
■ Gate valves ■ Gate valve ■ 700 JJ ■ PN 160 / PD 18 ■ DN 50-300/250

Materials				
Pos.	Component	1.5415 (42)	1.7335 (44)	1.7383 (45)
100	Body	1.5415 ¹⁾	1.7383/1.7335 ¹⁾	1.7383 ¹⁾
160	▶ Gasket	Grooved with graphite layer	Grooved with graphite layer	Grooved with graphite layer
170	Stud	1.7709	1.7709 ²⁾	1.7709 ²⁾
189	Expansion shaft	--	1.7709 ²⁾	1.7709 ²⁾
190	Hexagonal nut	1.7218	1.7218	1.7218
200	Bonnet	1.7383	1.7383	1.7383
360/361	▶ Double disc	1.7383 ¹⁾	1.7383 ¹⁾	1.7383 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
420/421	▶ Packing	Graphite	Graphite	Graphite
430	Gland ring	1.5415	1.5415	1.5415
440	Gland flange	1.5415	1.5415	1.5415
450	Rivet pin	1.7218	1.7218	1.7218
462	Eye bolt	1.7709	1.7709	1.7709
464	Hexagonal nut	1.7218	1.7218	1.7218
510	▶ Yoke sleeve	CW 713 R	CW 713 R	CW 713 R
511	▶ Roller bearing	WLSt	WLSt	WLSt
540	Flange	1.0425	1.0460	1.0460
542	Headcap screw	8.8	8.8	8.8
552/553	▶ 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
610	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	L	H	Stroke	D
50	300	490	80	350
65 / 50	360	490	80	350
80	390	610	105	400
100	450	695	130	500
125 / 100	525	695	130	500
150	600	890	185	800
200	750	1090	235	1000
250	900	1275	265	1000
300 / 250	1050	1275	265	1000

Weights/kg and Kvs-values			
DN	FL	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-Version 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				
1.7383	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
(Except DN 65/50 and DN 125/100)
- Outside screw and yoke
- Non-turning, rising stem
- Yoke sleeve supported by needle bearings
- 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
- 1.7383

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

Media

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

Fields of application

Chemical industries, power plants, ship building and other

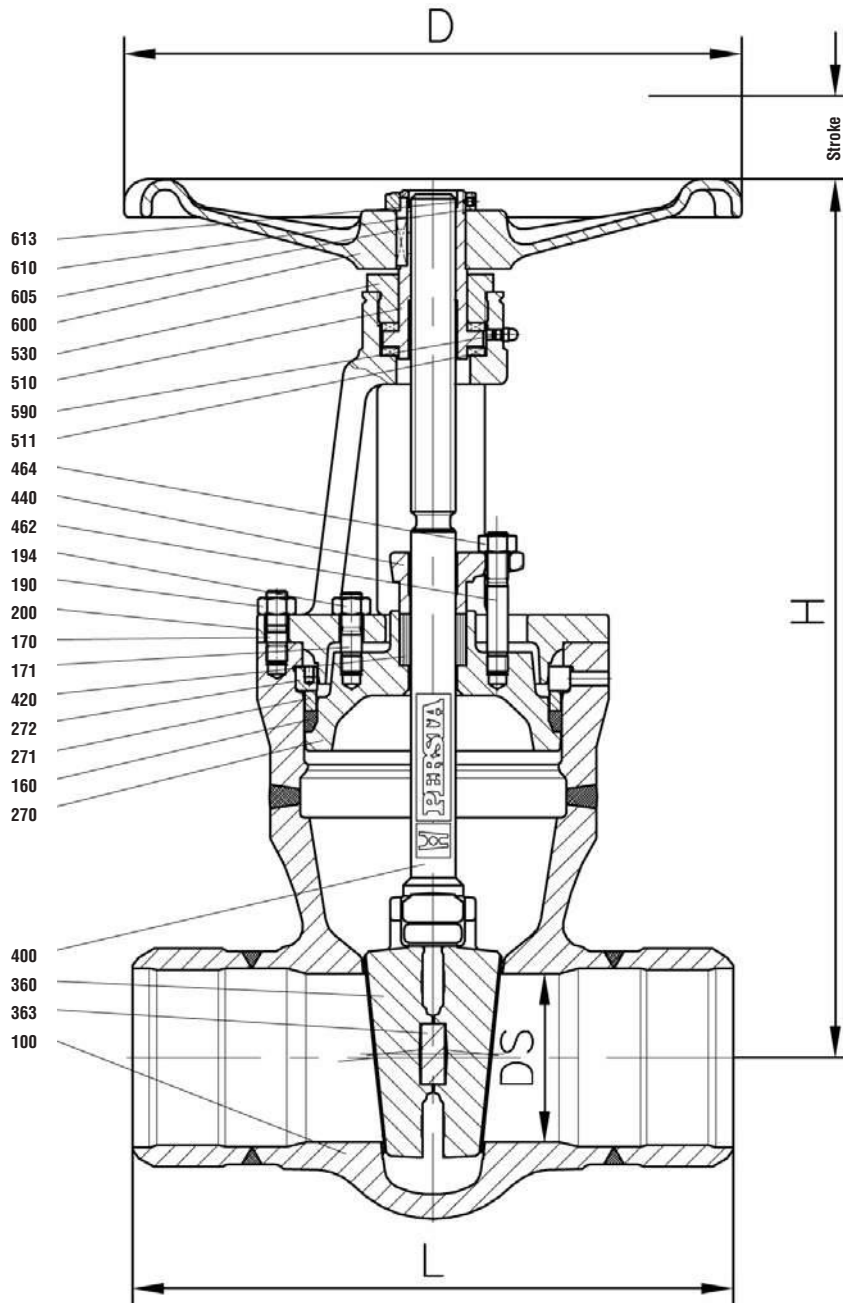
Design Highlights

- Die-forged body and bonnet
- Seats and wedge faced with stellite
- Full bore, except DN 65/50 and DN 125/100
- Non-turning, rising stem
- Pressure sealed bonnet
- Possibility to add an actuator flange

Benefits

- Free from porosity and shrink holes
- Best possible sliding performance, minimum wear
- No reduction in seat area
- Minimum wear of the gland packing
- Best possible sealing function
- Simple retrofitting of an actuator possible

▪ 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)	1.7383 (45)
100	Body welded on with	1.0460 Cr17	1.5415 Stellite	1.7335 Stellite	1.7383 Stellite
160	▶ 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	1.7218	1.7218	1.7218	1.7218
194	▶ Hexagonal nut	1.7218	1.7218	1.7218	1.7218
200	▶ Bonnet	1.5419	1.5419	1.5419	1.5419
270	▶ Cover	1.0460	1.5415	1.7335	1.7383
271	▶ Ring	1.0460	1.5415	1.7335	1.7383
272	▶ Segment ring	1.0460	1.5415	1.7335	1.7383
360	▶ Disc welded on with	1.0460 18/8 (40)	1.5415 Stellite	1.7335 Stellite	1.7383 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	1.7218	1.7218	1.7218	1.7218
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
610	▶ 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	FL	BW	Kvs (m ³ /h)
50	26,5	15,5	258,0
65 / 50	30,5	16,0	258,0
80	45,0	31,0	628,0
100	71,0	47,0	991,0
125 / 100	89,0	49,0	991,0
150	155,0	100,0	2323,0

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



Range of application

BW-Version 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				
1.7383	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
- Non-turning, rising stem
- Yoke sleeve supported by needle bearing
- 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
- 1.7383

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

Media

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

Fields of application

Chemical industries, power plants, ship building and other

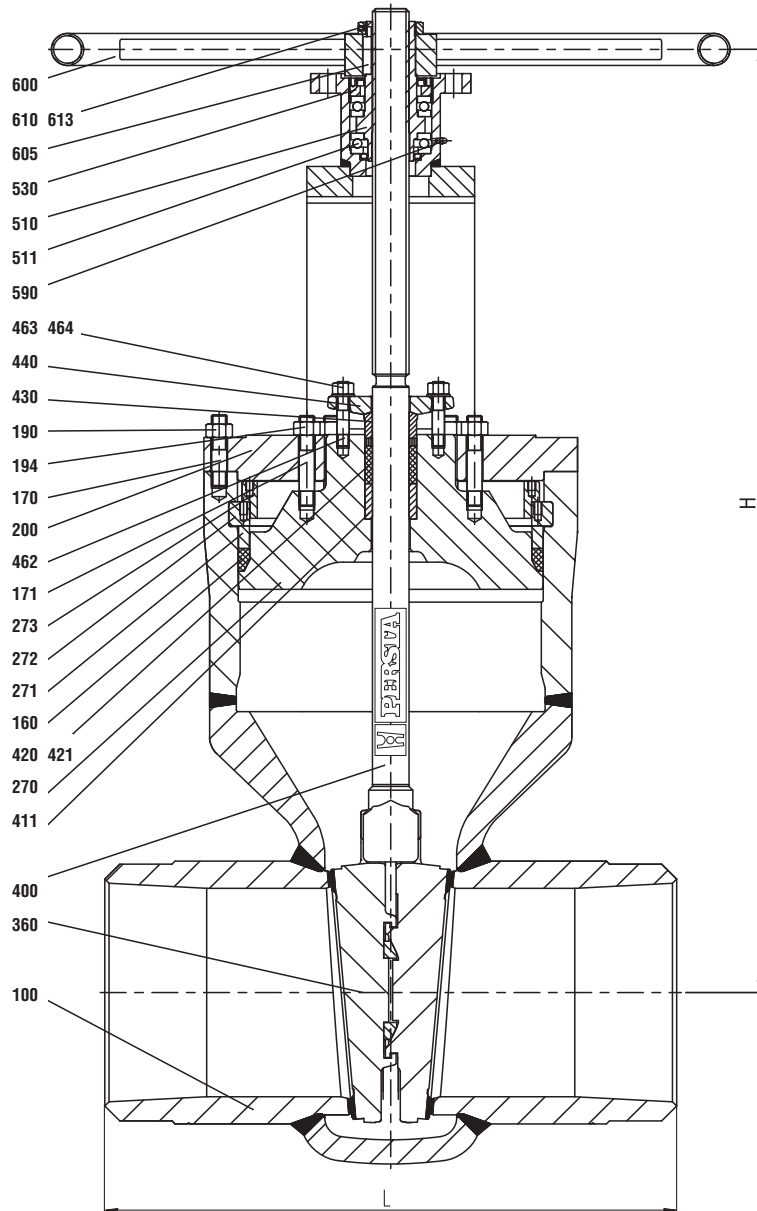
Design Highlights

- Die-forged body and bonnet
- Seats and wedge faced with stellite
- Full bore
- Gland ring and gland flange in two separate pieces
- Yoke sleeve supported by needle bearing
- Pressure sealed bonnet

Benefits

- Free from porosity and shrink holes
- Best possible sliding performance, minimum wear
- No reduction in seat area
- Damage to the stem by irregular tightening of gland bolts is avoid
- Minimize the expenditure of effort when operating valve
- Best possible sealing function

▪ 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)	1.7383 (45)
100	Body welded on with 18/8	1.0460	1.7383/1.5415	1.7383/1.7335	1.7383
160	▶ 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	1.7218	1.7218	1.7218	1.7218
194	Hexagonal nut	1.7218	1.7218	1.7218	1.7218
200	Bonnet	1.5415	1.5415	1.5415	1.5415
270	Cover	1.0460	1.5415	1.7335	1.7383
271	Ring	1.0460	1.5415	1.7335	1.7383
272	Segment ring	1.0460	1.5415	1.7335	1.7383
273	Cover	1.7383	1.5415	1.7335	1.7383
360	▶ Double disc welded on with Cr17	1.7383	1.7383	1.7383	1.7383
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
440	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	1.7218	1.7218	1.7218	1.7218
510	▶ Yoke sleeve	CW 713 R	CW 713 R	CW 713 R	CW 713 R
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
610	Hexagonal pipe nut	St	St	St	St
613	Screw pin	45H	45H	45H	45H
▶ Spare parts					

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	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

BW-Version 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	
1.0425	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									
1.7383	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						
1.4903	10	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	134	122	119	110	101	93	84	76	68	61	54	48	42	37	32	27	24	21

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
- Outside screw and yoke
- Non-turning, rising stem
- Yoke sleeve supported by needle bearings
- Pressure sealing bonnet acc. VGB-guidelines
- Possibility to add an actuator

Pressure and temperature ratings

- Pressure rating up to 136 bar
- Temperature rating up to 650 °C

Materials

- 1.0425
- 1.5415
- 1.7335
- 1.7383
- 1.4903

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

Media

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

Fields of application

Chemical industries, power plants, ship building and other

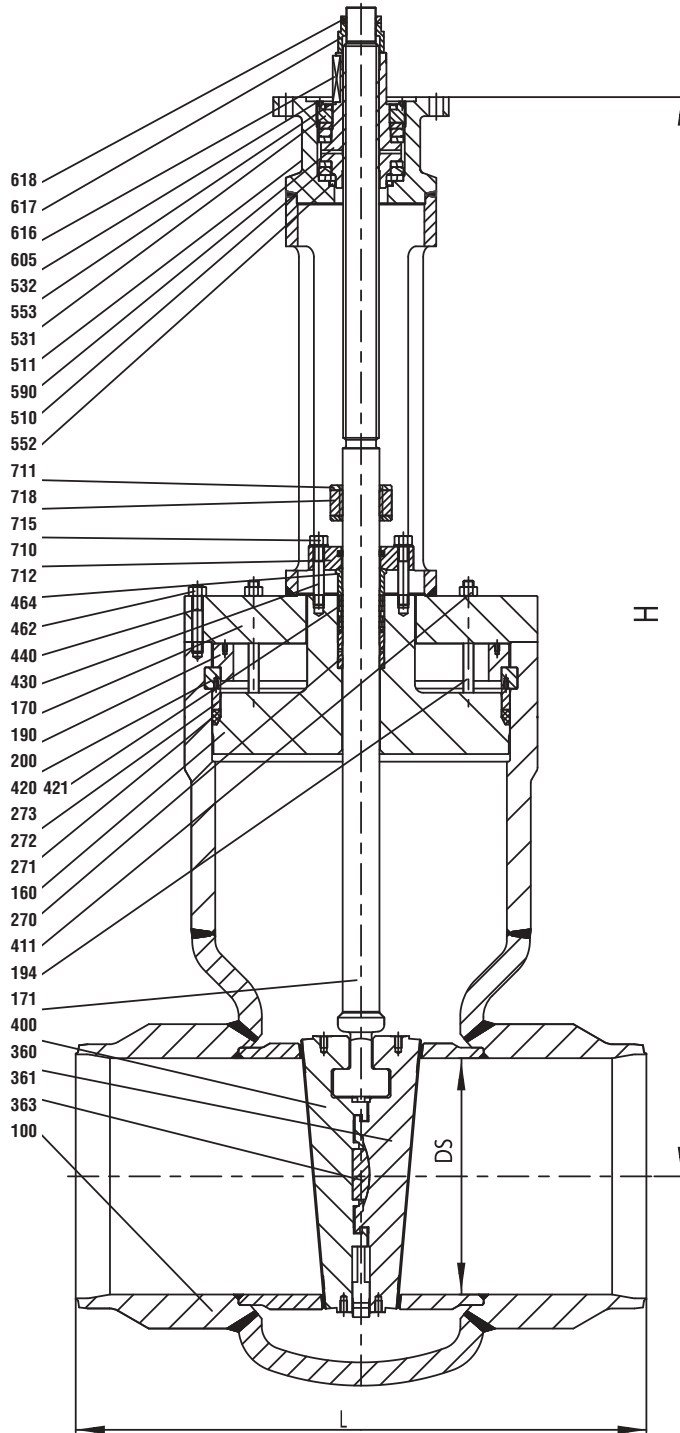
Design Highlights

- Seats and wedge faced with stellite
- Non turning, rising stem
- Gland ring and gland flange in two separate pieces
- Yoke sleeve supported by needle bearing
- Pressure sealed bonnet

Benefits

- Best possible sliding performance, minimum wear
- Minimum wear to the gland packing
- Damage to the stem by irregular tightening of gland bolts is avoided
- Minimize the expenditure of effort when operating valve
- Best possible sealing function

