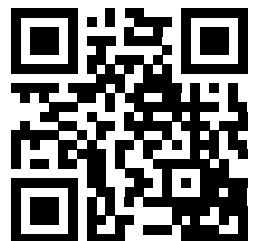




Valves for the industry

- 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 ° K 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

Please see our relevant Instruction Operational Maintenance manual for further information and warnings which have to be considered for the operation of industrial valves.

Imprint

Copyright in and to this documents shall remain with Stahl-Armaturen PERSTA GmbH.

Duplication, application or notification to a third party is forbidden, criminal and institute legal proceeding (German Copyright Act, UWG, BGB). All rights, including rights created by patent grant or registration of a utility model, are reserved.

■ Table of content

■ Designation	■ Type	■ Size	■ Rating	■ Page
---------------	--------	--------	----------	--------

■ Globe valves

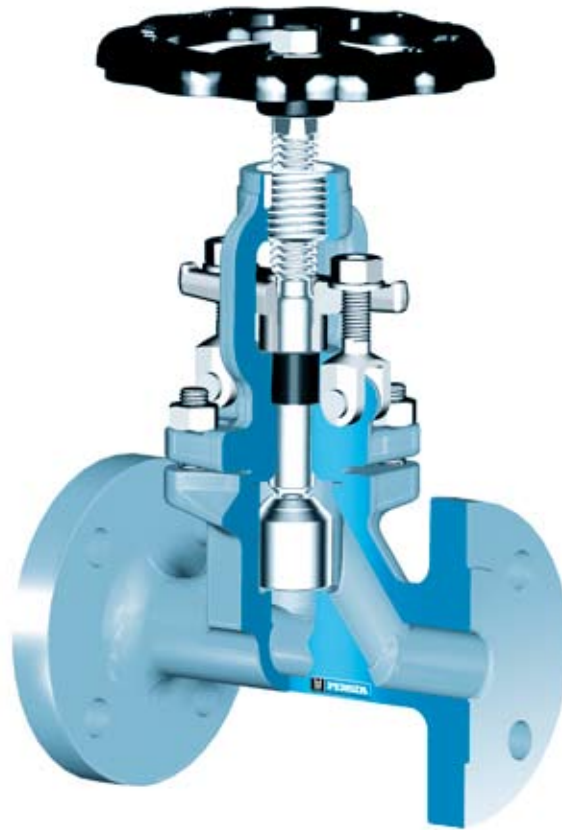
Gobe valve	200 AE/BE/AJ/BJ	DN 10-50	PN 10-160	1-4
Lift check valve	240 MT	DN 10-50	PN 10-160	1-4
Globe valve	200 AE/BE/AJ/BJ	DN 65-200	PN 10-160	5-8
Lift check valve	240 MT	DN 65-200	PN 10-160	5-8
Bellow seal globe valve / VALTRA	200 AL	DN 15-400 (200)	PN 10-160	9-10
High pressure globe valve HD 91	200 JM	DN 10-65/50	PN 320	11-14
High pressure globe valve HD 2000	200 LM/202 LM	DN 10-65	PN 500	15-20
High pressure globe valve HD 2000 with back seat	200 LS/200 LJ	DN 10-65	PN 500	15-20
High pressure lift check valve HD 2000	240 MT	DN 10-65	PN 500	15-20
Stop check valve HD 2000	240 MM	DN 10-65	PN 500	15-20
High pressure globe valve DVA 25/40	200 BZ	DN 80-250	PD 25/40	21-24
Further standards				25-26
Special globe valve variants				27-28

■ Gate valves

Small gate valve	808 GJ	DN 10-40	PN 10-100	29-32
Small gate valve / VALTRA	800/808 GJ	NPS _{1/2} - 2 / DN 15-50	Class 800/10-40	33-36
Gate valve	700 HJ/JJ (GA)	DN 50-150	PN 10-100	37-42
Gate valve	700 HJ/JJ (GA)	DN 200-250	PN 10-40	43-46
Gate valve	700 HJ/JJ	DN 200-300	PN 63-100	47-50
Gate valve	400 JJ	DN 350-700	PN 63-100	51-54
Gate valve / VALTRA	700 JJ	DN 300-1000	PN 10-25	55-56
Gate valve / VALTRA	700 JJ	DN 300-700	PN 40	57-58
Gate valve	700 JJ	DN 50-300/250	PN 160/PD 18	59-62
High pressure gate valve DSK 10	700 JT	DN 50-150	PD 10	63-66
High pressure gate valve DSK 10	700 JT	DN 200-350/300	PD 10	67-70
High pressure gate valve DSK 10	700 JT	DN 350-700	PD 10	71-74
High pressure gate valve DSK 26	700 JT	DN 65-300	PD 25/40	75-78
High pressure gate valve DSK 16-63	700 JT	DN 50-600	PD 16-63	79-82
Overpressure-safety-devices / PERSTA Type SV 97, -98, -99				83-84
Gate valve variants				85-86

■ Designation	■ Type	■ Size	■ Rating	■ Page
■ Swing check valves				
Swing check valves	640 AA	DN 50-250	PN 10-40	87-90
Swing check valves/VALTRA	640 AA	DN 300-800	PN 10-40	91-94
Swing check valves	640 AA	DN 50-300/250	PN 63-160 (PD 18)	95-98
High pressure swing check valves DRI 26	640 AB	DN 65-300	PD 25/40	99-102
High pressure swing check valves DRI 16-63	640 AB	DN 50-600	PD 16-63	103-106
High pressure stop check valves DRA 26	640 ST		PD 25/40	107-108
Freewheel swing check valve	640 DJ	DN 50-800	PN 40-250	109
Swing check valves variants				110
■ Line blind valves				
Line blind valves DPV 10	990 VW	DN 350-700	PD 10	111-114
Line blind valves DPV 16-63	990 VW	DN 65-600	PD 16-63	115-118
■ Strainer				
Strainer	990 ST	DN 10-65	PN 500	119-122
Strainer DSF	990 SZ	DN 80-250	PD 25/40	123-124
■ Technical appendix				
Pressure-rate-tables PD 10-63				125
Flange dimensions				126
Design				127-128
Butt welding ends DIN 3239 and 2559				129
Butt welding ends EN 12627				130
Processing and test equipment/test facilities				131
Qualification/approvals				132
Figure number code				133
■ Notice				
<p>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</p>				

- **Globe valves** ▪ **Globe valve** ▪ **200 AE/BE/AJ/BJ** ▪ **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	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	63	61	58	56	47	40	32	25	20	15		
	100	100	100	100	100	100	100	100	95	91	87	74	62	49	38	31	24		
	160	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	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⁾⁶⁾		40	40	40	37	35	32	28										
	63 ⁴⁾⁶⁾		63	63	63	58	50	45	40										
	100 ⁴⁾⁶⁾		100	100	100	92	80	70	60										
	160 ⁴⁾⁶⁾		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
6) At temperature > 50 °C only applicable for short-time service.

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

Standard features

- Straight body
- Die-forged valve body and bonnet
- Shut-off disc, Fig. No. 200 AE
- Shut-off disc with yoke sleeve, standard features AJ
- Trottle disc with yoke sleeve, standard features BJ
- Trottle disc standard features BE
- Outside screw and yoke
- Position indicator if required
- Turning and rising stem (AE/BE)
- Non-turning, rising stem (AJ/BJ)

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 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

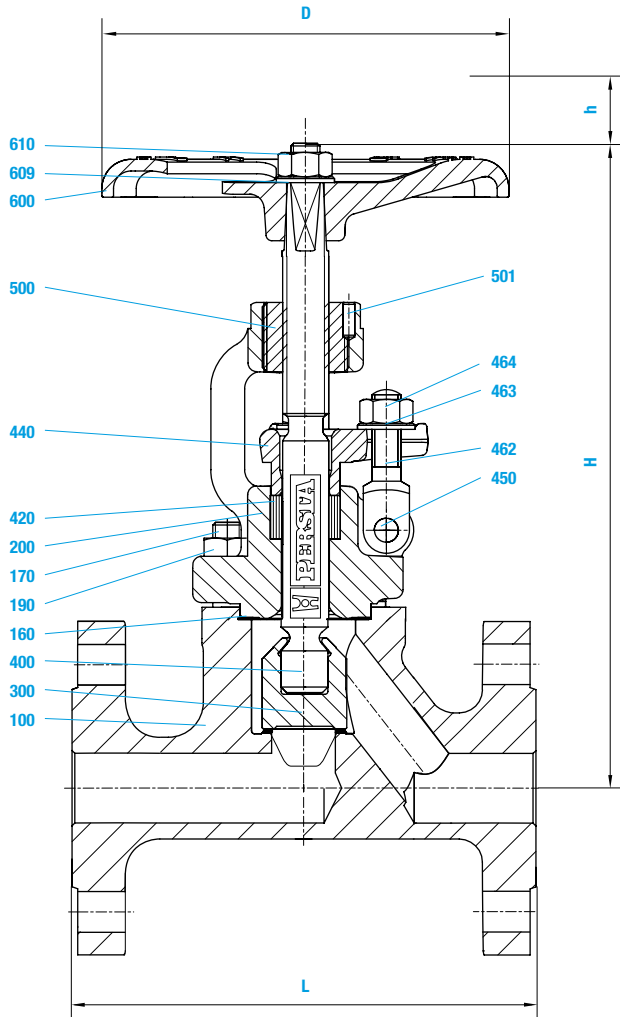
- Die-forged valve body and bonnet
- Seats are hardfaced or welded on
- Body-bonnet connection male and female
- Body and bonnet in two separate pieces with bolted connection

Benefits

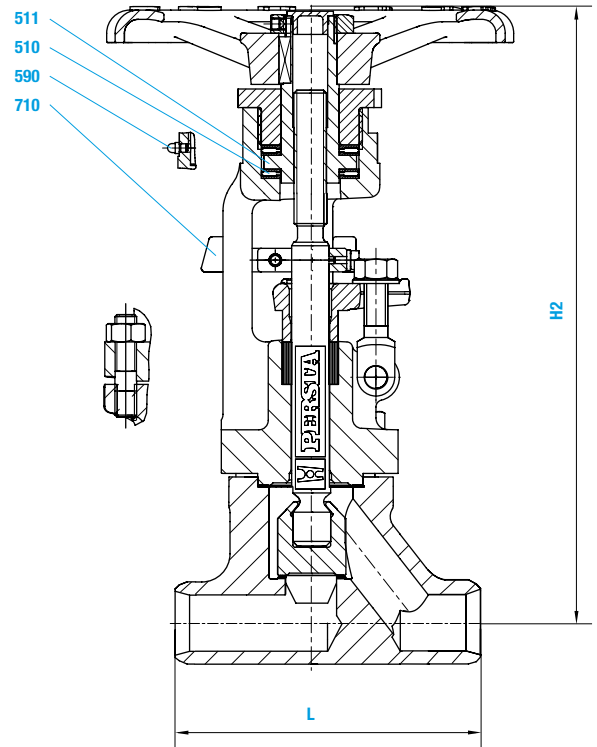
- Free from porosity and shrink holes
- Extremely resistant to wear
- Sealing blow out proof
- To ease maintenance work, e.g. regrinding of the body seats

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

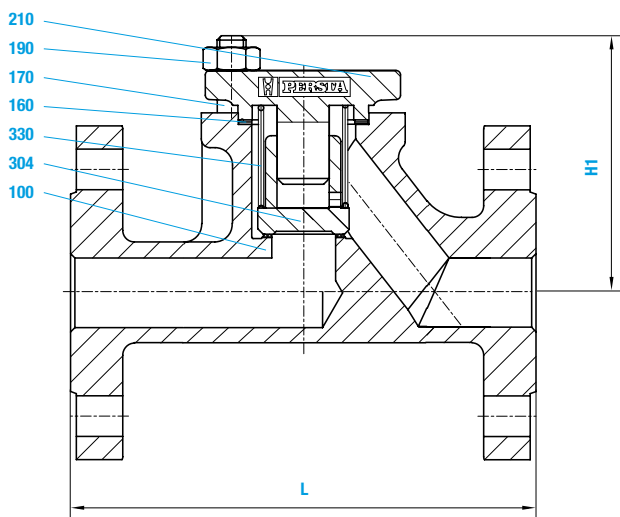
Globe valve AE/BE



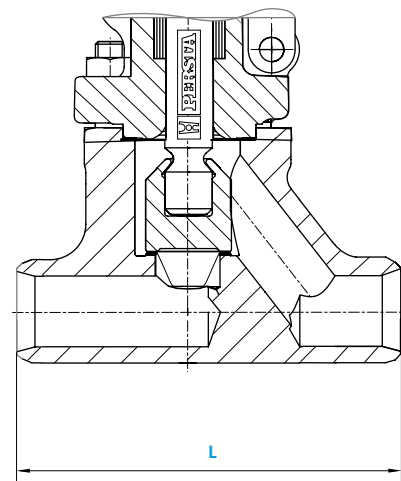
Globe valve AJ/BJ



Lift check valve



BW-Version



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

Materials							
Pos.	Component	1.0460 (21)	1.0566 (25)	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
510	▶ Yoke sleeve	1.0718	1.0718	1.0718	1.0718	1.0718	1.0718
511	▶ Needle bearing	WLS	WLS	WLS	WLS	WLS	WLS
590	Grease nipple	5.8	5.8	5.8	5.8	5.8	5.8
600	Handwheel	5.3106	5.3106	5.3106	5.3106	5.3106	5.3106
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
710	Anti-rotation device	5.3106	5.3106	5.3106	5.3106	5.3106	5.3106

▶ Spare parts
Special materials on request; alterations reserved.

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

Dimensions/mm									
PN	DN	FL L	BW L	H	H1	H2	Stroke h	D	1.0619 H
10-40	10	130	130	215	85	275	12	140	
	15	130	130	215	85	275	12	140	
	20	150	130	220	90	275	12	140	
	25	160	130	220	90	275	12	140	
	32	180	160	245	115	305	15	180	
	40	200	180	250	130	305	15	180	
63-160	50	230	210	260	120	345	18	180	
	10	210	150	220	100	275	12	180	
	15	210	150	220	100	275	12	180	
	20	230	150	220	100	275	12	180	
	25	230	160	220	100	275	12	180	
	32	260	180	285	140	335	15	225	
63-100	40	260	210	285	140	335	15	225	
	50	300	250	285	150	345	18	150	260
160	50	300	250	285	150	345	18	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
	32	19,0	13,2	15,6	9,0
63-100	40	21,0	12,8	16,8	9,0
	50	24,1	15,0	19,5	11,0
160	50	25,0	15,0	22,0	11,0

Kvs-values (m3/h)														
Line	DN 10	DN 15	DN 20	PN 10-40				DN 10	DN 15	DN 20	PN 63-160			
				DN 25	DN 32	DN 40	DN 50				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** ▪ **Globe valve** ▪ **200 AE/BE/AJ/BJ** ▪ **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** ▪ **Globe valve** ▪ **200 AE/BE/AJ/BJ** ▪ **PN 10-160** ▪ **DN 65-200**
- **Globe valves** ▪ **Lift check valve** ▪ **240 MT** ▪ **PN 10-160** ▪ **DN 65-200**

Standard features

- Straight bonnet
- Cast steel body and bonnet
- Shut-off disc, Fig. No. AE
- Shut-off disc with yoke sleeve standard features AJ
- Throttle disc with yoke sleeve standard features BJ
- Throttle disc, Fig. No. 200 BE
- Outside screw and yoke
- Position indicator if required
- Turning and rising stem (AE/BE)
- Non-turning, rising stem (AJ/BJ)

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

- 1.0619
- 1.5419
- 1.7221
- 1.7357
- 1.4581
- 1.4308

Further materials on request.

Media

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

Fields of application

Chemical industries, power plant, ship building and other

Design Highlights

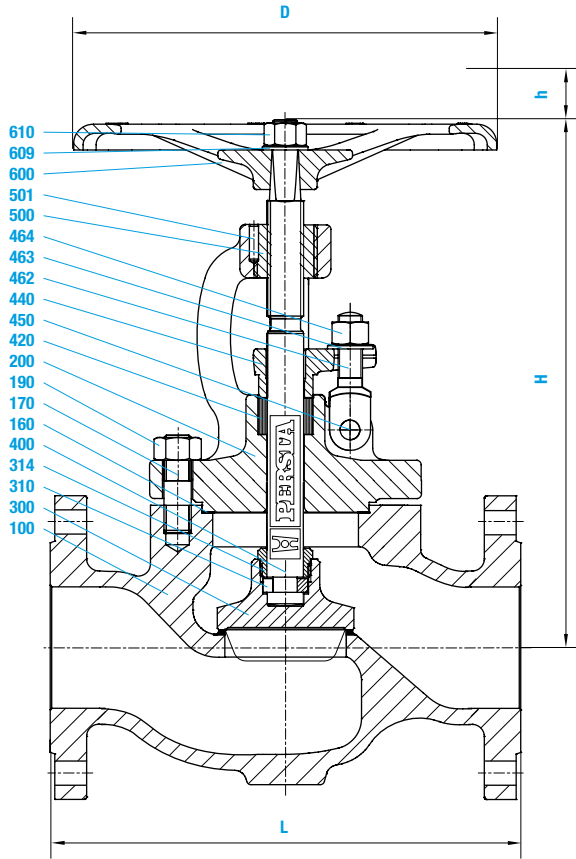
- Seats are welded on
- Body-bonnet connection male and female
- Body and bonnet in two pieces with bolted connection

Benefits

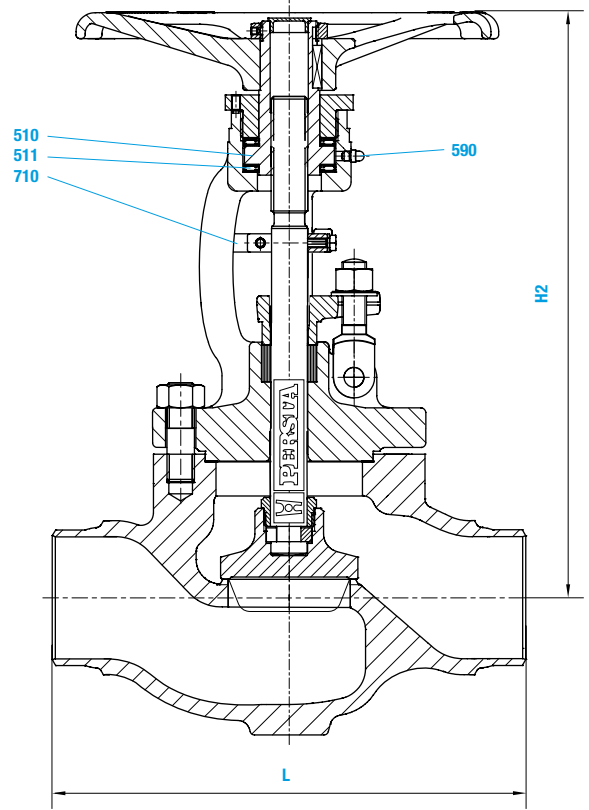
- Extremely resistant to wear
- Sealing blow out proof
- To ease maintenance work, e.g. regrinding

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

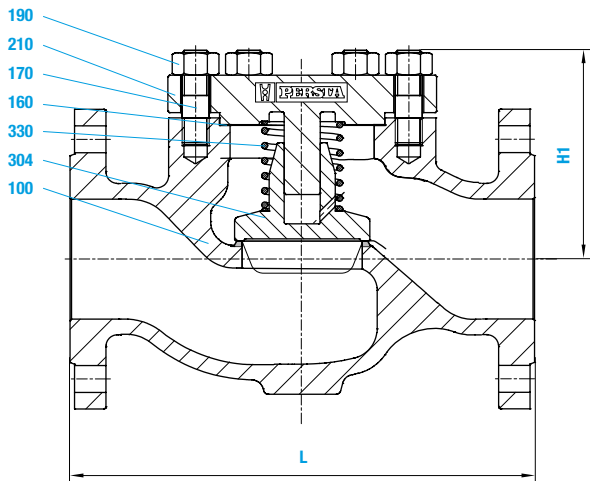
Globe valve AE/BE



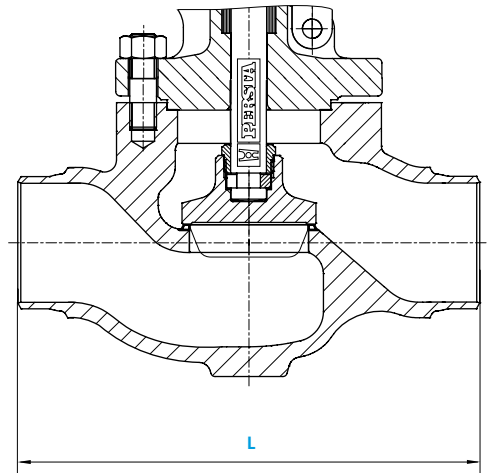
Globe valve AJ/BJ



Lift check valve



BW-Version



- **Globe valves** ▪ **Globe valve** ▪ **200 AE/BE/AJ/BJ** ▪ **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⁾	1.7221	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	Cover	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⁾
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
510	▶ Yoke sleeve	1.0718	1.0718	1.0718	1.0718	1.0718	1.0718
511	▶ Bearing	WLS	WLS	WLS	WLS	WLS	WLS
590	Grease nipple	5.8	5.8	5.8	5.8	5.8	5.8
600	Handwheel	5.3106	5.3106	5.3106	5.3106	5.3106	5.3106
600	Handwheel	5.3106	5.3106	5.3106	5.3106	5.3106	5.3106
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
710	Anti-rotation device	5.3106	5.3106	5.3106	5.3106	5.3106	5.3106

▶ Spare parts Special materials on request; alterations reserved.

1) PN 10-40 4) Seat hard faced with Cr17 9) ≥ PN 63 seat hard faced with hastelloy
2) PN 63-160 5) Seat hard faced with stellite
3) Seat hard faced ≥ DN 125, 1.0460 seat hard faced with Cr17 8) ≥ PN 63 seat hard faced with stellite

Dimensions/mm								
PN	DN	FL L	BW L	H	Stroke h	H1	D	H2
10-40	65	290	290	310	22	105	225	330
	80	310	310	360	25	115	280	390
	100	350	350	400	30	140	280	400
	125	400	400	465	40	145	360	495
	150	480	480	530	50	170	360	530
	200	600	600	575	65	240	450	575
63-160	65	340	340	360	22	120	280	360
	80	380	380	400	25	145	280	400
	100	430	430	410	30	165	360	410
63	125	500	500	535	40	210	360	535
	150	550	550	555	50	235	450	555
100	125	500	500	535	40	210	360	535
	150	550	550	555	50	235	450	555

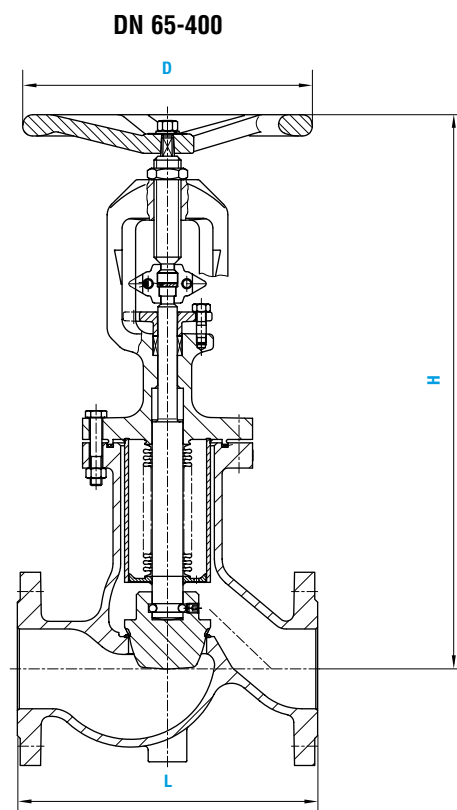
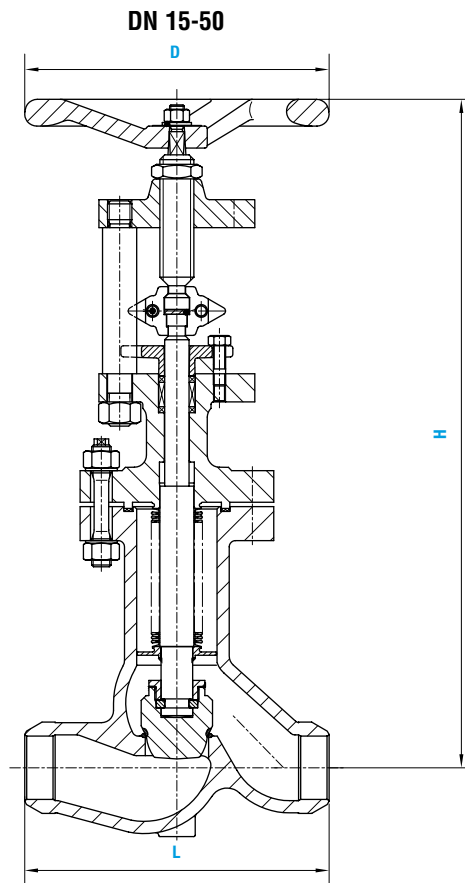
Weights/kg									
DN	200 AE / BE								
	PN 10-16 FL	PN 25-40 FL	PN 10-40 BW	PN 63 FL	PN 63 BW	PN 100 FL	PN 100 BW	PN 160 FL	PN 160 BW
65	27,5	27,5	16,0	34,0	24,0	34,0	24,0	39,0	24,0
	37,0	37,0	28,0	47,0	36,0	47,0	36,0	51,0	36,0
	52,0	53,0	41,0	72,0	56,0	72,0	56,0	80,0	56,0
	69,0	69,0	55,0	117,0	93,0	120,0	93,0		
	103,0	110,5	97,0	160,0	125,0	166,0	125,0		
	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
	29,6	29,6	20,4	42,0	23,0	42,0	23,0	46,0	23,0
	35,4	35,4	29,0	63,0	38,0	63,0	38,0	71,0	38,0
	58,0	58,0	40,0	101,0	78,0	106,0	78,0		
	80,0	80,0	65,0	145,0	110,0	150,0	110,0		
	145,0	160,0	148,0						

Kvs-values (m3/h) 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 / AJ	71,0	122,0	162,0	260,0	370,0	660,0
200 BE / BJ	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 bar** 65 80 100 125 150 200 110 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	
Disc	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



ASME
version
available

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⁾		
1.0460	160	160	160	160	160	160	160	151	132	118	99	80	76	73	69	65	61	54	45	37														
	250	250	250	250	250	250	250	235	206	184	155	125	119	113	107	102	96	85	71	58														
	320	320	320	320	320	320	320	302	264	236	198	160	153	145	138	130	123	109	91	75														
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	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	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	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	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

- Disc and stem in one piece
- Die-forged valve body
- 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 320 bar
- Temperature rating from -10 °C up to 600 °C

