



## Globe valves

with gland packing  
with non-rotating stem  
bonnetless,  
with bajonet-type body / yoke connection  
flanged  
or with butt or socket  
weld ends

**PN 250-320**  
**DN 10-50**

## Applications

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

## Operating data

- Maximum permissible pressure 320 bar
- Maximum permissible temperature 580 °C
- Selection as per pressure / temperature ratings (see overleaf)

## Materials

- |                |        |              |
|----------------|--------|--------------|
| • 16 Mo 3      | 1.5415 | up to 530 °C |
| • 13 CrMo 4-5  | 1.7335 | up to 550 °C |
| • 10 CrMo 9-10 | 1.7380 | up to 580 °C |

## Design

- Straight-way pattern
- Throttling valve disc
- Forged body and yoke
- Single-piece body, bonnetless
- Stem sealed by gland packing with packing end rings
- Non-rotating stem
- Position indicator
- Seat / disc interface made of wear-resistant and corrosion-proof stellite
- Yoke head designed for mounting electric and pneumatic actuators (DIN ISO 5210/5211)
- EC type-tested (Module B), component mark TÜ.A. 301
- Stem nut free of non-ferrous heavy metals

## Standard variants

- Valve combination
- Locking device
- Gland cover with scraper ring
- Installation kit for electric actuator
- Electric actuators
- Weldneck flanges (type ZXLV)
- Other weld end designs
- Inspections to technical codes such as TRD/TRB/AD2000 – German Steam Boiler / Pressure Vessel Regulations – or to customer specification

## Additional information

- NORI® 500 globe valves, type ZXSV, bonnetless, with single-piece body, up to PN 500, see type series booklet: 7641.1
- NORI® -A globe valves, type ZXLR/ZXSR, bonnetless, with single-piece body, up to PN 500, see type series booklet: 7655.1
- NORI® -A non-return valves, type RXLR/RXSR, see type series booklet: 7693.1
- Operating instructions: 0570.82

## On all enquiries / orders please specify

- |                         |                               |
|-------------------------|-------------------------------|
| 1 Type                  | 7 Material                    |
| 2 PN                    | 8 Fluid                       |
| 3 DN                    | 9 Flow rate                   |
| 4 Operating pressure    | 10 Pipe connection            |
| 5 Differential pressure | 11 Variants                   |
| 6 Operating temperature | 12 Type series booklet number |

When ordering spare parts, please indicate original works number and year of manufacture.

The valves satisfy the safety requirements of Annex I of the European Pressure Equipment Directive 97/23/EC (PED) for fluids in Groups 1 and 2.

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

### Butt and socket weld ends, type ZXSV

Nom. pressure	Material	Material No.	Permissible operating pressures in bar at temperatures in °C <sup>1)</sup>																		
			up to 100	150	200	250	300	350	400	425	450	475	500	510	520	530	540	550	560	570	580
PN 160	16Mo 3	1.5415	160	138	126	117	102	96	90	88	87	85	56	44	28	14					
	13CrMo 4-5	1.7335	160	144	138	132	123	114	108	105	102	92	82	69	56	47	37	29			
	10CrMo 9-10	1.7380	160	160	135	132	126	117	111	108	105	102	81	71	62	54	47	41	35	31	26
PN 250	16Mo 3	1.5415	250	235	215	199	174	164	153	151	148	146	95	76	48	24					
	13CrMo 4-5	1.7335	250	245	235	225	209	194	184	179	174	157	140	119	96	80	62	50			
	10CrMo 9-10	1.7380	250	250	230	225	215	199	189	184	179	174	138	121	105	92	80	69	59	52	45
PN 320	16Mo 3	1.5415	320	313	286	266	231	218	204	201	197	162	127	101	80	64					
	13CrMo 4-5	1.7335	320	320	313	299	279	258	245	238	231	209	186	158	128	106	83	67			
	10CrMo 9-10	1.7380	320	320	310	303	289	269	255	248	241	214	186	163	142	124	107	94	80	70	61

### Flanges, type ZXLV

Nom. pressure	Material	Material No.	Permissible operating pressures in bar at temperatures in °C <sup>1)</sup>												
			up to 250	300	350	400	425	450	475	500	510	520	530	540	550
PN 250	16 Mo 3	1.5415	250	217	195	185	179	174	172	101	78	61	49		
	13 CrMo 4-5	1.7335		250	238	227	223	217	206	184	154	124	97	73	54
	10 CrMo 9-10	1.7380									124	108	95	81	
PN 320	16 Mo 3	1.5415	320	278	250	236	230	222	220	129	99	78	63		
	13 CrMo 4-5	1.7335		320	304	292	285	278	264	237	200	158	124	93	69
	10 CrMo 9-10	1.7380									158	139	121	104	

<sup>1)</sup> The valves can be used down to -10 °C  
 Operating pressures as per EN 1092/1 are also permitted.  
 Dimensions see page 4