▪ 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)	1.7383 (45)	1.4903 (63)
100	Body welded on with	1.0425	1.5415	1.7335	1.7383	1.4903
		Stellite	Stellite	Stellite	Stellite	Stellite
160	▶ Gasket	Graphite	Graphite	Graphite	Graphite	Graphite
170	Stud	1.7709	1.7709	1.7709	1.7709	1.7709
171	Stud	1.7709	1.7709	1.7709	1.7709	1.7709
190	Hexagonal nut	1.7218	1.7218	1.7218	1.7218	1.7218
194	Hexagonal nut	1.7255	1.7218	1.7218	1.7218	1.7218
200	Bonnet	1.5415	1.5415	1.5415	1.5415	1.5415
270	Cover	1.0460	1.5415	1.7335	1.7383	1.4903
271	Ring	1.0460	1.5415	1.7335	1.7383	1.4903
272	Segment ring	1.0460	1.5415	1.7335	1.7383	1.4903
273	Cover	1.0460	1.0460	1.0460	1.0460	1.0460
360/361	▶ Double disc welded on with	1.0460	1.5415	1.7335	1.7383	1.4903
		Stellite	Stellite	Stellite	Stellite	Stellite
363	▶ Pressure piece	1.4122	1.4122	1.4122	1.4122	1.4122
400	▶ Stem	1.4021	1.4923	1.4923	1.4923	1.4923/1.4980
411	▶ Guide bush	1.8507	1.8507	1.8507	1.8507	1.8507
420	▶ Packing	Graphite	Graphite	Graphite	Graphite	Graphite
421	▶ Ring	Graphite	Graphite	Graphite	Graphite	Graphite
430	Gland ring	1.5415	1.5415	1.5415	1.5415	1.5415
440	Gland flange	1.0460	1.5415	1.7335	1.7383	1.7383
462	Stud	1.7709	1.7709	1.7709	1.7709	1.7709
464	Hexagonal nut	1.7218	1.7218	1.7218	1.7218	1.7218
510	▶ Yoke sleeve	CW 713 R	CW 713 R	CW 713 R	CW 713 R	CW 713 R
511	▶ Bearing	WLS	WLS	WLS	WLS	WLS
531	Screwing	1.7335	1.7335	1.7335	1.7335	1.7335
532	Screw pin	45H	45H	45H	45H	45H
552/553	▶ Gasket	NBR	NBR	NBR	NBR	NBR
590	Grease nipple	5.8	5.8	5.8	5.8	5.8
605	Stop ring	1.0060	1.0060	1.0060	1.0060	1.0060
616	Screw pin	1.0460	1.0460	1.0460	1.0460	1.0460
617	Handwheel nut	45H	45H	45H	45H	45H
618	Key	St	St	St	St	St
710	Switch bracket	1.0425	1.0425	1.0425	1.0425	1.0425
711	Hexagonal screw	8.8	8.8	8.8	8.8	8.8
712	Hexagonal nut	8	8	8	8	8
715	Key	1.4021	1.4021	1.4021	1.4021	1.4021
718	Washer	1.0038	1.0038	1.0038	1.0038	1.0038

▶ Spare parts

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	Kvs (m ³ /h)
350	995	11243
400	1600	14521
450	2000	18105
500	2490	22353
600	4550	32188
700	5750	41773

▪ Gate valves ▪ High pressure gate valve DSK 26 ▪ 700 JT ▪ PD 25 / PD 40 ▪ DN 65-300



Range of application

BW-Version Material	PD	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																						
		20	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				
1.0460	25	250	250	250	250	250	235	206	184	155	125	119	113	107	102	96	85	71	58																					
1.5415	25	300	300	300	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	300	300	300	294	272	258	243	240	237	234	231	228	227	225	224	222	202	170	134	109	88	69	57	46												
1.7383	25	300	300	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	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	425	425	425	418	383	372	344	316	290	263	238	213	191	169	150	132	115	100	85	75	64				
1.4901	25	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	423	397	370	345	320	297	275	252	230	208	186	166	147	127	110	95	82				

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations. For temperatures > 570 °C stem in 1.4980

Range of application

BW-Version Material	PD	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																							
		20	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					
1.0460	40	400	400	400	400	400	377	330	295	248	200	190	181	172	162	153	135	113	93																						
1.5415	40	480	480	480	480	480	447	412	353	341	330	327	325	322	320	318	315	313	311	271	212	161	127	101																	
1.7335	40	481	481	481	481	481	471	436	412	388	384	379	374	370	365	363	360	358	355	322	271	215	175	141	110	90	73														
1.7383	40	480	480	480	480	480	480	471	436	412	407	403	398	393	388	384	379	374	358	318	278	242	212	183	160	136	120	103	89	79											
1.6368	40	657	657	657	657	657	657	657	657	657	657	657	657	657	643	577	495	412	328	245	163																				
1.4903	40	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	669	612	596	551	506	464	421	381	341	306	271	240	212	183	160	136	120	103					
1.4901	40	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	677	635	592	552	512	475	440	404	369	334	298	265	235	204	176	152	131					

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations. For temperatures > 570 °C stem in 1.4980

■ **Gate valves** ■ High pressure gate valve DSK 26 ■ 700 JT ■ PD 25 / PD 40 ■ DN 65-300

Version

- Body made of forged steel
- Wedge guided in groove
- Welded seat rings
- Outside screw and yoke
- Position indicator / Switch bracket
- Pressure sealing bonnet acc. to VGB-guidelines
- Yoke sleeve supported by needle bearing
- Possibility to add an actuator

Materials

- 1.0460
- 1.4901
- 1.4903
- 1.5415
- 1.6368
- 1.7335
- 1.7383

Further materials on request

Pressure and temperature ratings

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

Media

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

Fields of application

High temperature steam and water, refining (catalytic reformers and hydrocrackers), petrochemical and chemical industries

Design Highlights

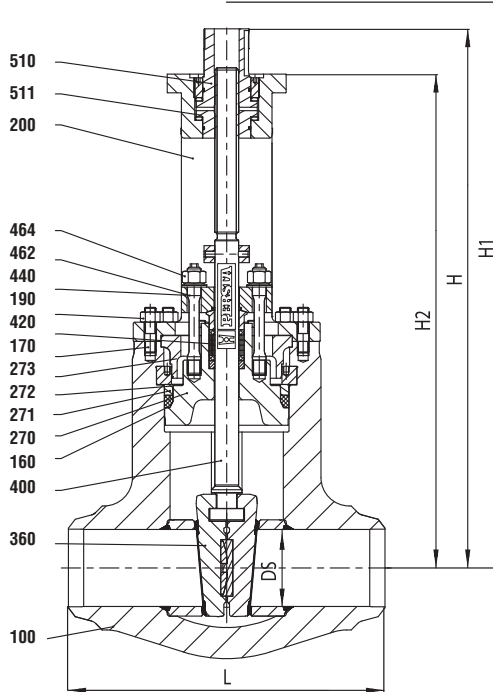
- Long bonnet
- Seats of the shut-off device and of the valve body generally faced with stellite
- Non-rising handwheel
- Non-turning, rising stem
- Outside located switch-bracket
- Hammer head connection between shut-off device and stem
- Gland ring and gland flange in two separate pieces
- Yoke sleeve supported by needle bearings

Benefits

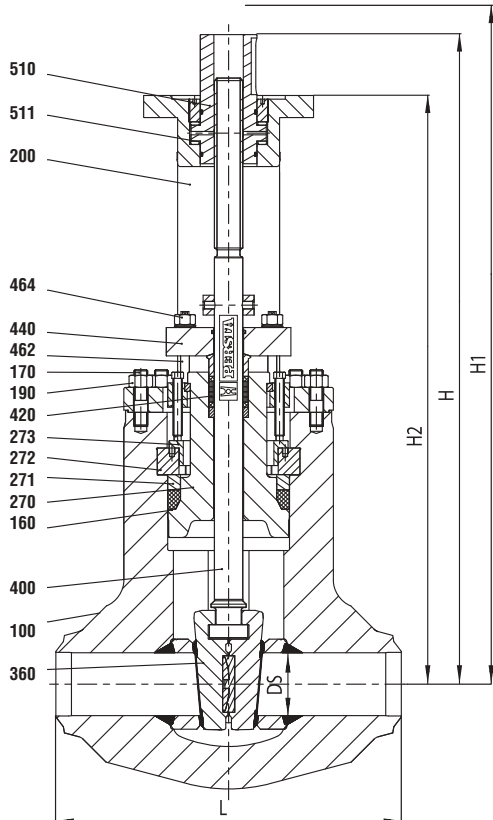
- To reduce temperatures
- Best possible sliding performance and minimum wear
- Small dimensions
- Minimum wear to the gland packing
- Protects against torsion of the stem
- The wedges are able to move parallel to the axis of the pipeline within the guiding groove. This protects the stem against bending moments
- Damage to the stem by irregular tightening of gland bolts is avoided
- Minimize the expenditure of effort when operating valve

▪ Gate valves ▪ High pressure gate valve DSK 26 ▪ 700 JT ▪ PD 25 / PD 40 ▪ DN 65-300

DSK 26 ▪ PD 25 ▪ DN 80-300



DSK 26 ▪ PD 40 ▪ DN 65-250



■ Gate valves ■ High pressure gate valve DSK 26 ■ 700 JT ■ PD 25 / PD 40 ■ DN 65-300

Materials								
Pos.	Component	1.0460 (21)	1.5415 (42)	1.7335 (44)	1.7383 (45)	1.6368 (46)	1.4903 (63)	1.4901 (66)
100	Body welded on with	1.0460 Stellite	1.5415 Stellite	1.7335 Stellite	1.7383 Stellite	1.6368 Stellite	1.4903 Stellite	1.4901 Stellite
160	▶ Gasket	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
170	▶ Stud	1.7709	1.7709	1.7709	1.7709	1.7709	1.7709	1.7709
190	Hexagonal nut	1.7218	1.7218	1.7218	1.7218	1.7218	1.7218	1.7218
200	Bonnet	1.5419	1.5419	1.5419	1.5419	1.5419	1.5419	1.5419
270	Cover	1.7383	1.7383	1.7383	1.7383	1.4903	1.4903	1.4901
271	Ring	1.7383	1.7383	1.7383	1.7383	1.4903	1.4903	1.4901
272	Segment ring	1.7383	1.7383	1.7383	1.7383	1.4903	1.4903	1.4901
273	Cover	1.5419	1.5419	1.5419	1.5419	1.5419	1.5419	1.5419
360	▶ Disc welded on with	1.7383 Stellite	1.7383 Stellite	1.7383 Stellite	1.7383 Stellite	1.4903 Stellite	1.4903 Stellite	1.4901 Stellite
400	▶ Stem	1.4122	1.4122	1.4122	1.4122	1.4923	1.4923	1.4980
400	▶ Stem from 570 °C					1.4980	1.4980	
420	▶ Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
440	Gland flange	1.7380	1.7380	1.7380	1.7380	1.7380	1.7380	1.7380
462	▶ Stud	1.7709	1.7709	1.7709	1.7709	1.4923	1.4923	1.4923
464	Hexagonal nut	1.7218	1.7218	1.7218	1.7218	1.4923	1.4923	1.4923
510	▶ Yoke sleeve	CW713R	CW713R	CW713R	CW713R	CW713R	CW713R	CW713R
511	▶ Bearing	WLSst	WLSst	WLSst	WLSst	WLSst	WLSst	WLSst
	▶ Spare parts							

Dimensions/mm DSK 26.25									
DN	DS	L mm	H mm	H1 mm	H2 mm	Stroke mm	R/Stroke	H-Wheel mm	DIN/ISO 5210
80	70	305	556	605	511	80	16	400	F10 (F14)
100	90	406	658	725	606	105	18	450	F14
125	111	483	781	861	720	130	21	500	F14
150	136	559	952	1045	872	152	22		F16 (F14)
200	178	711	1078	1270	1045	192	24		F25 (F16)
250	222	864	1267	1515	1240	248	28		F30 (F25)
300	263	770 (991)	1528	1815	1497	287	29		F30

Weights/kg and Kvs-values			
DN	BW	Kvs (m ³ /h)	
80	72	505	
100	128	875	
125	208	1270	
150	380	1910	
200	615	3270	
250	1160	5080	
300	1835	7140	

Dimensions/mm DSK 26.40									
DN	DS	L mm	H mm	H1 mm	H2 mm	Stroke mm	R/Stroke	H-Wheel mm	DIN/ISO 5210
65	50	330	518	594	466	56	19	400	F10 (F14)
80	57	368	638	675	585	63	21	450	F14
100	72	457	713	836	656	87	15	500	F14
125	90	533	795	870	725	106	15		F16
150	111	610	1090	1230	1040	133	15		F25 (F16)
200	146	762	1195	1370	1165	174	18		F30 (F25)
250	185	1270	1475	1685	1440	212	21		F35 (F30)

Weights/kg and Kvs-values			
DN	BW	Kvs (m ³ /h)	
65	83	210	
80	136	310	
100	219	505	
125	411	835	
150	676	1485	
200	1188	2200	
250	2208	3530	

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



Range of application

BW-Version 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	295	248	200	191	182	172	163	153	136	113	93																						
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																	
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													
1.7383	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										
1.6368	16	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	402	360	309	257	205	153	102																					
	32	525	525	525	525	525	525	525	525	525	515	482	396	330	262	196	130																					
	40	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680		
1.4903	16	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	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	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680		
1.4901	16	272	272	272	272	272	272	272	272	272	272	272	272	272	271	254	237	221	205	190	176	161	147	133	119	106	94	81	70	61	52							
	25	425	425	425	425	425	425	425	425	425	425	425	425	425	425	423	397	370	345	320	297	275	252	230	208	186	166	147	127	110	95	82						
	32	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	542	508	474	442	410	380	352	323	295	267	239	212	188	163	141	122	105
	40	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations. Design according to working data PD 63 on request

■ **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
- Split wedge type
- Outside screw and yoke
- Non-turning, rising stem
- Yoke sleeve supported by needle bearings
- Pressure sealing bonnet acc. VGB-guidelines
- Possibility to add an actuator

Pressure and temperature ratings

- Pressure rating up to 680 bar
- Temperature rating up to 650 °C
- Other temperature ratings on request

Materials

- 1.0460
- 1.4901
- 1.4903
- 1.5415
- 1.7335
- 1.7383
- 1.6368

Further materials on request

Media

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

Fields of application

High temperature steam and water, refining (catalytic reformers and hydrocrackers), petrochemical and chemical industries

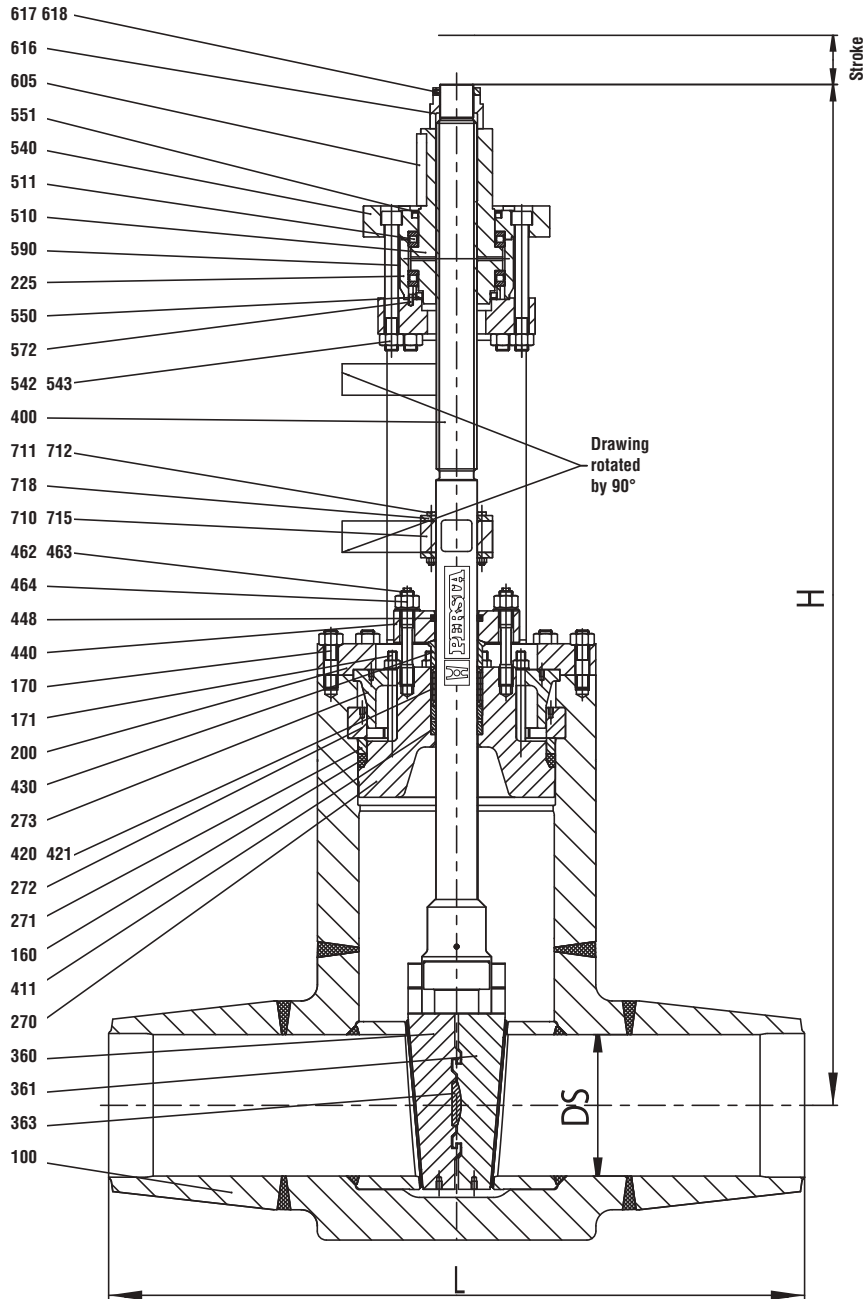
Design Highlights

- Long bonnet
- Seats and wedges faced with stellite
- Non-turning, rising stem
- Outside located switch bracket
- Hammer head connection between shut-off device and stem
- Gland flange and gland ring in two separate pieces
- Yoke sleeve supported by axial bearings