Materials

- 1.0460
- 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

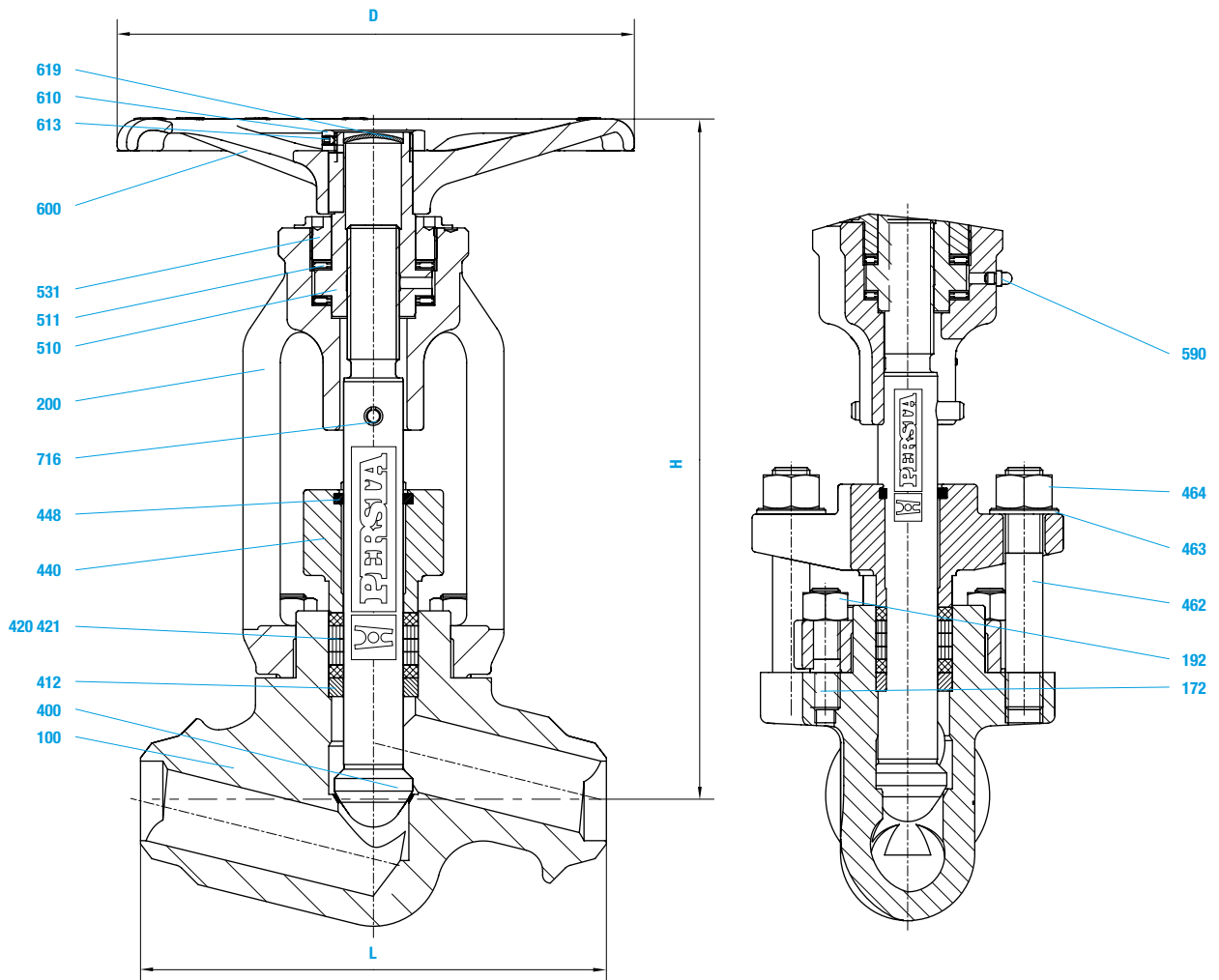
Design Highlights

- Body seat: edge seat welded on integrately 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	1.0460 (21)	1.5415 (42)	1.7335 (44)	1.7383 (45)
100	Body welded on with	1.0460	1.5415	1.7335	1.7383
172	Stud	Stellite	Stellite	Stellite	Stellite
192	Hexagonal nut	1.7709	1.7709	1.7709	1.7709
200	Bonnet	1.7218	1.7218	1.7218	1.7218
400	▶ Stem	1.7379	1.7379	1.7379	1.7379
412	▶ Guide sleeve	1.4122 ¹⁾	1.4122 ¹⁾	1.4122 ¹⁾	1.4122 ¹⁾²⁾
420 / 421	▶ Packing	0.7660	0.7660	0.7660	0.7660
440	▶ Gland flange	Pure graphite	Pure graphite	Pure graphite	Pure graphite ²⁾
448	▶ Dirt scraper	1.7379	1.7379	1.7379	1.7379
462	▶ Stud	Graphite plait	Graphite plait	Graphite plait	Graphite plait
463	▶ Washer	1.7709	1.7709	1.7709	1.7709
464	▶ Hexagonal nut	St	St	St	St
510	▶ Yoke sleeve	1.7218	1.7218	1.7218	1.7218
511	▶ Bearing	CW 713 R	CW 713 R	CW 713 R	CW 713 R
531	▶ Screwing	WLSt	WLSt	WLSt	WLSt
590	▶ Grease nipple	1.0460	1.0460	1.0460	1.0460
600	▶ Handwheel	5.8	5.8	5.8	5.8
610	▶ Hexagonal nut	5.3106	5.3106	5.3106	5.3106
613	▶ Screw pin	St	St	St	St
619	▶ Lock washer	45H	45H	45H	45H
716	▶ Tension pin	ST	ST	ST	ST
		1.0904	1.0904	1.0904	1.0904

▶ Spare parts

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

Dimensions/mm					
DN	L	H	Stroke	R/Stroke	DIN/ISO D 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	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

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

Standard features

- Disc and stem in one piece
- Die-forged valve body
- Non-turning, rising stem
- Position indicator / Anti-rotation device
- Throttle disc
- Yoke sleeve supported by needle bearings
- Greater than DN 20 with integral actuator flange
- Back seat type available (200 LS / 200 LJ)
- All HD 2000 valves also available in angle pattern (e.g. 202 LM)

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
- 1.4550
- 1.4901
- 1.4903
- 1.5415
- 1.7335
- 1.7383 Further materials on request.

Media

Depending on the material the 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

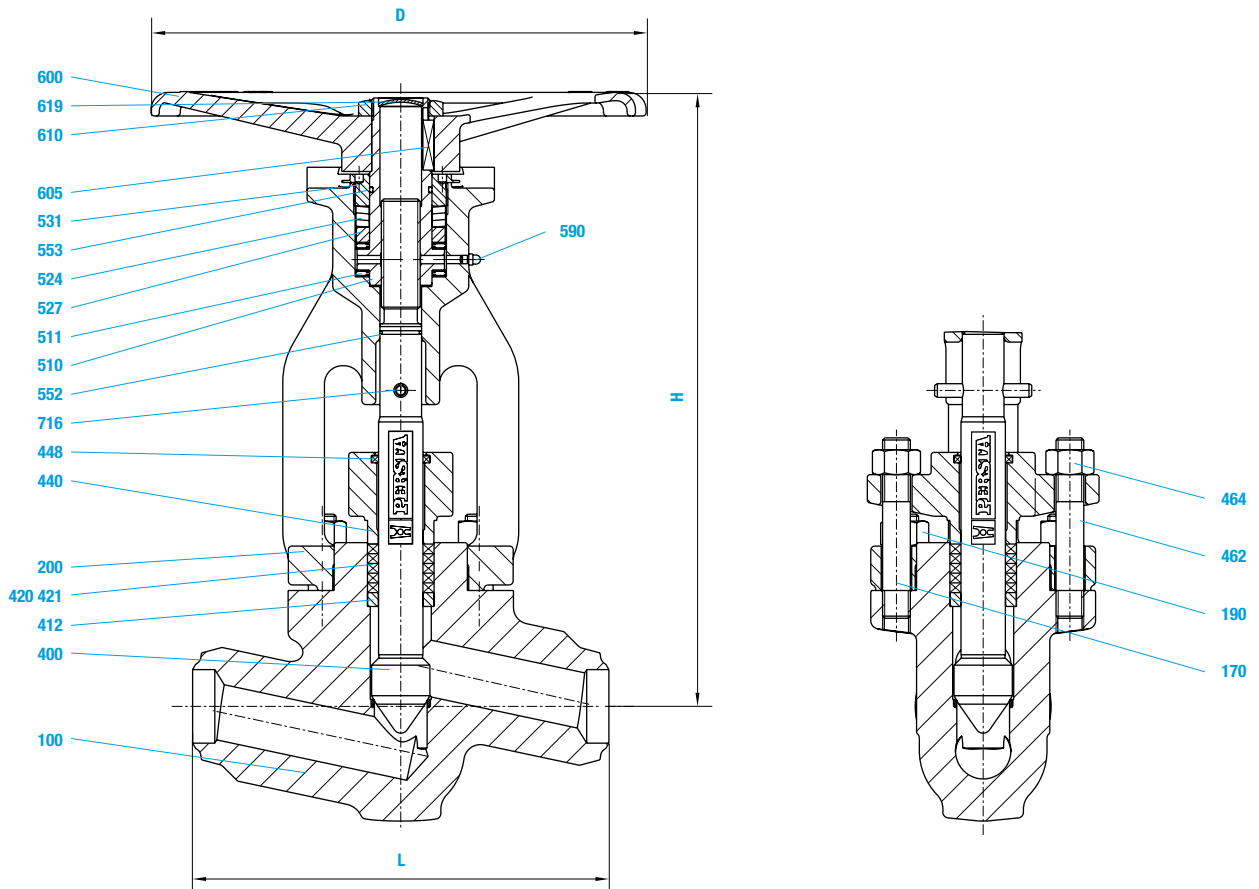
- Body seat: tapered seat welded on integrally with stellite
- Disc and stem in one piece; up from 570 °C with stellite tapered seat
- Sealing to the outside only by means of the gland packing
- Body and bonnet in two separate pieces with bolted connection
- Yoke sleeve made of bronze
- Cup springs above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

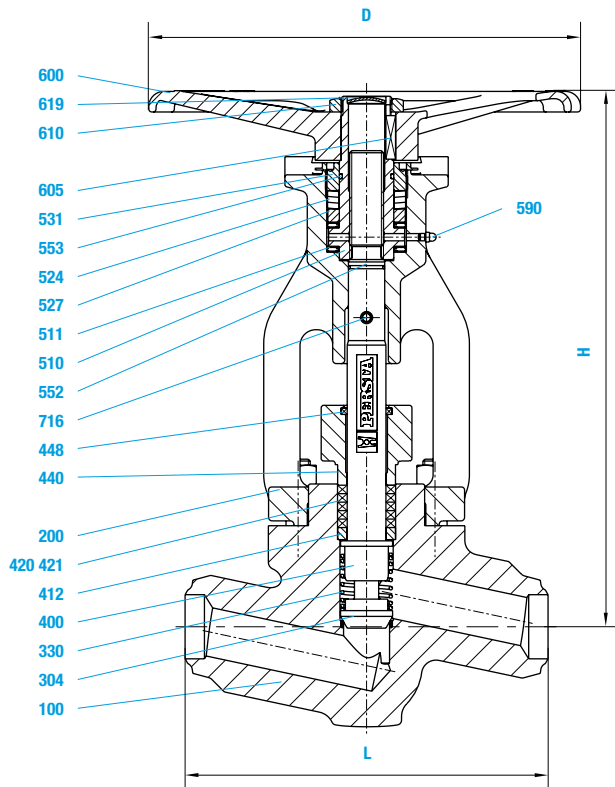
▪ **Globe valves** ▪ High pressure globe valve HD 2000 ▪ 200 LM ▪ PN 500 ▪ DN 10-65

200 LM Shut-off globe valve

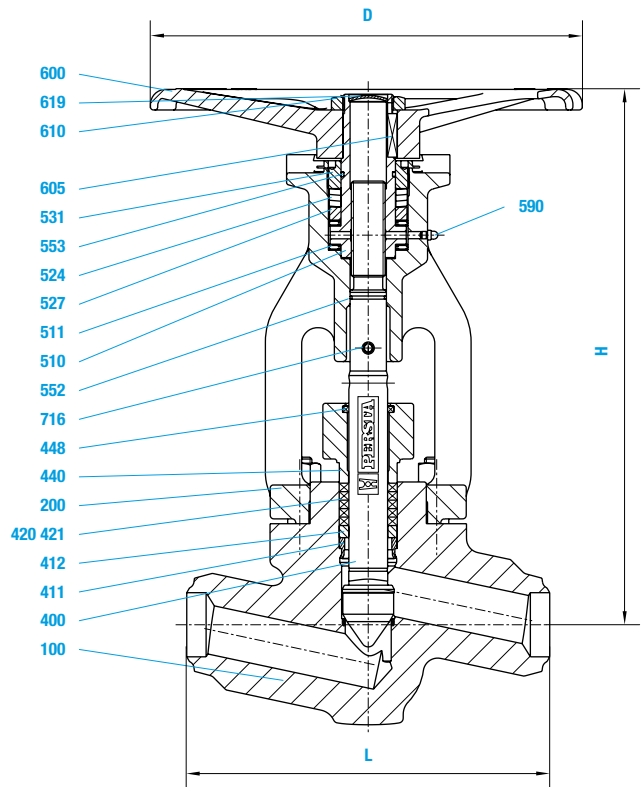


- **Globe valves** ▪ High pressure globe valve HD 2000 ▪ 200 LS ▪ PN 500 ▪ DN 10-65
- **Globe valves** ▪ Stop check valve ▪ 240 MM ▪ PN 500 ▪ DN 10-65
- **Globe valves** ▪ Lift check valve HD 2000 ▪ 240 MT ▪ PN 500 ▪ DN 10-65

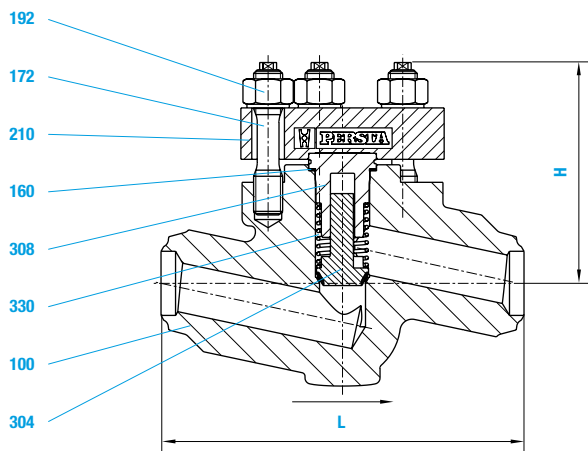
240 MM Stop check valve
also available in angle pattern



200 LS globe valve with back seat
also available in angle pattern



240 MT Lift check valve
also available in angle pattern



- **Globe valves** ▪ High pressure globe valve HD 2000 ▪ 200 LM/LS ▪ PN 500 ▪ DN 10-65
- **Globe valves** ▪ Stop check valve ▪ 240 MM ▪ 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⁾	1.4550 (89)
100	Body welded on with	1.0460	1.5415	1.7335	1.7383	1.4903	1.4901	1.4550
		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	1.4923	1.4923	1.4980
172	Stud	1.4923	1.4923	1.4923	1.4923	1.4986	1.4986	1.4986
190	Hexagonal nut	1.7218	1.7709	1.7218	1.4986	1.4986	1.4923	1.4986
192	Hexagonal nut	1.4923	1.4923	1.4923	1.4923	1.4986	1.4986	1.4986
200	Bonnet	1.7379	1.7379	1.7379	1.7379	1.7379	1.7379	1.7379 ³⁾
210	Cover	1.7380	1.7380	1.7380	1.7380	1.4903	1.4901	1.4550
304	▶ Disc	1.4923	1.4923	1.4923	1.4923	1.4923	1.4923	1.4980
308	Guide bush	1.4923	1.4923	1.4923	1.4923	1.4980	1.4980	1.4980
330	Pressure spring	2.4669	2.4669	2.4669	2.4669	2.4699	2.4699	2.4669
400	▶ Stem	1.4122 ¹⁾	1.4122 ¹⁾	1.4122 ¹⁾	1.4122 ¹⁾²⁾	1.4122 ¹⁾²⁾	1.4122 ¹⁾²⁾	1.4980 ¹⁾
411	Back seat ring	1.4980	1.4980	1.4980	1.4980	1.4980	1.4980	1.4980
412	Guide sleeve	0.7660	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	Pure graphite
421	▶ Thrust ring	Pure graphite	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	1.7379 ³⁾
448	▶ Dirt scraper	Graphite plait	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	1.4980
464	Hexagonal nut	1.7218	1.7218	1.7218	1.7218	1.4923	1.4923	1.4986
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	WLSt	WLSt	WLSt	WLSt	WLSt	WLSt	WLSt
524	Spring	1.8159	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	1.4021
531	Screwing	1.0460	1.0460	1.0460	1.0460	1.0460	1.4122	1.0460
552	▶ O-Ring	Viton	Viton	Viton	Viton	Viton	Viton	Viton
553	▶ O-Ring	Viton	Viton	Viton	Viton	Viton	Viton	Viton
590	Grease nipple	5.8	5.8	5.8	5.8	5.8	5.8	5.8
600	Handwheel	5.3106	5.3106	5.3106	5.3106	5.3106	5.3106	5.3106
605	Key	1.0060	1.0060	1.0060	1.0060	1.0060	1.0060	1.0060
610	Hexagonal nut	St	St	St	St	St	St	St
619	Lock washer	St	St	St	St	St	St	St
716	Tension pin	1.0904	1.0904	1.0904	1.0904	1.0904	1.0904	1.0904

▶ Spare parts

1) On request stem with stellite seats
2) For temperatures > 570 °C stem with stellite seats in 1.4980 and hightemperature-packing.
3) Nickel plated

Dimensions/mm								
DN	L	L1	H	H1	Stroke	R/ Stroke	D	DIN/ISO 5210
10	150	75	228	99	10	5	140	F07 ¹⁾
15	150	75	228	99	10	5	140	F07 ¹⁾
20	180	90	280	122	16	8	225	F10
25	180	90	280	122	16	8	225	F10
32	300	150	445	182	27	9	360	F10/F14
40	300	150	445	182	27	9	360	F10/F14
50	300	150	445	182	27	9	360	F10/F14
65	360	200	563	208	36	12	450	F14/F16

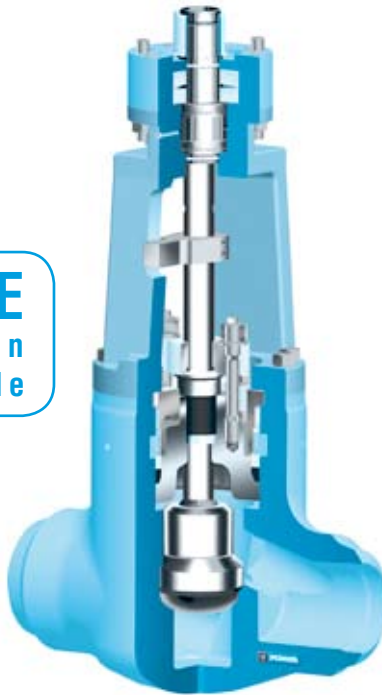
1) Specify flange ends when placing order

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

Weights/kg and Kvs-values						
DN	BW 200 LM	BW 202 LM	BW 240 MM	BW 200 LS	BW 240 MT	Kvs (m ³ /h) 200 LM / LS
10	6,0	6,0	6,0	6,0	3,8	2,3
15	6,0	6,0	6,0	6,0	3,8	3,4
20	11,5	11,5	11,5	11,5	7,9	6,2
25	11,3	11,3	11,3	11,3	7,7	7,9
32	47,5	47,5	47,5	47,5	30,5	20,0
40	47,0	47,0	47,0	47,0	30,0	24,1
50	46,5	46,5	46,5	46,5	29,5	28,3
65	107,0	107,0	128,0	107,0	72,0	48,5

- **Globe valves** ▪ **High pressure globe valve DVA 25 / DVA 40** ▪ **200 BZ** ▪ **PD 25 / PD 40** ▪ **DN 80-250**

ASME
version
available



		Range of application																																						
		Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																						
BW-Version	Material	PD	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	80	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	110	88	69	57	46												
1.7380	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	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	309	257	205	153	102																			
1.4903	25	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	316	290	263	238	213	191	169	150	132	115	100	85	75	65			
1.4901	25	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	297	275	253	231	209	187	166	147	128	110	96	82		

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

Attention: Pressure rating of the materials 1.6368, 1.4903 and 1.4901 was reduced in the "cold" range to 320 bar. This pressure rating is only valid for the DVA 25.

		Range of application																																								
		Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																								
BW-Version	Material	PD	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	191	182	172	163	153	136	113	93																							
1.5415	40	480	480	480	480	480	448	413	354	342	330	328	325	323	321	318	316	314	311	272	212	161	127	102																		
1.7335	40	481	481	481	481	481	471	436	413	389	384	380	375	370	365	363	361	358	356	323	272	215	175	141	110	91	74															
1.7380	40	480	480	480	480	480	480	471	436	413	408	403	398	394	389	384	380	375	358	318	278	243	212	184	160	137	120	104	90	79												
1.6368	40	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	577	495	412	328	245	163																				
1.4903	40	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	596	551	506	464	422	382	342	306	271	240	212	184	160	137	120	104				
1.4901	40	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	553	513	475	440	405	369	334	299	266	235	205	177	153	132		

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

Attention: Pressure rating of the materials 1.6368, 1.4903 and 1.4901 was reduced in the "cold" range to 600 bar. This pressure rating is only valid for the DVA 40.

■ **Globe valves** ■ High pressure globe valve DVA 25 / DVA 40 ■ 200 BZ ■ PD 25 / PD 40 ■ DN 80-250

Standard features

- Straight pattern
- Die-forged valve body and bonnet
- Pressure sealing bonnet acc. to VGB-guidelines
- Throttle disc
- Body seat welded on integratedly
- Outside screw and yoke
- Position indicator / Anti-rotation device
- Yoke sleeve supported at the top and the bottom
By means of needle bearings
- Non-turning, rising stem
- Universal valve head for mounting actuators

Pressure and temperature ratings

- Pressure rating up to 600 bar
- Temperature rating up to 650 °C

Materials

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

Further materials and sizes 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, industries and power plant.

Design Highlights

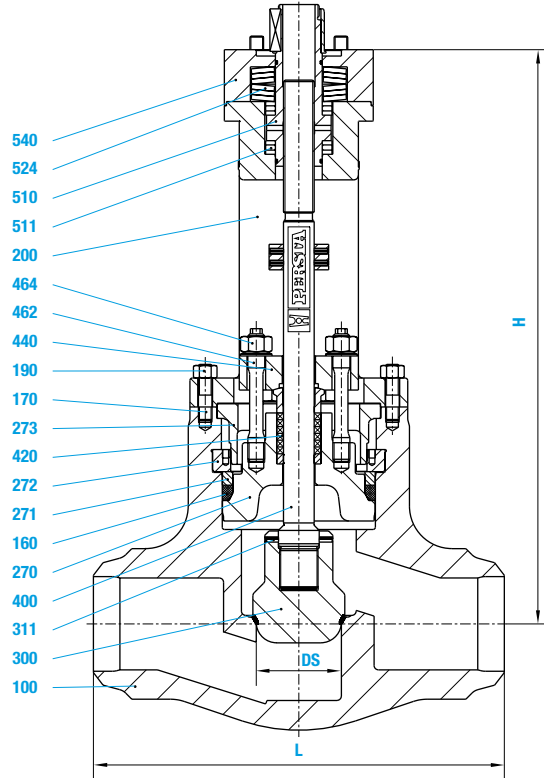
- Die-forged body and bonnet
- Pressure sealing bonnet
- Body seat welded on integratedly with stellite
- Extended bonnet
- Outside located anti twist device
- Non-turning, rising stem
- Gland flange and gland ring in two separate pieces
- Yoke sleeve supported by needle bearings
- Cup springs above the upper needle bearing

Benefits

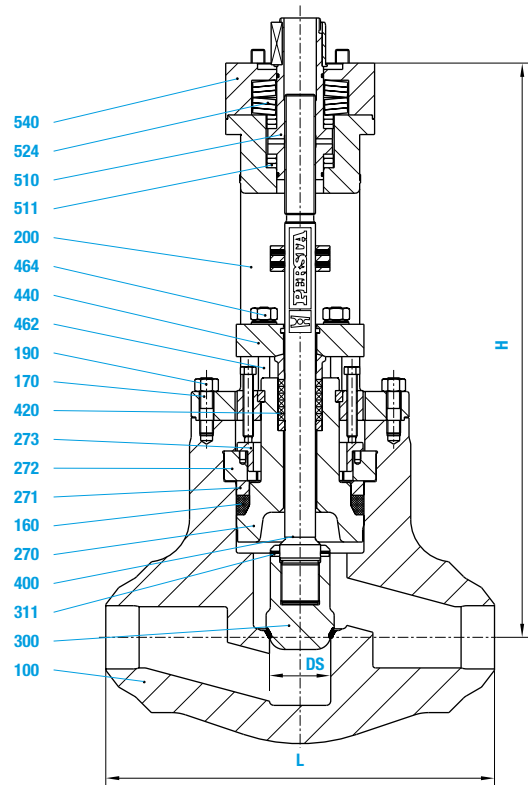
- Free from porosity and shrink holes
- Best possible sealing function
- Extremely resistant to wear
- To reduce temperatures
- Usable as position indicator
- Minimum packing wear
- Damage to the stem by irregular tightening of gland bolts is avoided
- To minimize the expenditure of effort when operating the valve
- To maintain the necessary closing forces at elongation changes between stem and yoke arms due to thermal changes. Also to protect against excess torsion when electric actuators are fitted.

