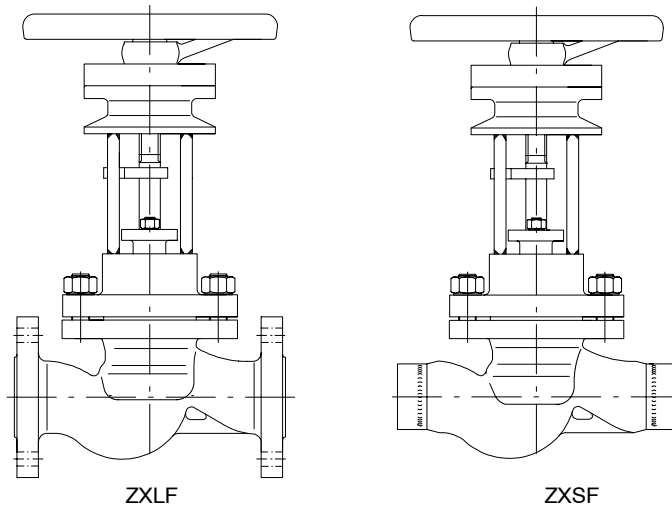


## Globe valves



with gland packing  
with non-turning stem

flanged  
or butt-weld ends

**PN 250-320**  
**DN 65-200**

### Application

- In industrial plants, power stations, process and marine engineering.
- For water, steam, gas, oil and other non-aggressive media.
- Other applications on request.

### Operating data

- Maximum allowable pressure 320 bar
- Maximum allowable temperature 550 °C
- Pressure-temperature ratings see next side

### Materials

- GP 240 GH 1) 1.0619 up to 450 °C
- G 17 CrMo 55 1.7357 up to 550 °C

### Design

- Straight-way pattern with vertical bonnet
- Pressure relief cone
- Non-rotating stem
- Position indicator
- Seats of wear-resistant and corrosion-proof Cr-steel or stellite
- Stem sealed by a gland
- Outside confined bonnet gasket
- Yoke suitable for mounting electric and pneumatic actuators (DIN ISO 5210/5211)

1) previously: GS-C 25 N

The valves meet the safety requirements of the Pressure Equipment Directive 97/23/EC (PED) of annex I for fluids of the groups 1 and 2.

### Standard variants

- Throttle cone
- Rigid throttle cone stem
- Back seat
- Stellite seats (standard for 1.7357)
- PTFE gland
- Free from oil and grease
- Position switch
- Threaded bush free from non-ferrous metals
- Attachments for actuators
- Other flange and butt-weld end designs
- onAcceptance tests to technical codes such as TRD/TRB/AD2000 or customer specificati
- Connection branch made of 16Mo3

### Remarks

- Operating instruction: 0570.82

### On all enquiries / orders please specify

- |                            |                               |
|----------------------------|-------------------------------|
| 1 Type                     | 7 Material                    |
| 2 PN                       | 8 Medium                      |
| 3 DN                       | 9 Flow rate *)                |
| 4 Working pressure         | 10 Pipe connection            |
| 5 Differential pressure *) | 11 Standard variants          |
| 6 Operating temperature    | 12 Type series booklet number |

When ordering spares, indicate original factory number and year of manufacture.

\*) Indispensable for variant with throttle cone

The valves do not have a potential internal source of ignition and can be used in potentially explosive atmospheres, group II, category 2 (zones 1+21) and category 3 (zones 2+22) according to ATEX 94/9/EC.



### Pressure-Temperature ratings

Nom. pressure PN	Material	Material no.	Working pressures at temperatures in °C 1)														
			to 120	200	250	300	350	400	425	450	475	500	510	520	530	540	550
250	GP 240 GH 2)	1.0619	250	200	175	150	140	125	115	80							
	G 17 CrMo 5-5	1.7357	250	250	250	250	238	227	223	217	206	184	154	124	97	73	54
320	GP 240 GH 2)	1.0619	320	250	225	192	180	160	150	100							
	G 17 CrMo 5-5	1.7357	320	320	320	320	304	292	285	278	264	237	200	158	124	93	69

1) The valves can be used down to -10 °C

2) previously: GS-C 25N

Operating pressures to EN 1092/1 are also permissible

### Installation

Globe valves are installed in the line so that the medium enters the valve underneath the cone and flows out above it. They can also be installed in lines with alternating flow.