Benefits

- To reduce temperatures
- Best possible sliding performance and minimum wear
- Minimum wear to the gland packing
- Protects against torsion
- Wedge are able to align parallel to the axis of the pipe within the guiding groove. This protects the stem against bending moments
- Damage to the stem by irregular tightening of gland bolts is avoided
- Minimize the expenditure of effort when operating valve

▪ 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)	1.7383 (45)	1.6368 (46)	1.4903 (63)	1.4901 (66)
100	Body	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
	welded on with	Stellite	Stellite	Stellite	Stellite	Stellite	Stellite	Stellite
160	▶ Gasket	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
170	Stud	1.7709	1.7709	1.7709	1.7709	1.7709	1.7709	1.7709
171	Stud	1.7709	1.7709	1.7709	1.7709	1.7709	1.7709	1.7709
200	Bonnet	1.5415	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	1.0460
270	Cover	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
271	Ring	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
272	Segment ring	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
273	Cover	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
360/361	▶ Double disc welded on with	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
		Stellite	Stellite	Stellite	Stellite	Stellite	Stellite	Stellite
363	▶ Pressure piece	1.4122	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	1.4980
411	▶ Guide bush	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507
420	▶ Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
421	▶ Ring	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
430	Gland ring	1.5415	1.5415	1.5415	1.5415	1.5415	1.5415	1.5415
440	Gland flange	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4903
448	▶ Dirt scraper	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
462	Stud	1.7709	1.7709	1.7709	1.7709	1.4923	1.4923	1.4980
463	Washer	St	St	St	St	St	St	St
464	Hexagonal nut	1.7218	1.7218	1.7218	1.7218	1.4923	1.4923	1.4980
510	▶ Yoke sleeve	CW 713 R	CW 713 R	CW 713 R	CW 713 R	CW 713 R	CW 713 R	CW 713 R
511	▶ Bearing	WLS	WLS	WLS	WLS	WLS	WLS	WLS
540	Flange	1.0425	1.0425	1.0425	1.0425	1.0425	1.0425	1.0425
542	Cylindrical screw	8,8	8,8	8,8	8,8	8,8	8,8	8,8
543	Hexagonal nut	8	8	8	8	8	8	8
550/551	▶ Gasket	NBR	NBR	NBR	NBR	NBR	NBR	NBR
572	Tension pin	1.0904	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	5,8
605	Key	1.0060	1.0060	1.0060	1.0060	1.0060	1.0060	1.0060
616	Stop ring	1.0460	1.0460	1.0460	1.0460	1.0460	1.0460	1.0460
617	Screw pin	45H	45H	45H	45H	45H	45H	45H
618	Hexagonal pipe nut	St	St	St	St	St	St	St
710	Switch bracket	1.0425	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	8,8
712	Hexagonal nut	8	8	8	8	8	8	8
715	Key	1.4021	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	1.0038

▶ Spare parts

Dimensions/mm, Weights/kg and Kvs-values																		
DN	DS	DSK 16				DSK 25				DSK 32				DSK 40		DSK 63		KV (m ³ /h)
		L	H	Stroke	kg	L	H	Stroke	kg	L	H	Stroke	kg	H	Stroke	kg	kg	
65 - 200																		
225	202,5									1050	1720	240	1980	Version DSK 26.40				4221
250 / 225	202,5									1150	1720	240						
250	225,0									1150	1980	270	2300	On request				5211
300 / 250	225,0									1350	1980	270						
300	270,0									1350	2195	305	3600					7504
350 / 300	270,0									1550	2195	305						
350	315,0	1200	2140	350	2230	1550	2280	350	3750	1550	2400	350	5840					10214
400 / 350	315,0	1350	2140	350	3000	1750	2280	350		1750	2400	350						
400	360,0	1350	2320	400	3000	1750	2565	410	5500	1750	2700	410	8200					13340
450 / 400	360,0	1500	2320	400		1950	2565	410		1950	2700	410						
450	405,0	1500	2485	445	3935	1950	2850	460	7700									16884
500 / 450	405,0	1650	2485	445		2150	2850	460										
500	450,0	1650	2850	495	5400													20844
600 / 500	540,0																	
600	540,0																	30015

■ Gate valves ■ Overpressure-safety-devices

If a closed gate valve filled with a medium (e.g. water) (fig. 1) is heated, an unacceptably high pressure may develop inside 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 inside 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 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 inside 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. 4). This hole prevents the pressure inside 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. 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. 1 and 3).

Fig. 4 includes a pressure equalizing pipe to reduce the opening torque with differential pressure, this configuration also enables the „3rd chamber“ to be relieved to the high pressure side. Bi-directional flow characteristics are achievable with this design.

Fig. 1

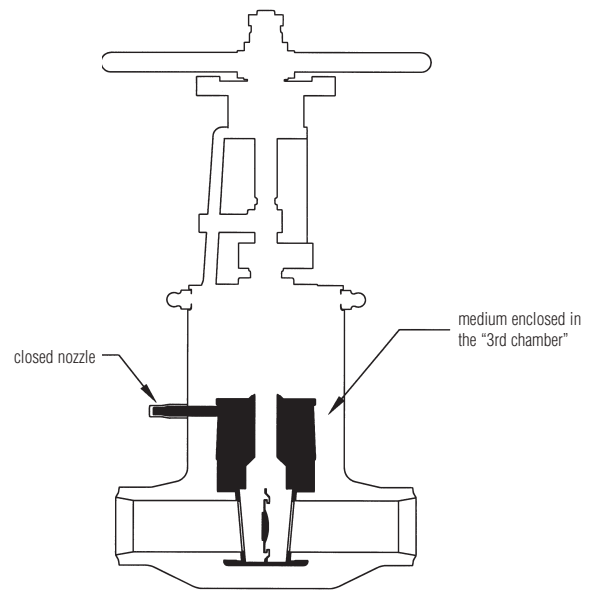


Fig. 2

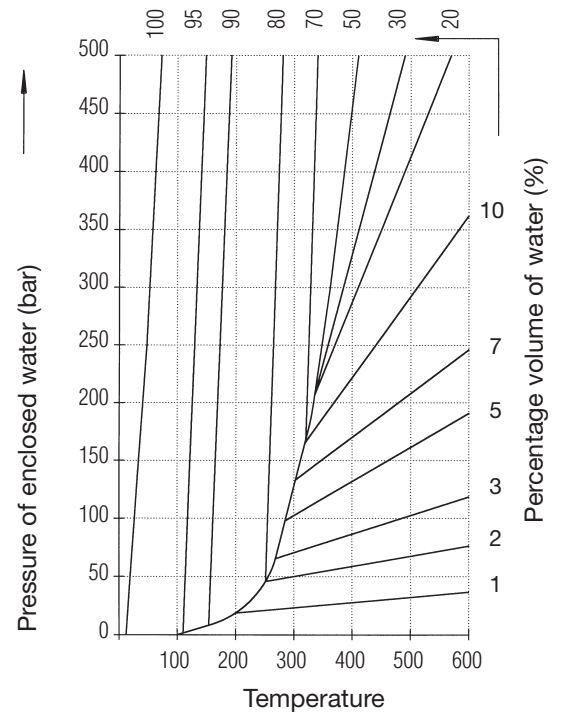


Fig. 3
With safety valve

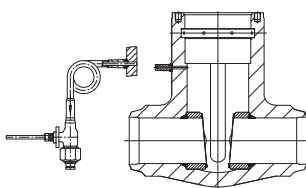


Fig. 4
With equalizing pipe and bypass valves

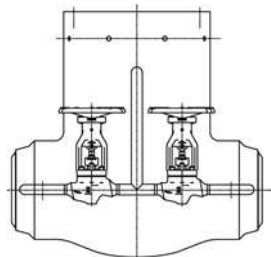


Fig. 5
With hole in the wedge or seating

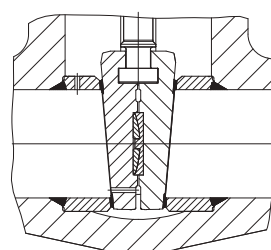
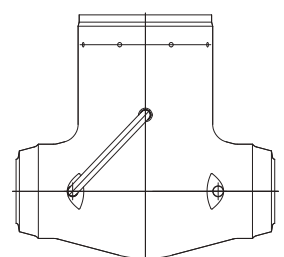


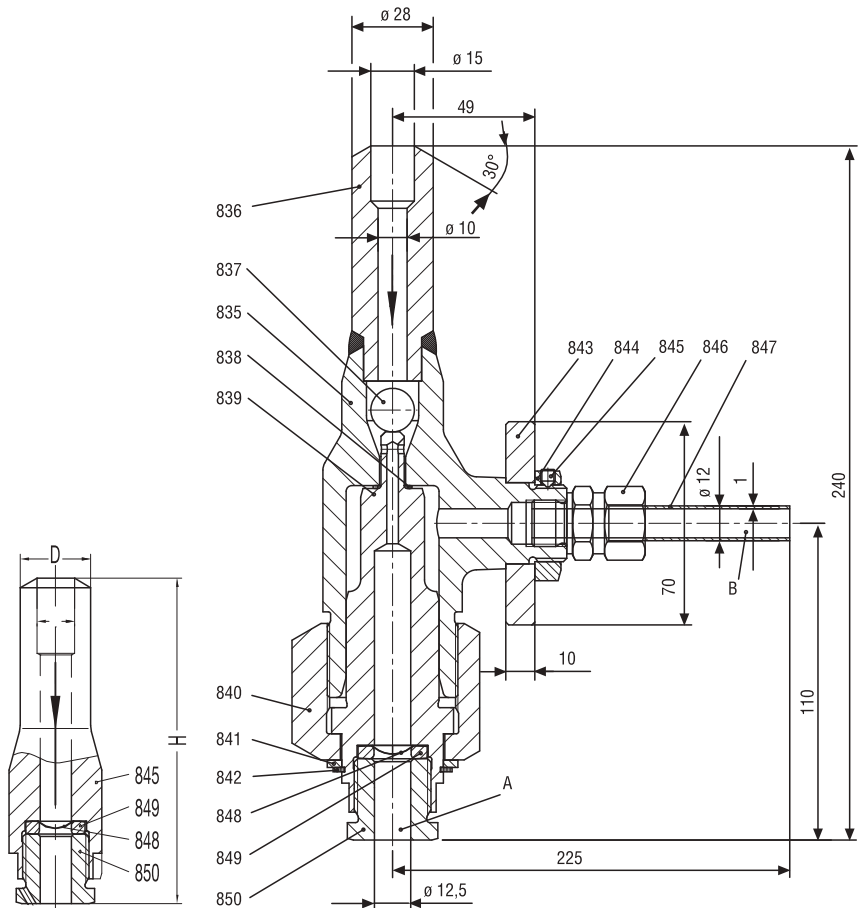
Fig. 6
With equalizing pipe to the 3rd chamber



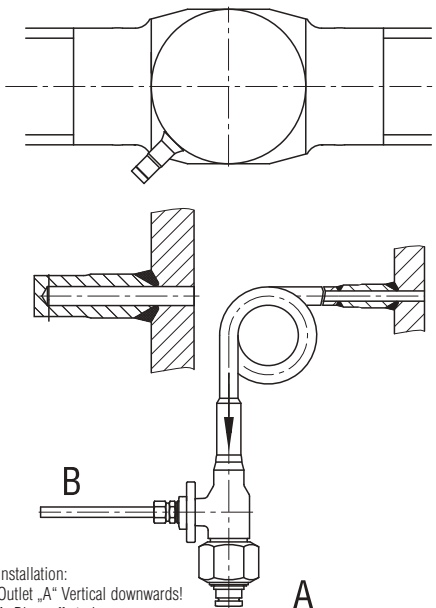
■ Gate valves ■ Overpressure-safety-devices ■ PERSTA Typ SV 98 + SV 99

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	CW 713 R
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

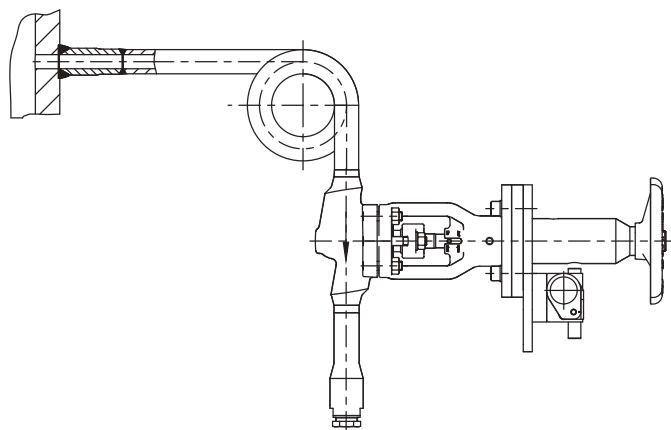


Assembly Sketch SV 98



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

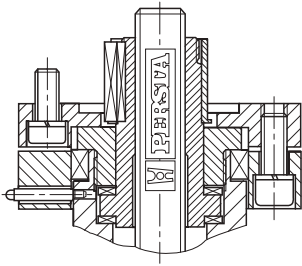
Assembly Sketch SV 99



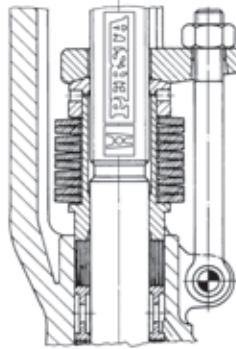
With lockable
 High-pressure-globe valve

▪ Gate valves ▪ Variants

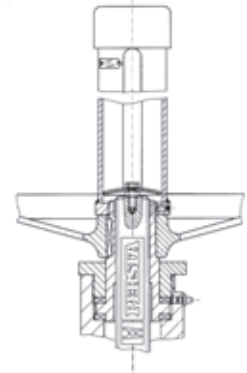
Universal valve head for mounting actuators



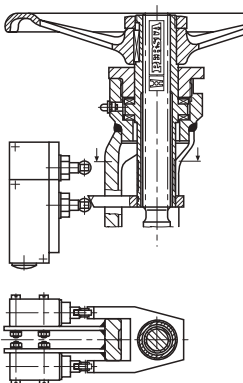
Stuffing box with central plate-spring tightening



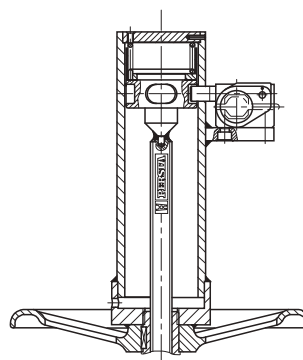
Position indicator / Stem protection cap



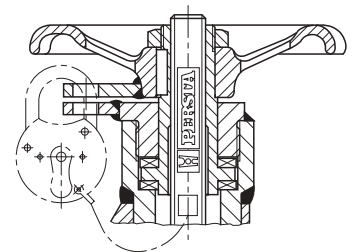
Limit switch actuation



PERLOC-system locking device

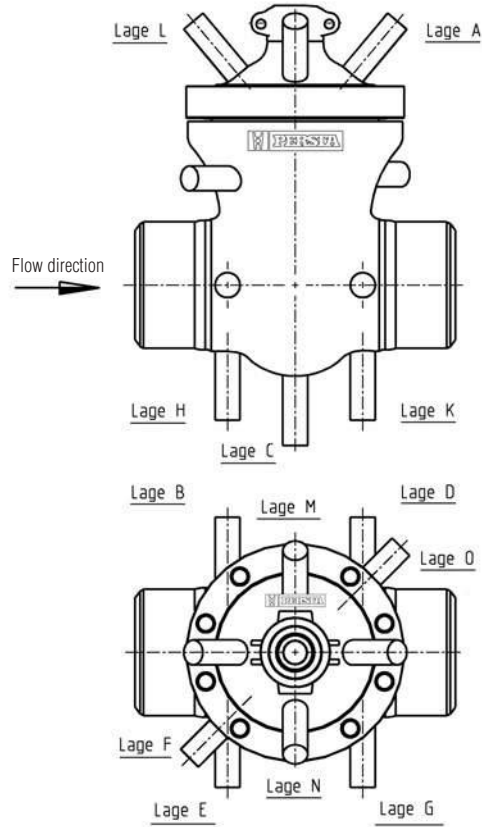
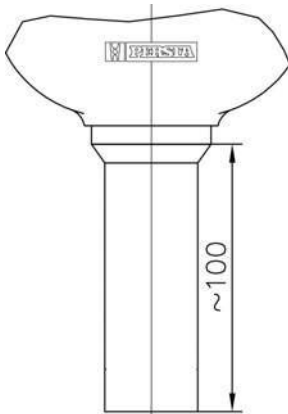


Interlocking device

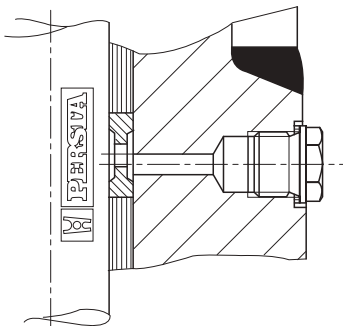


■ Gate valves ■ Variants

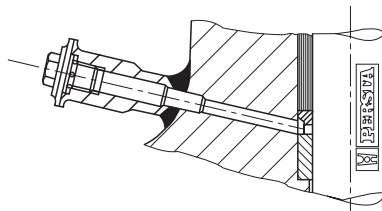
Drainage stud,
variable position



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	120	150	200	250	300	350	400
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