▪ **Globe valves** ▪ High pressure globe valve DVA 25 / DVA 40 ▪ 200 BZ ▪ PD 25 / PD 40 ▪ DN 80-250

DVA 25 ▪ PD 25 ▪ DN 80-250



DVA 40 ▪ PD 40 ▪ DN 80-200



■ **Globe valves** ■ High pressure globe valve DVA 25 / DVA 40 ■ 200 BZ ■ PD 25 / PD 40 ■ DN 80-250

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	1.4923	1.4923	1.4923
190	Hexagonal nut	1.7218	1.7218	1.7218	1.7218	1.7218	1.7218	1.7218
200	Bonnet	1.7379	1.7379	1.7379	1.7379	1.7379	1.7379	1.7379
270	Cover	1.7383	1.7383	1.7383	1.7383	1.4903	1.4903	1.4901
271	Thrust ring	1.7383	1.7383	1.7383	1.7383	1.4903	1.4903	1.4901
272	Segmentring	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
300	▶ Disc welded on with	1.4903 Stellite	1.4903 Stellite	1.4903 Stellite	1.4903 Stellite	1.4903 Stellite	1.4903 Stellite	1.4901 Stellite
311	Grooved pin	1.4571	1.4571	1.4571	1.4571	1.4571	1.4571	1.4571
400	▶ Stem	1.4122	1.4122	1.4122	1.4122	1.4923	1.4923	1.4980
400	▶ Stem up to 500°C			1.4980*	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	WLS	WLS	WLS	WLS	WLS	WLS	WLS
524	Spring	Spring Steel	Spring Steel	Spring Steel	Spring Steel	Spring Steel	Spring Steel	Spring Steel
540	Flange	1.0460	1.0460	1.0460	1.0460	1.0460	1.0460	1.0460

▶ Spare parts

* In PD 25 up to DN 150
* In PD 40 up to DN 125

Dimensions/mm DVA 25							
DN	DS	L	H	Stroke	R/Stroke	H-Wheel	DIN/ISO 5210
80	64	305	450 (475)	32	11	450	F10 (F14)
100	82	406	575	42	14	500	F14
125	100	483	675 (725)	51	17	600	F14 (F16)
150	122	559	800 (850)	62	21	720	F16 (F25)
200	160	711	950 (1000)	82	27		F25 (F30)
250	190	864	1075 (1150)	96	24		F30 (F35)

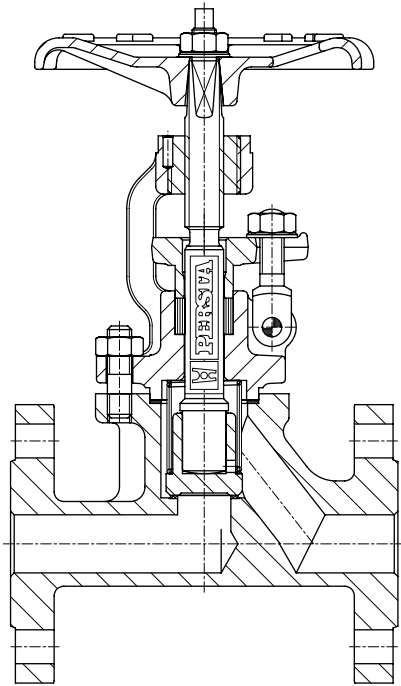
Weights/kg and Kvs-values DVA 25		
DN	BW	Kvs (m ³ /h)
80	69	71
100	132	95
125	200	141
150	378	210
200	615	362
250	1120	510

Dimensions/mm DVA 40							
DN	DS	L	H	Stroke	R/Stroke	H-Wheel	DIN/ISO 5210
80	57	368	575	28	9	500	F14
100	72	359	675 (725)	38	13	600	F14 (F16)
125	90	533	800 (850)	45	15	720	F16 (F25)
150	111	610	950 (1000)	57	19		F25 (F30)
200	146	762	1075 (1150)	75	19		F30 (F35)

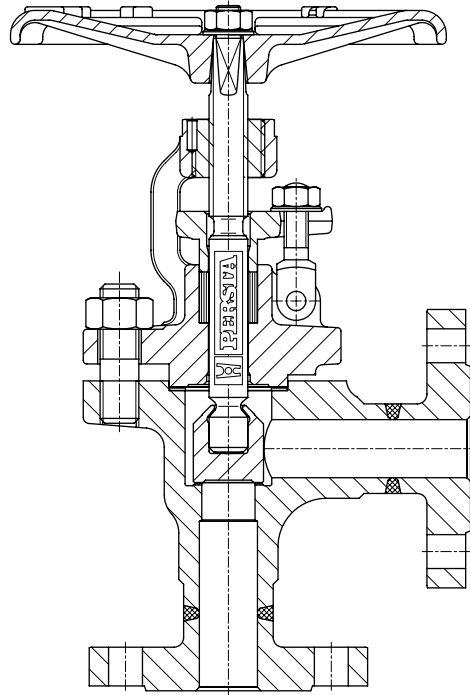
Weights/kg and Kvs-values DVA 40		
DN	BW	Kvs (m ³ /h)
80	145	45
100	225	73
125	430	114
150	715	174
200	1140	300

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

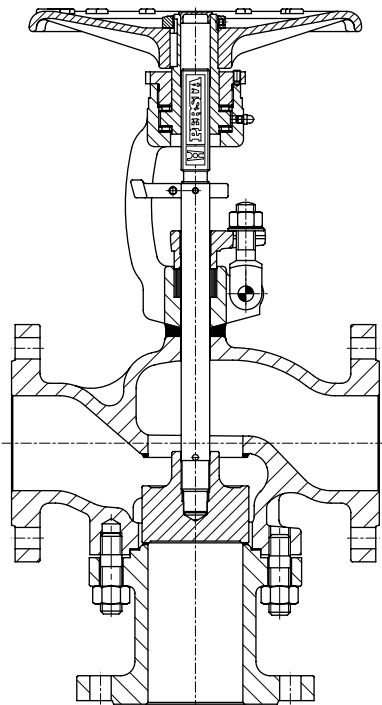
Screw down non return valve 240 ME



Angle globe valve 202 AE



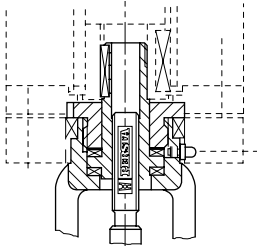
Changeover valve 203 EM



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

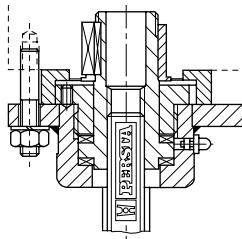
Universal Valve-Head

For subsequent assembly of E-actuators without welding



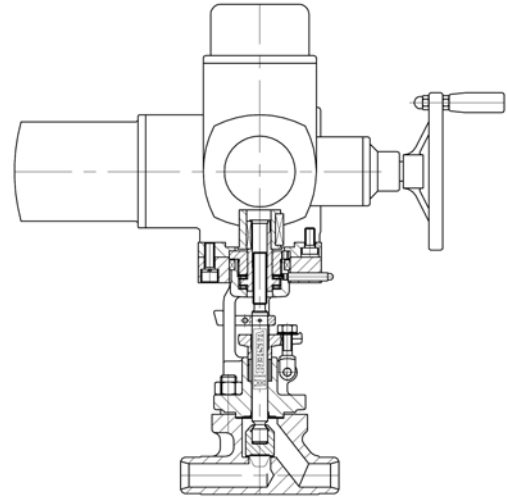
Assembly of E-actuators

Standard design DN 65



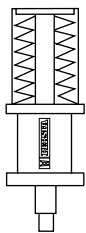
For running a particular limit of travel e.g. with air or current

Example



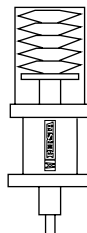
PERCON piston drive

Spring opening

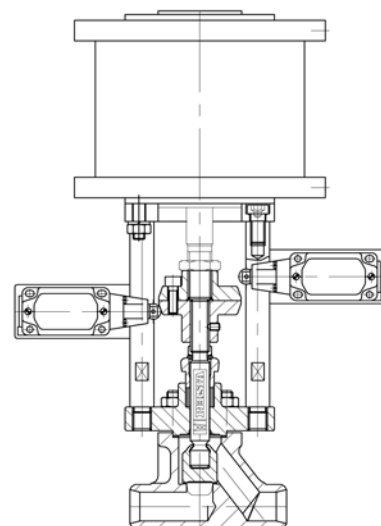


PERCON piston drive

Spring closing



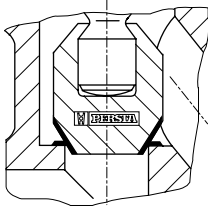
Example



■ **Globe valves** ■ **Variants**

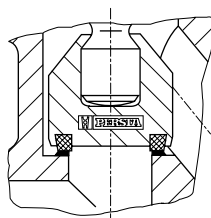
Disc with edge seat

For media with small quantities of impurities



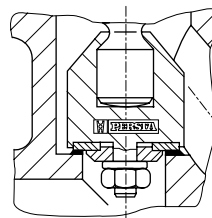
Disc with soft seat

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



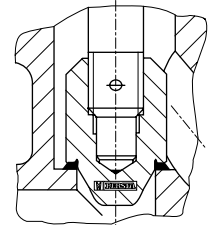
Disc with elastomer coated obturator

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



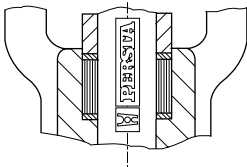
Control disc

Pinned down suitable for operating in intermediate position



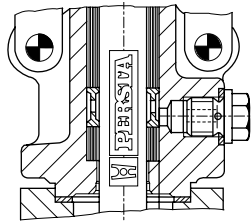
PTFE-stuffing box

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



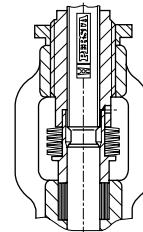
Stuffing box with lantern and test screw plug

Also for sealing water or leakage suction

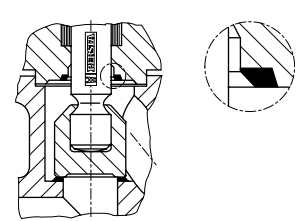


Stuffing box with central cup spring tightening

In order to minimize maintenance costs

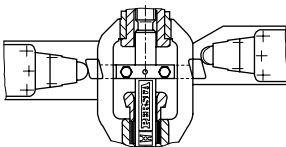


Hard faced back seat



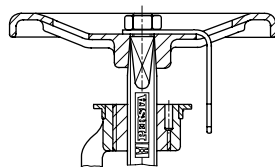
Limit switches

Can be supplied mechanically or inductively



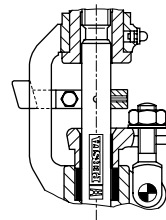
On-Off position indicator

With sheet metal bracket

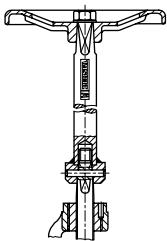


Non-rotating stem

In order to reduce packing wear

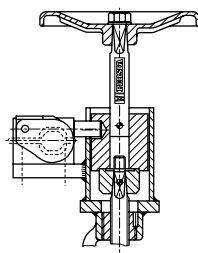


Stem extension



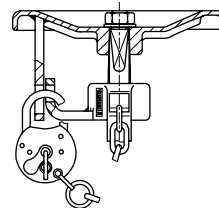
PERLOC system locking mechanism

Also for interlocking mechanism (safety circuits)



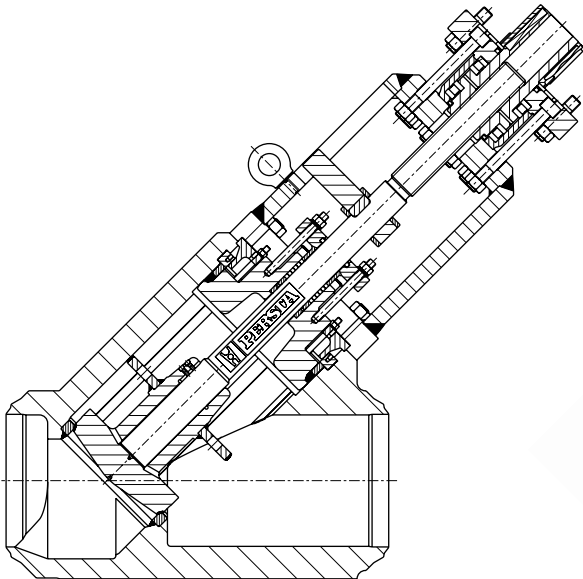
Locking mechanism

With padlock

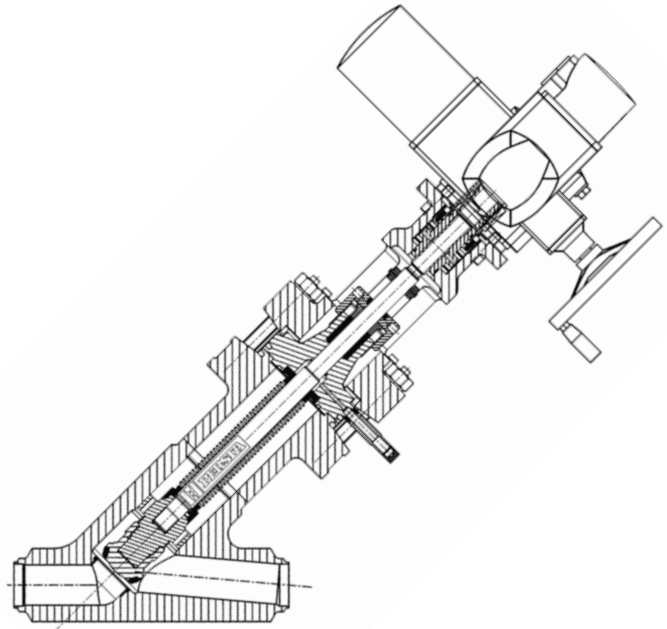


■ **Globe valves** ■ **Special valves**

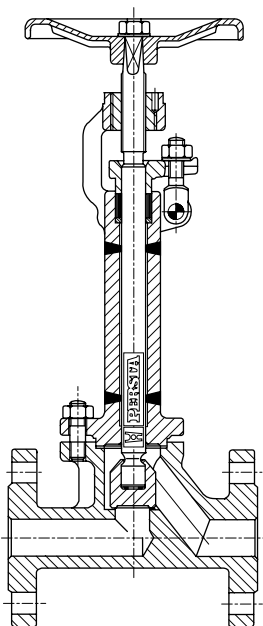
Y-pattern stop check valve



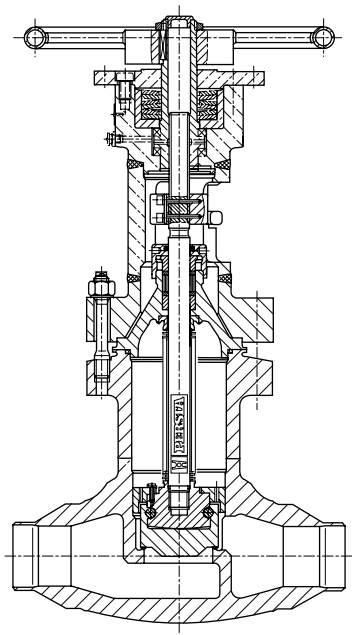
Bellow seal Y-valve



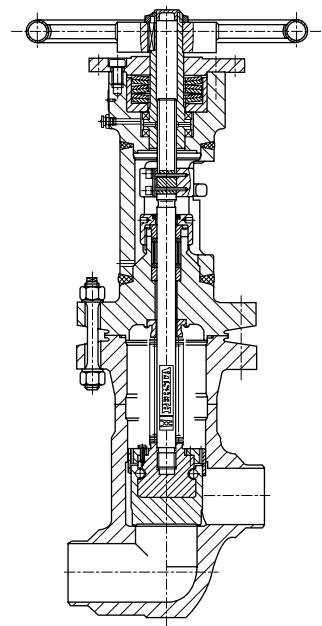
Globe valve with insulating section



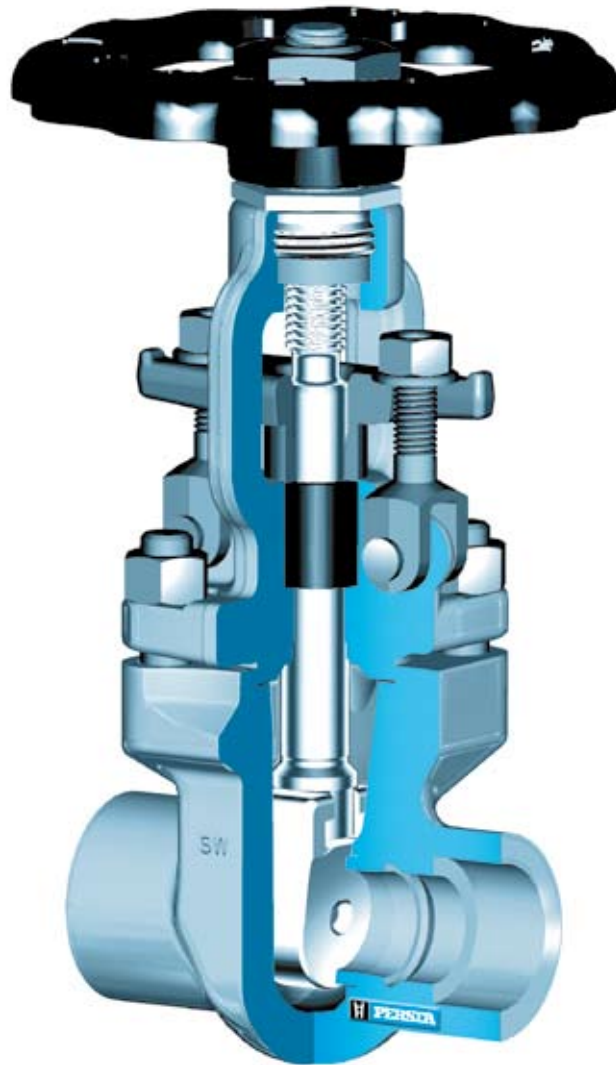
Monobloc valve



Monobloc-Z-valve



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



Range of application

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

Material	PN	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																			
		-200	-60	-10	20	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	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

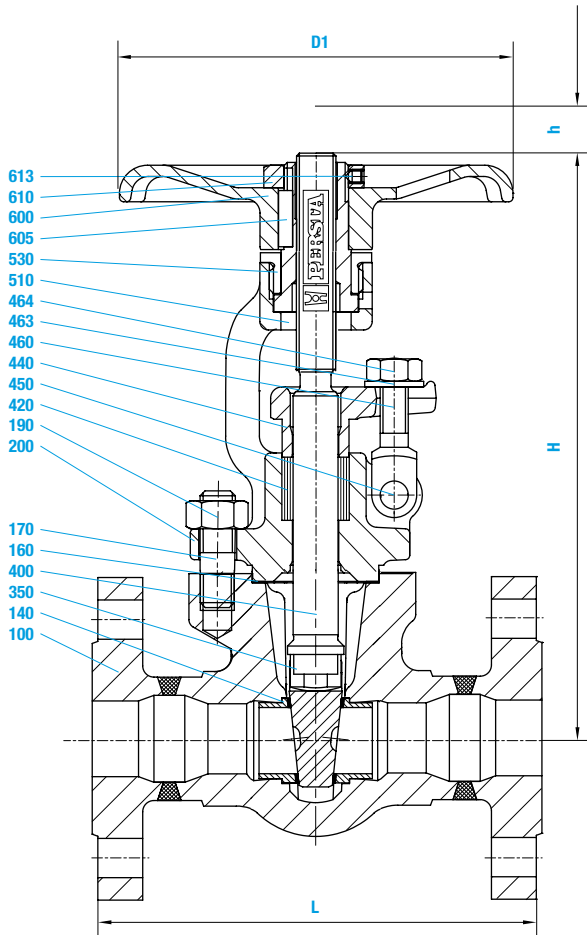
- Die-forged body and bonnet
- Wedge made of stellite
- Gasket, male and female face
- Full bore
- Non-turning, rising stem

Benefits

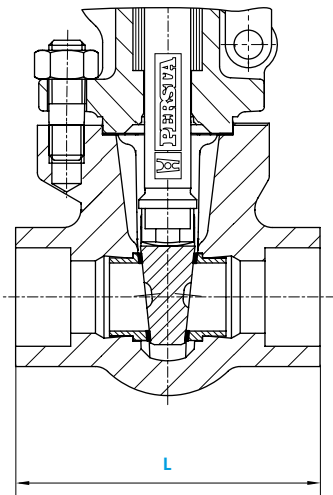
- Free from porosity and shrink holes
- Extremely resistant to wear
- Blow out protection
- No reduction in seat area
- Minimal wear of the gland-packing

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

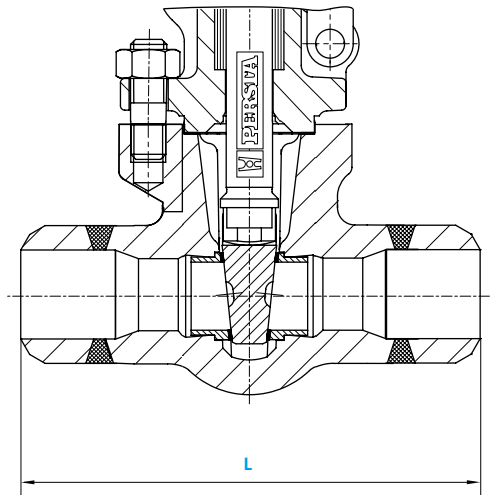
Small gate valve FL-version



Socket welding version



BW-version



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

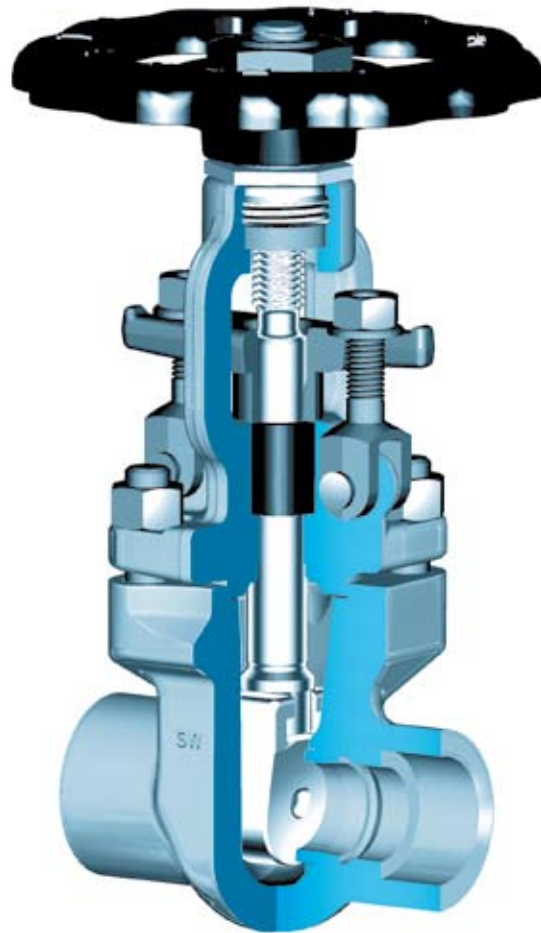
Materials					
Pos.	Component	1.0460 (21)	1.7335 (44)	1.0566 (25)	1.4571 (87)
100	Body	1.0460	1.7335	1.0566	1.4571
140	Seat ring	1.4571	1.4571 ¹⁾	1.4571	1.4571
160	▶ Gasket	Graphite	Graphite	Graphite	Graphite
170	Stud	1.7709	1.4923	A4-70	A4-70
190	Hexagonal nut	1.7218	1.4923	A4-70	A4-70
200	Bonnet	1.0460	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	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 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)
- NPS 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) ▪ NPS 1/2 - 2 (DN 15-50)

Standard features

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

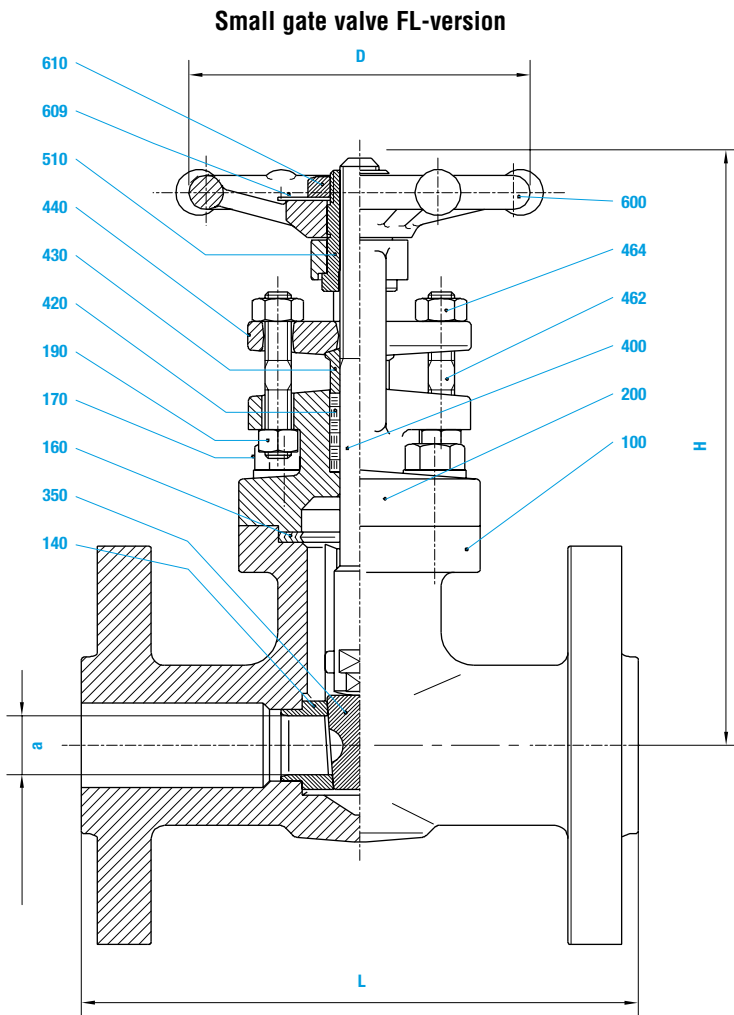
Design Highlights

- Die-forged body and bonnet
- Wedge made of stellite
- Gasket, male and female face
- Full bore
- Non-turning, rising stem

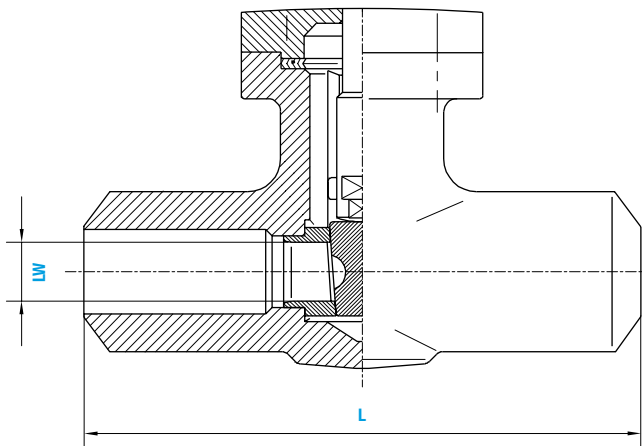
Benefits

- Free from porosity and shrink holes
- Extremely resistant to wear
- Blow out protection
- No reduction in seat area
- Minimal wear of the gland-packing

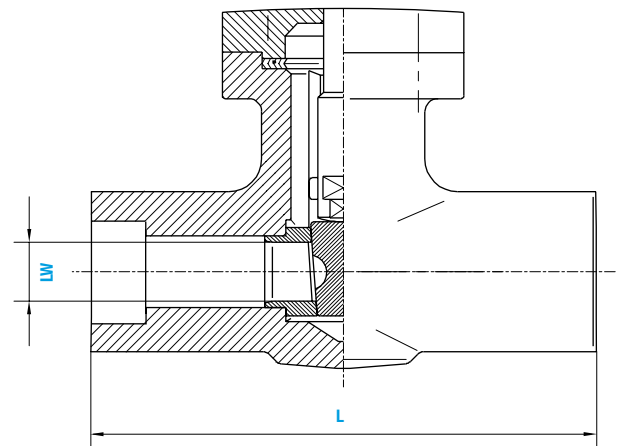
▪ Gate valves ▪ VALTRA Small gate valve ▪ 800/808 GJ ▪ Class 800 (PN 10-40) ▪ NPS 1/2 - 2 (DN 15-50)



BW-version



Socket welding version



■ Gate valves ■ VALTRA Small gate valve ■ 800/808 GJ ■ Class 800 (PN 10-40) ■ NPS 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	Spiral-Grafit	Spiral-Grafit
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 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 (m ³ /h)
1/2	2,2	14,2
3/4	3,5	25,2
1	5,0	37,2
1 1/4	6,5	61,0
1 1/2	8,5	95,3
2	17,0	149,0
800 GJ 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												
100	100,0	100,0	100,0	92,5	80,0	70,0	60,0	56,0	50,0													
1.0566 ³⁾⁴⁾	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	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													
	100 ²⁾	100,0	100,0	100,0	100,0	96,0	88,0	79,0	70,0													
1.5415	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										
100	100,0	100,0	100,0	100,0	100,0	100,0	87,0	78,0	74,0	72,0	70,0											
1.7335	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						
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							
1.7383	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



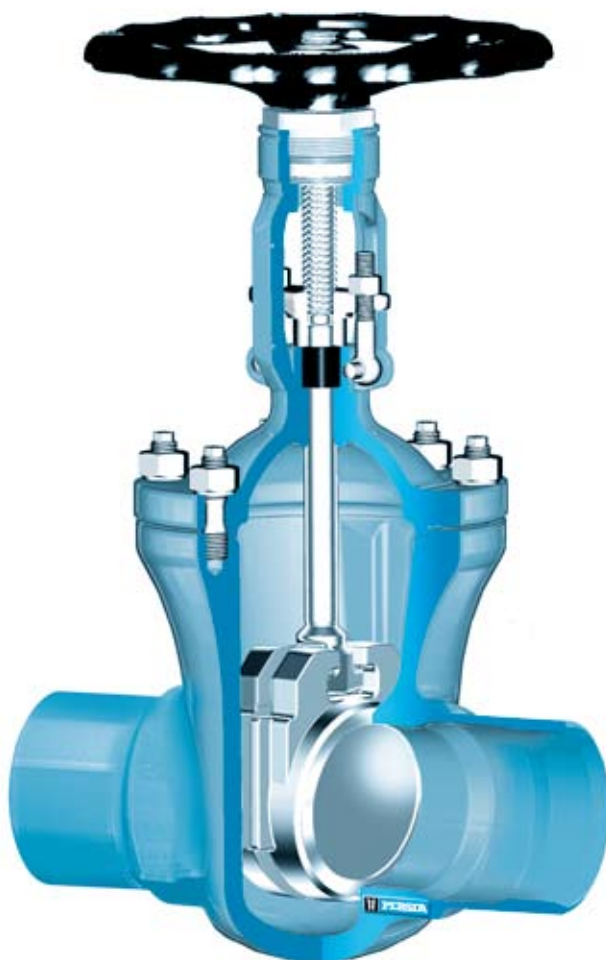
Pressure rate table acc. DIN EN 1092-1

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

Material	PN	-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 buttweld 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	10		1000	1000	1000	1000	940	820	740	642	595	480	450	430	410	380	340	280	230														
1.0566 ²⁾³⁾	10	1000	1021	1021	1000	960	880	790	700																								
1.5415	10		1200	1200	1200	1200	1120	1030	880	850	820	820	810	810	800	790	790	780	780	680	530	400	320	250									
1.7335	10		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	10		1200	1200	1200	1200	1200	1200	1180	1090	1030	1020	1010	990	980	970	960	950	940	890	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 disc gate valve / 2 disc-design = Type JJ
- Wedge gate valve / Flexible wedge design = Type 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 standard features GA