If differential pressures specified for DN 65 to 200 are exceeded, a pressure relief cone is required. In this case, the valve must be installed so that the pressure to be sealed off acts above the cone.

The pressure-relief cone acts as a bypass and can only serve its purpose if a back pressure builds up after opening so that the max. pressures specified in the table are not exceeded.

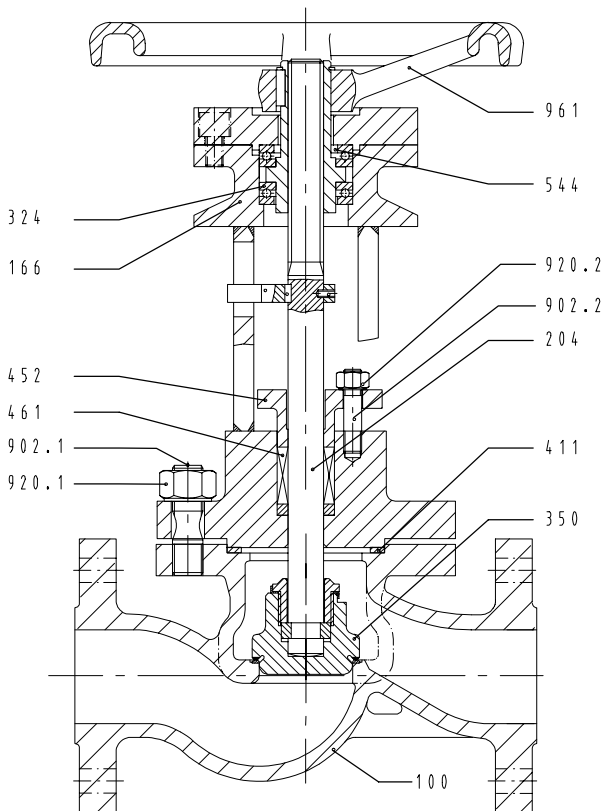
### Max. permissible differential pressure for shutoff

DN	65	80	100	125	150	200
Δp bar	110	70	44	33	21	14

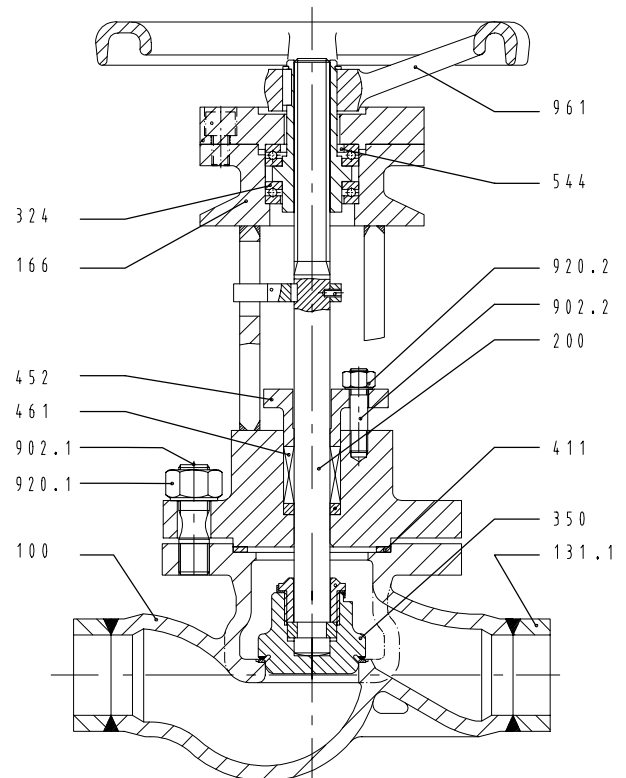
The variant with rigid throttle cone must be installed in such a way that the pressure to be sealed off acts above the cone.

For valves with throttle cone, detailed information on the operating conditions are required for optimum selection.