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

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

Version

- Body cast steel
- Available with flange and buttweld ends

Pressure and temperature ratings

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

Materials

- 1.0619

Further materials on request

Media

Depending on the material swing check 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

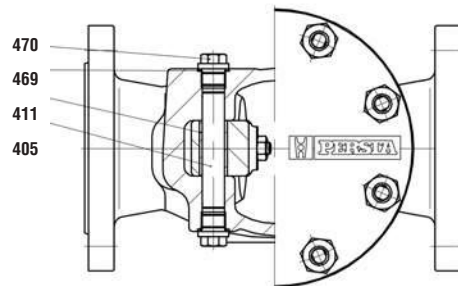
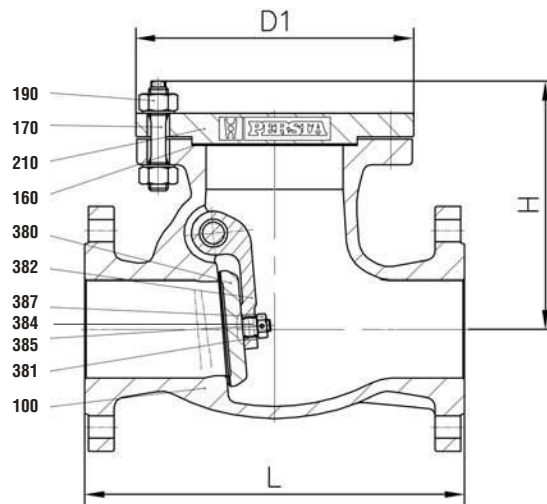
- Hard faced integral body seat with 13 % Cr-Steel or 17 % Cr-Steel layer
- Shut-off disc with curved journal within lever
- The lever rests on the hinge pin by means of a separate bearing bush

Benefits

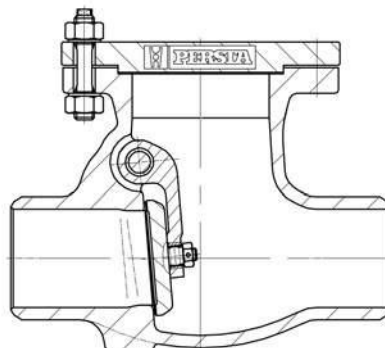
- Extremely resistant to wear
- To improve movability and therefore to improve the alignment of the disc to the body seat
- Improved resistance to wear by means of proper material selection

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

Flange-Version



BW-Version



■ **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⁾
170	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
384	▶ Bushing	1.4006
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	FL	BW	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
- Available with flange and buttweld ends

Pressure and temperature ratings

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

Material

- P265GH

Further materials on request

Media

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

Fields of application

Chemical industries, power plants, ship building and other

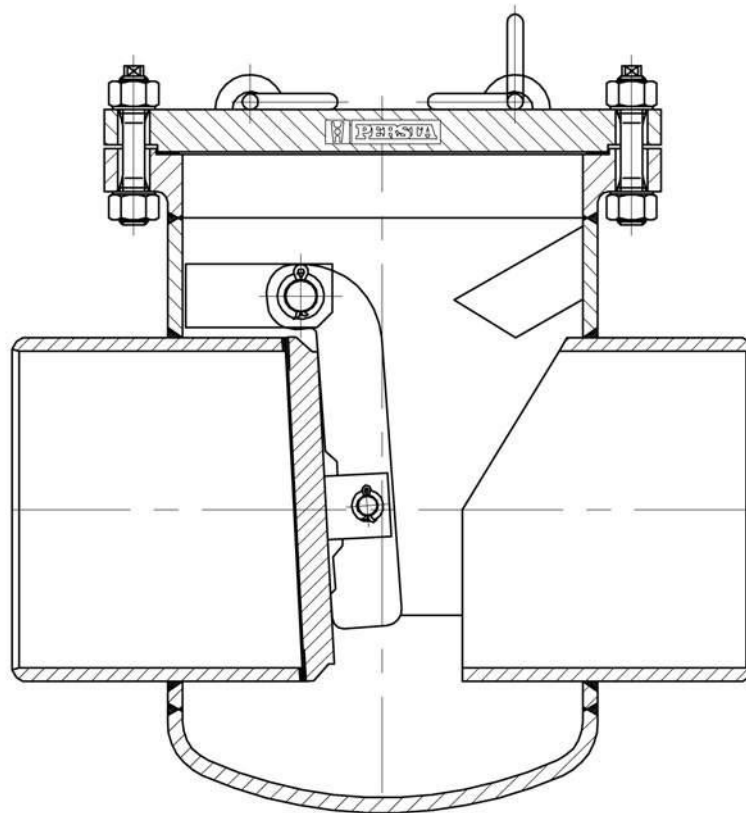
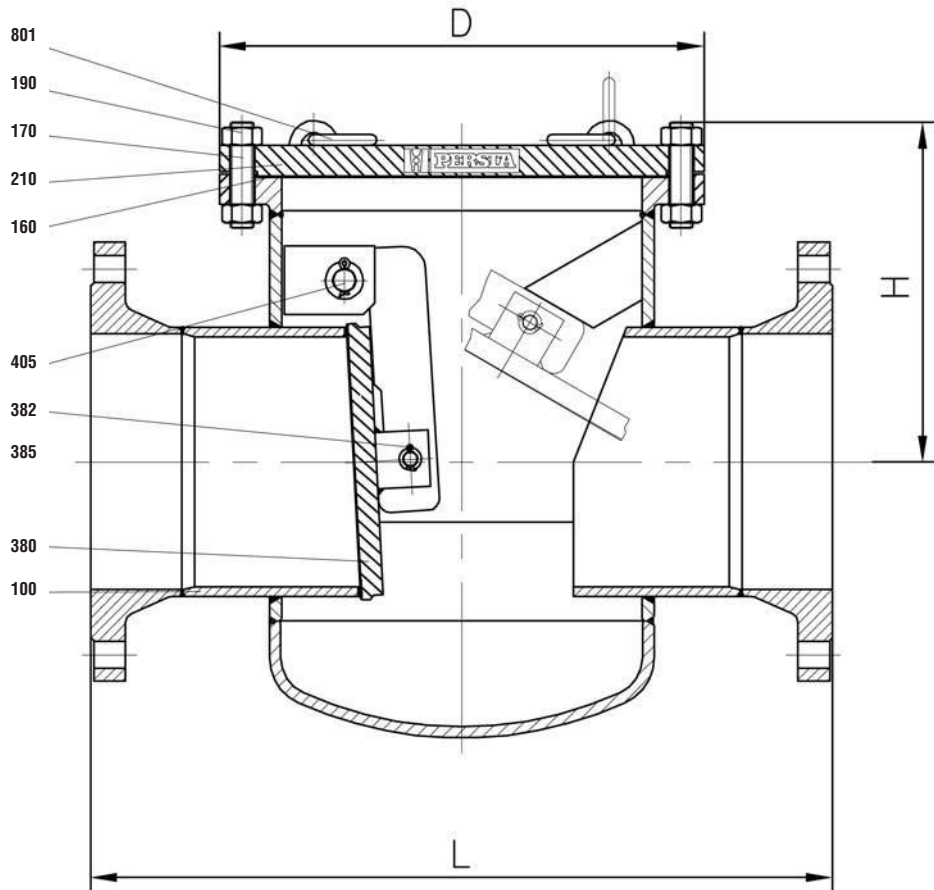
Design Highlights

- 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 alignment of the disc to the body seat
- Improved resistance 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
170	Screw bolt	1.4541/Graphite
190	Hexagonal nut	1.7158
210	Cover	1.7158
380	▶ Disc welded on with	P265GH
382	▶ Hinge	X8CrTi18
384	▶ Bushing	S235JRG2
385	▶ Pint	GG 25
405	▶ Hinge pin	A2-70
801	Lifting eye bolt	1.4021
		S355J2G3
	▶ Spare parts	
	Further materials on request.	

Dimensions/mm

DN	PN 10-16		PN 25		PN 40		PN 10-16		PN 25		PN 40	
	L	L	H	H	H	H	D	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		Kvs (m3/h)
	FL	FL	FL	FL	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	PN	Admissible operating pressure [bar] at design temperature [°C] ¹⁾															
		-10	20	120	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
1.7383	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	PN	Admissible operating pressure [bar] at design temperature [°C] ¹⁾															
		-10	20	120	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	
1.7383	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	PN	Admissible operating pressure [bar] at design temperature [°C] ¹⁾															
		-10	20	120	150	200	250	300	350	400	450	500	510	520	530	540	550
1.5415	160	160	160	160	160	160	139	125	118	112	72	55	43	35			
1.7335	160	160	160	160	160	160	160	153	146	139	118	100	79	62	46	35	
1.7383	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- Version Material	PD	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																									
		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				
1.7383	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
- Fastening of the disc at the cover
- Available with flange and buttweld ends

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
- 1.7383

Further materials on request

Media

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

Fields of application

Chemical industries, power plants, ship building and other

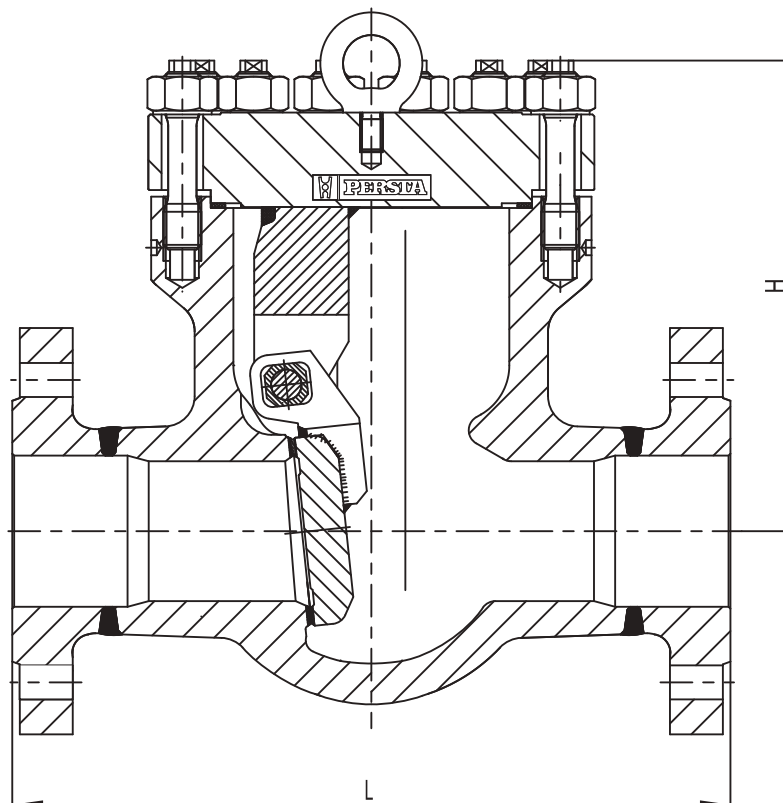
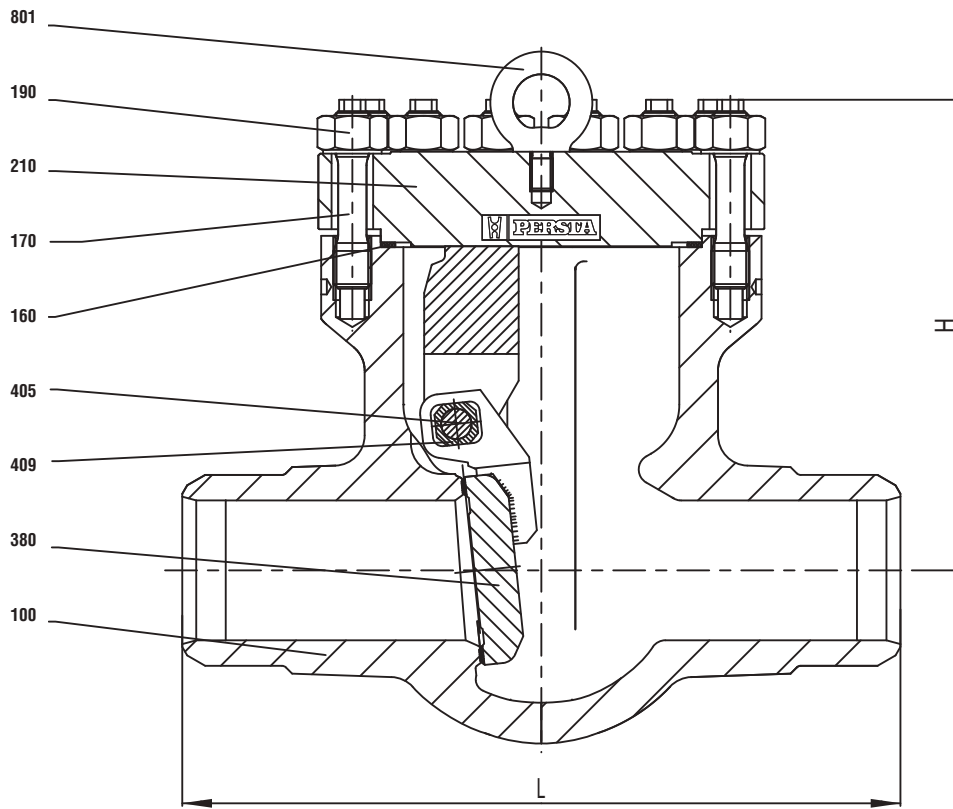
Design Highlights

- Die-forged body
- Integral seat
- Lever rests on the hinge pin by means of the guide bush
- Bolted bonnet with reduced-shaft bolts
- Fastening of the disc at the cover

Benefits

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

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



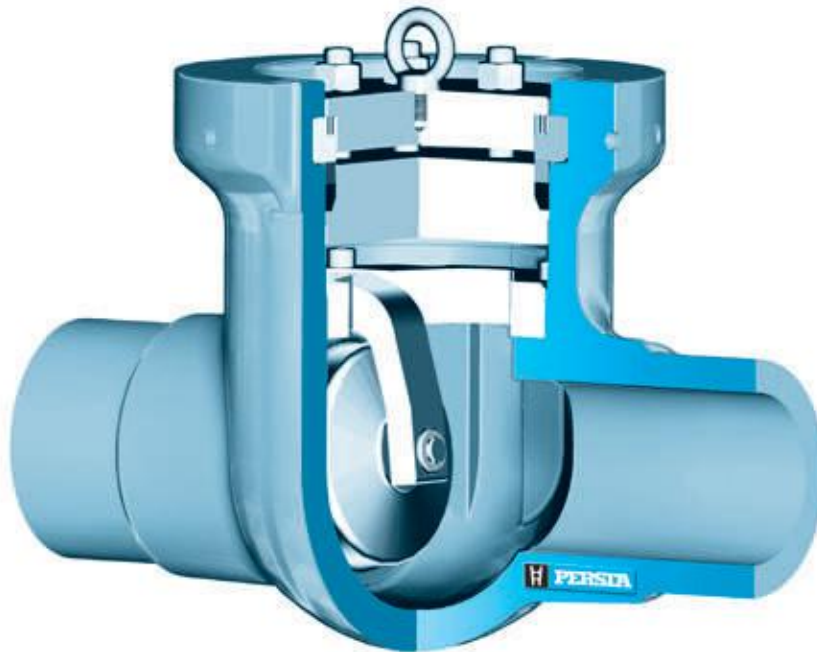
■ **Swing check valves** ■ **640 AA** ■ **PN 63-160 (PD 18)** ■ **DN 50-300/250**

Materials				
Pos.	Component	1.5415 (42)	1.7335 (44)	1.7383 (45)
100	Body welded on with	1.5415 Stellite	1.7383/1.7335 Stellite	1.7383 Stellite
160	▶ Gasket	Graphite	Graphite	Graphite
170	Screw bolt	1.7709	1.7709	1.7709
190	Hexagonal nut	1.7218	1.7218	1.7218
210	Cover	1.5415	1.7335	1.7383
380	▶ Disc welded on with	1.5415 Stellite	1.7335 Stellite	1.7383 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 63-100 L	PN 160 L	H	D
50	250	300	220	192
65 / 50	340	360	220	192
80	380	390	280	236
100	430	450	320	265
125 / 100	500	525	320	265
150	550	600	410	350
200	650	750	510	440
250	775	900	595	550
300 / 250	900	1050	595	550

Weights/kg		
DN	FL	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-Version 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				
1.7383	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⁾ Betriebstemperatur = Berechnungstemperatur minus Temperaturzuschlag nach Regelwerk.