- Wedge gate valve / Flexible wedge design
- 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

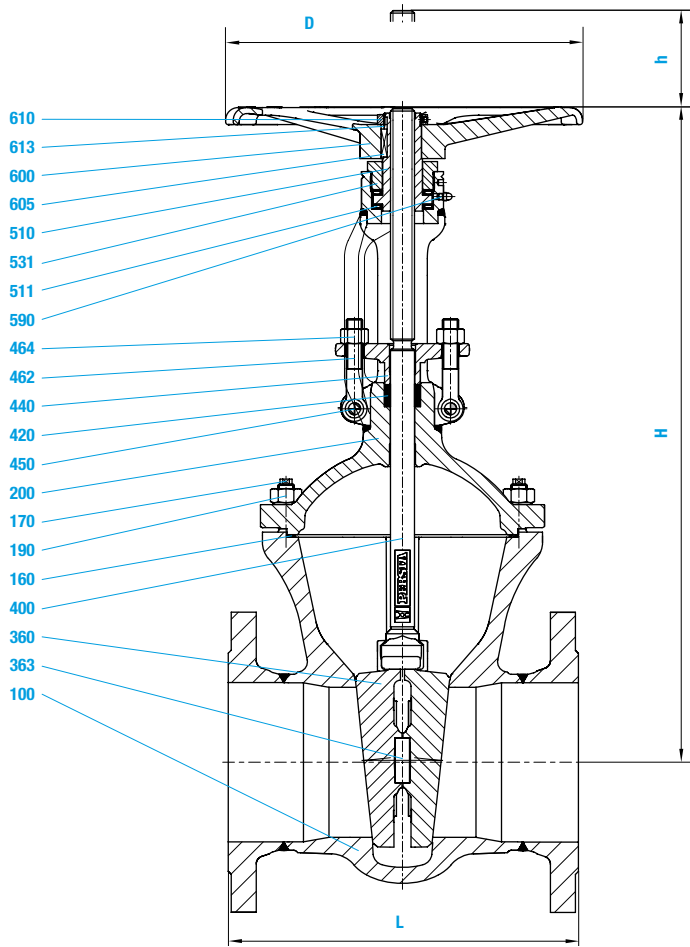
Design Highlights

- 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

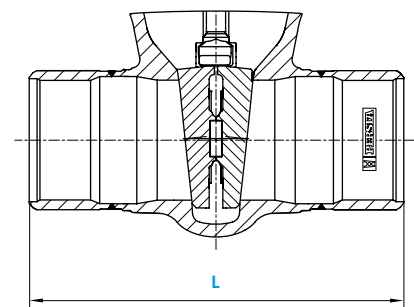
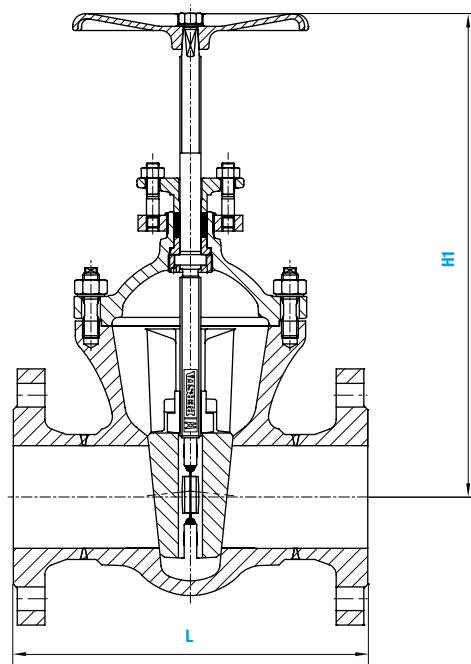
Benefits

- 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	▶ 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	▶ Bearing	WLSt	WLSt	WLSt	WLSt	WLSt	WLSt
531	Screwing	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	5.3106	5.3106	5.3106	5.3106	5.3106	5.3106
605	Key	1.0060	1.0060	1.0060	1.0060	1.0060	1.0060
610	Hexagonal 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	23,5	22	20	17	16	13	10	
	40	40	40	40	37,5	35	32	28	24	21	10	
1.0566 ²⁾	10-16	16	16	16	15	14	13	11				
	25	25	25	25	24	22	20	17				
	40	40	40	40	38	35	32	28				

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

2) At temperatures > 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 disc gate valve / 2 disc-design = Type JJ
- Wedge gate valve / Flexible wedge design = Type HJ
- Die-forged body and bonnet
- Body with full bore
- Outside screw and yoke
- Non-turning rising stem
- Yoke sleeve
- Available with flange and buttweld ends

Option standard features GA

- Wedge gate valve / Flexible wedge design
- 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

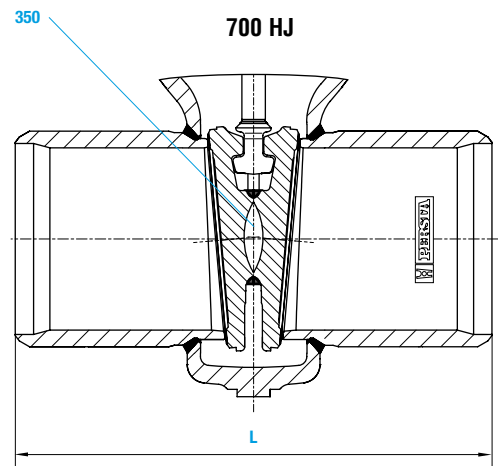
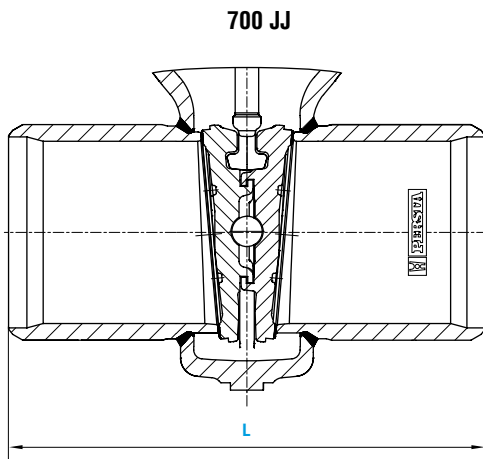
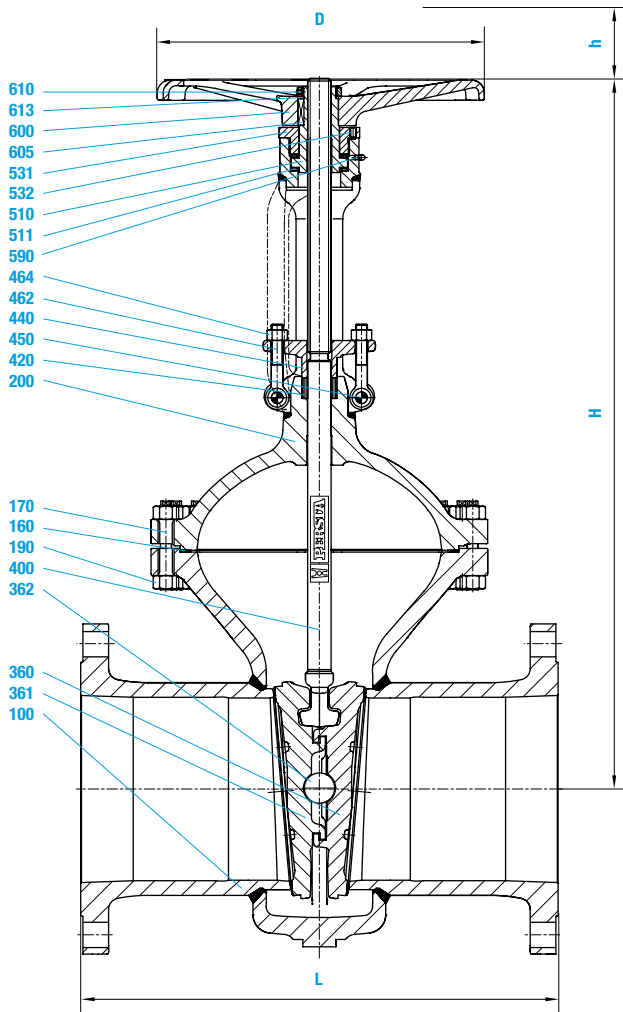
Design Highlights

- 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 without welding

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



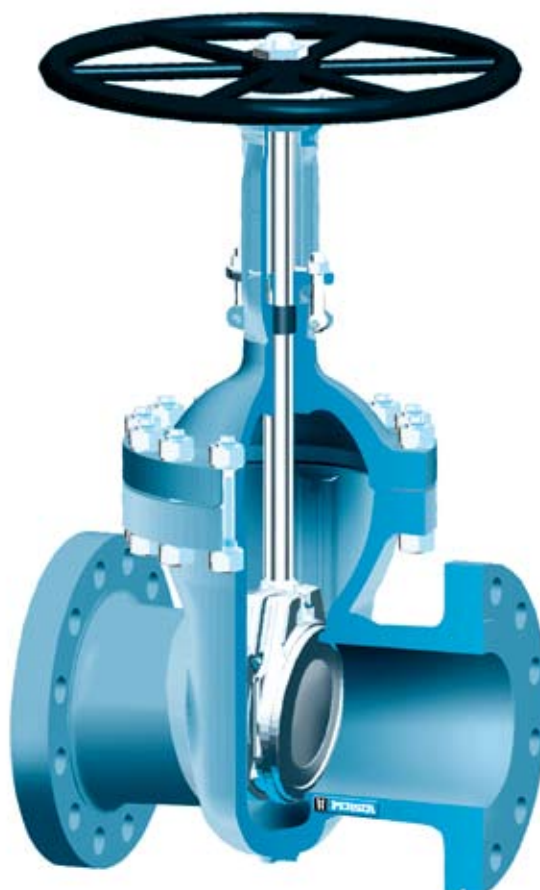
■ Gate valves ■ Gate valve ■ 700 HJ/JJ (GA) ■ PN 10-40 ■ DN 200-250

Materials			
Pos.	Component	1.0460 (21)	1.0566 (25)
100	Body	1.0460 ³⁾	1.0566 ³⁾
160	▶ Seat ring	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	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	▶ Screwing	1.0718	1.0718
532	Screw pin	45H	45H
590	▶ Grease nipple	5.8	5.8
600	Handwheel	5.3106	5.3106
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	Stroke H	h	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	12												
	100	100	100	100	91	80	70	60	56	50	34	21	19												
1.5415	63	63	63	63	63	63	63	56	50	47	45	37	35	29	22	16	14								
	100	100	100	100	100	100	100	87	78	74	70	57	54	45	34	27	22								
1.7335	63	63	63	63	63	63	63	61	58	56	53	51	47	40	32	25	20	16	13	10					
	100	100	100	100	100	100	100	95	91	87	82	80	74	62	49	38	31	24	19	16					
1.7383	63	63	63	63	63	63	63	62	62	60	55	53	47	40	35	28	25	22	18	15	12	11	9		
	100	100	100	100	100	100	100	98	96	94	85	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 ▪ 700 HJ/JJ ▪ PN 63-100 ▪ DN 200-300

Standard features

- Split disc gate valve / 2 disc – design type = Type JJ
- Wedge gate valve / flexible wedge-design Type 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.

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

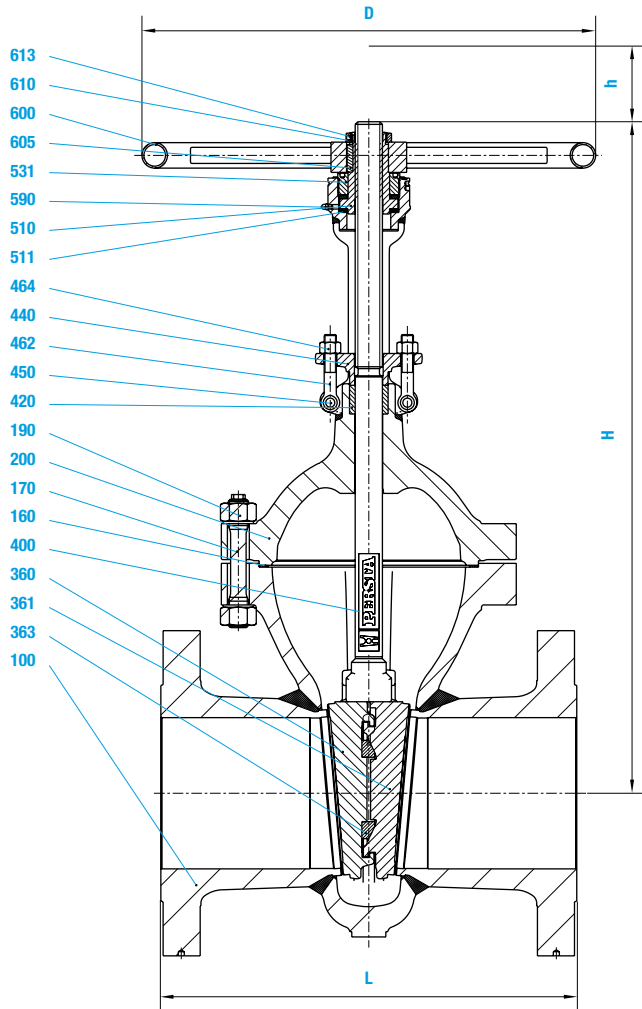
Design Highlights

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

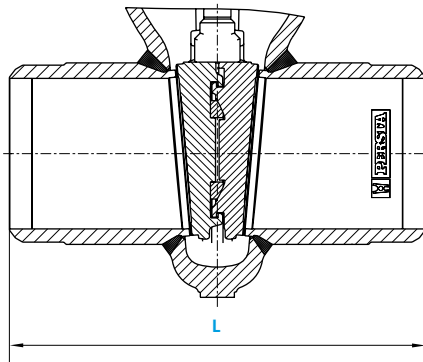
Benefits

- 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

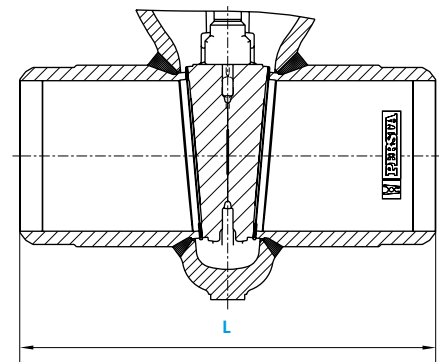
▪ Gate valves ▪ Gate valve ▪ 700 HJ/JJ ▪ PN 63-100 ▪ DN 200-300



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⁾
363	▶ Pressure piece	1.4122	1.4122	1.4122	1.4122
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	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	Screwing	1.0718	1.0718	1.0718	1.0718
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	Hexagonal 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		Stroke h	D
	L	H		
200	550	890	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	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																							
		-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	100	87	78	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	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	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 disc gate valve
- 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

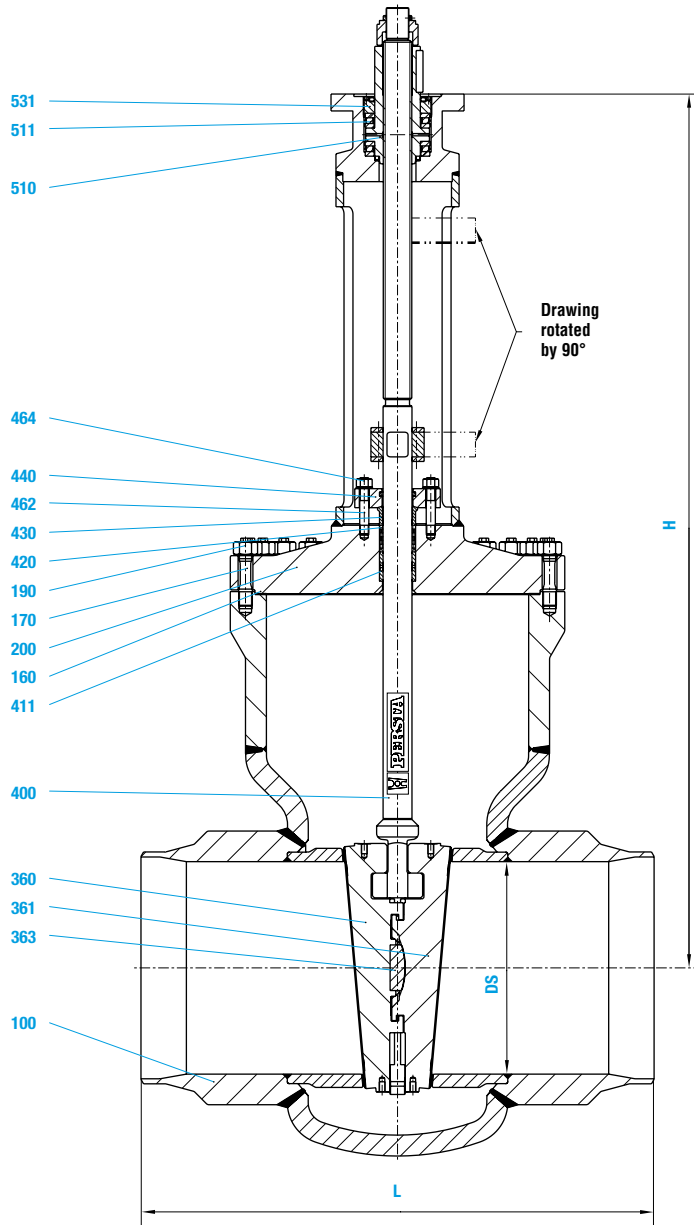
Design Highlights

- Seats and 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

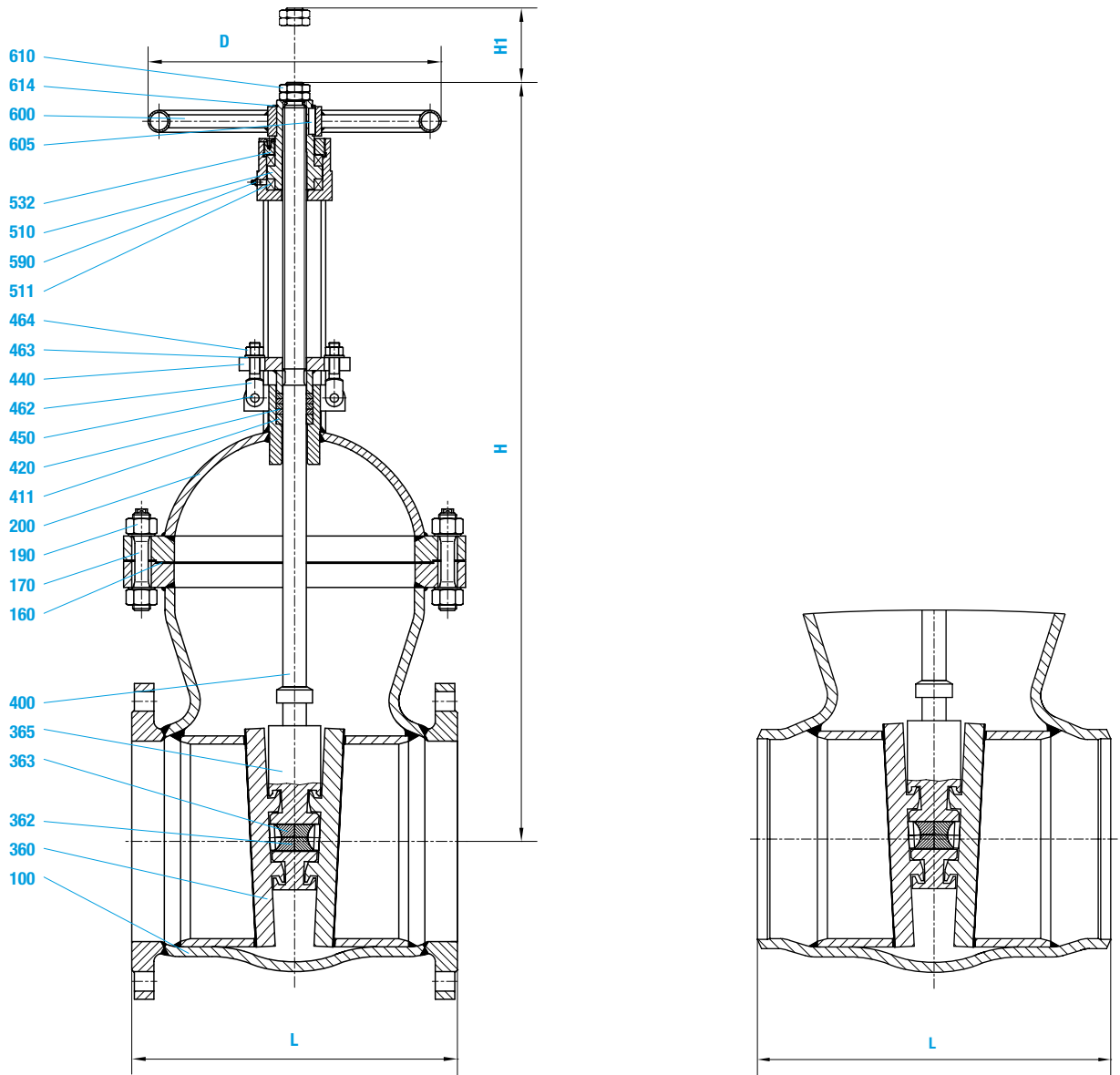
Materials					
Pos.	Component	1.0425 (22)	1.5415 (42)	1.7335 (44)	1.7383 (45)
100	Body welded on with	1.0425	1.5415	1.7335	1.7383
160	▶ Seat ring	Stellite	Stellite	Stellite	Stellite
170	▶ Stud	Graphite	Graphite	Graphite	Graphite
190	Hexagonal nut	1.7709	1.7709	1.7709	1.7709
200	Bonnet	1.7218	1.7218	1.7218	1.7218
360 / 361	▶ 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	▶ Packing	1.4021	1.4122	1.4122	1.4122
430	Gland ring	1.8507	1.8507	1.8507	1.8507
440	Gland flange	Graphite	Graphite	Graphite	Graphite
462	Stud	1.5415	1.5415	1.5415	1.5415
464	Hexagonal nut	1.5415	1.5415	1.7383	1.7383
510	▶ Yoke sleeve	1.7709	1.7709	1.7709	1.7709
511	▶ Bearing	1.7218	1.7218	1.7218	1.7218
531	Screwing	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	14	13	11	10	8	
	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

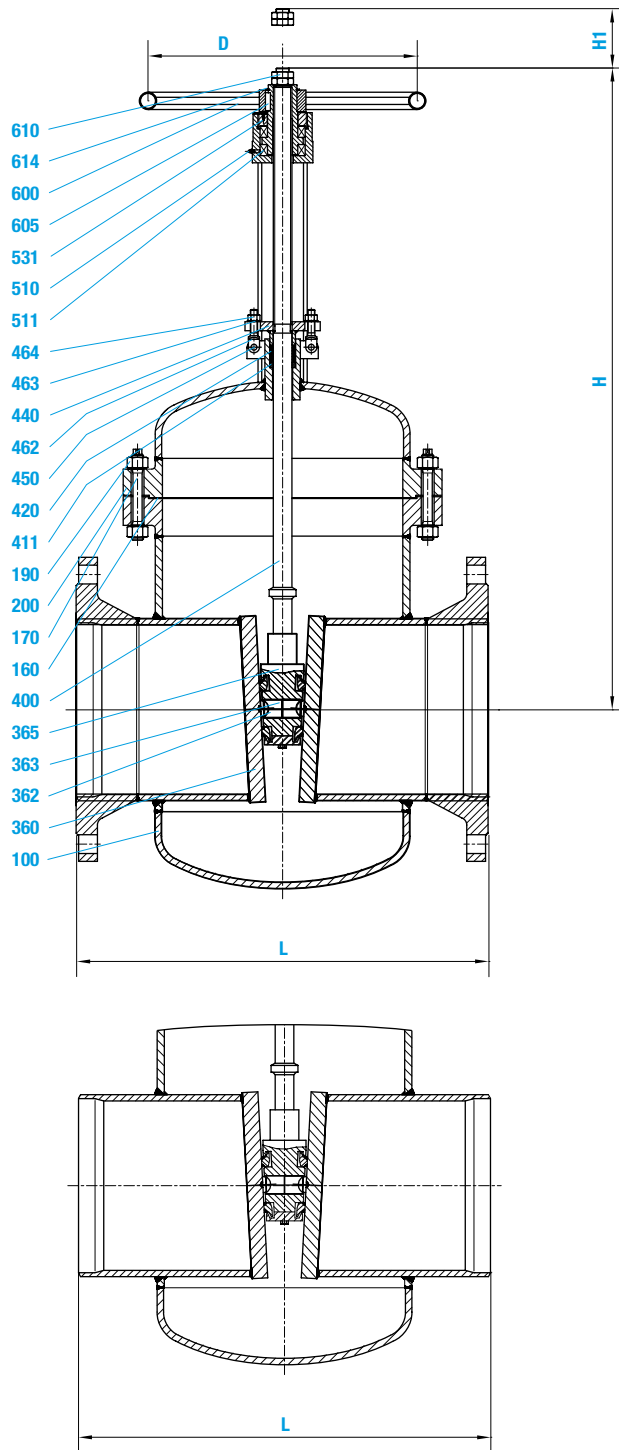
Materials		
Pos.	Component	P265GH (22)
100	Body welded on with	P265GH
160	▶ Gasket	X20CrMo171
170	Tension screw	Sigralflex
190	Hexagonal nut	1.7158
200	Bonnet	1.7158
360	▶ Disc welded on with	P265GH
362	▶ Ball	P265GH
363	▶ Pressure piece	X8CrTi18
365	▶ Double disc guide	1.4021
400	▶ Stem	1.4021
411	Guide bushing	GG 25
420	▶ Packing	Graphite
440	Gland flange	P265GH
450	Grooved pin	1.1181
462	Gland bolt	1.1181
463	Washer	St
464	Hexagonal nut	1.0501
510	▶ Screw pin	0.7040
511	▶ Roller bearing	WLSt
532	Countersink screw	8.8
590	Grease nipple	5.8
600	Handwheel	St
605	Key	1.0050
610	Hexagonal nut	5.6
614	Retaining ring	Spring Steel
	▶ Spare parts	
	Further materials on request.	