ZXLF



ZXSF

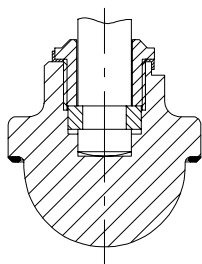


## Materials

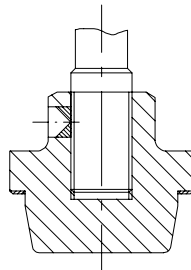
Part no.	Name of parts	Material	Temperature °C	Remarks
100	Body	GP 240 GH	1.0619	up to 450
		G 17 CrMo 5-5	1.7357	up to 550
166	Yoke	13 CrMo 4-5	1.7335	up to 550
131.1	Branch	16 Mo 3	1.5415	up to 450
		13 CrMo 4-5	1.7335	up to 550
200 *)	Stem	X 35 CrMo 17-1	1.4122	up to 550
324	Thrust bearing	St	up to 550	
350 *)	Cone	13 CrMo 4-5	1.7335	up to 550
411 *)	Gasket	CrNi-steel / Grafit	up to 550	Serrated
452	Gland	P 250 GH	1.0406	
461. *)	Packing	Graphite		
544 *)	Threaded bush	Multi-bronze		
902.1/2	Stud	21 CrMo V 5-7	1.7709	
920.1/2	Hexagon nut	25 CrMo 4	1.7218	
961	Handwheel	GG-25	0.6025	

\*) Recommended spare parts

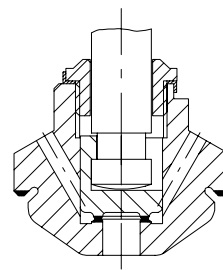
## Variants



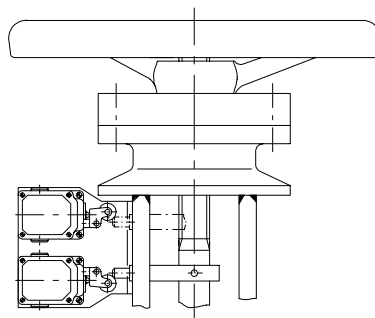
Throttle cone



Rigid throttle cone stem



Pressure relief cone



Position switch

## Dimensions type ZXLF

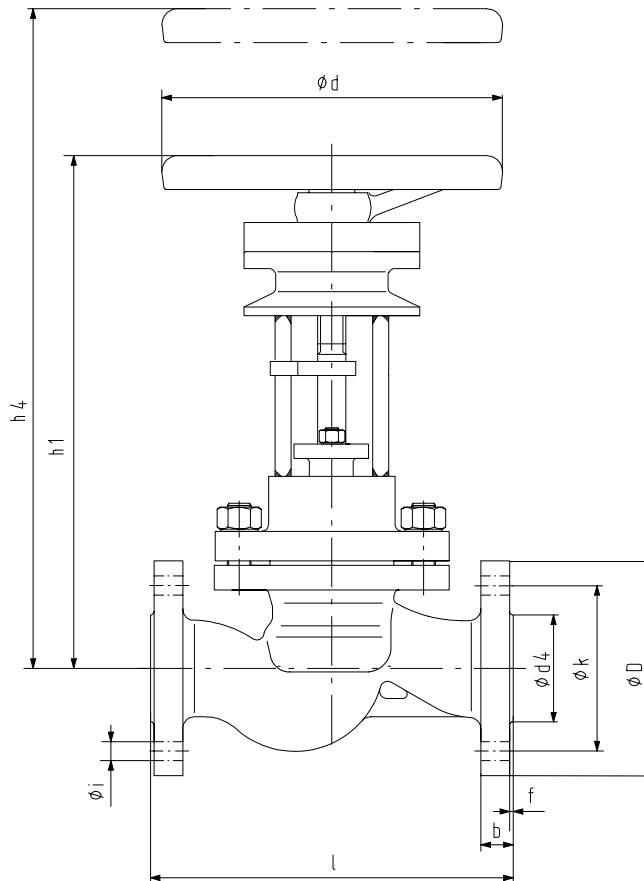
Face-to-face dimension - on table (previously: DIN 3202/1-F3)

Flanges - Connection dimensions to DIN 2501, (ISO 2084, BS 4504)  
- raised face type E DIN 2526

Other flange designs:

e.g. grooved both ends type N DIN 2512, or recessed type R 13 DIN 2513 or lens joint type L DIN 2696