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

Standard features

- Valve body made of forged steel
- Swing check valve with internal hinge pin
- Lever rests in separate support ring
- Pressure sealed bonnet acc. VGB-guidelines

Pressure and temperature ratings

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

Materials

- 1.5415
- 1.7335
- 1.7383

Further materials on request

Media

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

Fields of application

High temperature steam and water, Refining (catalytic reformers and hydrocrackers), petrochemical and chemical industries

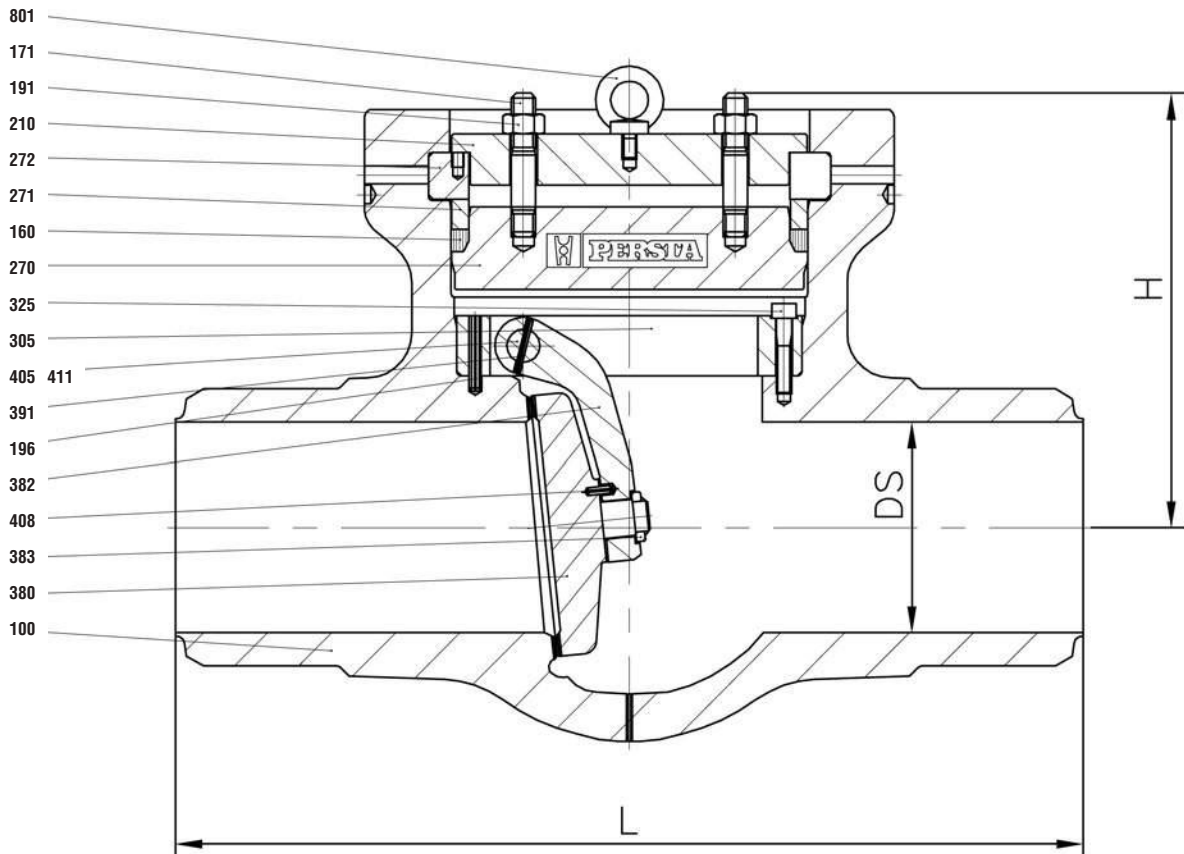
Design Highlights

- Body and bonnet made of forged steel
- Seats faced with stellite
- Lever rests in a separate support ring
- Shut-off disc with curved journal
- Pressure sealed bonnet

Benefits

- Free from porosity and shrink holes
- Extremely resistant to wear
- The setting of the disc can be examined before installing the bonnet cover
- Optimum alignment of the disc to the body seat
- Best possible sealing function

▪ 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)	1.7383 (45)
100	Body welded on with	1.5415 Stellite	1.7383/1.7335 Stellite	1.7383 Stellite
160	Gasket	Graphite	Graphite	Graphite
171	Stud	1.7709	1.7709	1.7709
191	Hexagonal nut	1.7218	1.7218	1.7218
196	Tension pin	1.4370	1.4370	1.4370
210	Cover	1.5415	1.7335	1.7383
270	Cover	1.5415	1.7335	1.7383
271	Ring	1.5415	1.7335	1.7383
272	Segment ring	1.5415	1.7335	1.7383
305	▶ Body	1.5415	1.7335	1.7383
325	Cylindrical screw	A4	A4	A4
380	▶ Disc welded on with	1.5415 Stellite	1.7335 Stellite	1.7383 Stellite
382	▶ Hinge	1.5415	1.7335	1.7383
383	▶ Washer	1.0460	1.7335	1.7383
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
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 26 ■ 640 AB ■ PD 25 / PD 40 ■ DN 65-300



Range of application

BW-Version Material	PD	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																						
		20	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				
1.0460	25	250	250	250	250	250	235	206	184	155	125	119	113	107	102	96	85	71	58																					
1.5415	25	300	300	300	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	300	300	300	294	272	258	243	240	237	234	231	228	227	225	224	222	202	170	134	109	88	69	57	46												
1.7383	25	300	300	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	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	425	425	425	418	383	372	344	316	290	263	238	213	191	169	150	132	115	100	85	75	64				
1.4901	25	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	423	397	370	345	320	297	275	252	230	208	186	166	147	127	110	95	82				

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

Range of application

BW-Version Material	PD	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																							
		20	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					
1.0460	40	400	400	400	400	400	377	330	295	248	200	190	181	172	162	153	135	113	93																						
1.5415	40	480	480	480	480	480	447	412	353	341	330	327	325	322	320	318	315	313	311	271	212	161	127	101																	
1.7335	40	481	481	481	481	481	471	436	412	388	384	379	374	370	365	363	360	358	355	322	271	215	175	141	110	90	73														
1.7383	40	480	480	480	480	480	480	471	436	412	407	403	398	393	388	384	379	374	358	318	278	242	212	183	160	136	120	103	89	79											
1.6368	40	657	657	657	657	657	657	657	657	657	657	657	657	657	643	577	495	412	328	245	163																				
1.4903	40	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	669	612	596	551	506	464	421	381	341	306	271	240	212	183	160	136	120	103					
1.4901	40	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	677	635	592	552	512	475	440	404	369	334	298	265	235	204	176	152	131					

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

High pressure swing check valves ■ DRI 26 ■ 640 AB ■ PD 25 / PD 40 ■ DN 65-300

Standard features

- Valve body made of forged steel
- Swing check valve with internal hinge pin
- Disc applicated to the body insert
- Pressure sealing bonnet acc. to VGB-guidelines

Pressure and temperature ratings

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

Materials

- 1.0460
- 1.4901
- 1.4903
- 1.5415
- 1.6368
- 1.7335
- 1.7383

Further materials on request

Media

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

Fields or application

Chemical industries, industries and power plants

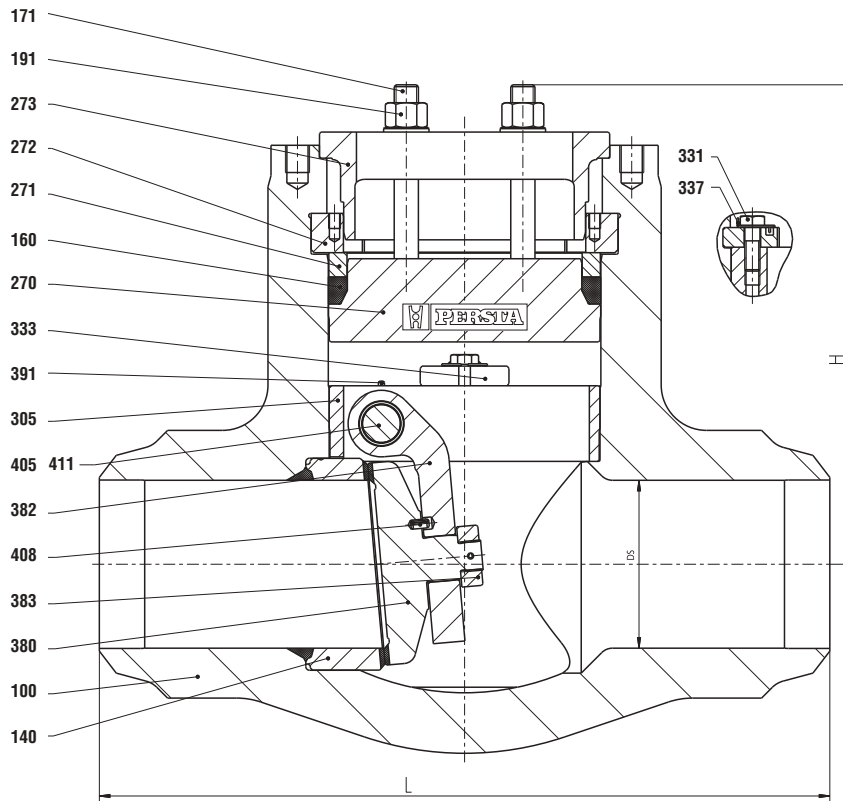
Design Highlights

- Valve body made of forged steel
- Tubular forged body
- Seats faced with stellite
- Lever rests in a separate support ring
- Shut-off disc with curved journal
- Pressure sealed bonnet
- Cover can be used for dismantling of the cover fastener

Benefits

- Free from porosity and shrink holes
- No pressure retaining weldseams
- Extremely resistant to wear
- The setting of the disc can be examined before installing the bonnet cover
- Optimum adjustment of the disc to the body seat
- Best possible sealing function
- No special tools are necessary for dismantling the disc fastener

High pressure swing check valves ■ DRI 26 ■ 640 AB ■ PD 25 / PD 40 ■ DN 65-300



High pressure swing check valves ■ DRI 26 ■ 640 AB ■ PD 25 / PD 40 ■ DN 65-300

Materials

Pos.	Component	1.0460 (21)	1.5415 (42)	1.7335 (44)	1.7383 (45)	1.6368 (46)	1.4903 (63)	1.4901 (66)
100	Body	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
140	Seat ring	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
	welded on with	Stellite	Stellite	Stellite	Stellite	Stellite	Stellite	Stellite
160	▶ Gasket	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
171	Stud	A 193 B7	A 193 B7	A 193 B7	A 193 B7	A 193 B7	A 193 B7	A 193 B7
191	Hexagonal nut	A 194 2H	A 194 2H	A 194 2H	A 194 2H	A 194 2H	A 194 2H	A 194 2H
270	Tension pin	1.7383	1.7383	1.7383	1.7383	1.4903	1.4903	1.4901
271	Ring	1.7383	1.7383	1.7383	1.7383	1.4903	1.4903	1.4901
272	Segment ring	1.7383	1.7383	1.7383	1.7383	1.4903	1.4903	1.4901
273	Cover	1.0460	1.0460	1.0460	1.0460	1.0460	1.0460	1.0460
305	Support ring	1.7383	1.7383	1.7383	1.7383	1.7383	1.4903	1.4903
331	Hexagonal nut	A4	A4	A4	A4	A4	A4	A4
333	▶ Flange	1.4903	1.4903	1.4903	1.4903	1.4903	1.4903	1.4903
337	▶ Locking ring	1.4301	1.4301	1.4301	1.4301	1.4301	1.4301	1.4301
380	▶ Disc	1.7383	1.7383	1.7383	1.7383	1.4903	1.4903	1.4901
	welded on with	Stellite	Stellite	Stellite	Stellite	Stellite	Stellite	Stellite
382	Hinge	1.7383	1.7383	1.7383	1.7383	1.7383	1.4903	1.4903
383	▶ Washer	1.4923	1.4923	1.4923	1.4923	1.4923	1.4923	1.4923
391	▶ Tension pin	1.4310	1.4310	1.4310	1.4310	1.4310	1.4310	1.4310
405	▶ Hinge pin	1.4923	1.4923	1.4923	1.4923	1.4923	1.4923	1.4923
411	▶ Guide bush	0.7040	0.7040	0.7040	0.7040	0.7040	0.7040	0.7040
	▶ Spare parts							

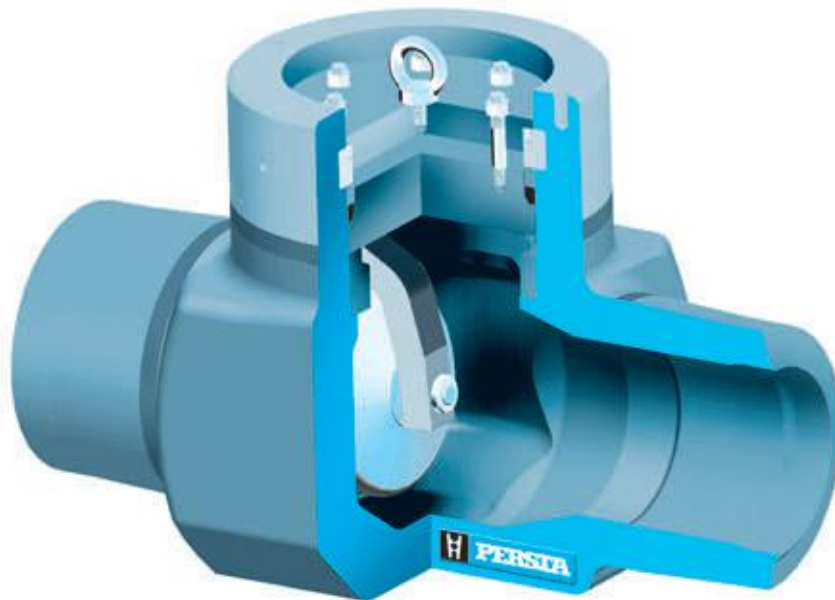
Dimensions/mm and Weights/kg

DRI 26.25 DN	DS	L	H	kg
80	70	305	230	49
100	90	406	257	83
125	111	483	317	137
150	136	559	357	265
200	178	711	445	401
250	222	864	530	744
300	263	991	603	1182

Dimensions/mm and Weights/kg

DRI 26.40 DN	DS	L	H	kg
65	50	330	231	59
80	57	368	246	91
100	72	457	278	150
125	90	533	337	288
150	111	609	431	445
200	146	762	479	796
250	185	1270	587	1542

▪ High pressure swing check valves ▪ DRI 16-63 ▪ 640 AB ▪ PD 16-63 ▪ DN 50-500



Range of application

BW-Version 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	295	248	200	191	182	172	163	153	136	113	93																				
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															
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											
1.7383	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								
1.6368	16	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	402	360	309	257	205	153	102																			
	32	525	525	525	525	525	525	525	525	525	515	482	396	330	262	196	130																			
	40	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680
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			
	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	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680
1.4901	16	272	272	272	272	272	272	272	272	272	272	272	272	272	272	271	254	237	221	205	190	176	161	147	133	119	106	94	81	70	61	52				
	25	425	425	425	425	425	425	425	425	425	425	425	425	425	425	423	397	370	345	320	297	275	252	230	208	186	166	147	127	110	95	82				
	32	544	544	544	544	544	544	544	544	544	544	544	544	544	544	542	508	474	442	410	380	352	323	295	267	239	212	188	163	141	122	105				
	40	680	680	680	680	680	680	680	680	680	680	680	680	680	680	680	677	635	592	552	512	475	440	404	369	334	298	265	235	204	176	152	131			

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations. Design according to working data PD 63 on request

■ **High pressure swing check valves** ■ DRI 16-63 ■ 640 AB ■ PD 16-63 ■ DN 50-500

Standard features

- Valve body made of forged steel
- Swing check valve with internal hinge pin
- Lever rests in a separate support ring
- Welded seat ring
- Pressure sealed bonnet acc. VGB-guidelines

Pressure and temperature ratings

- Pressure rating up to 680 bar
- Temperatur rating up to 650 °C
- Higher ratings on request

Materials

- 1.0460
- 1.4901
- 1.4903
- 1.5415
- 1.6368
- 1.7335
- 1.7383

Further materials on request

Media

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

Fields of application

High temperature steam and water, refining (catalytic reformers and hydrocrackers), petrochemical and chemical industries