Dimensions/mm					
DN	PN 10-25 L	PN 10-25 H	PN 10-16 H1	PN 25 H1	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	1000*		800
900					
1000					

*Attention: BW-overall length, DN 800, PN 25, 1250 mm
Flange-overall length, DN 800, PN 25, 1500 mm

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	1370	1170	1170	1285	33929
700	1690	1715	1980	1630	1630	1775	46181
800	2410	2440	3480	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

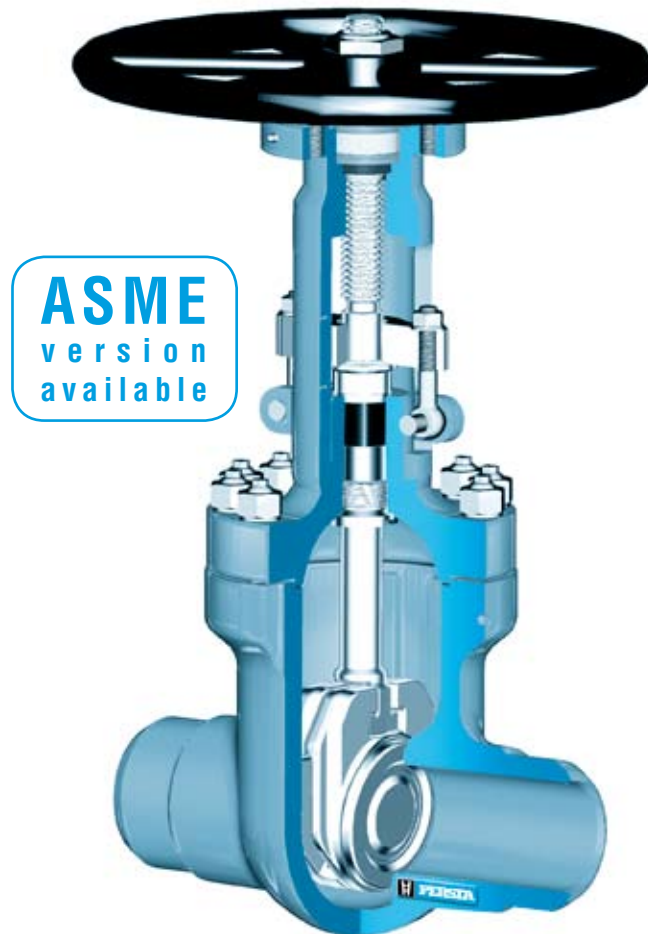
Materials		
Pos.	Component	P265GH (22)
100	Body welded on with	P265GH
160	▶ Seat ring	X20CrMo171
170	Tension screw	Sigralflex
190	Hexagonal nut	1.7158
200	Bonnet	P265GH
360	▶ Disc welded on with	P265GH
362	▶ Ball	X8CrTi18
363	▶ Pressure piece	1.4021
365	▶ Double disc guide	1.4021
400	▶ Stem	P265GH
411	Guide bushing	1.4021
420	▶ Packing	GG 25
440	Gland flange	Graphite
450	Grooved pin	P265GH
462	Gland bolt	1.1181
463	Washer	1.1181
464	Hexagonal nut	St
510	▶ Yoke sleeve	1.0501
511	▶ Bearing	0.7040
531	Yoke nut	WLS
600	Handwheel	S355J2G3
605	Key	St
610	Hexagonal nut	1.0050
614	Retaining ring	5.6
	▶ Spare parts	Spring Steel

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	1750			

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
- Split disc type
- 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 258 bar (PD 18)
- Pressure rating FL up to 160 bar
- Temperature ratings up -10 °C up to 600 °C

Materials

- 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 medi

Fields of application

Chemical industries, power plants, ship building and other

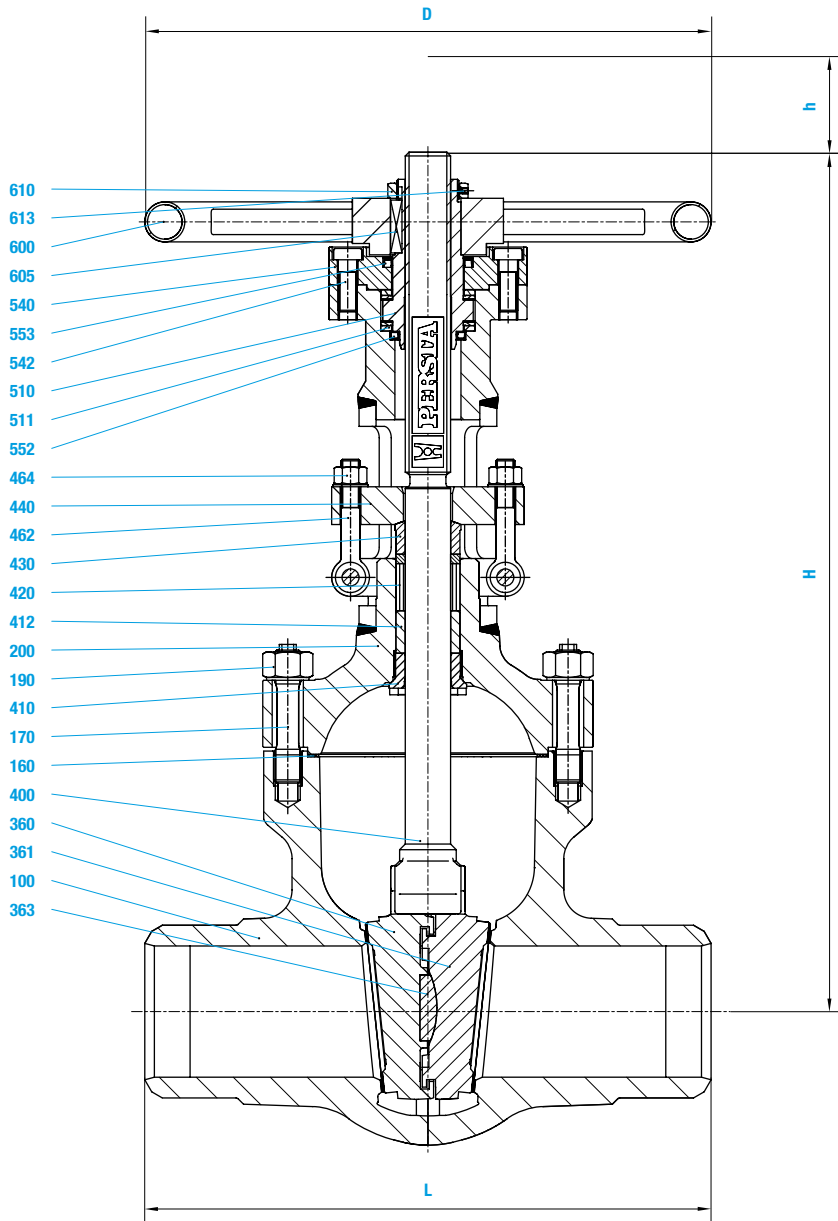
Design Highlights

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

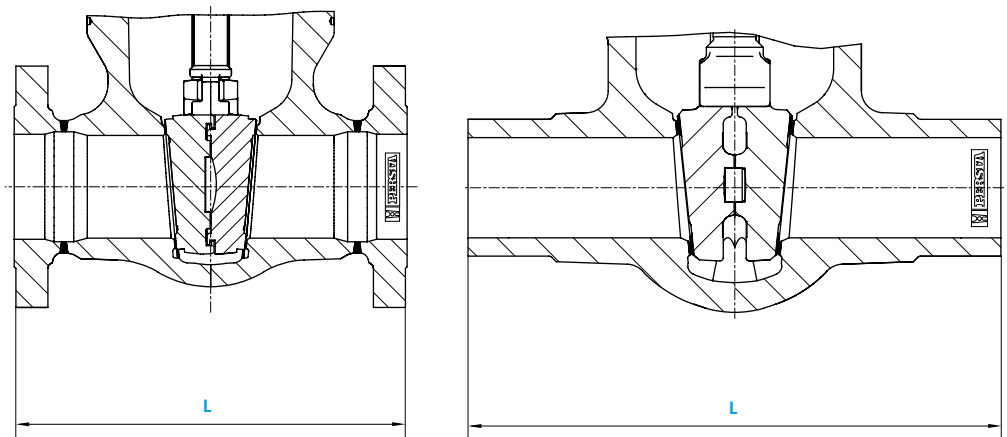
Benefits

- 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⁾
190	Hexagonal nut	1.7218	1.7218	1.7218
200	Bonnet	1.7383	1.7383	1.7383
360 / 361	▶ 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	Guide sleeve	1.0718	1.0718	1.0718
420	▶ Packing	Graphite	Graphite	Graphite
430	Gland ring	1.5415	1.5415	1.5415
440	Gland flange	1.5415	1.5415	1.5415
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	▶ Bearing	WLS1	WLS1	WLS1
540	Flange	1.0425	1.0460	1.0460
542	Headcap screw	8.8	8.8	8.8
552 / 553	▶ Gasket	NBR	Viton	Viton
600	Handwheel	St	St	St
605	Key	1.0060	1.0060	1.0060
610	Hexagonal 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 h	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 disc gate valve
- 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 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

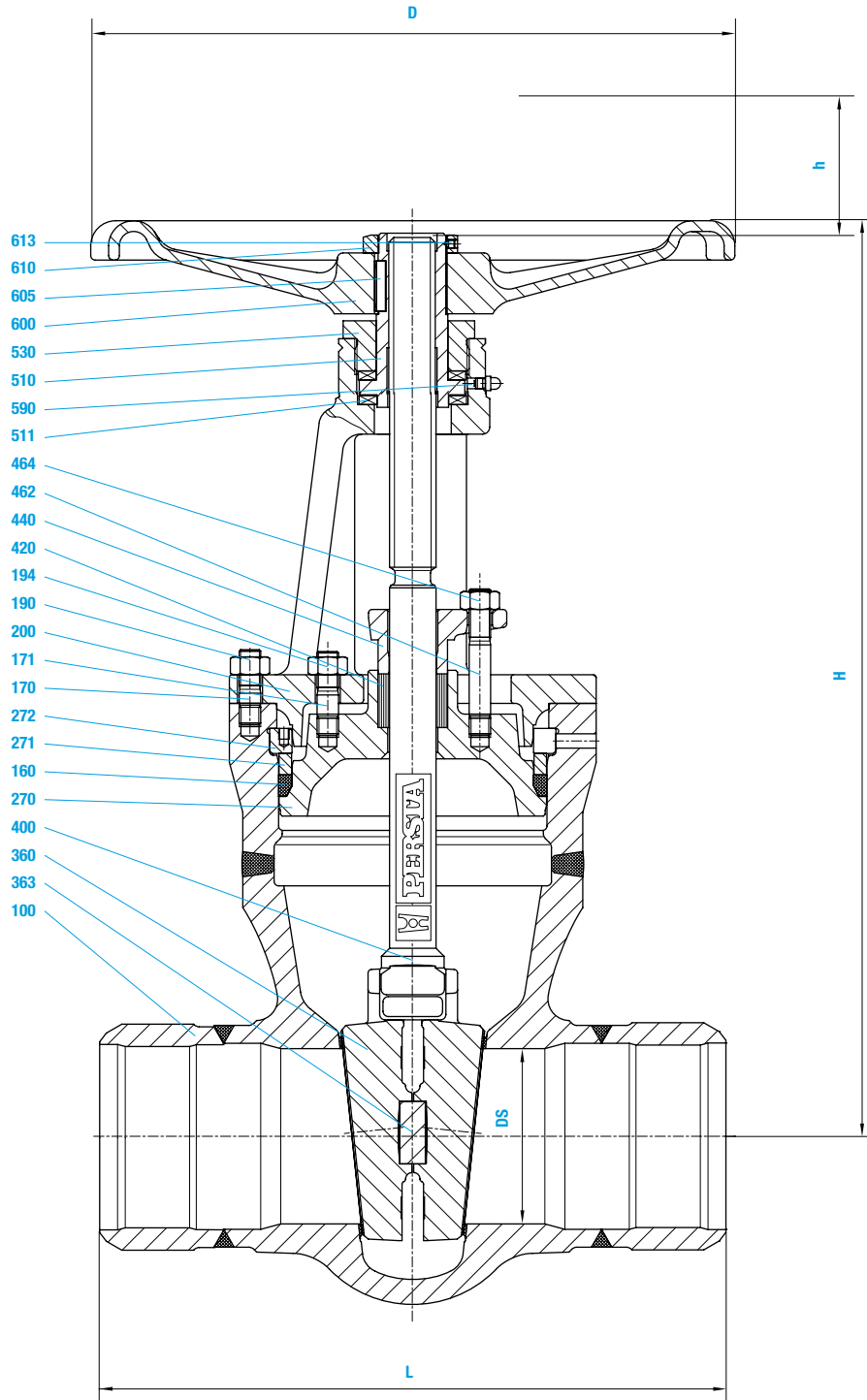
Design Highlights

- Die-forged valve body with integral seats
- Hard faced seats
- Full bore, except DN 65/50 and DN 125/100
- Non-turning rising stem with burnished shaft
- Rolled stem thread
- Pressure sealing bonnet
- Possibility to add an actuator flange

Benefits

- Compared to cast steel, robust and highly stressable
- Best possible sliding performance, minimum wear
- No reduction in seat area
- Minimum wear of the gland packing
- Optimal surface with higher surface hardness and therefore better wear resistance than cut threads
- Best possible sealing function
- Simple retrofitting of an actuator without welding

▪ 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	Segmentring	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	Screwing	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 nut	St	St	St	St
613	Screw pin	45H	45H	45H	45H

▶ Spare parts

Dimensions/mm					
DN	DS	L	H	Stroke h	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 disc gate valve
- 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 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

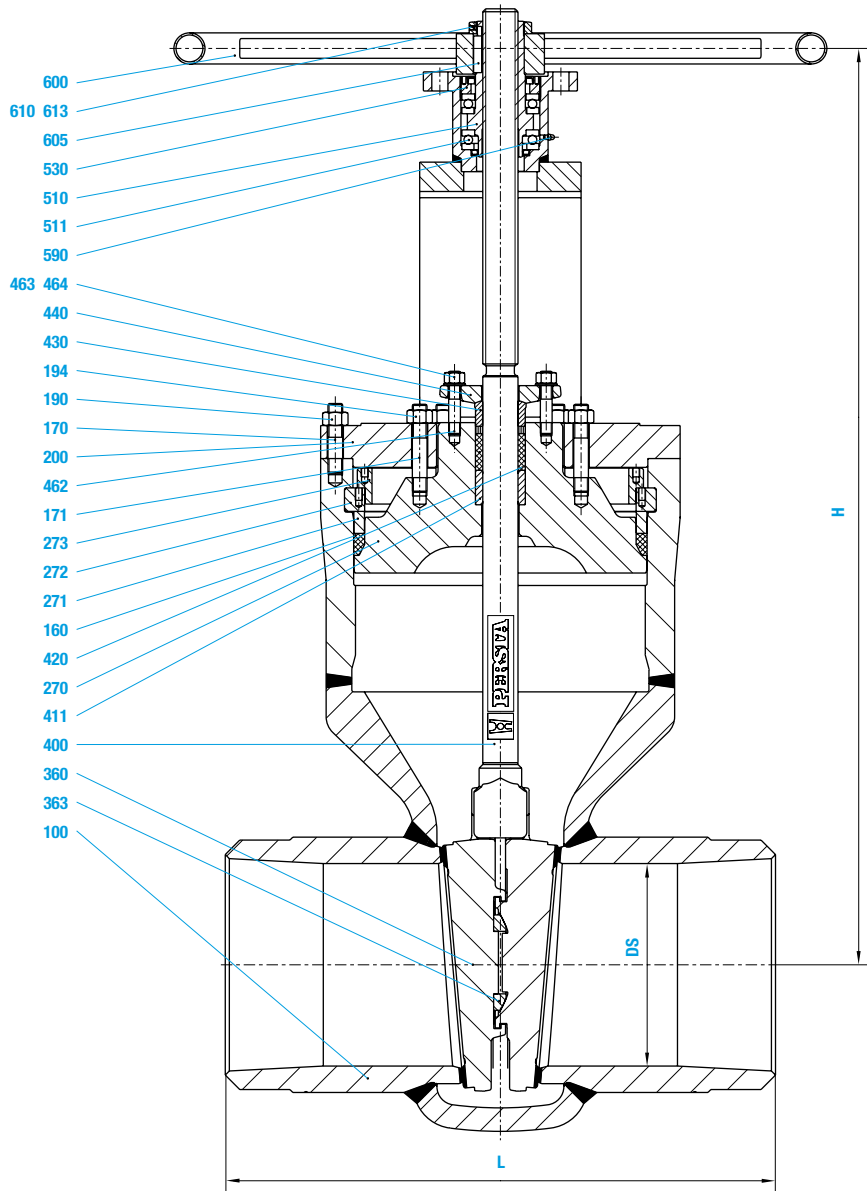
Design Highlights

- 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 sealing bonnet

Benefits

- Free from porosity and shrink holes compared to cast steel, robust and highly stressable
- Extremely resistant to wear
- No reduction in seat area
- 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 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	1.0460	1.7383/1.5415	1.7383/1.7335	1.7383
160	▶ Gasket	18/8	Stellite	Stellite	Stellite
170	▶ Stud	Graphite	Graphite	Graphite	Graphite
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	▶ Segmentring	1.0460	1.5415	1.7335	1.7383
273	▶ Cover	1.7383	1.5415	1.7335	1.7383
360	▶ Disc welded on with	1.7383	1.7383	1.7383	1.7383
363	▶ Pressure piece	Cr17	Stellite	Stellite	Stellite
400	▶ Stem	1.4122	1.4122	1.4122	1.4122
411	▶ Guide bushing	1.4021	1.4122	1.4122	1.4122
420	▶ Packing	1.8507	1.8507	1.8507	1.8507
430	▶ Gland ring	Graphite	Graphite	Graphite	Graphite
440	▶ Gland flange	1.0718	1.0718	1.0718	1.0718
462	▶ Stud	1.0460	1.0460	1.0460	1.0460
463	▶ Washer	1.7709	1.7709	1.7709	1.7709
464	▶ Hexagonal nut	St	St	St	St
510	▶ Yoke sleeve	1.7218	1.7218	1.7218	1.7218
511	▶ Bearing	CW 713 R	CW 713 R	CW 713 R	CW 713 R
530	▶ Screwing	WLS	WLS	WLS	WLS
590	▶ Grease nipple	1.0718	1.0718	1.0718	1.0718
600	▶ Handwheel	5.8	5.8	5.8	5.8
605	▶ Key	0.7040	0.7040	0.7040	0.7040
610	▶ Hexagonal nut	1.0060	1.0060	1.0060	1.0060
613	▶ Screw pin	St	St	St	St
		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																																		
		Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																		
BW-Version	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		
1.0425	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 disc gate valve
- Outside screw and yoke
- Non-turning, rising stem
- Yoke sleeve supported by needle bearings
- Pressure sealing bonnet acc. VGB-guidelines
- Easy assembly of an E-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 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

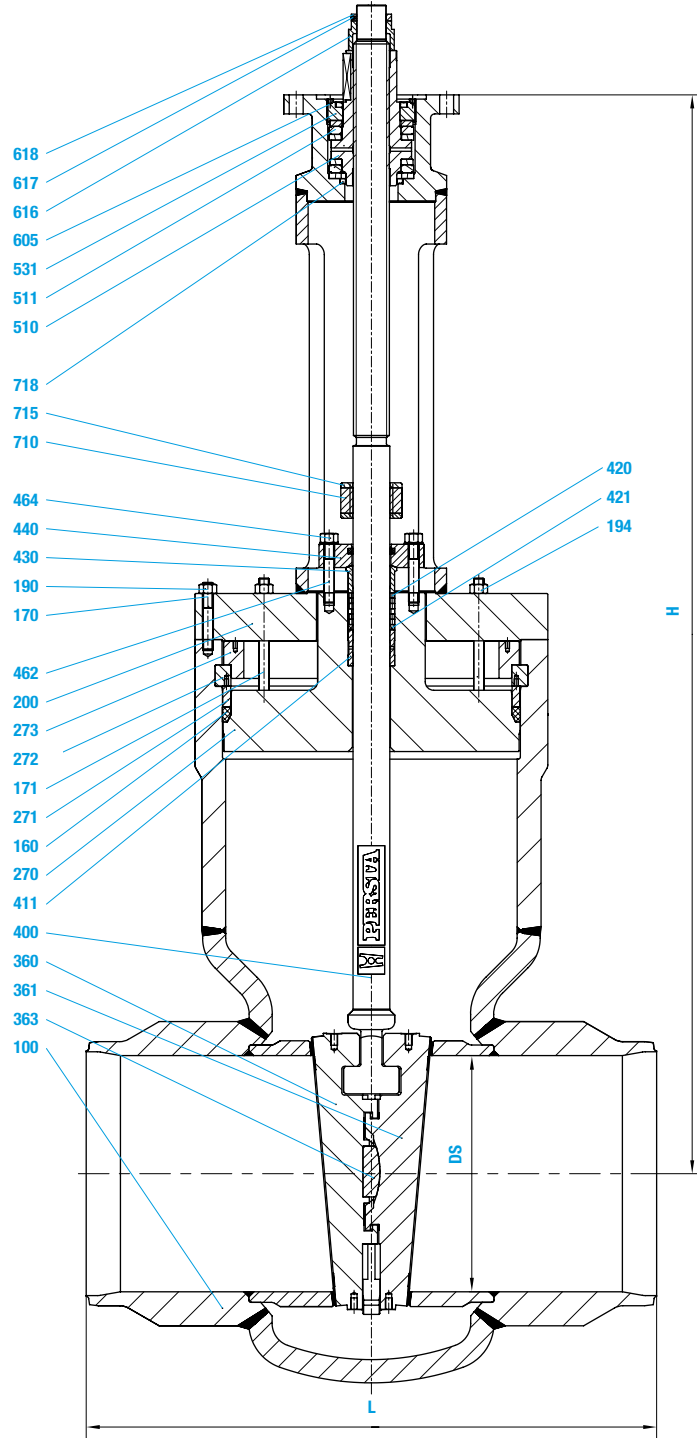
Design Highlights

- Seats and disc 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 Stellite	1.5415 Stellite	1.7335 Stellite	1.7383 Stellite	1.4903 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	Segmentring	1.0460	1.5415	1.7335	1.7383	1.4903
273	Cover	1.0460	1.0460	1.0460	1.0460	1.0460
360 / 361	▶ Disc welded on with	1.0460 Stellite	1.5415 Stellite	1.7335 Stellite	1.7383 Stellite	1.4903 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 bushing	1.8507	1.8507	1.8507	1.8507	1.8507
420	▶ Packing	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	WLSi	WLSi	WLSi	WLSi	WLSi
531	Yoke nut	1.7335	1.7335	1.7335	1.7335	1.7335
605	Key	1.0060	1.0060	1.0060	1.0060	1.0060
616	Screw pin	1.0460	1.0460	1.0460	1.0460	1.0460
617	Screw pin	45H	45H	45H	45H	45H
618	Hexagonal nut	St	St	St	St	St
710	Switch bracket	1.0425	1.0425	1.0425	1.0425	1.0425
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																																					
		Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																					
BW-Version	Material	PD	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	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																																					
		Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																					
BW-Version	Material	PD	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

Standard features

- Body made of forged steel
- Disc 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

Pressure and temperature ratings

- Pressure rating up to 680 bar
- Temperature 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 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

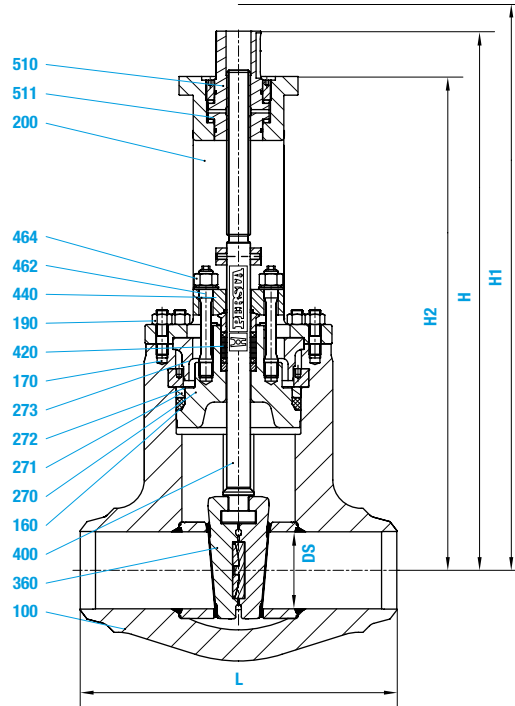
- Long bonnet
- Seats of the shut-off device and of the valve body generally faced with stellite
- Non-rising handwheel
- Non-turning, rising stem and burnished stem
- Outside located switch-bracket
- Hammer head connection between shut-off device and stem
- Gland ring and gland flange in two separate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

Benefits

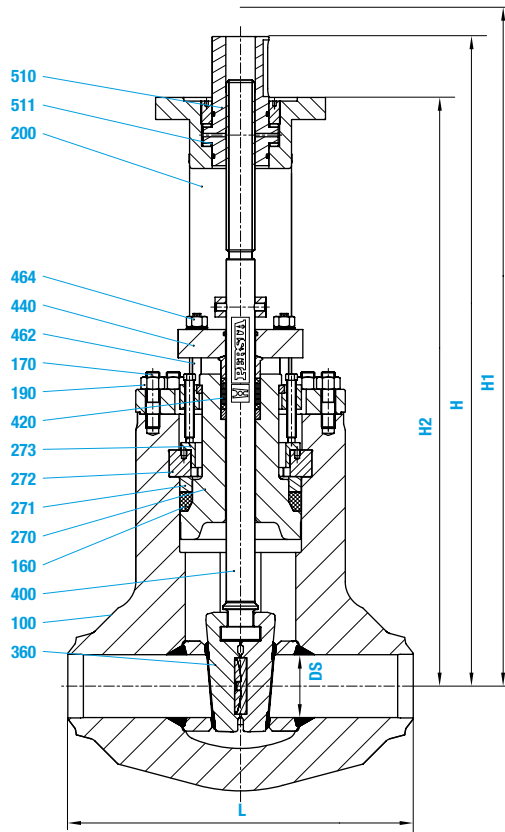
- To reduce temperatures
- Best possible sliding performance and minimum wear
- Small dimensions
- Minimum wear to the gland packing
- Protects against torsion of the stem
- The wedges are able to move parallel to the axis of the pipeline within the guiding groove. This protects the stem against bending 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	Segmentring	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							

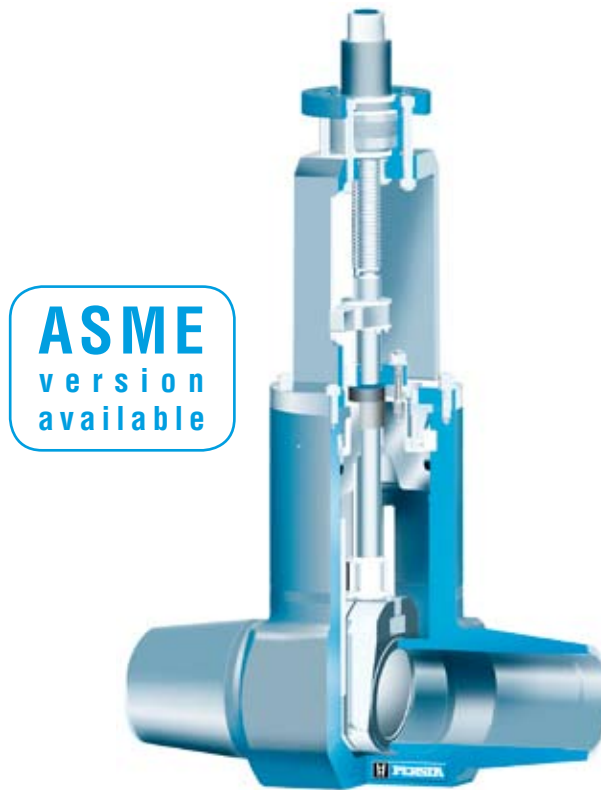
Dimensions/mm DSK 26.25										
DN	DS	L	H	H1	H2	Stroke	R/Stroke	H-Wheel	DIN/ISO 5210	
80	70	305	556	605	511	80	16	400	F10 (F14)	
100	90	406	658	725	606	105	18	450	F14	
125	111	483	781	861	720	130	21	500	F14	
150	136	559	952	1045	872	152	22		F16 (F14)	
200	178	711	1078	1270	1045	192	24		F25 (F16)	
250	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	H	H1	H2	Stroke	R/Stroke	H-Wheel	DIN/ISO 5210	
65	50	330	518	594	466	66	19	400	F10 (F14)	
80	57	368	638	675	585	73	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



ASME
version
available

		Range of application																																		
		Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																		
BW-Version	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	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	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	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	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425		
	32	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	
	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) 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 disc type
- Welded seatrings and guide bars
- Outside screw and yoke
- Position indicator / non-rotating device
- Pressure sealing bonnet
acc. VGB-guidelines
- Yoke sleeve supported by needle bearing
- Possibility to add an actuator