Other flange designs on request



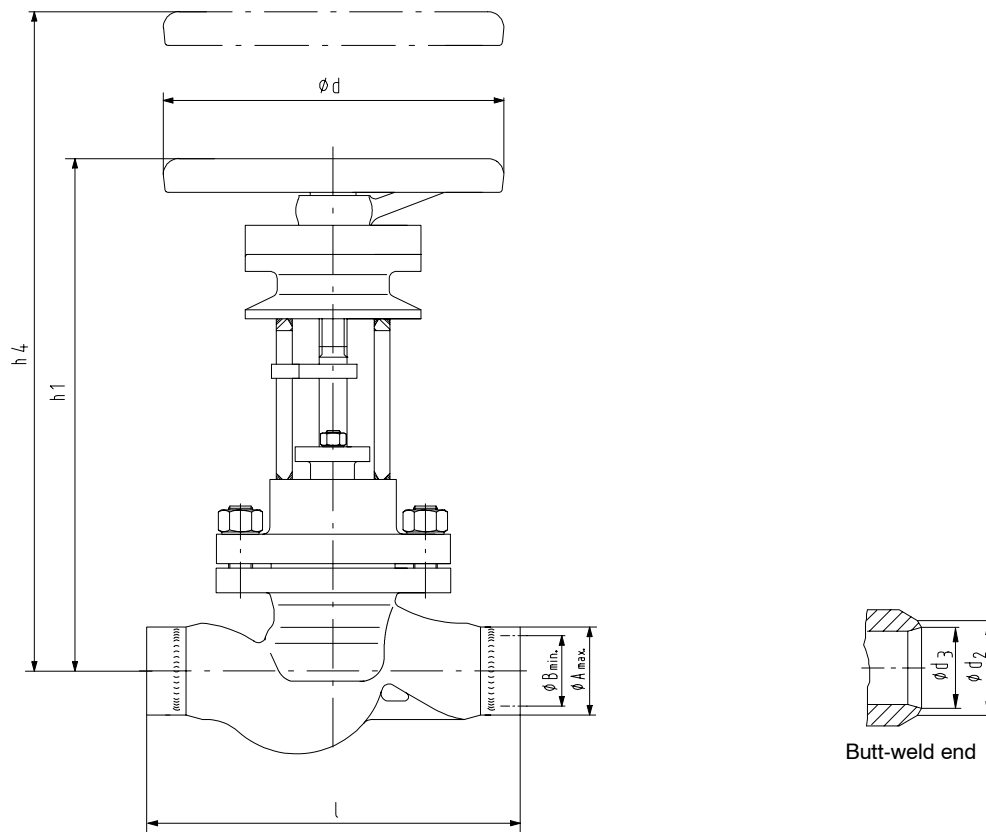
Dimensions in mm

Nom. pressure PN	Type	Nom. bore DN	Face-to-face dimension l	Flange Ø D	Bolt circle Ø k	Number of bolt holes z	Hole Ø i	Raised face Ø d <sub>4</sub> x f	Flange thickness b	Centre-to-top height open h <sub>1</sub>	Vertical clearance for removal h <sub>4</sub>	Stroke	Hand-wheel Ø d	Weight appr. kg
250	ZXLF/ ZXLFA	65	400	230	180	8	26	122x3	42	565	735	40	500	85
		80	450	255	200	8	30	138x3	46	630	830	45	500	125
		100	520	300	235	8	33	162x3	54	695	920	50	500	200
		125	600	340	275	12	33	188x3	60	770	1040	65	630	270
	ZXLF	150	700	390	320	12	36	218x3	68	815	1100	80	800	400
		200	800	485	400	12	42	285x3	82	885	1220	100	800	650
	ZXLFA	150	700	390	320	12	36	218x3	68	920	1200	80	1000	430
		200	800	485	400	12	42	285x3	82	990	1325	100	1000	680
320	ZXLF/ ZXLFA	65	400	255	200	8	30	122x3	51	565	735	40	500	90
		80	450	275	220	8	30	138x3	55	630	830	45	500	135
		100	520	335	265	8	36	162x3	65	695	920	50	500	215
		125	600	380	310	12	36	188x3	75	770	1040	65	630	295
	ZXLF	150	700	425	350	12	39	218x3	84	815	1100	80	800	450
		200	800	525	440	12	42	285x3	103	885	1220	100	800	750
	ZXLFA	150	700	425	350	12	39	218x3	84	920	1200	80	1000	480
		200	800	525	440	12	42	285x3	103	990	1325	100	1000	800

### Dimensions type ZXSf

Face-to-face dimension - See table  
 Butt-weld ends - DIN 3239/1  
 Groove form - DIN 2559/21

Different designs of butt-weld ends and welding groove forms are possible, but only within the dimensions  $A_{max.}$  und  $B_{min.}$ .  
 Butt weld ends to EN 12627 possible.