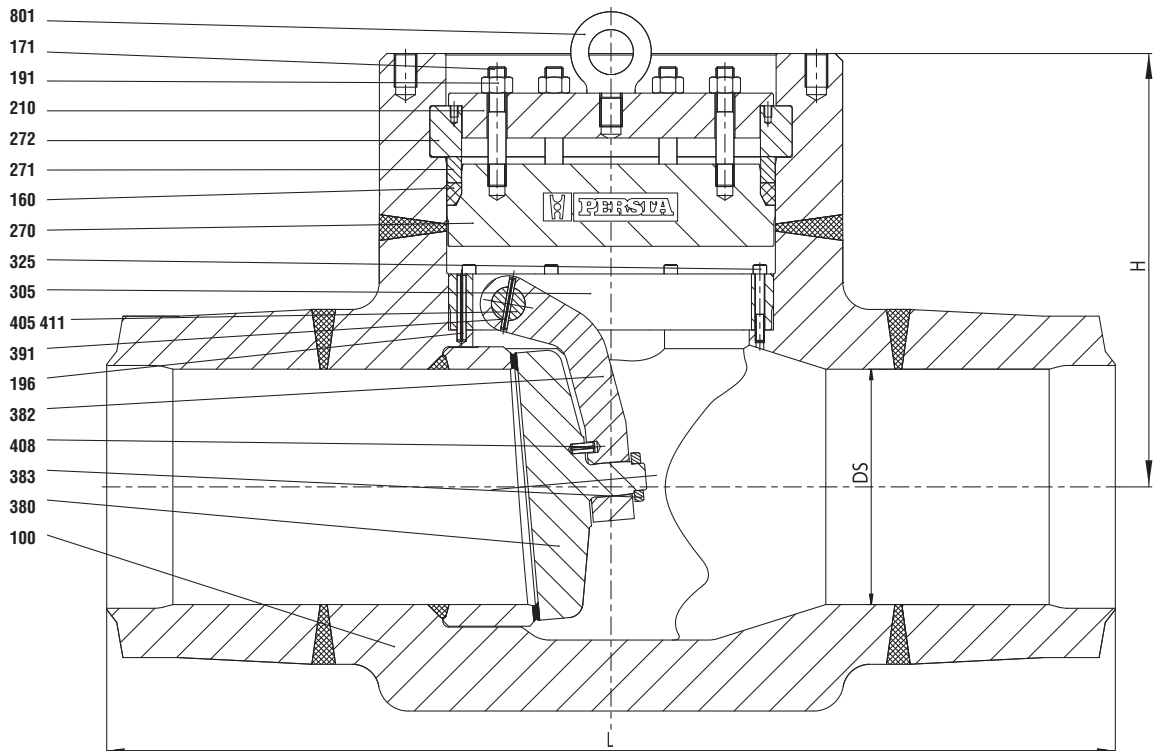
Design Highlights

- Valve body made of forged steel
- Seats faced with stellite
- Lever rests in a separate support ring
- Shut-off device with curved journal
- Pressure sealed bonnet

Benefits

- Free from porosity and shrink holes
- Extremely resistant to wear
- The setting of the disc can be examined before installing the bonnet cover
- Optimum alignment of the disc to the body seat
- Best possible sealing function

▪ High pressure swing check valves ▪ DRI 16-63 ▪ 640 AB ▪ PD 16-63 ▪ DN 50-500



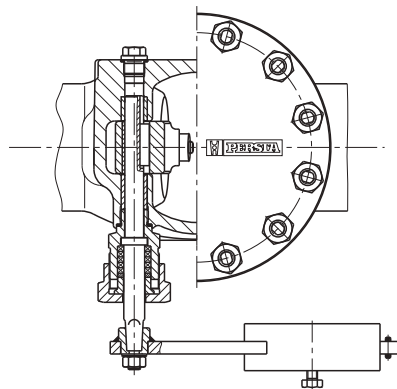
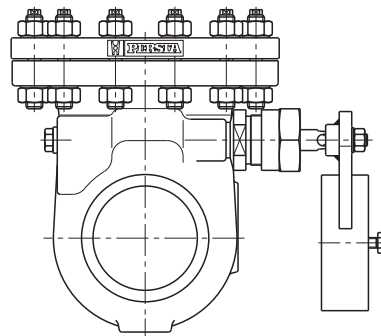
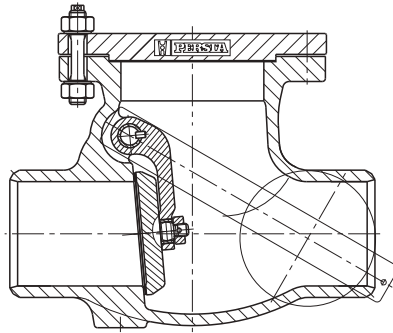
■ High pressure swing check valves ■ DRI 16-63 ■ 640 AB ■ PD 16-63 ■ DN 50-500

Materials								
Pos.	Component	1.0460 (21)	1.5415 (42)	1.7335 (44)	1.7383 (45)	1.6368 (46)	1.4903 (63)	1.4901 (66)
100	Body	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
160	▶ Gasket	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
171	Stud	1.7709	1.7709	1.7709	1.7709	1.7709	1.7709	1.4923
191	Hexagonal nut	1.7218	1.7218	1.7218	1.7218	1.7218	1.7218	1.4923
196	▶ Tension pin	1.4310	1.4310	1.4310	1.4310	1.4310	1.4310	1.4310
210	Cover	1.7383	1.7383	1.7383	1.7383	1.7383	1.7383	1.4903
270	Cover	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
271	Ring	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
272	Segment ring	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
305	▶ Supportring	1.0460	1.5415	1.7335	1.7383	1.7383	1.4903	1.4901
325	Cylindrical screw	A4	A4	A4	A4	A4	A4	A4
380	▶ Disk	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
	welded on with	Stellite	Stellite	Stellite	Stellite	Stellite	Stellite	Stellite
382	▶ Hinge	1.0460	1.5415	1.7335	1.7383	1.7383	1.4903	1.4903
383	▶ Washer	1.0460	1.0460	1.7335	1.7383	1.6368	1.4923	1.4923
391	▶ Tension pin	1.4310	1.4310	1.4310	1.4310	1.4310	1.4310	1.4310
405	▶ Hinge pin	1.4923	1.4923	1.4923	1.4923	1.4923	1.4923	1.4923
408	▶ Tension pin	1.4310	1.4310	1.4310	1.4310	1.4310	1.4310	1.4310
411	▶ Guide bush	0.7040	0.7040	0.7040	0.7040	0.7040	0.7040	0.7040
801	Lifting eye bolt	1.0401	1.0401	1.0401	1.0401	1.0401	1.0401	1.0401
	▶ Spare parts							

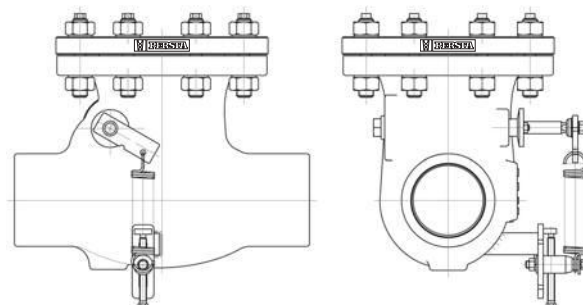
Dimensions/mm and Weights/kg													
DN	DS	DRI 16			DRI 25			DRI 32			DRI 40		DRI 63
		L	H	kg	L	H	kg	L	H	kg	H	kg	
65-200													
225	202,5							Version DRI 26.40			Version DRI 26.40		
250 / 225	202,5							1050	450	910			
250	225,0	Version DRI 26.25			Version DRI 26.25						On request	On request	
300 / 250	225,0							1150	515	1300			
300	270,0							1350	515				
350 / 300	270,0							1350	605	2300			
350	315,0							1550	605				
400 / 350	315,0	1200	540	2300	1550	580	2300	1550	785	4000			
400	360,0	1200	540		1750	580		1750	785				
450 / 400	360,0	1350	600	3600	1750	660	3600						
450	405,0	1350	600		1950	660		On request					
500 / 450	405,0	1500	690	5400	1950	750	5400						
500	450,0	1500	692		2150	750							
600 / 500	540,0	1650											
600	540,0	On request			On request								

▪ **Swing check valves** ▪ Variants

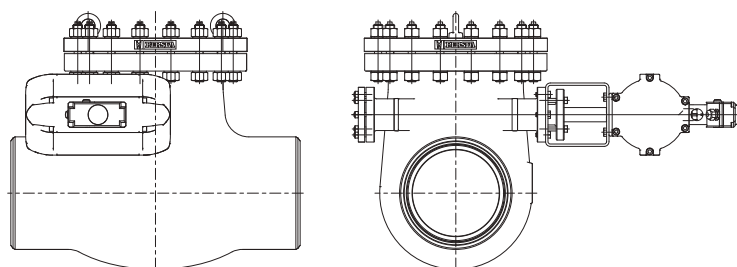
Swing check valve with lever and weight



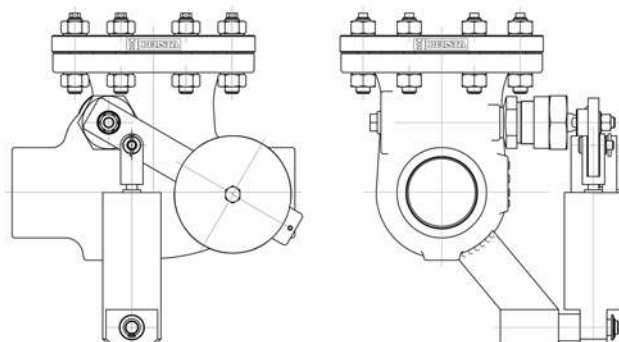
Swing check valve with recuperating spring



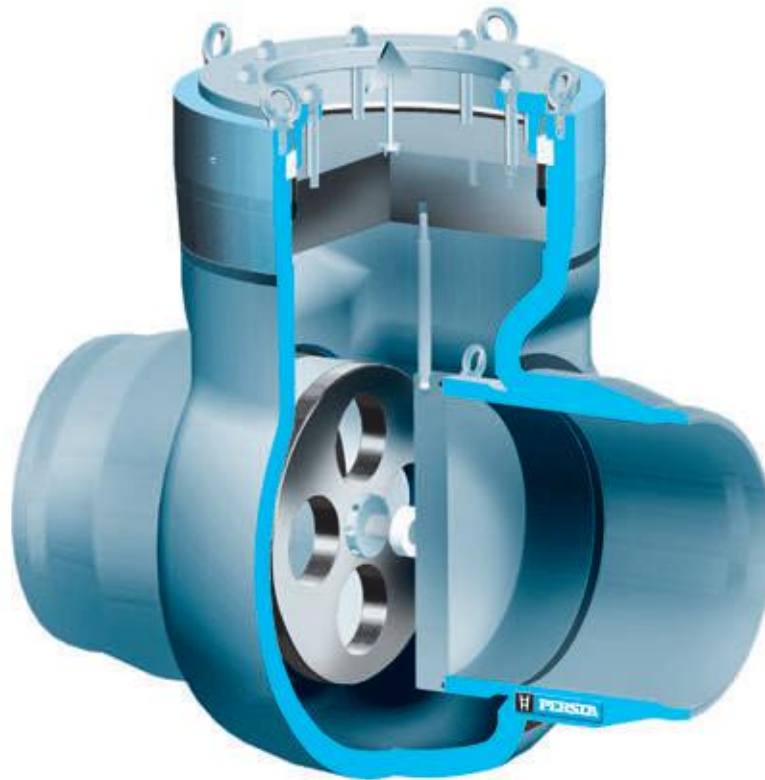
Freerun swing check valve with actuator



Swing check valve with damping unit



▪ High pressure line blind valve DPV 10 ▪ 990 VW ▪ PD 10 ▪ DN 350-700



Range of application

BW-Version 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	
1.0425	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									
1.7383	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						
1.4903	10	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	134	122	119	110	101	93	84	76	68	61	54	48	42	37	32	27	24	21

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

■ **High pressure line blind valve DPV 10** ■ 990 VW ■ PD 10 ■ DN 350-700

Standard features

- Die forged body and bonnet
- Welded seat ring
- Position indicator
- Pressure sealing bonnet acc. to VGB-guidelines

Pressure and temperature ratings:

- Pressure rating up to 136 bar
- Temperature rating up to 650 °C

Materials

- 1.0425
- 1.4903
- 1.5415
- 1.7335
- 1.7383

Further materials on request

Media

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

Fields of application

High temperature steam and water, refining (catalytic reformers and hydrocrackers), petrochemical and chemical industries

Design Highlights

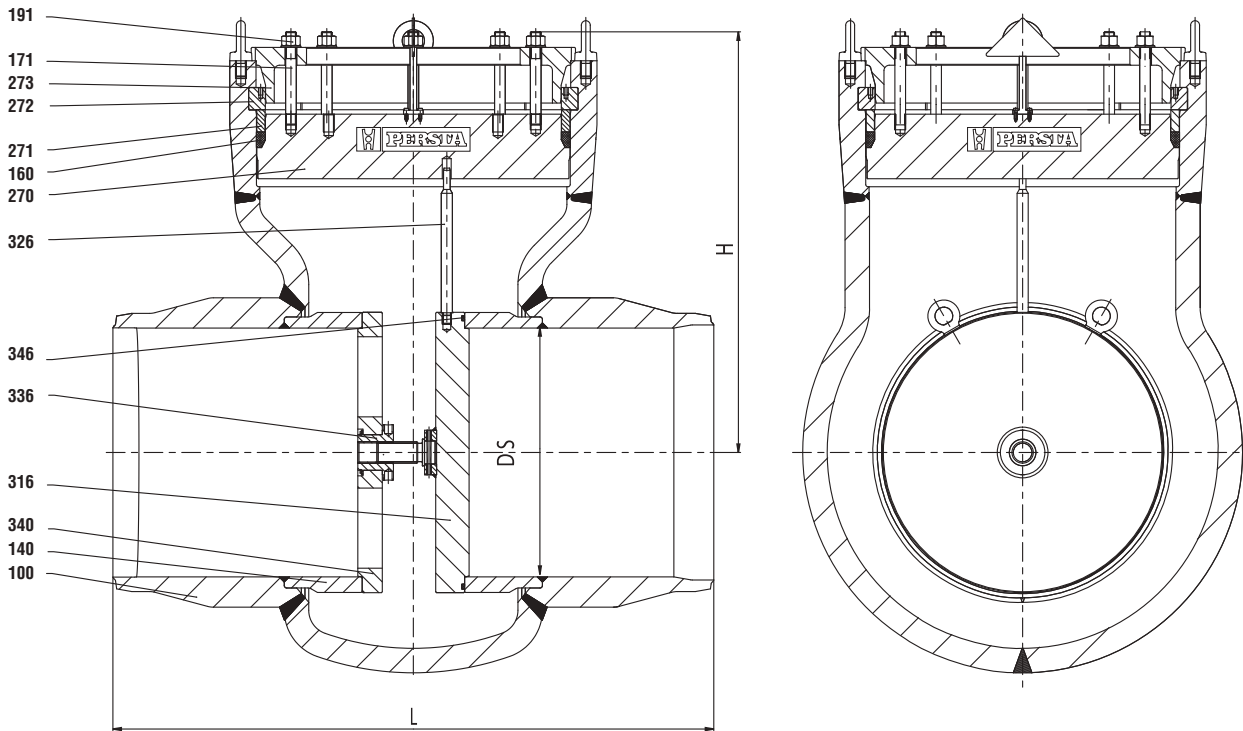
- Thin wallthickness
- Position indicator
- Pressure sealed bonnet

Benefits

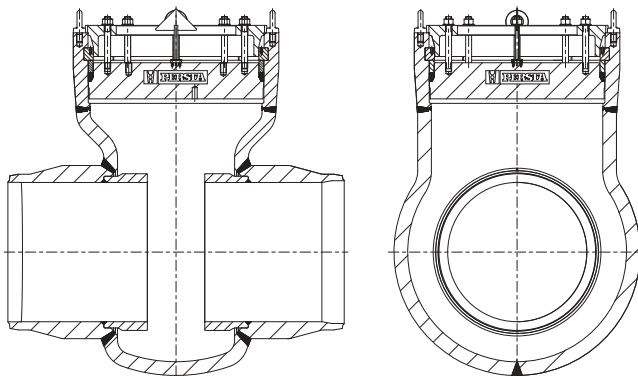
- Less temperature stresses
- Indicates if seal plate is mounted or dismantled
- Best possible sealing function

■ High pressure line blind valve DPV 10 ■ 990 VW ■ PD 10 ■ DN 350-700

Closed passage (seal plate mounted)



Free passage (seal plate dismantled)



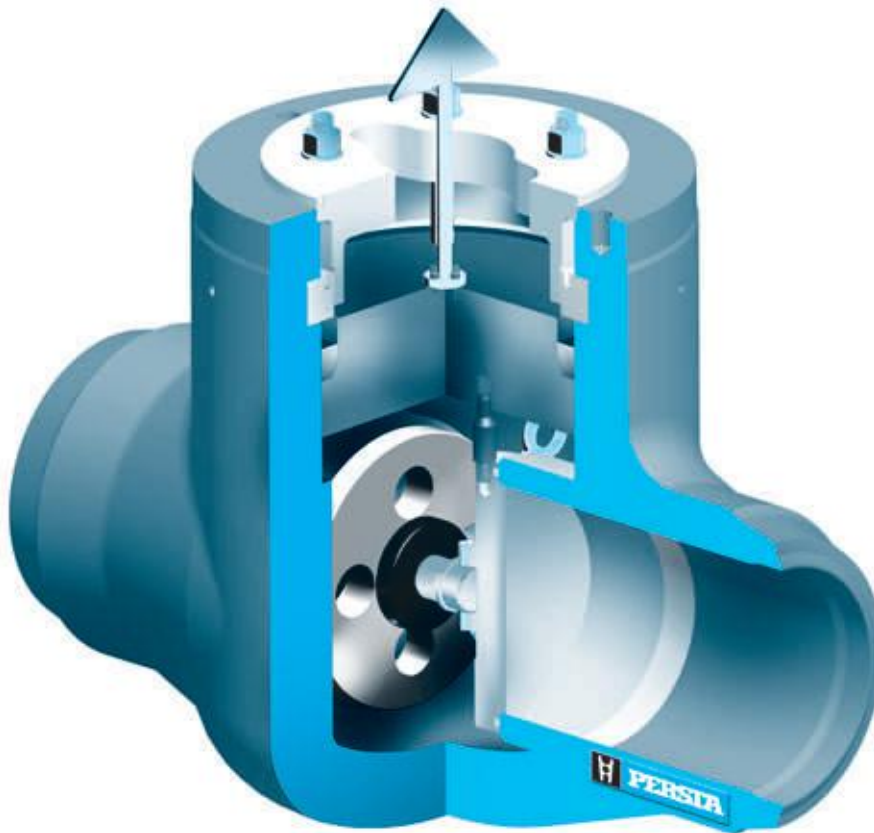
Specials on request

■ High pressure line blind valve DPV 10 ■ 990 VW ■ PD 10 ■ DN 350-700

Materials						
Pos.	Component	1.0425 (22)	1.5415 (42)	1.7335 (44)	1.7383 (45)	1.4903 (63)
100	Body	1.0425	1.5415	1.7335	1.7383	1.4903
140	Seat ring	1.0460	1.5415	1.7335	1.7383	1.4903
	welded on with	Stellite	Stellite	Stellite	Stellite	Stellite
160	▶ Gasket	Graphite	Graphite	Graphite	Graphite	Graphite
171	Stud	1.7709	1.7709	1.7709	1.7709	1.7709
191	Hexagonal nut	1.7218	1.7218	1.7218	1.7218	1.7218
270	Cover	1.7383	1.7383	1.7383	1.7383	1.4903
271	Ring	1.7383	1.7383	1.7383	1.7383	1.4903
272	Segment ring	1.7383	1.7383	1.7383	1.7383	1.4903
273	Supporting cap	1.0460	1.0460	1.0460	1.0460	1.0460
316	Cone plate	1.7383	1.7383	1.7383	1.7383	1.4903
326	Fixing bolt	1.4021	1.4021	1.4021	1.4021	1.4021
336	Coupling nut	CW 713 R	CW 713 R	CW 713 R	CW 713 R	CW 713 R
340	Plate	1.7383	1.7383	1.7383	1.7383	1.7383
346	▶ O-Ring	Viton	Viton	Viton	Viton	Viton
	▶ Spare parts					