Pressure and temperature ratings

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

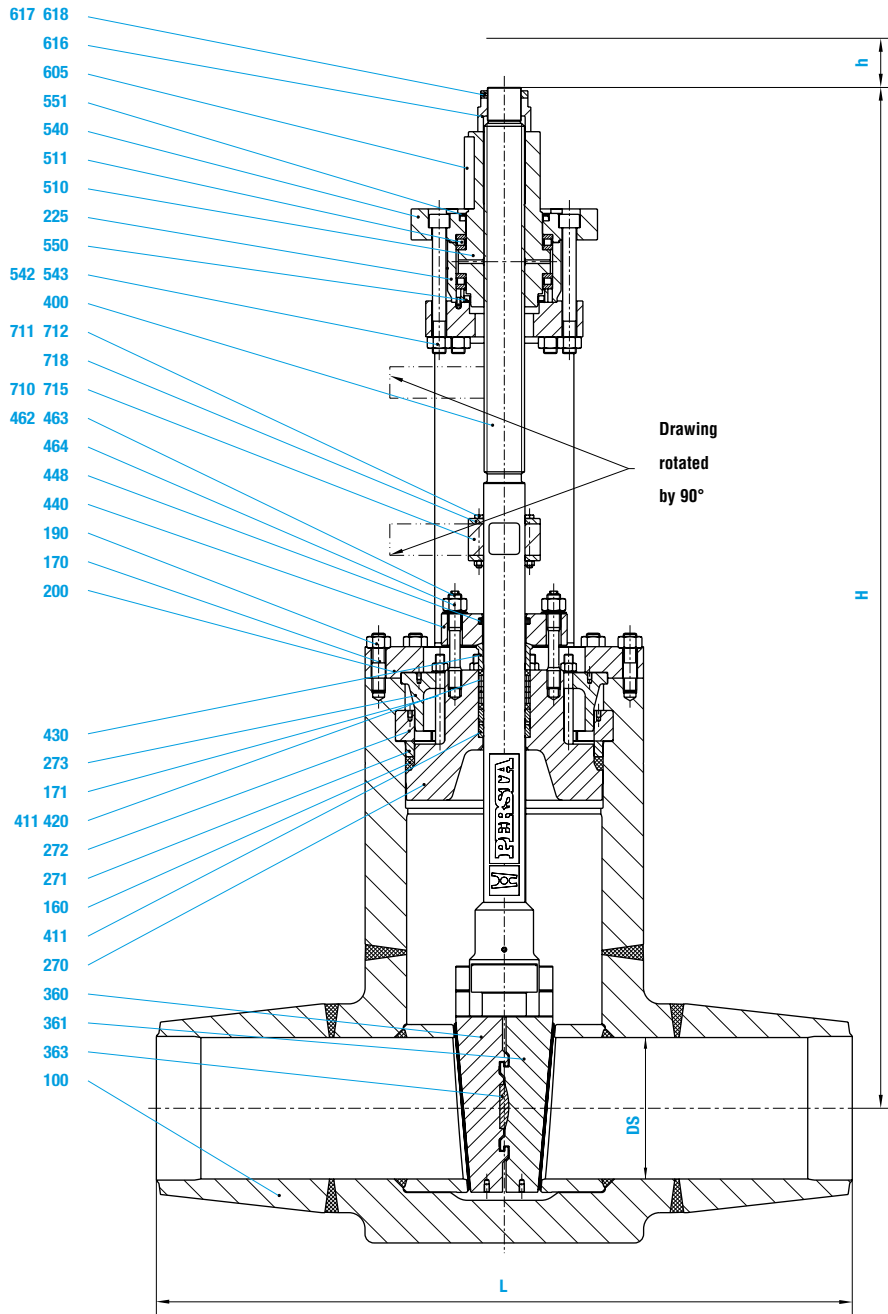
Design Highlights

- Long bonnet
- Seats and discs faced with stellite
- Non-turning, rising stem and burnished 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 needle bearing

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 shut-off device and stem 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 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
171	▶ 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	1.5415	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	▶ Segmentring	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	▶ Disc welded on with	1.0460 Stellite	1.5415 Stellite	1.7335 Stellite	1.7383 Stellite	1.6368 Stellite	1.4903 Stellite	1.4901 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 bushing	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	1.7709	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	▶ Headcap 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
605	▶ Key	1.0060	1.0060	1.0060	1.0060	1.0060	1.0060	1.0060
616	▶ Screw 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 (m3/h)	
		L	H	Stroke/h	kg	L	H	Stroke/h	kg	L	H	Stroke/h	kg	L	H	Stroke/h	kg	L	H	Stroke/h	kg		
65 - 200																							
225	202,5									Version DSK 26.40				Version DSK 26.40									4221
250 / 225	202,5									1050	1720	240	1980										
250	225,0									1150	1720	240											
300 / 250	225,0									1150	1980	270	2300										5211
300	270,0									1350	1980	270											
350 / 300	270,0									1350	2195	305	3600										7504
350	315,0									1550	2195	305											
400 / 350	315,0	1200	2140	350	2230	1550	2280	350	3750	1550	2400	350	5840										10214
400	360,0	1350	2140	350		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 ■ Over-pressure-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 an equalizing pipe connection to the third room (Fig. 5) with the pressurized side.

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. 6 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

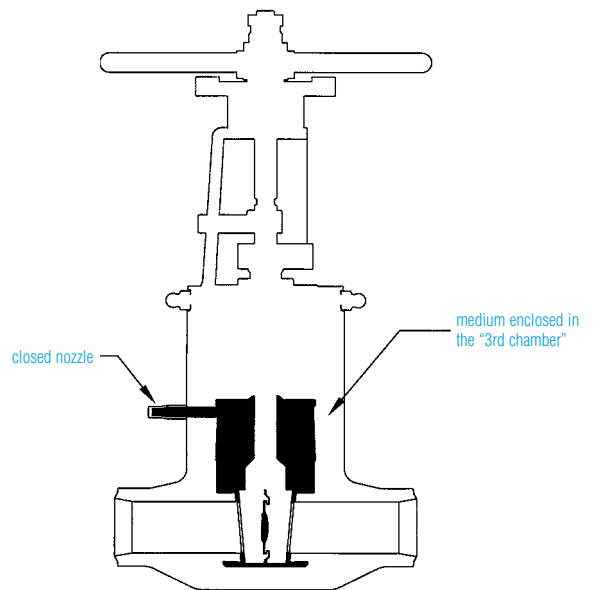


Fig. 2

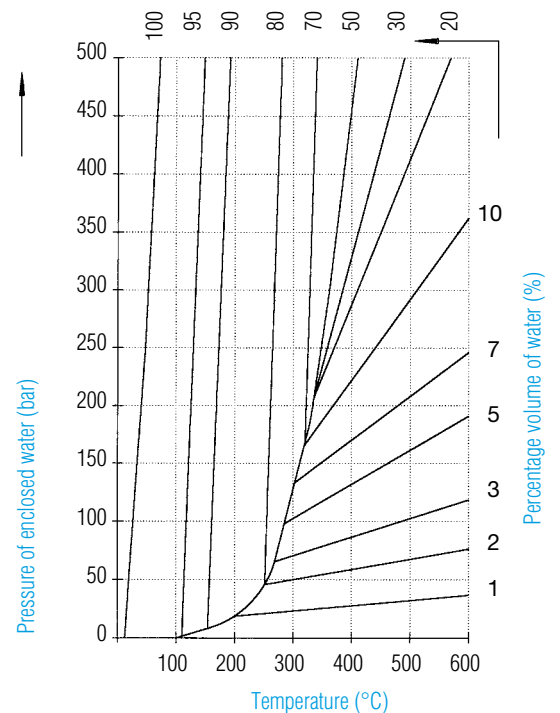


Fig. 3: With safety valve

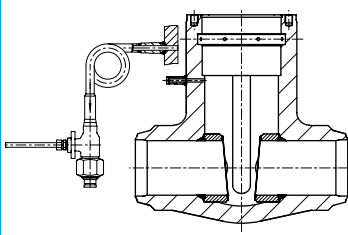


Fig. 4: With hole in the disc or seating

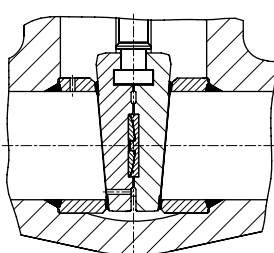


Fig. 5: With equalizing pipe to the 3rd chamber

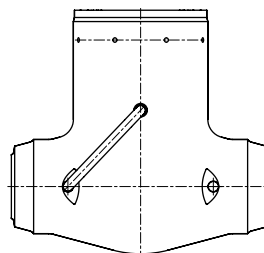
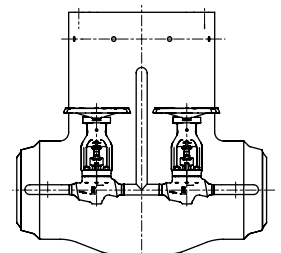
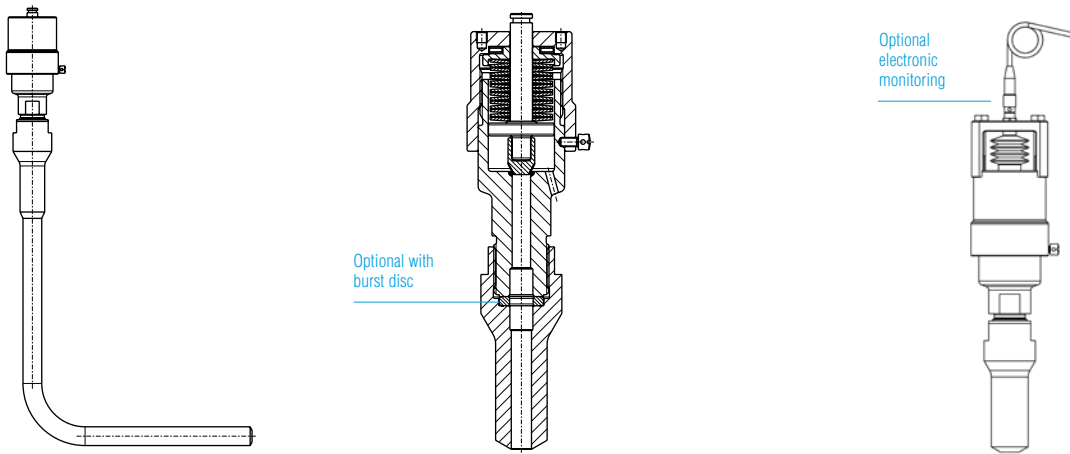


Fig. 6: With equalizing pipe and bypass valves

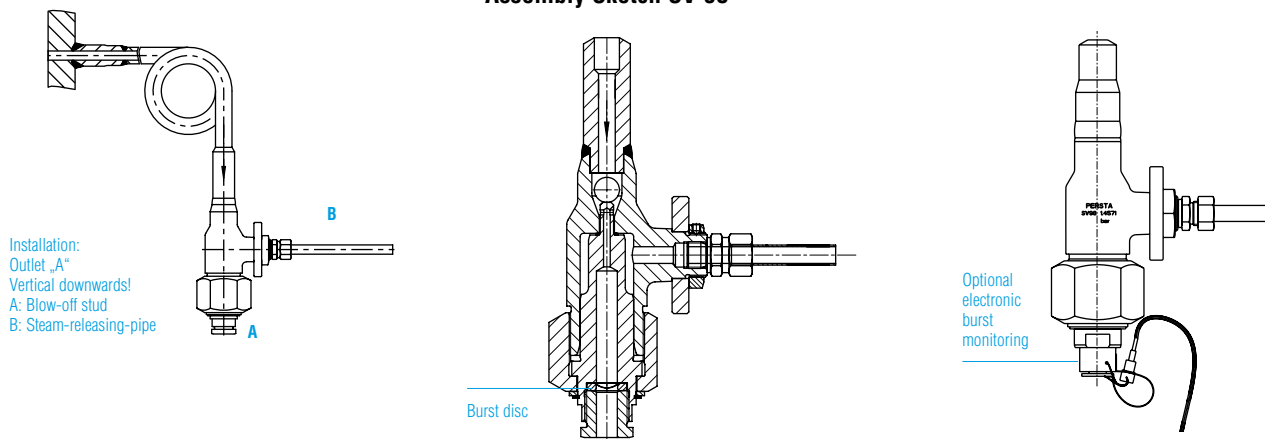


■ Gate valves ■ Over-pressure-safety devices ■ PERSTA Type SV 97 / SV 98 / SV 99

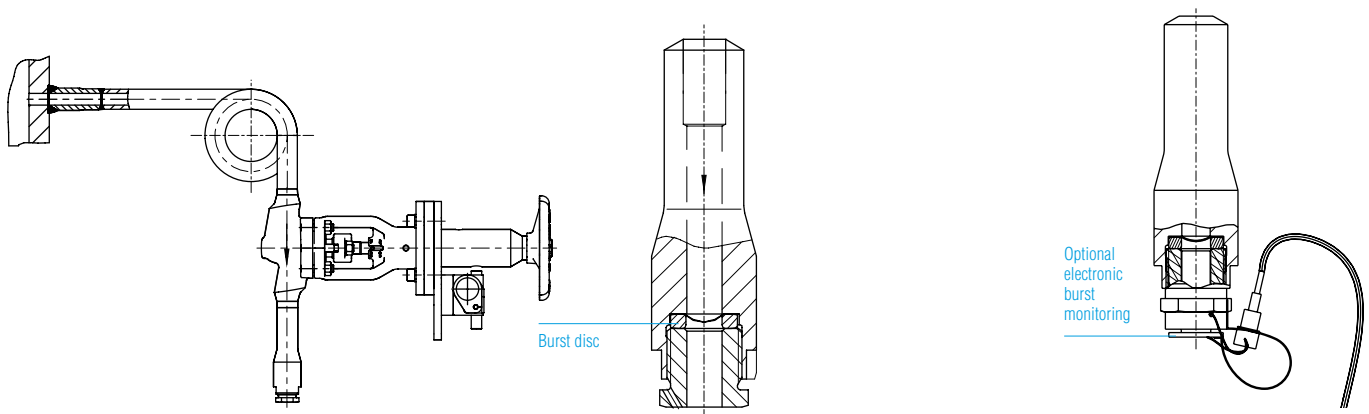
Assembly Sketch SV 97



Assembly Sketch SV 98

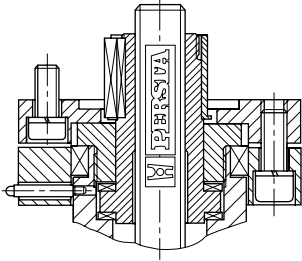


Assembly Sketch SV 99 with lockable high pressure globe valve

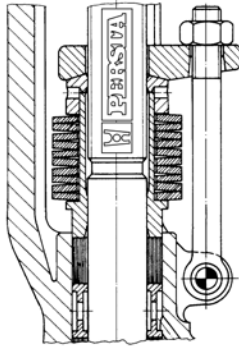


■ Gate valves ■ Variants

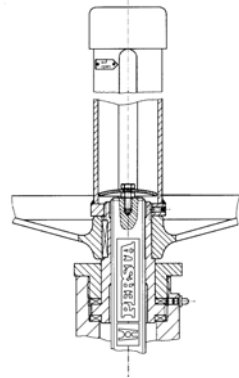
Universal valve head for mounting actuators



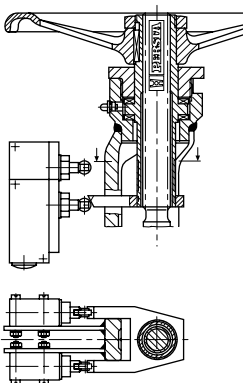
Stuffing box with central plate-spring tightening



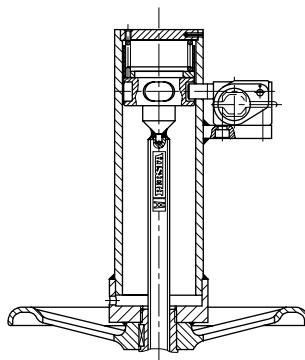
Position indicator / Stem protection cap



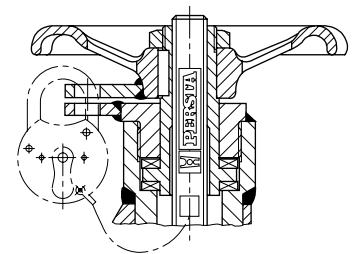
Limit switch actuation



PERLOC-system locking device

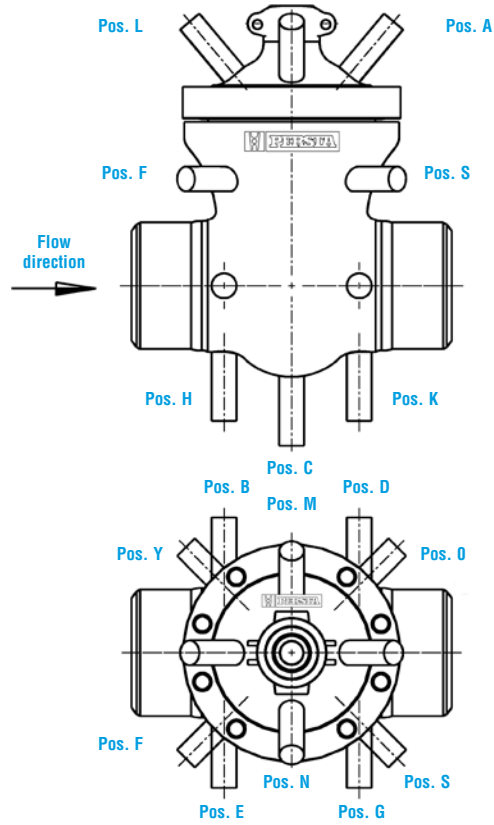
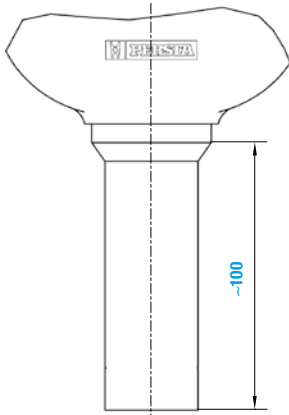


Interlocking device

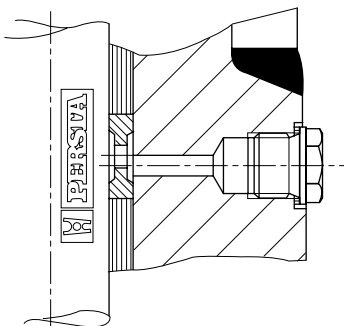


■ Gate valves ■ Variants

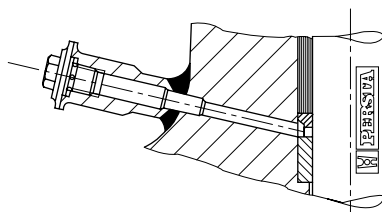
Drainage stud, variable position



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

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

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

Standard features

- Body cast steel
- 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

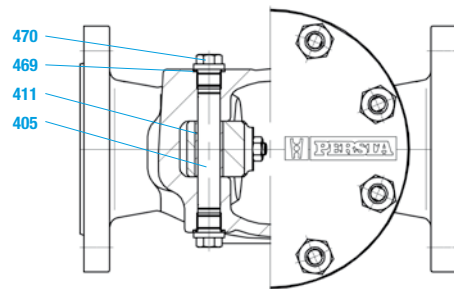
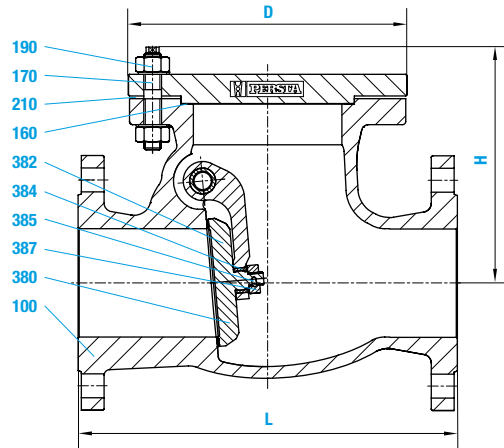
- Hard faced integral body seat with 13 % Cr-Steel or 17 % Cr-Steel layer
- Shut-off disc with curved journal within lever
- The lever rests on the hinge pin by means of a separate bearing bush

Benefits

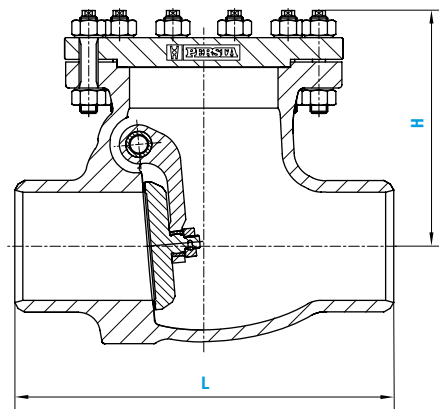
- Extremely resistant to wear
- To improve movability and therefore to improve the alignment of the disc to the body seat
- Improved resistance to wear by means of proper material selection

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

FL-Version



EE-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	▶ Stud	1.1181
190	Hexagonal nut	1.1181
210	Bonnet	1.0460
380	▶ Disc welded on with	1.4021 ¹⁾
382	▶ Hinge	1.0425
384	▶ Bushing	1.4006
385	▶ Pint	1.4370
387	Washer	1.4021
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

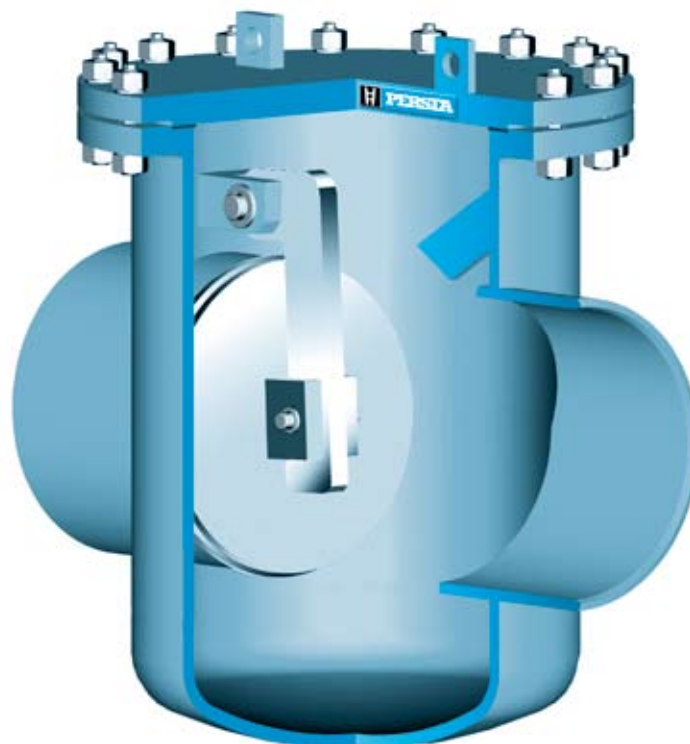
Dimensions/mm

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

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

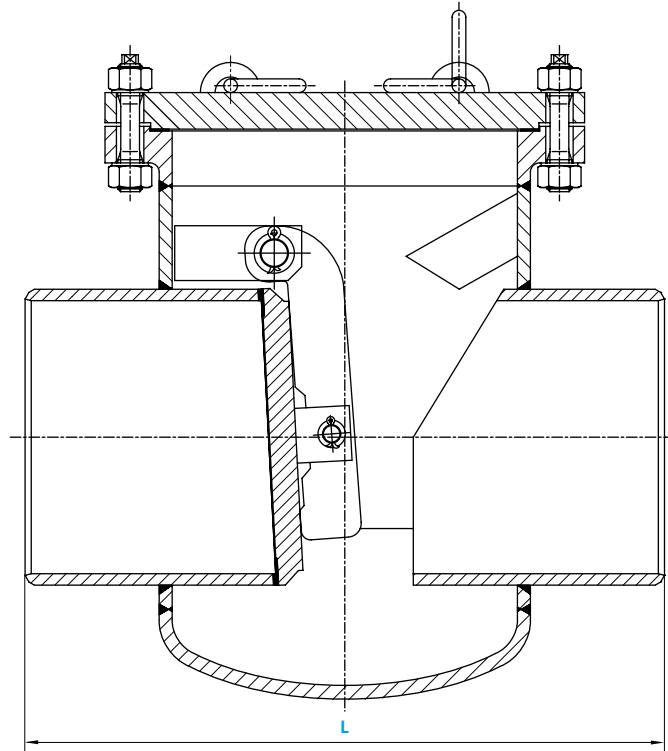
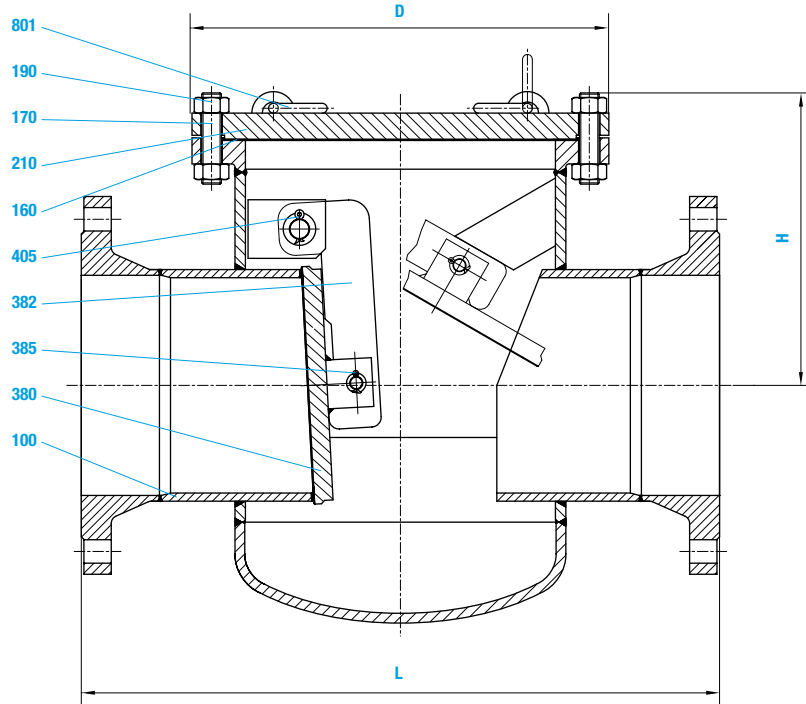
Design Highlights

- 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	Tension screw	1.4541 / Graphite
190	Hexagonal nut	1.7158
210	Bonnet	1.7158
380	▶ Disc welded on with	P265GH
382	▶ Hinge	X8CrTi18
385	▶ Pint	S235JRG2
405	▶ Hinge pin	A2-70
801	Lifting eye bolt	1.4021
	▶ Spare parts	S355J2G3

Further materials on request.