Dimensions in mm

Nom. pressure PN	Type	Nom. bore DN	Face-to-face dimension l	Butt-weld ends not machined		Socket weld ends to ANSI B 16.11 Groove form to DIN 2559-21 Ød2                      Ød3 *)				Corresponding pipe dimensions		Centre-to-top height open h <sub>1</sub>	Vert. clearance for removal h <sub>4</sub>	Stroke	Hand-wheel Ød	Weight appr. kg			
				ØA <sub>max.</sub>	ØB <sub>min.</sub>	PN 250	PN 320	PN 250	PN 320	PN 250	PN 320								
250-320	ZXSf/ ZXSFA	65	480	93	48	77	90	59,5	68,0	76,1 x 8,8	88,9 x 11,0	565	735	40	500	70			
		80	530	116	62	115	115	93,0	87,5	114,3 x 11,0	114,3 x 14,2	630	830	45	500	120			
		100	620	138	84	As per customer specification within the dimensions A <sub>max.</sub> and B <sub>min.</sub>													
		125	720	179	106														
	ZXSf	150	820	198	133	As per customer specification within the dimensions A <sub>max.</sub> and B <sub>min.</sub>													
		200	950	267	175														
	ZXSFA	150	820	198	133	As per customer specification within the dimensions A <sub>max.</sub> and B <sub>min.</sub>													
		200	950	267	175														
													695	920	50	630	170		
													770	1040	65	800	220		
												815	1100	80	800	330			
												885	1220	100	800	580			
												920	1200	80	1000	350			
												990	1325	100	1000	610			

 \*) d<sub>3</sub> = d<sub>p</sub> acc. to DIN 3239

**Product Features - to our Customers' Benefit**

**Non-rising handwheel**

**Your benefit**

- Ideal in confined spaces

**DIN-ISO connection flange**

**Your benefit**

- Simple installation of actuators without dismantling pressure-retaining parts
- No retrofit required

**Position indicator in standard variant**

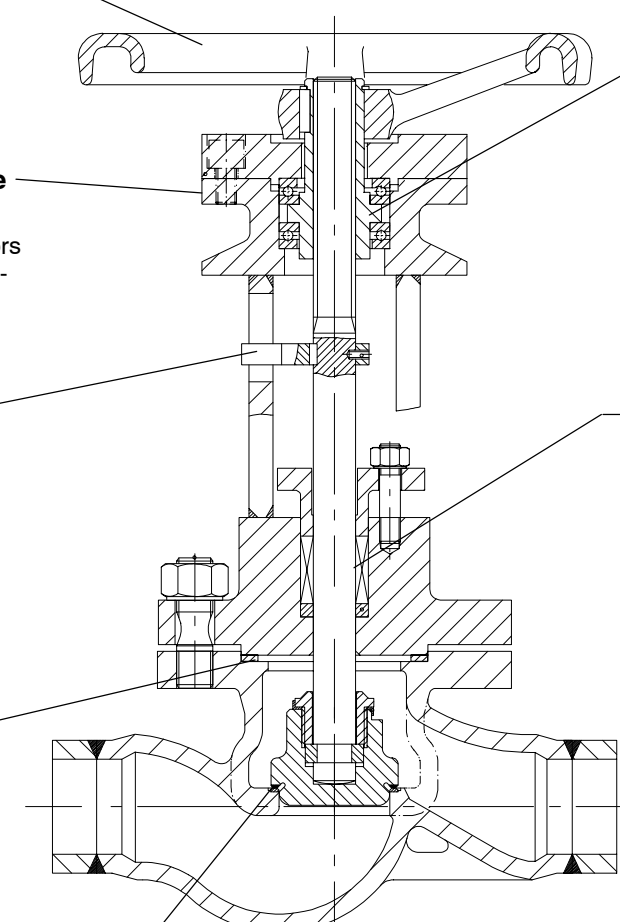
**Your benefit**

- Valve position easy to see

**Serrated bonnet gasket**

**Your benefit**

- Reliable sealing towards the atmosphere



**Threaded bush supported by ball bearings**

**Your benefit**

- Effortless operation

**Stem with burnished shank**

**Your benefit**

- Long gland life

**Valve seat made of wear and corrosion-resistant materials**

**Your benefit**

- High reliability
- Long life

Subject to technical modification without prior notice

01.02.2006

7653.1/8-10