Dimensions/mm and Weights/kg					
DN	DS	L	H	kg	
350	330	850	645	710	
400	375	950	690	1150	
450	419	1050	710	1400	
500	464	1150	861	1800	
600	559	1350	945	2540	
700	640	1550	1150	3750	

■ High pressure line blind valve DPV 16-63 ■ 990 VW ■ PD 16-63 ■ DN 65-600



Range of application

BW-Version 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	295	248	200	191	182	172	163	153	136	113	93																				
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															
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											
1.7383	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								
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																		
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			
	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	680	669	613	596	552	507	464	422	382	342	306	271	240	212	184	160	137	120	104		
1.4901	16	272	272	272	272	272	272	272	272	272	272	272	272	272	272	271	254	237	221	205	190	176	161	147	133	119	106	94	81	70	61	52				
	25	425	425	425	425	425	425	425	425	425	425	425	425	425	425	423	397	370	345	320	297	275	252	230	208	186	166	147	127	110	95	82				
	32	544	544	544	544	544	544	544	544	544	544	544	544	544	544	542	508	474	442	410	380	352	323	295	267	239	212	188	163	141	122	105				
	40	680	680	680	680	680	680	680	680	680	680	680	680	680	680	677	635	592	552	512	475	440	404	369	334	298	265	235	204	176	152	131				

1) Operating temperature = design temperature minus temperature surcharge acc. to DIN regulations. Design according to working data PD 63 on request

■ **High pressure line blind valve DPV 16-63** ■ 990 VW ■ PD 16-63 ■ DN 65-600

Standard features

- Valve body made of forged steel with welded seat rings
- Position indicator
- Pressure sealing bonnet acc. to VGB-guidelines

Pressure and temperature ratings

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

Materials

- 1.0460
- 1.4901
- 1.4903
- 1.5415
- 1.6368
- 1.7335
- 1.7383

Further materials on request

Media

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

Fields of application

High temperature steam and water, refining (catalytic reformers and hydrocrackers), petrochemical and chemical industries

Design Highlights

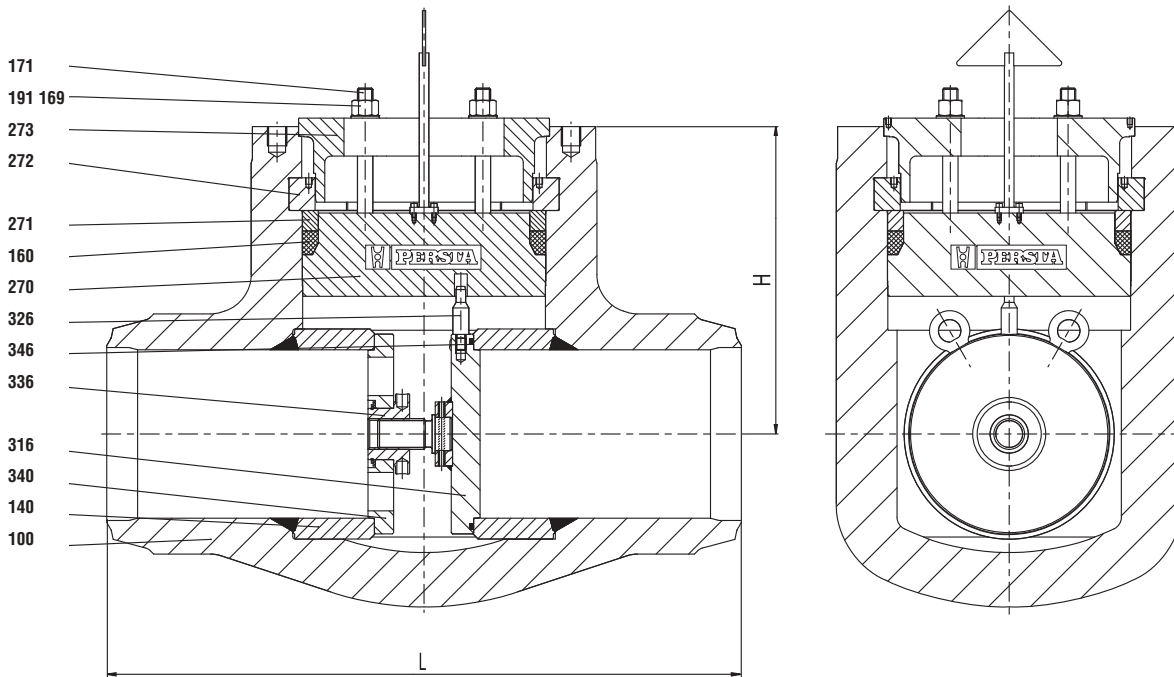
- Valve Body made of forged steel
- Tubular forged body
- Seat faced with stellite
- Position indicator
- Cover can be used for dismantling of the cover fastener

Benefits

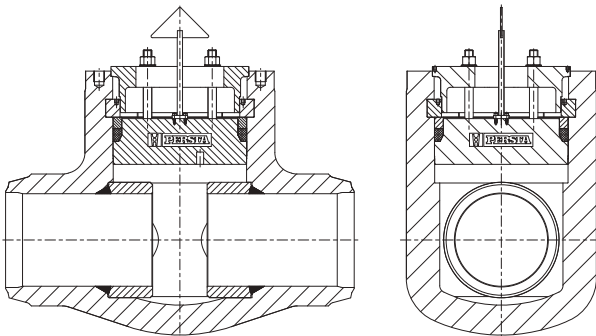
- Free from porosity and shrink holes
- No pressure retaining weldseams
- Extremely resistant to wear
- Indicates if seal plate is mounted or dismantled
- No special tools are necessary for dismantling the disc fastener

■ High pressure line blind valve DPV 16-63 ■ 990 VW ■ PD 16-63 ■ DN 65-600

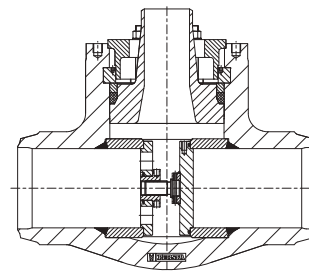
Closed passage (seal plate mounted)



Free passage (seal plate dismantled)



With blow-out attachment (seal plate mounted)



Specials on request

■ High pressure line blind valve DPV 16-63 ■ 990 VW ■ PD 16-63 ■ DN 65-600

Materials								
Pos.	Component	1.0460 (21)	1.5415 (42)	1.7335 (44)	1.7383 (45)	1.6368 (46)	1.4903 (63)	1.4901 (66)
100	Body	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
140	Seat ring	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
	welded on with	Stellite	Stellite	Stellite	Stellite	Stellite	Stellite	Stellite
160	Gasket	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
171	Stud	A 193 B7	A 193 B7	A 193 B7	A 193 B7	A 193 B7	A 193 B7	A 193 B7
191	Hexagonal nut	A 194 2H	A 194 2H	A 194 2H	A 194 2H	A 194 2H	A 194 2H	A 194 2H
270	Cover	1.7383	1.7383	1.7383	1.7383	1.4903	1.4903	1.4901
271	Ring	1.7383	1.7383	1.7383	1.7383	1.4903	1.4903	1.4901
272	Segment ring	1.7383	1.7383	1.7383	1.7383	1.4903	1.4903	1.4901
273	Supporting cap	1.0460	1.0460	1.0460	1.0460	1.0460	1.0460	1.0460
316	Cone plate	1.7383	1.7383	1.7383	1.7383	1.4903	1.4903	1.4901
326	Fixing bolt	1.4021	1.4021	1.4021	1.4021	1.4021	1.4021	1.4021
336	Coupling nut	CW 713 R	CW 713 R	CW 713 R	CW 713 R	CW 713 R	CW 713 R	CW 713 R
340	Plate	1.7383	1.7383	1.7383	1.7383	1.7383	1.7383	1.7383
346	O-Ring	Viton	Viton	Viton	Viton	Viton	Viton	Viton

► Spare parts

Dimensions/mm and Weights/kg													
DN	DPV 16			DPV 25			DPV 32			DPV 40			DPV 63
	L	H	kg	L	H	kg	L	H	kg	L	H	kg	
65							330	208	59,0	330	231	59	
80	305	207	49	305	207	49	368	221	91,0	368	246	91	
100	406	231	83	406	231	83	457	250	150,0	457	278	150	
125	483	285	137	483	285	137	533	303	288,0	533	337	288	On request
150	559	321	265	559	321	265	609	388	445,0	609	431	445	
200	711	401	401	711	401	401	762	431	796,0	762	479	796	
250	864	477	744	864	477	744	1270	528	1542,0	1270	587	1542	
300	991	543	1182	991	543	1182							
350													
400	On request			On request			On request			On request			
450													
500													
600													

▪ **Strainer** ▪ 990 ST ▪ 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				
1.0460	500	550,0	550,0	550,0	550,0	550,0	550,0	518,0	463,0	389,0	315,0	300,0	285,0	270,0	255,0	240,0	213,0	177,0	146,0																					
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													
1.7383	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	550,0	500,0	465,0	430,0	380,0	338,0	298,0	261,0	231,0	198,0	172,0			
1.4901	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	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	

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

■ **Strainer** ■ 990 ST ■ PN 500 ■ DN 10-65/50

Standard features

- Die-forged valve body
- Screw cap
- Compact design

Pressure and temperature ratings

- Pressure rating up to 550 bar
- Temperature rating up to 650 °C (depending on selected material)
- Maximum pressure difference between inlet and outlet 2 bar

Materials

- 1.0460
- 1.4901
- 1.4903
- 1.5415
- 1.7335
- 1.7383

Screen/filter mesh size

- 0,10 mm
- 0,25 mm
- 0,50 mm
- 1,00 mm

Further materials on request

Media

Depending on the material the strainer is suitable for water, gas, oil and other non aggressive media

Fields of application

Chemical industries, power plants, process engineering and other

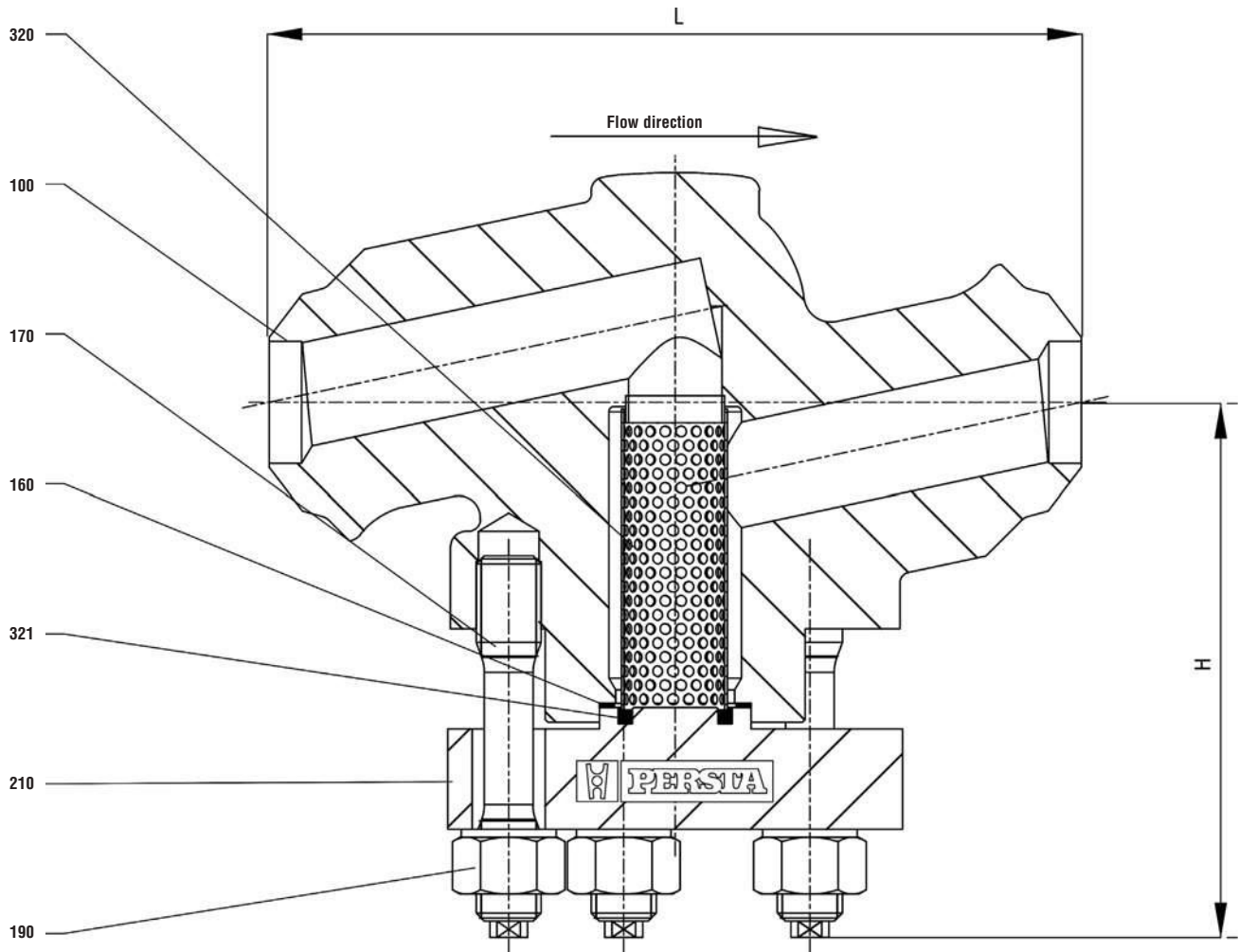
Design Highlights

- Body and bonnet in forged steel
- Body in two separate pieces with bolted connection
- Body-bonnet connection male and female
- Differences of screen/filter mesh size

Benefits

- In contrast to cast steel parts generally free from porosity and shrink holes
- Improved the service possibilities, for exchanging the screen filter
- Blow out protection
- Individually selectable according to the grade of pollution and medium

▪ **Strainer** ▪ 990 ST ▪ PN 500 ▪ DN 10-65/50



■ **Strainer** ■ **990 ST** ■ **PN 500** ■ **DN 10-65/50**

Materials

Pos.	Component	1.0460 (21)	1.5415 (42)	1.7335 (44)	1.7383 (45)	1.4903 (63)	1.4901 (66)
100	Body	1.0460	1.5415	1.7335	1.7383	1.4903	1.4901
160	▶ Gasket	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
170	Bolt	1.4923	1.4923	1.4923	1.4923	1.4986	1.4986
190	Hexagonal nut	1.4923	1.4923	1.4923	1.4923	1.4986	1.4986
210	Cover	1.7383	1.7383	1.7383	1.7383	1.4903	1.4901
320	▶ Filter cylinder	1.4571	1.4571	1.4571	1.4571	1.4571	1.4571
321	▶ Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
	▶ Spare parts						

Dimensions/mm

DN	L	H
10	150	100
15	150	100
20	180	127
25	180	127
32 ¹⁾	300	198
40	300	198
50	300	198
65/50	300	198

1) 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
10	3,7
15	3,7
20	7,6
25	7,4
32 ¹⁾	29,8
40	29,3
50	28,8
65/50	28,8

■ 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 1.4901, 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.