Dimensions/mm								
DN	PN 10-16	PN 25-40	PN 10-16	PN 25	PN 40	PN 10-16	PN 25	PN 40
	L	L	H	H	H	D	D	D
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	1500	1650						
800	1700	1850						

Weights/kg and Kvs-values									
DN	PN 10	PN 16	PN 25	PN 40	PN 10	PN 16	PN 25	PN 40	Kvs (m ³ /h)
	FL	FL	FL	FL	BW	BW	BW	BW	
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	160	139	125	118	112	72	55	43	35		
1.7335	160	160	160	160	160	160	160	160	153	146	139	118	100	79	62	46	35
1.7383	160	160	160	160	160	160	160	160	153	146	139	118	100	79	70	61	52

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

BW- Version Material	PD	Admissible operating pressure [bar] at design temperature [°C] ¹⁾																													
		-10	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	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	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	258	250	239	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 258 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

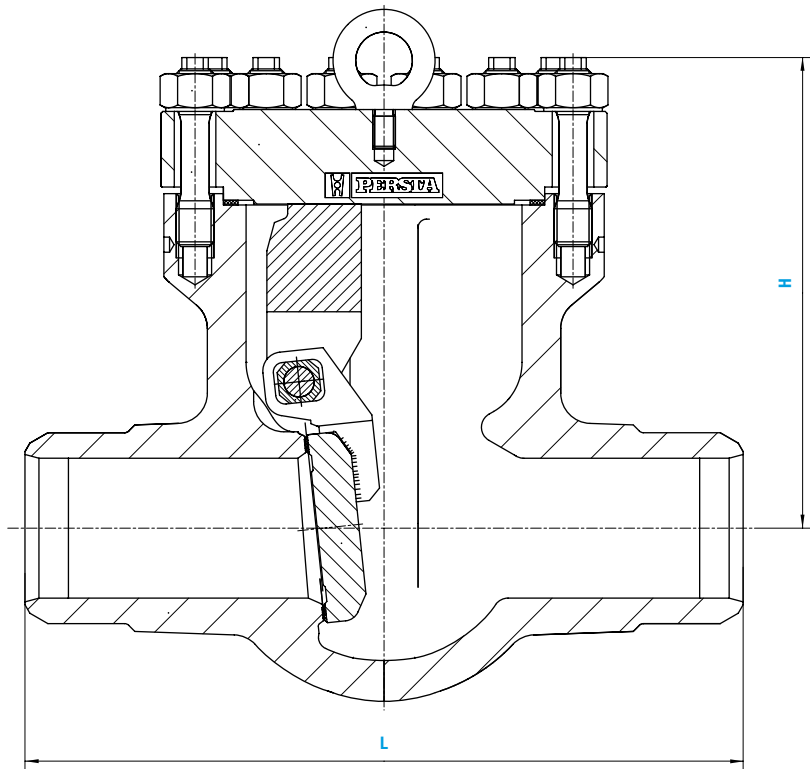
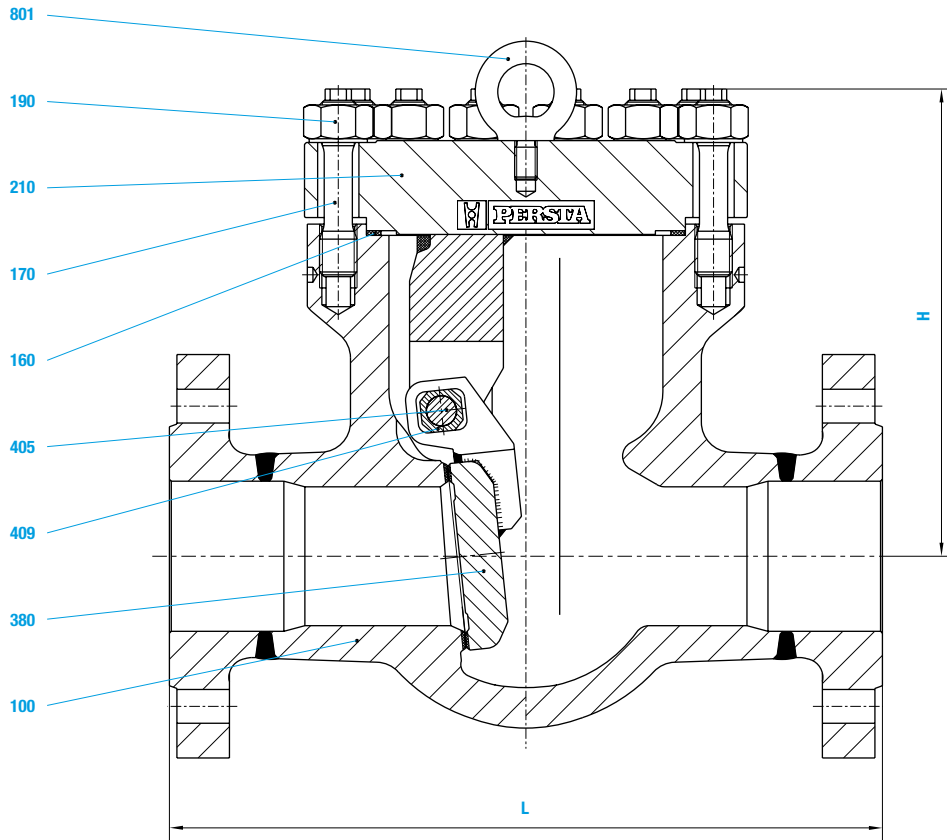
Design Highlights

- 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	Stud	1.7709	1.7709	1.7709
190	Hexagonal nut	1.7218	1.7218	1.7218
210	Bonnet	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	5.3106	5.3106	5.3106
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 26
- 640 AB
- PD 25 / PD 40
- DN 65-300



		Range of application																																				
		Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																				
BW-Version	PD	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																																				
		Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																				
BW-Version	PD	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
- Lever rests in separate support ring
- Pressure sealing bonnet acc. VGB-guidelines

Pressure and temperature ratings

- Pressure rating up to 680 bar
- Temperature 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 of application

Chemical industries, power plants, ship building and other

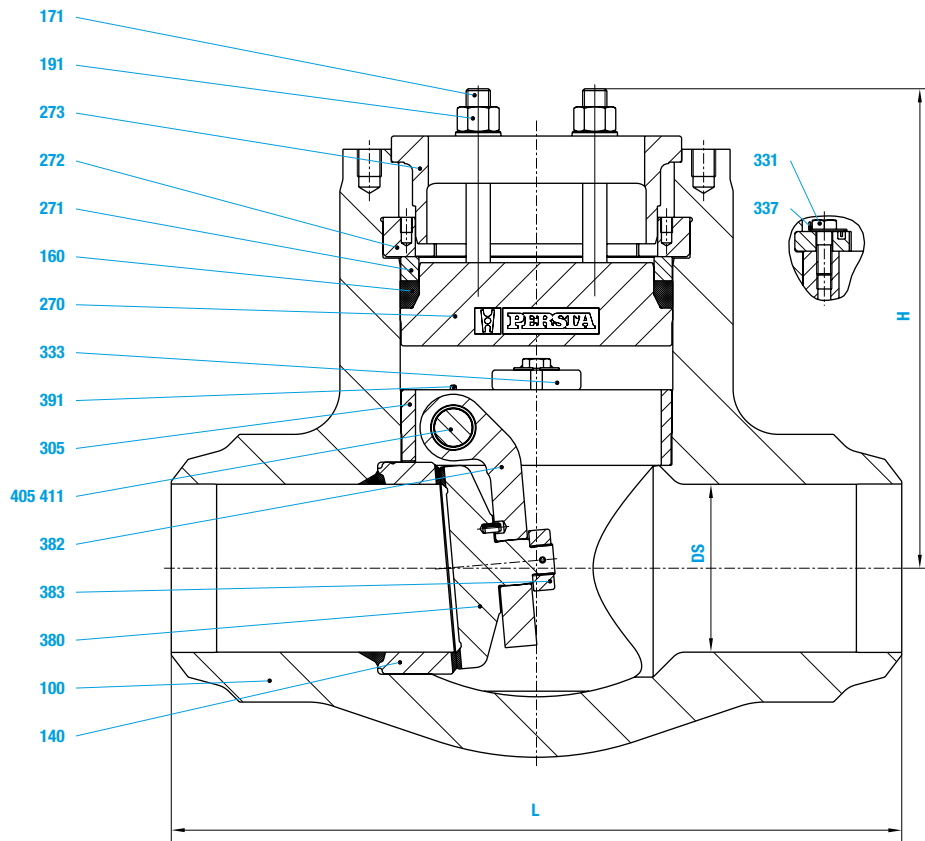
Design Highlights

- 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 sealing 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

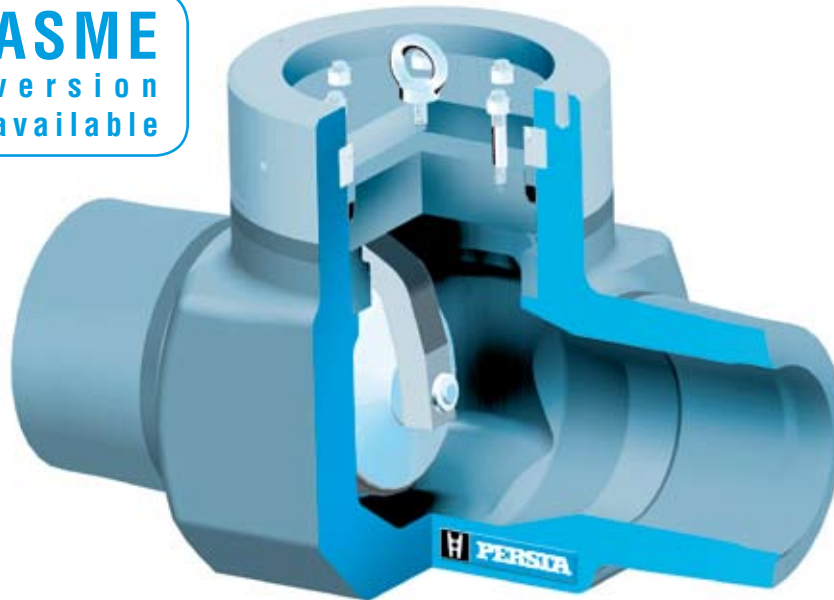
Materials								
Pos.	Component	1.0460 (21)	1.5415 (42)	1.7335 (44)	1.7383 (45)	1.6368 (46)	1.4903 (63)	1.4901 (66)
100	Body	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
140	Seat ring	1.0460	1.5415	1.7335	1.7383	1.6368	1.4903	1.4901
	welded on with	Stellite	Stellite	Stellite	Stellite	Stellite	Stellite	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	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	Segmentring	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	Supportring	1.7383	1.7383	1.7383	1.7383	1.7383	1.4903	1.4903
331	Hexagonal screw	A4	A4	A4	A4	A4	A4	A4
333	▶ Flange	1.4903	1.4903	1.4903	1.4903	1.4903	1.4903	1.4903
337	▶ Retaining 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 bushing	5.3106	5.3106	5.3106	5.3106	5.3106	5.3106	5.3106
	▶ 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 50-600

ASME
version
available



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	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	657	657	657	627	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	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	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	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	
	32	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544
	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) 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 50-600

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 sealing bonnet acc. VGB-guidelines

Pressure and temperature ratings

- Pressure rating up to 680 bar
- Temperature 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

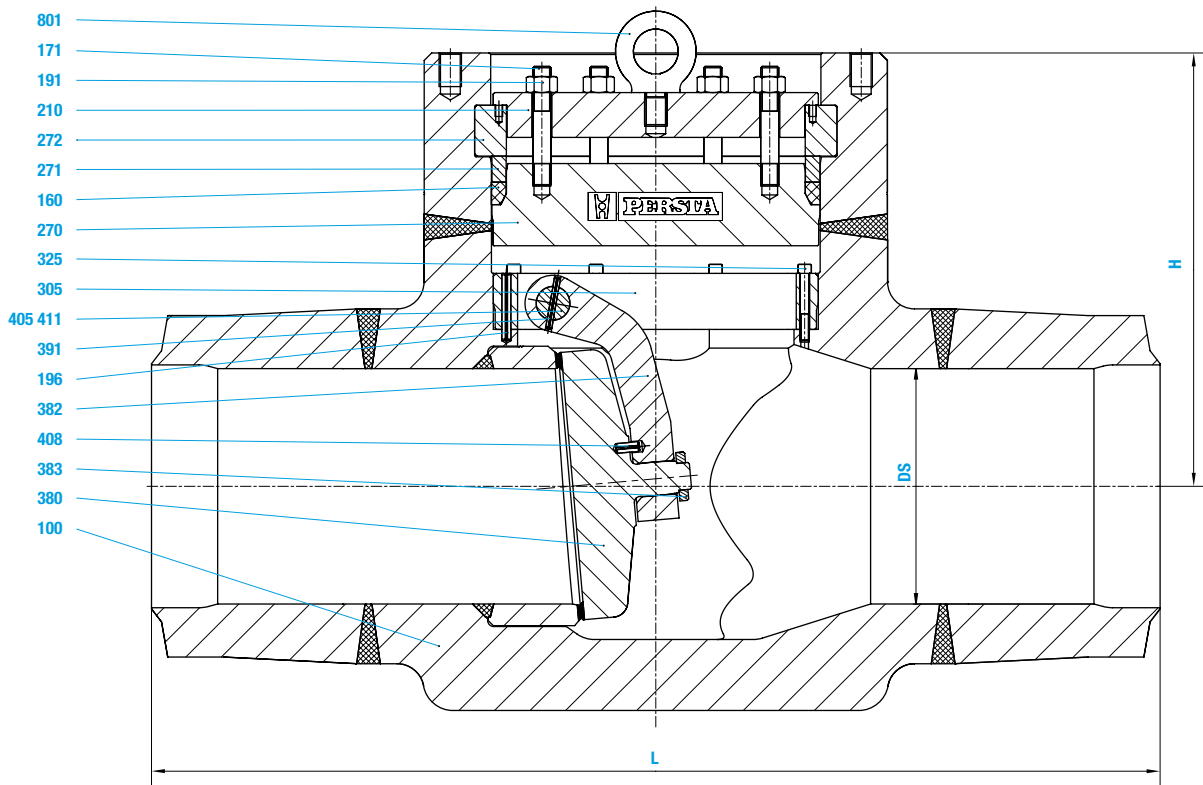
Design Highlights

- Valve body made of forged steel
- Seats faced with stellite
- Lever rests in a separate support ring
- Shut-off device with curved journal
- Pressure sealing 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 50-600



■ High pressure swing check valves ■ DRI 16-63 ■ 640 AB ■ 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
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	Bonnet	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	Segmentring	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	Headcap screw	A4	A4	A4	A4	A4	A4	A4
380	▶ 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
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 bushing	5.3106	5.3106	5.3106	5.3106	5.3106	5.3106	5.3106
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	L	H	kg	L	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	450							
300	270,0							1150	515	1300						
350 / 300	270,0							1350	515							
350	315,0							1350	605	2300						
350 / 350	315,0	1200	540	2300	1550	580	2300	1550	605							
400 / 350	315,0	1200	540		1750	580		1550	785	4000						
400	360,0	1350	600	3600	1750	660	3600	1750	785							
450 / 400	360,0	1350	600		1950	660					On request					
450	405,0	1500	690	5400	1950	750	5400									
500 / 450	405,0	1500	692		2150	750										
500	450,0	1650														
600 / 500	540,0	1650			On request											
600	540,0	On request														

■ High pressure stop check valve ■ **DRA 26** ■ **640 ST** ■ **PD 25 / 40** ■ **DN 80-200**



		Range of application																																						
		Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																						
BW-Version	Material	PD	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																																						
		Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																						
BW-Version	Material	PD	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	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

▪ **High pressure stop check valve** ▪ DRA 26 ▪ 640 ST ▪ PD 25 / 40 ▪ DN 80-200

Standard features

- Body hollow-forged in a closed die
- Double-sided high-pressure shut-off system
 - Function of a check valve
 - Function of a gate valve
- Internal hinge pin, pivoted in a separate retaining ring
- Movable shut-off system guided in a groove
- Defined stop of the check disc
- Pressure sealing bonnet acc. to VGB-guidelines
- Generally stellited seats

Pressure and temperature ratings

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

Materials

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

Further materials and nominal sizes on request

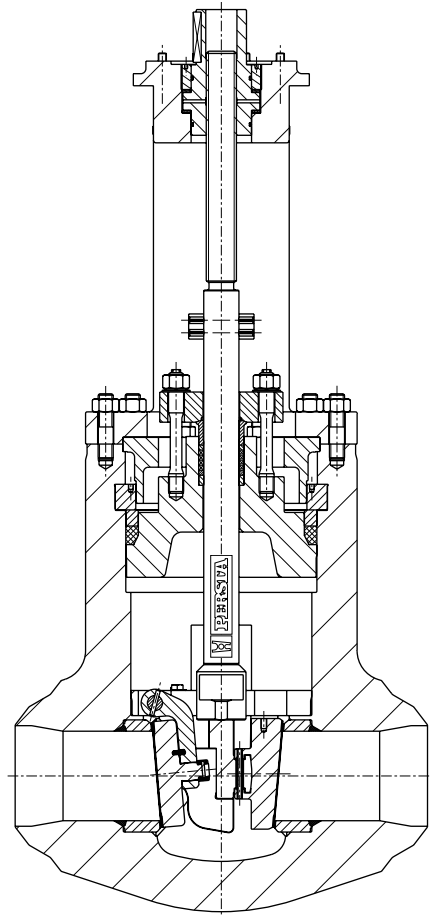
Media

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

High pressure stop check valve



Design-Highlights

- Operating mode as a check valve and a gate valve
- Sealing in both flow directions
- Full straight seat passage
- Full opening angle of the check disk
- Flexible-mounted non-return and shut-off disc
- Shut-off system guided in a groove
- Shut-off discs with anti-twist safeguard

Benefits

- Possible savings:
 - One valve
 - Two welding seams in pipeline
 - Space and weights
 - Less insulation time and effort
 - Less maintenance and inspection requirements
- Secure protection of relevant and complex parts of the plant
- Better flow characteristics than non-return valves
- Minimizing pressure drop
- Better smoothness of running and adjustment of the valves in the body seats
- Prevention of positional deviations of the shut-off disc and protection against damage
- Effective adjustment to the body seats with constant repetitive contact

▪ Swing check valves ▪ Freewheel swing check valve ▪ 640 DJ ▪ PN 40-250 ▪ DN 50-800

Standard features: Die-forged valve body

Standard features

- Die-forged valve body, cast or as a welded steel design
- Available with flange and butt weld ends
- Bolted or pressure sealing bonnet
- Pneumatic or hydraulic actuator for safe closing

Pressure and temperature ratings

- Pressure rating up to 250 bar
- Temperature rating up to 600 °C

Materials

- 1.0619+N ▪ 1.0425 ▪ 1.5415 ▪ 1.7335 ▪ 1.7383

Further materials on request.

Media

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

Fields of application

Mainly in steam cycles for fast closing / protection applications

Design Highlights

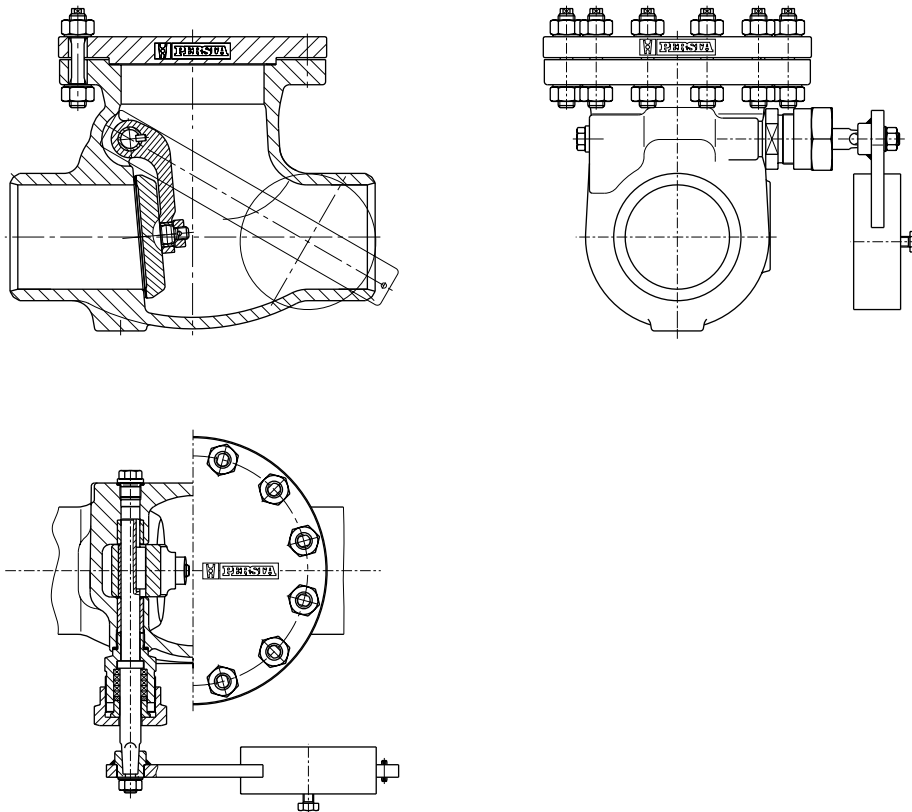
- Seats are welded on
- Shut-off device with convey pin within lever
- Freewheeling hinge pin
- Part turn actuator for safe closing
- Standard connection to ISO 5211
- Symmetric body design

Benefits

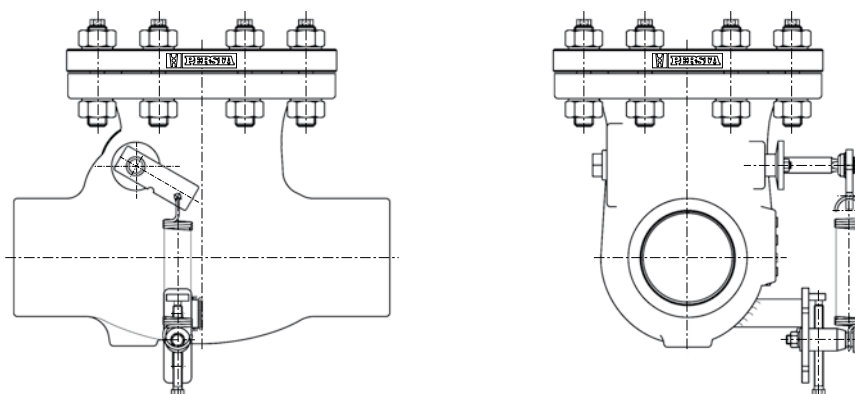
- Best possible sliding performance, minimum wear
- Optimum alignment of the disc to the body seat
- Low friction and less packing wear
- Safe and fast closing
- Easy installation of pneumatic or hydraulic part turn actuator
- Actuators can be installed on the left or on the right side without using new components

■ **Swing check valves** ■ **Swing check valve variants**

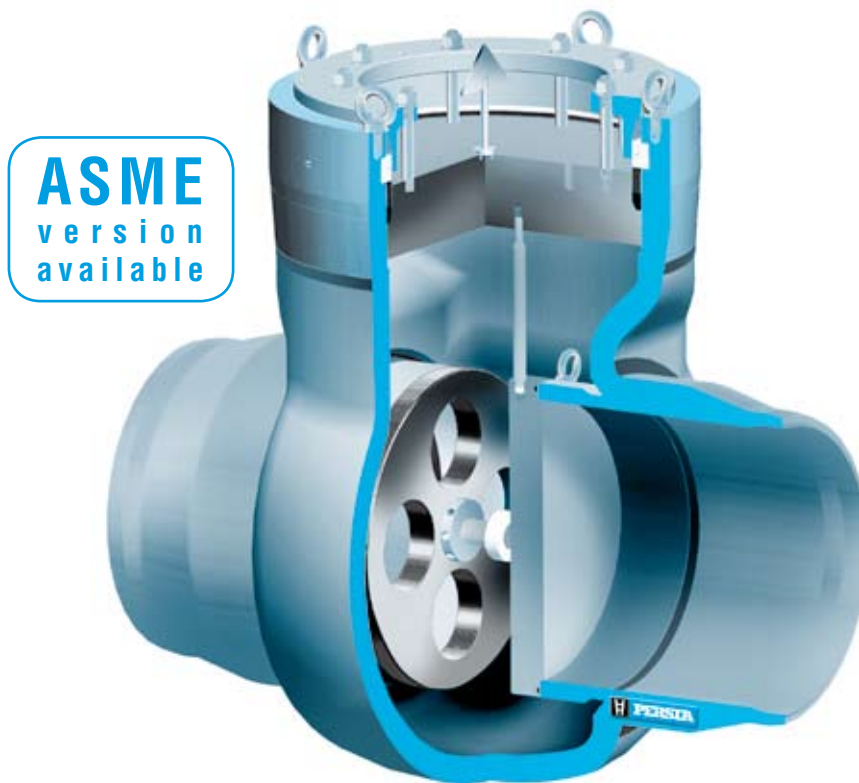
Swing check valve with lever and weight



Swing check valve with recuperating spring



- 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

- 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

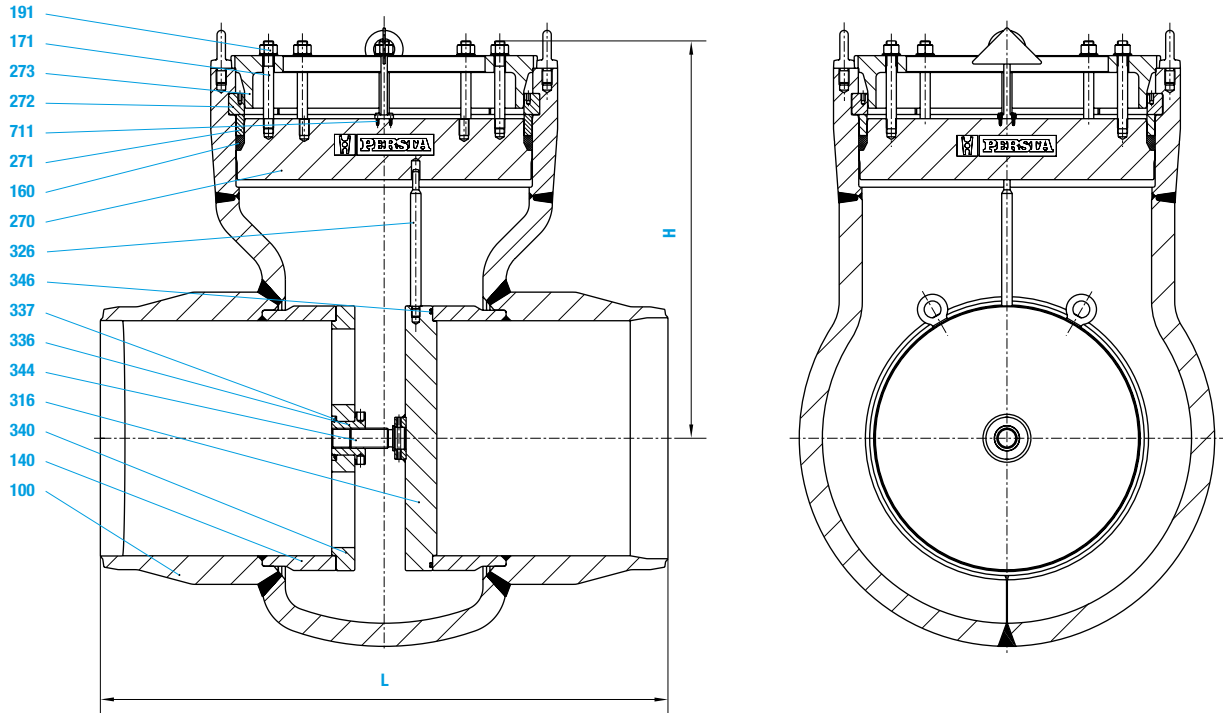
- Thin wallthickness
- Position indicator
- Pressure sealing bonnet

Benefits

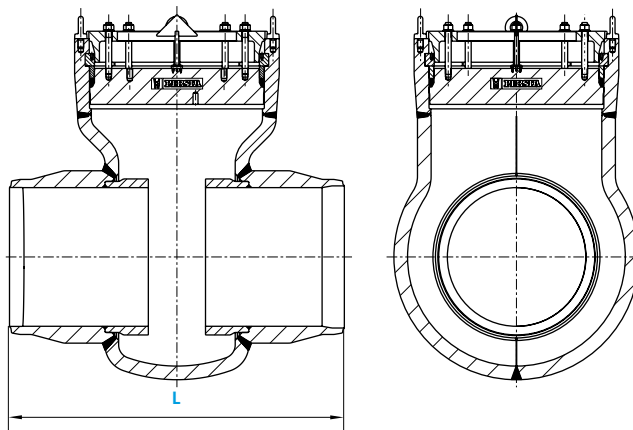
- Less temperature stresses
- Indicates if seal plate is mounted or dismantled
- Best possible sealing function

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

Closed passage (seal plate mounted)



Free passage (seal plate dismantled)



Special design with blow-out attachment or guide-insert on request

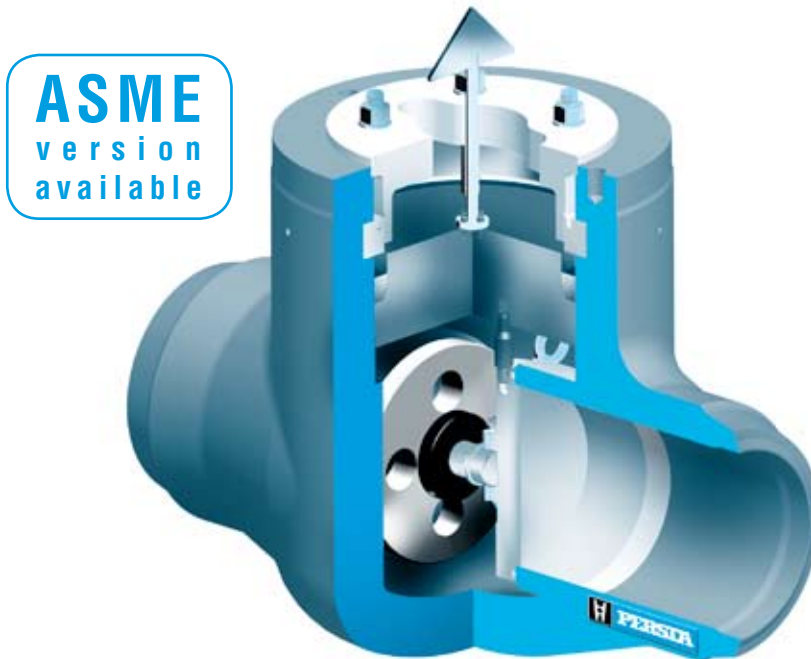
■ High pressure line blind valve ■ DPV 10 ■ 990 VW ■ PD 10 ■ DN 350-700

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	Segmentring	1.7383	1.7383	1.7383	1.7383	1.4903
273	Cover	1.0460	1.0460	1.0460	1.0460	1.0460
316	Cone plate	1.7383	1.7383	1.7383	1.7383	1.4903
326	Tension pin	1.4021	1.4021	1.4021	1.4021	1.4021
336	Yoke sleeve	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
337	Locking ring	Spring Steel	Spring Steel	Spring Steel	Spring Steel	Spring Steel
344	Stud bolt	1.4021	1.4021	1.4021	1.4021	1.4021
346	▶ O-Ring	Viton	Viton	Viton	Viton	Viton
711	Bolt	8.8	8.8	8.8	8.8	8.8

▶ 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																																	
		Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																	
BW-Version	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	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	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	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	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425	425		
	32	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544	544		
	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		

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
- Temperature 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

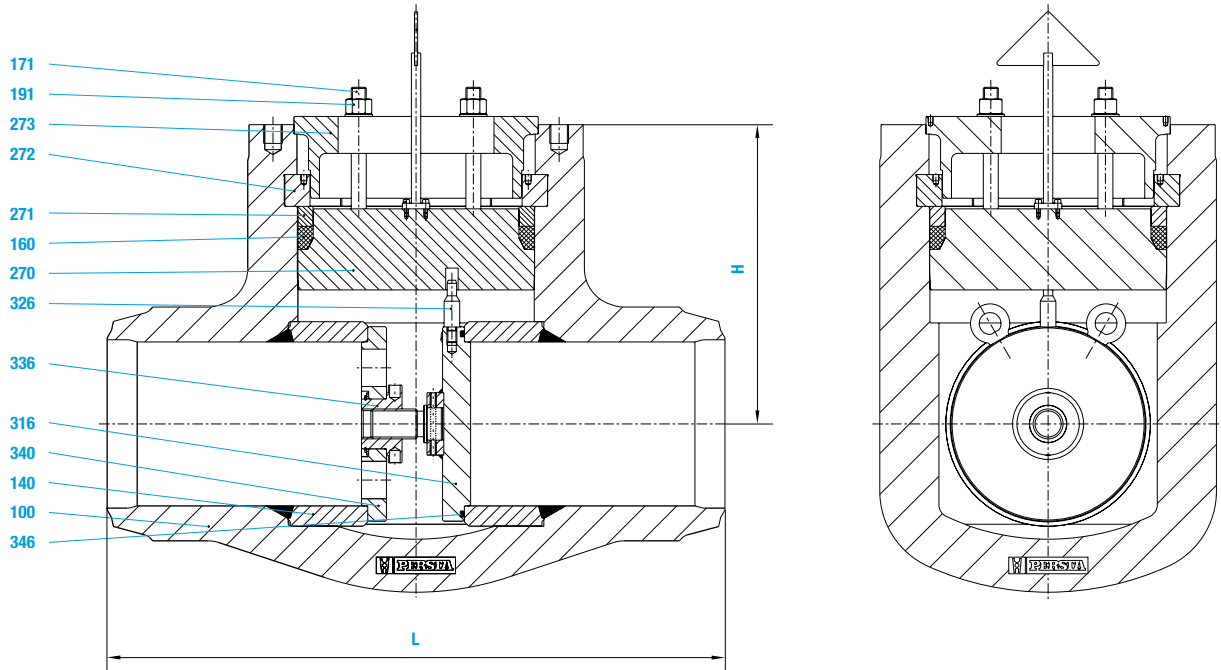
- Valve body and cover made of forged steel
- Position indicator
- Pressure sealing bonnet
- Cover can be used for dismantling of the cover fastener

Benefits

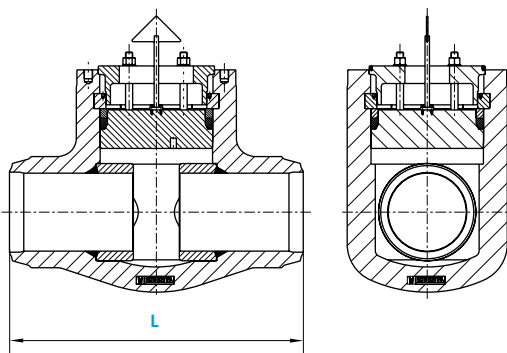
- Free from porosity and shrink holes
- Indicates if seal plate is mounted or dismantled
- Best possible sealing function
- No special tools are necessary for dismantling

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

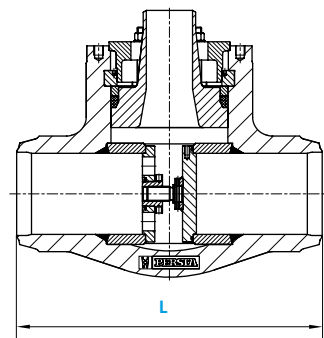
Closed passage (seal plate mounted)



**Free passage
(seal plate dismantled)**

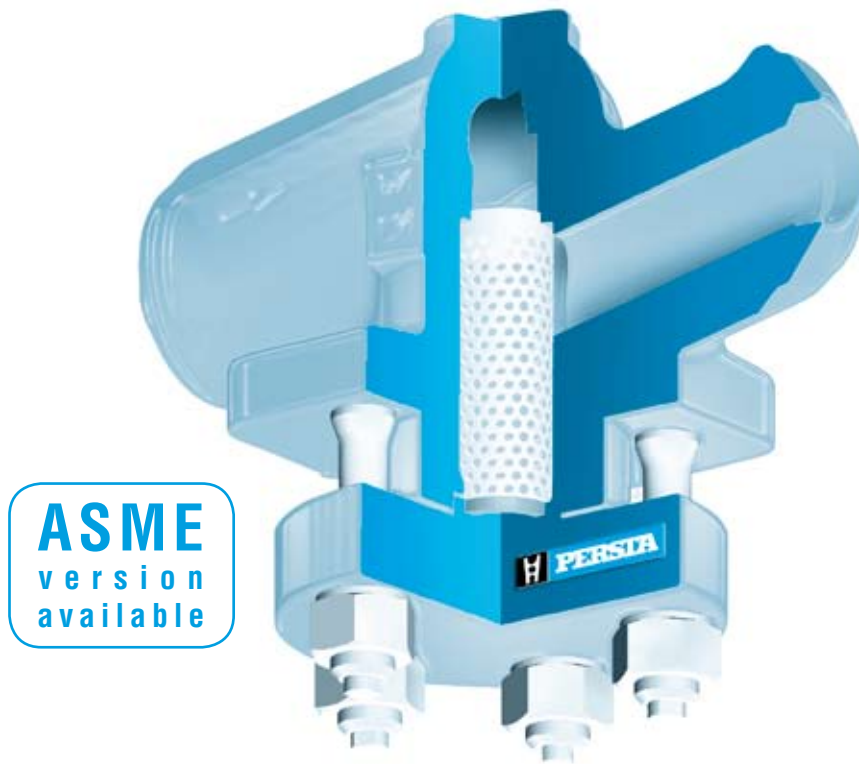


**With blow-out attachment
(seal plate mounted)**



Special design with blow-out attachment or guide-insert on request

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



ASME
version
available

		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	550	550	550	550	550	518	463	389	315	300	285	270	255	240	213	177	146																			
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	500,3	437,3	381,7	333,5	289,1	252,0	214,9	189,0	163,1	140,8	124,5								
1.4903	500	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	550,0	500,0	465,0	430,0	380,0	338,0	298,0	261,0	231,0	198,0	172,0		
1.4901	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	526	470	419	370	322	278	241	207
1.4550	500	550	550	550	550	550	550	544	504	481	463	460	456	454	451	449	447	445	443	442	441	440	439	438	437	437	436	435	434	433	396	363	320	271	240	207		

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

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

Standard features

- Die-forged valve body
- Screw cap
- Compact design
- Also available in angle pattern (992 ST)

Pressure and temperature ratings

- Pressure rating up to 680 bar
- Temperature rating up to 650 °C
- Maximum pressure difference between inlet and outlet 2 bar

Materials

Screen/filter mesh size

- | | |
|----------|---------|
| ▪ 1.0460 | 0,10 mm |
| ▪ 1.4550 | 0,25 mm |
| ▪ 1.4901 | 0,50 mm |
| ▪ 1.4903 | 1,00 mm |
| ▪ 1.5415 | |
| ▪ 1.7335 | |
| ▪ 1.7383 | |

Further materials and strainer mesh 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

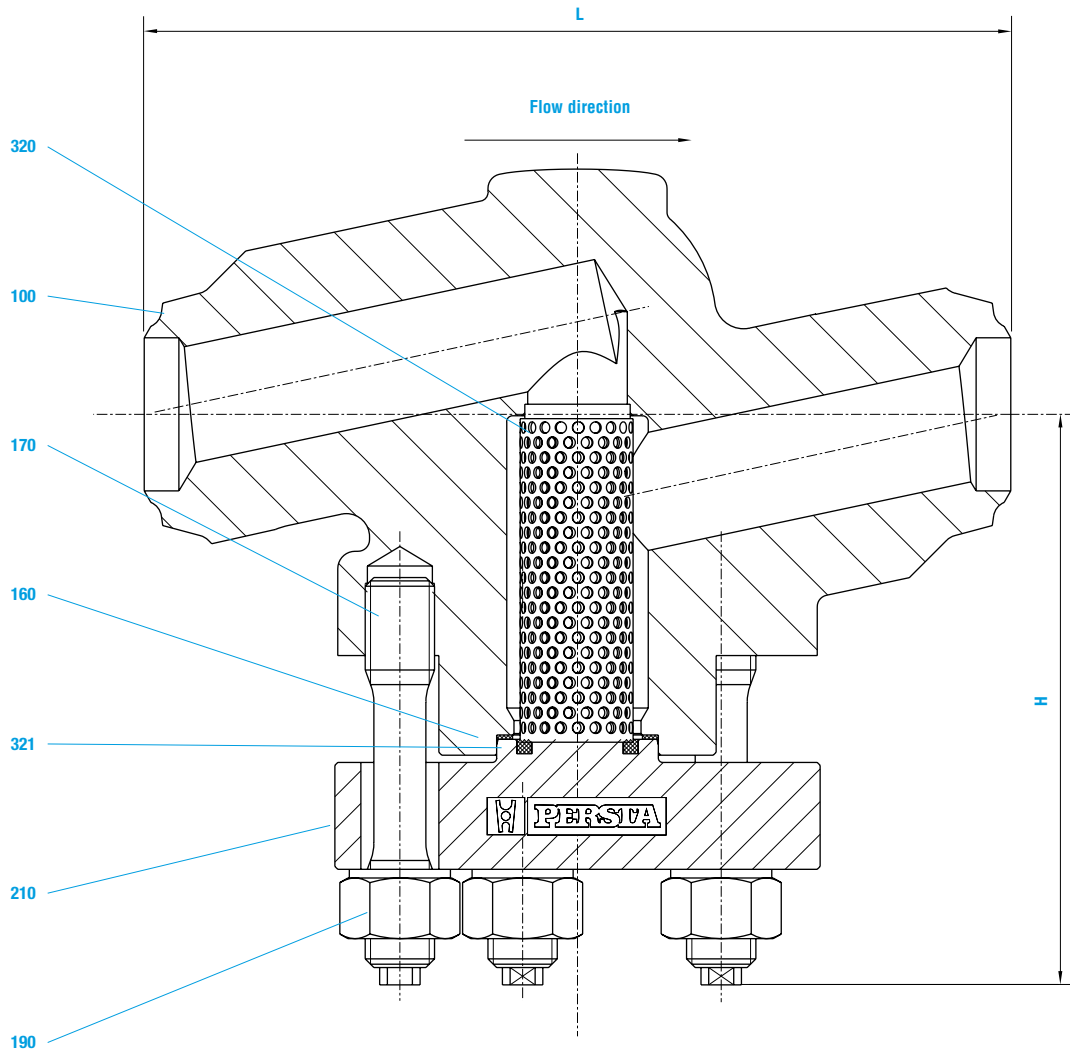
Design Highlights

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



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

Materials								
Pos.	Component	1.0460 (21)	1.5415 (42)	1.7335 (44)	1.7383 (45)	1.4903 (63)	1.4901 (66)	1.4550 (89)
100	Body	1.0460	1.5415	1.7335	1.7383	1.4903	1.4901	1.4550
160	▶ Gasket	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
170	Stud	1.4923	1.4923	1.4923	1.4923	1.4986	1.4986	1.4986
190	Hexagonal nut	1.4923	1.4923	1.4923	1.4923	1.4986	1.4986	1.4986
210	Bonnet	1.7383	1.7383	1.7383	1.7383	1.4903	1.4901	1.4550
320	▶ Filter cylinder	1.4571	1.4571	1.4571	1.4571	1.4571	1.4571	1.4571
321	▶ Packing	Graphite	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	350	251

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	65,0

- **Strainer** ▪ **Strainer DSF** ▪ **990 SZ** ▪ **PD 25 / 40** ▪ **DN 80-250**



		Range of application																																					
		Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																					
BW-Version Material	PD	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																																					
		Admissible operating pressure [bar] at design temperature [°C] ¹⁾																																					
BW-Version Material	PD	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

▪ **Strainer** ▪ **Strainer DSF** ▪ **990 SZ** ▪ **PD 25 / 40** ▪ **DN 80-250**

Standard features

- Valve body made of forged steel
- Pressure sealing bonnet acc. VGB-guidelines

Pressure and temperature ratings

- Pressure rating up to 680 bar
- Temperature rating up to 650 °C
- Maximum pressure difference between inlet and outlet 2 bar

Materials

Screen/filter mesh size

- | | |
|----------|---------|
| ▪ 1.0460 | 0,10 mm |
| ▪ 1.4901 | 0,25 mm |
| ▪ 1.4903 | 0,50 mm |
| ▪ 1.5415 | 1,00 mm |
| ▪ 1.6368 | 3,00 mm |
| ▪ 1.7335 | |
| ▪ 1.7383 | |

Further materials and strainer mesh 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
- Differences of screen/filter mesh size
- Pressure sealing bonnet
- Cover with draining possibility

Benefits

- In contrast to cast steel parts generally free from porosity and shrink holes
- Individually selectable according to the grade of pollution and medium
- Best possible sealing function
- Ease removal filter residues

■ **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.

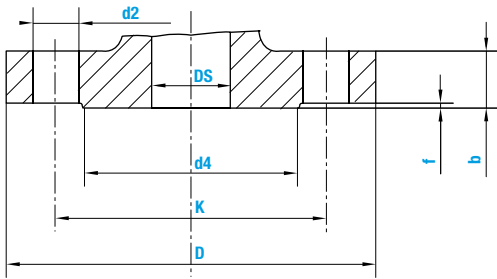
The valves will be marked as working pressure valves.

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	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	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 Dimensions	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	16	16	20	20	24	24	24
	Thread	M12	M12	M12	M16	M16	M16	M16	M16	M16	M16	M20	M20	M20	M20	M24	M24	M24	M24	M27	M27	M30
d2	14	14	14	18	18	18	18	18	18	18	18	22	22	22	22	26	26	30	30	33	33	
16	Flange D	95	105	115	140	150	165	185	200	220	250	285	340	405	460	520	580	715	840	910	1025	
	b	16	18	18	18	18	20	22	24	24	26	22	24	26	28	30	32	34	36	36	38	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	M12	M12	M12	M16	M16	M16	M16	M16	M16	M20	M20	M24	M24	M24	M24	M27	M30	M33	M33	M33	M36
d2	14	14	14	18	18	18	18	18	18	18	22	22	26	26	26	30	33	36	36	39	39	
25	Flange D	95	105	115	140	150	165	185	200	235	270	300	360	425	485	555	620	730	845	960	1085	
	b	16	18	18	18	18	20	22	24	24	26	28	30	32	34	38	40	44	46	46	50	50
	k	65	75	85	100	110	125	145	160	190	220	250	310	370	430	490	550	660	770	875	990	
	Raised face d4	45	58	68	78	88	102	122	138	162	188	218	278	335	395	450	505	615	720	820	930	
	f	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	5	5	5	5
	No. of bolts	4	4	4	4	4	4	8(4)*	8	8	8	8	12	12	16	16	16	20	20	24	24	24
	Thread	M12	M12	M12	M16	M16	M16	M16	M16	M20	M24	M24	M24	M27	M27	M30	M33	M33	M36	M39	M45	M45
d2	14	14	14	18	18	18	18	18	22	26	26	26	30	30	33	36	36	39	42	48	48	
40	Flange D	95	105	115	140	150	165	185	200	235	270	300	375	450	515	580	660	755	890	995	1140	
	b	16	18	18	18	18	20	22	24	24	26	28	34	38	42	46	50	52	60	64	72	72
	k	65	75	85	100	110	125	145	160	190	220	250	320	385	450	510	585	670	795	900	1030	
	Raised face d4	45	58	68	78	88	102	122	138	162	188	218	285	345	410	465	535	615	735	840	960	
	f	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	5	5	5	5
	No. of bolts	4	4	4	4	4	4	8	8	8	8	8	12	12	16	16	16	20	20	24	24	24
	Thread	M12	M12	M12	M16	M16	M16	M16	M16	M20	M24	M24	M27	M30	M30	M33	M36	M39	M45	M45	M52	M52
d2	14	14	14	18	18	18	18	18	22	26	26	30	33	33	36	39	42	48	48	56	56	
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	M12	M16	M16	M20	M20	M20	M20	M20	M24	M27	M30	M33	M33	M33							
d2	14	18	18	22	22	22	22	22	26	30	33	36	36	36								
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	M12	M16	M16	M20	M20	M24	M24	M27	M30	M30	M33	M36	M39								
d2	14	18	18	22	22	26	26	26	30	33	33	36	39	42								
160	Flange D	105	130	140	155	170	195	220	230	265	315	355	430	515	585							
	b	20	24	24	24	28	30	34	36	40	44	50	60	68	78							
	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	M12	M16	M16	M20	M20	M24	M24	M27	M30	M30	M33	M39	M39								
d2	14	18	18	22	22	26	26	26	30	33	33	36	42	42								

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

■ Technical appendix ■ Design

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.

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** ■ **Design**

Operating characteristics:

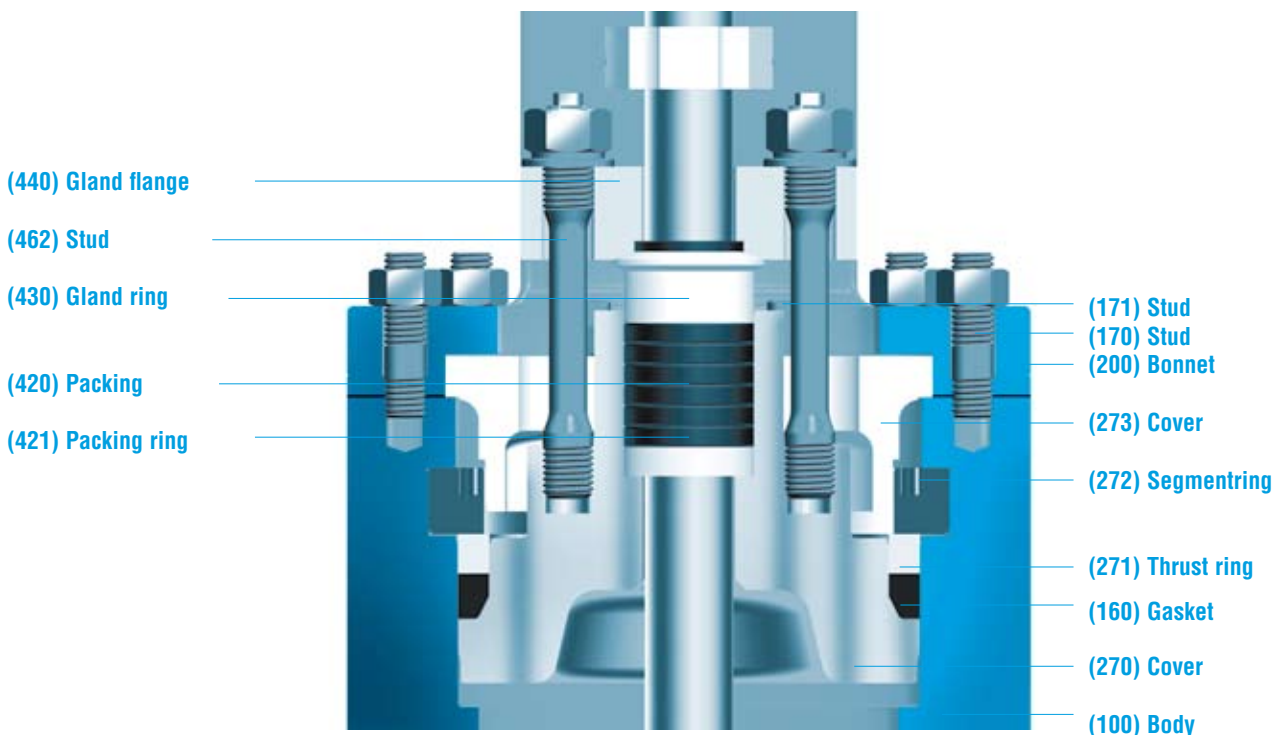
An axial force which increases as the internal pressure increases is applied to the elastic gasket. This force compresses the elastic gasket which deforms radially and axially. In the radial direction it is pressed against the wall of the body and the cover, thus achieving the required surface pressure 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.



Segmentring

Attention:

Overpressure devices are required to protect against unacceptable pressure peaks. See page 83.

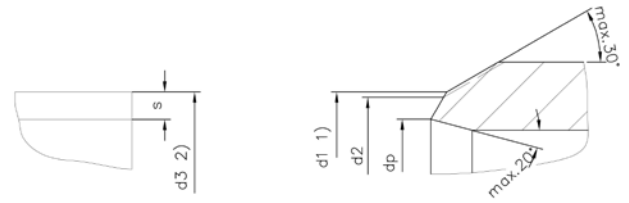


■ Technical appendix ■ Pipe and valve dimensions

Pipe (DIN 2448) and valve dimensions rel. DIN 3239 and DIN 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	54,67,0	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.



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

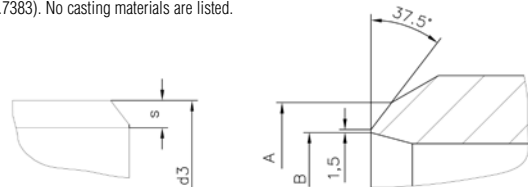
■ Technical appendix ■ Pipe and valve dimensions

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					
	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 is the outer diameter of the connected steelpipe Line 1 acc. 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, stelling 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 ■ Qualification

Approvals	
Name of the testing firm or organisation	Specification
TÜV Nord Cert GmbH	DIN EN ISO 9001:2008
TÜV Nord Systems	AD 2000 HP 0 / TRD 201 / ASME B16.34
TÜV Nord Systems	DIN EN ISO 3834-2 (EN 729-2) / DGRL 97 / 23/EG Modul H/H1
TÜV Nord Systems	KTA 3201.3 / KTA 3211.3
VdTÜV (Bauteilkz. MLV's)	TÜV . A . 030 - 08
TÜV Nord EnSys (Eignungsprf. MLV's)	T08-85-03
Eignungsprüfung VGB	KTA 1401 and AVS D 100/50
Global Standart Moscow	GOST TR Nr. C-DE.MM06.B.00156 (Dirt scraper)
Global Standart Moscow	GOST TR Nr. C-DE-MM06.B.00157 (Div. industrial valves)
Rostehnadzor Russland	RTN
Promatomnadzor Minsk	GOSPROMNADZOR (Belarus)
Bharat Heavy Electricals LTD	24 NRV
Paks Nuclear Power Plant	KM51 / 2011
EDF	EDF
Shell Nederland Raffin. BV	Service group 77DAAB / Service group 77DPBA
Shell Nederland Chemie BV	Service group 77DAAB / Service group 77DPBA
Kuwait Oil Company	VEC / VA / GT / 015 / 16 / 97
Canada	Canadian Registration; CSA B51
ENERGO-ATOM	QS-System
Slovenské Elektrárne	QS-System
Forsmark Kraftgruppe AB	QS-System
GE Energy	QS-System
Fire Safe	ISO 10497 / API 607

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	Materials 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	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 / AJ
Globe valve with throttle disc	200 BE / BJ
Globe valve with non-rotating stem	200 AJ
Bellow seal globe valve	200 AL
Globe valve with throttle disc and non-rotating stem	200 BJ
Bellow seal globe valve with throttle disc	200 BL
Highpressure valve DVA 25 / 40	200 BZ
Highpressure valve HD 91	200 JM
Highpressure valve HD 2000	200 LM / 202 LM
Highpressure valve HD 2000 with back seat	200 LS / 200 LJ
Screw down non return valve	240 ME
Stop check valve HD 2000	240 MM
Lift check valve	240 MT
Changeover valve DN 10-50	203 EH
Changeover valve DN 65-200	203 EM
Gate valve	400 JJ
Swing check valve	640 AA
Highpressure swing check valve DRI 16 - 63	640 AB
Swing check valve with lever and weight	640 AE
High pressure stop check valve DRA	640 AT
Freewheel swing check valve	640 DJ
Gate valve, flexible wedge type, inside screw and yoke	700 GA
Gate valve, flexible wedge type	700 HJ
Gate valve, split wedge type	700 JJ
High pressure gate valve DSK 16 - 63	700 JT
Small gate valve, full bore	808 GJ
Small gate valve, reduced bore	800 GJ
Strainer	990 ST / SZ
High pressure line blind valve	990 VW

Figure number code

Example

XXX XX XX. X

Figure number

Materials

Connections

Materials				
DIN-Nr.	EN-Bez.	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
1.4550	1.4550	X6CrNiNb18-10	X6CrNiNb18-10	89
1.4571	1.4571	X6CrNiMoTi17-12-2	X 6 CrNiMoTi 17 12 2	82 (up to max 280 °C)
1.4571	1.4571	X6CrNiMoTi17-12-2	X 6 CrNiMoTi 17 12 2	85
1.4581	1.4581	GX5CrNiMoNb19-11-2	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
1.5419	1.5419	GS-22 MO4	G 20 Mo5	32
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

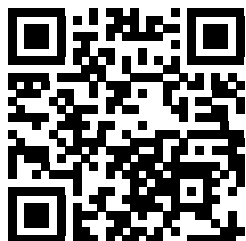
Figure number code

Result

700 HJ 21. 1

Stahl-Armaturen PERSTA GmbH

Mülheimer Straße 18
59581 Warstein, Germany
Phone +49 29 02 7 62 - 02
Fax +49 29 02 7 67 03
www.persta.com
info@persta.de



*Experience
the difference*