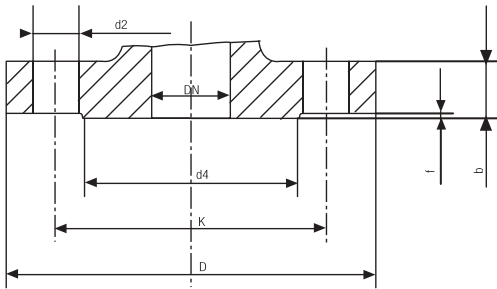
The valves will be marked as working pressure valves.

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	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	10	100	100	94	82	74	62	50	48	45	43	41	38	34	28	23																			
	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	295	248	200	191	182	172	163	153	136	113	93																			
1.5415	10	120	120	112	103	88	85	82	82	81	81	80	79	79	78	78	68	53	40	32	25														
	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														
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										
	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										
1.7383	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							
	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							
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																	
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		
	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		
1.4901	16	272	272	272	272	272	272	272	272	272	272	272	272	272	272	271	254	237	221	205	190	176	161	147	133	119	106	94	81	70	61	52			
	25	425	425	425	425	425	425	425	425	425	425	425	425	425	425	423	397	370	345	320	297	275	252	230	208	186	166	147	127	110	95	82			
	32	544	544	544	544	544	544	544	544	544	544	544	544	544	544	542	508	474	442	410	380	352	323	295	267	239	212	188	163	141	122	105			
	40	680	680	680	680	680	680	680	680	680	680	680	680	680	680	677	635	592	552	512	475	440	404	369	334	298	265	235	204	176	152	131			

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. EN 1092 (other flange-types possible).

		Flange dimensions																				
Nom-press	DN Maße	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	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	4	4	4	4	4	4	8(4)*	8	8	8	8	8	12	12	12	16	16	20	20	24	24
	Thread d2	M12	M12	M12	M16	M16	M16	M16	M16	M16	M16	M20	M20	M20	M20	M24	M24	M24	M27	M27	M30	M30
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	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	3	4	4	4	4	5	5	5
	No. of bolts	4	4	4	4	4	4	8(4)*	8	8	8	8	12	12	12	16	16	20	20	24	24	24
	Thread d2	M12	M12	M12	M16	M16	M16	M16	M16	M16	M16	M20	M20	M24	M24	M24	M27	M27	M30	M33	M33	M36
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	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	3	4	4	4	4	5	5	5
	No. of bolts	4	4	4	4	4	4	8(4)*	8	8	8	8	12	12	12	16	16	20	20	24	24	24
	Thread d2	M12	M12	M12	M16	M16	M16	M16	M16	M20	M24	M24	M24	M27	M27	M30	M33	M33	M36	M39	M45	M45
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	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	3	4	4	4	4	5	5	5
	No. of bolts	4	4	4	4	4	4	8	8	8	8	8	12	12	12	16	16	20	20	24	24	24
	Thread d2	M12	M12	M12	M16	M16	M16	M16	M16	M20	M24	M24	M27	M30	M30	M33	M36	M39	M45	M45	M52	M52
63	Flange D	105	130	140	155	170	180	205	215	250	295	345	415	470	530							
	b	20	24	24	24	26	26	26	28	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	4	4	4	4	4	4	8	8	8	8	8	12	12	16							
	Thread d2	M12	M16	M16	M20	M20	M20	M20	M20	M24	M27	M30	M33	M33	M33							
100	Flange D	105	130	140	155	170	195	220	230	265	315	355	430	505	585							
	b	20	24	24	24	26	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	4	4	4	4	4	4	8	8	8	8	12	12	12	16							
	Thread d2	M12	M16	M16	M20	M20	M24	M24	M24	M27	M30	M30	M33	M36	M39							
160	Flange D	105	130	140	155	170	195	220	230	265	315	355	430	515	585							
	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	4	4	4	4	4	4	8	8	8	8	12	12	12	16							
	Thread d2	M12	M16	M16	M20	M20	M24	M24	M24	M27	M30	M30	M33	M39	M39							
			14	18	18	22	22	26	26	26	30	33	33	36	42	42						

* On request available for flanges acc. DIN 2632 bzw. DIN 2633.

■ Technical appendix ■ Construction

Body:

As a pressure-retaining component, the body, including the bonnet, determines the ranges in which the valves can be used. The demand for valves to withstand higher pressure and temperatures calls for special materials and production processes. In high-pressure applications, pressure ratings, nominal sizes and quantities require different production processes which take account of different conditions of use. Designs therefore vary according to the particular applications.

PERSTA forged valve bodies, particularly those designed for power stations, are die-forged or produced as open-die forgings which are then machined. Specific rolling and forming processes give the parts a dense, uniform, fine-structure with no bubbles or pores, and with a fibre orientation that is ideal for their intended use.

The modern production methods have increased the use of forged steel for high-pressure applications. However, the development of die-forged bodies has been restricted by the high forming forces and the associated size and cost of the forgings. Machined open-die forgings are therefore used for large bodies.

For PERSTA high pressure valves the following production methods proved excellent results:

1. Hollow one-piece-forgings, mainly for valve bodies in the DSK 26 range, 65 - 300. Connecting flanges or butt weld ends are welded on with a circumferential seam.
2. Bodies for gate valves and swing check valves in the DSK and DRI range, 50 - 600 are produced as solid, open-die forgings which are then machined. Valves are subjected to stress in the following ways:
 - mechanically by
 - operating pressure
 - operating temperature
 - temperature gradients during starting up and shut down
 - erosion and cavitation by the medium
 - due to the forces exerted by the connected pipes, fastening devices and the weight of mechanical actuators, and
 - chemically
 - due to corrosion.

In PERSTA valve bodies, thermal stress is limited by smooth transitions between different wall thicknesses.

Gate valves are sealed on the downstream side of the body. The required sealing force is provided by the medium by means of the differential pressure. For pressure ratings PD 10-63, PERSTA DSK gate valves are fitted with a mechanical stembarrel stop to limit the stress on the stems and the sealing faces caused by the actuation forces.

Ledges or grooves are guiding the wedge or the split wedge in the body after about 10 % of the opening lift. The forces which have to be absorbed from the guides are relatively low because there has already been a large degree of pressure compensation at this point.

The weld seams are designed for easy radiographic or ultrasonic testing.

All PERSTA gate valves and swing check valves can be delivered with butt welding ends to match the corresponding material and pipe diameter.

Stem sealing

The gland packing seals the stem guide onto outside. Operational demands of this sealing arise by reason of stem travel, pressure and friction at the gland packing, by thermal cycle stress and by the medium. The design of the gland follower resp. gland ring assures a smooth contact pressure of the packing rings even in the case of an easily irregular tightening of the gland bolts and prevents a seizing of the stem.

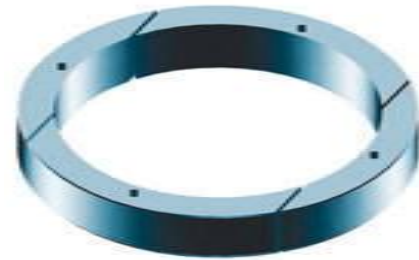
Mode of operation

A power applied by the stud bolts onto the gland follower will be transmitted via the gland ring resp. chamber ring to the packing rings. Thereby the packing rings are pressed together. Upcoming surface pressure towards the wall of the stuffing box chamber and towards the stem surface tightens against the medium.

■ **Technical appendix** ■ **Construction**

Operating characteristics:

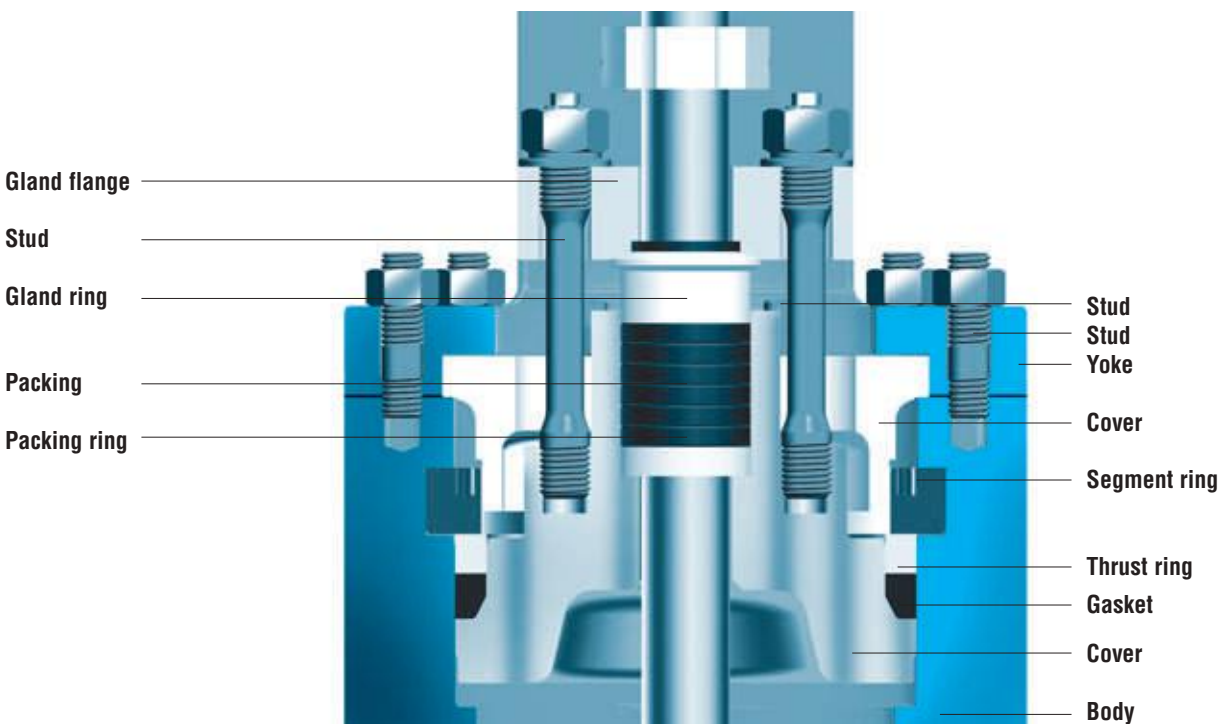
An axial force which increases as the internal pressure increases is applied to the elastic gasket. This force compresses the elastic gasket which deforms radially and axially. In the radial direction it is pressed against the wall of the body and the cover, thus achieving the required surface pressure and associated sealing force. The ring on the gasket absorbs axial force and transfers it to the segment ring. The segment ring is fitted in a groove in the body, thus transferring the axial force to the body. The segment ring consisting of four parts is held in the groove by the centring cover. The cover is pre-stressed by studs so that the gasket is deformed and the sealing effect achieved even when the internal pressure is low. Moreover the cover is centered by means of the supporting cap.



Segment ring

Attention:

Overpressure devices are required to protect against unacceptable pressure peaks. See page 86.

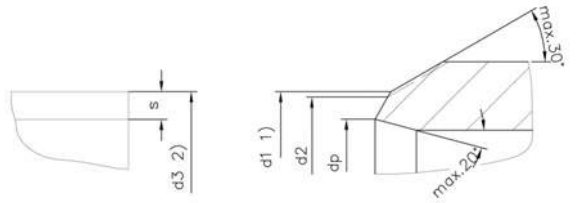


■ Technical appendix ■ Pipe and valve dimensions

Pipe (DIN 2448) and valve dimensions rel. DIN 3239 and 2559									
DN		Butt welding ends							
		Line 1 bis 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 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; 1.7383) 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 steel pipe Line 1 acc. ISO 4200-1985

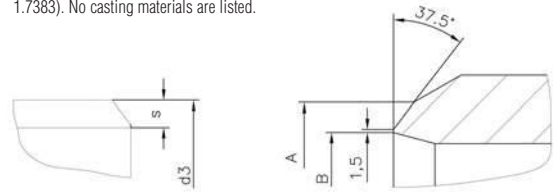
■ Technical appendix ■ Pipe and valve dimensions

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

DN		Butt welding ends							
		Line 1 bis 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	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 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; 1.7383). No casting materials are listed.



d3 ist der Außendurchmesser des zugehörigen Stahlrohres Reihe 1 nach ISO 4200-1985

■ **Technical appendix** ■ **Processing and test equipment / test facilities**

Mechanical workshop

9 Machining centres for drilling, turning and milling operations

CNC-controlled and conventional horizontal and vertical turning machines for workpieces up to app. 20 kN of weight

Drilling and milling machines, CNC-controlled saw, lapping and chipping machines, grinding machines and turning machines

Welding shop

Robot based welding systems for seat hard facing, stellite and joint welding

Hand and machine-welding

Electric annealing furnaces

Manipulator for submerged arc welding

Assembly

7 Assembly and test equipment for the pressure (tightness) test for valves up to max. DN 800 with a max. test pressure of 1.000 bar

Transport Facilities

Bridge cranes with max. carrying capacity of 160 kN

Slewing cranes with max. carrying of 20 kN

Fork lift trucks with max. carrying capacity of 75 kN

Ultrasonic test

■ Type of equipment: USM35X, companies, GE Krautkrämer

X-ray tests

■ Type of equipment and capacity
2 ISO Volt 320, ISO Volt 150
all from company GE, Seiffert

■ **Technical appendix** ■ **Approvals** ■ **Process tests joint welding**

Approvals	
Name of testing firm or organisation	Specification
TÜV Nord Cert	DIN EN ISO 9001:2008
TÜV Nord	AD 2000 HP0 / DIN EN ISO 3834-2
TÜV Nord	CE 0045, DGRL 97 / 23 / EG
TÜV Nord	KTA 3201.3 / KTA 3211.3
TÜV Nord (Bauteilkz. MLV's)	TÜV . A . 030 - 08
TÜV Nord (Eignungsprf. MLV's)	T08-85-03
AREVA NP	KTA 1401 und AVS D 100/50
AREVA NP / VGB	KTA 1401 und AVS D 100/50
FSPO Moscow	Goststandard Russia
FSPO Moscow	RTN
Promatomnadzor Minsk	GOSPROMNADZOR (Belarus)
Paks Nuclear Power Plant	FEL005
EDF Pole Industrie	EDF
Shell Nederland Raffin. BV	Service group 77DAAB / Service group 77DPBA
Shell Nederland Chemie BV	Service group 77DAAB / Service group 77DPBA
Alstom Power	Alstom QS-System
Kuwait Oil Company	VEC / VA / GT / 015 / 16 / 97
Canada	Canadian Registration; CSA B51

And the complete documentation provided by PERSTA quality control department is layed 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 joint welding							
Normen and standards: AD; TRD; EN 288-1; EN ISO 15614-1+11; ASME IX							
Materials acc. AD-HP 0	Materials acc. ISO/TR 15608	Material based on code	111 (E)	121 (UP)	135 (MAG)	141 (WIG)	511 (EB)
1	1	1.0460	X	X	X	X	X
1	1	1.5415	X	X	X	X	X
5.1	1	1.0566	X	X	X	X	-
3	4.2	1.6368	X	X	X	X	-
4.1	5.1	1.7335	X	X	X	X	X
4.1	5.2	1.7383	X	X	X	X	X
4.2	6.4	1.4903	X	X	-	X	-
4.2	6.4	1.4901	X	X	-	X	-
6	8.1	1.4571	X	X	X	X	X
Ni	45	2.4858	-	-	-	X	X

■ Technical appendix ■ Figure number code

Figure	
Type	PERSTA Code
Small globe valve (inside screw and yoke)	200 AB
Small globe valve (outside screw and yoke)	200 AF/BF
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 BJ
High pressure globe valve type HD 91	200 JM
High pressure globe valve type HD 92	200 BM
High pressure globe valve type HD 2000	200 LM
High pressure globe valve DVA 25	200 AZ/BZ
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
Gate valve	400 JJ
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
High pressure line blind valve	990 VW
Strainer	990 ST

Figure number code

Example

XXX XX XX. X

Figure number

Materials

Connections



Materials				
DIN-No.	EN-rel.	Material code (new)	Material code (old)	PERSTA Code
1.0425	1.0425	P265 GH	H II	22
1.0460	1.0460	P250 GH	C22.8	21
1.0566	1.0566	P355NL1	TSIE 355	25
1.0619	1.0619+N	GP240 GH+N	GS-C25N	11
1.4308	1.4308	GX5CrNi19-10	G-X6CrNi 18 9	77
1.4571	1.4571	X6CrNiMoTi17-12-2	X 6 CrNiMoTi 17 12 2	82 (bis max. 280 °C)
1.4571	1.4571	X6CrNiMoTi17-12-2	X 6 CrNiMoTi 17 12 2	85
1.4581	1.4581	GX5CrNiMoN19-11-2	G-X5CrNiMoNb18 10	72
1.4901	1.4901	X10CrWMoVNB 9-2		66
1.4903	1.4903	X10CrMoVNB 9-1	X 10 CrMoVNB 9-1	63
1.5415	1.5415	16Mo3	15 Mo 3	42
1.6368	1.6368	15NiCuMoNb5	15 NiCuMoNb 5	46
1.7221	1.7221	G26CrMo4	GS-26 CrMo 4	31
1.7335	1.7335	13CrMo4-5	13 CrMo 44	44
1.7357	1.7357	G17CrMo5-5	GS-17 CrMo 5 5	34
1.7380	1.7383	11CrMo9-10	10 CrMo 9 10	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

Figure number code

Result

700 HJ 21. 1

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the difference*