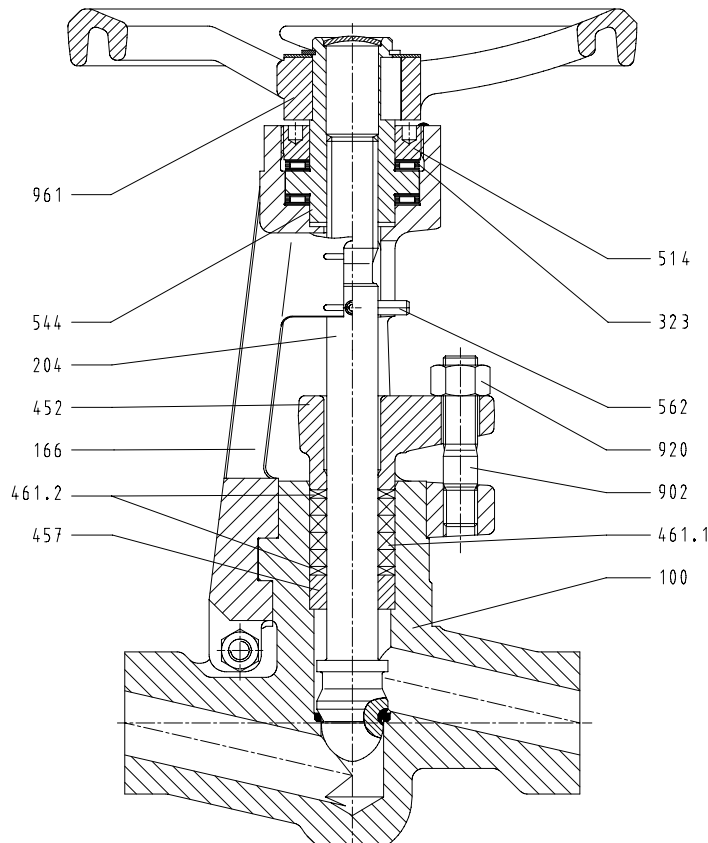
## Installation

Shut-off valves must be installed in the line so as to ensure that the fluid enters the valve beneath the disc and flows out above the disc. They can also be installed in lines with alternating flow.

**For throttling valves, it is recommended to have the pressure above the disc. Exact particulars on the operating conditions are required to allow optimum valve selection.**

### Note:

In the case of machined weld ends, the permissible operating pressures are governed by the actual dimensions obtained.



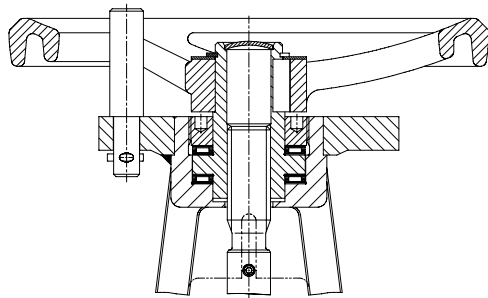
ZXSV

## Materials

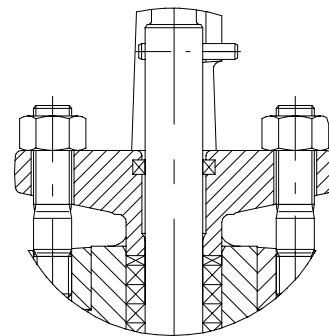
Part No.	Description	Temperature °C	Material	Comments		
100	Body	up to 530	16 Mo 3	1.5415	die-forged, stellite seat / disc interface	
		up to 550	13 CrMo 4-5	1.7335		
		up to 580	10 CrMo 9-10	1.7380		
166	Yoke	up to 580	13 CrMo 4-5	1.7335	die-forged	
204 *)	Throttling disc stem		X 39 CrMo 17-1	1.4122	stellite seat / disc interface	
323 *)	Thrust needle bearing		St			
452	Gland cover		13 CrMo 4-5	1.7335	die-forged	
457 *)	Gland ring		G-X70 CrMo 29-2	1.4136		
461.1 *)	Packing ring		Pure graphite			packing end rings
461.2 *)						
514	Threaded ring		9SMn28K	1.0718		
544 *)	Stem nut		45S20	1.0727	gas nitrocarburized	
562	Anti-rotation pin		St			
902	Stud		21 CrMo V 5-7	1.7709		
920	Hex. nut		25 CrMo 4	1.7218		
961	Handwheel		GTS-35-10	0.8135		

\*) Recommended spare parts

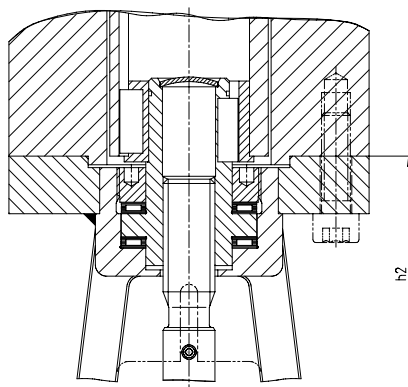
## Variants



Locking device



Gland cover with scraper ring



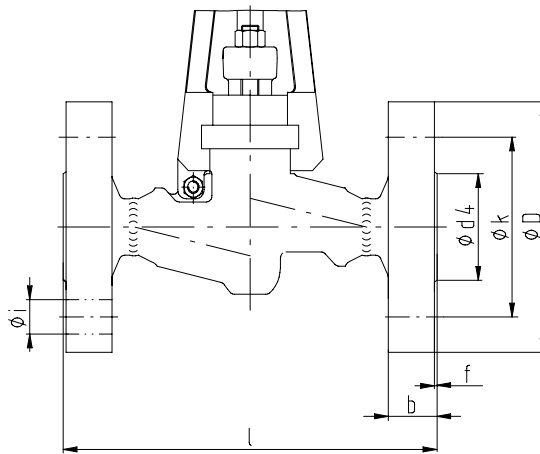
Installation of electric actuators

## Dimensions for “Weldneck flanges” variant, type ZXLV

Face-to-face length - see table  
 Flange - Mating dimensions DIN 2501  
 Raised face type E DIN 2526

Other flange designs:

e.g. grooved both ends type N DIN 2512, or  
 recessed (female face) type R 13 DIN 2513, or  
 lens-shaped joint type L DIN 2696  
 Other flange designs on request



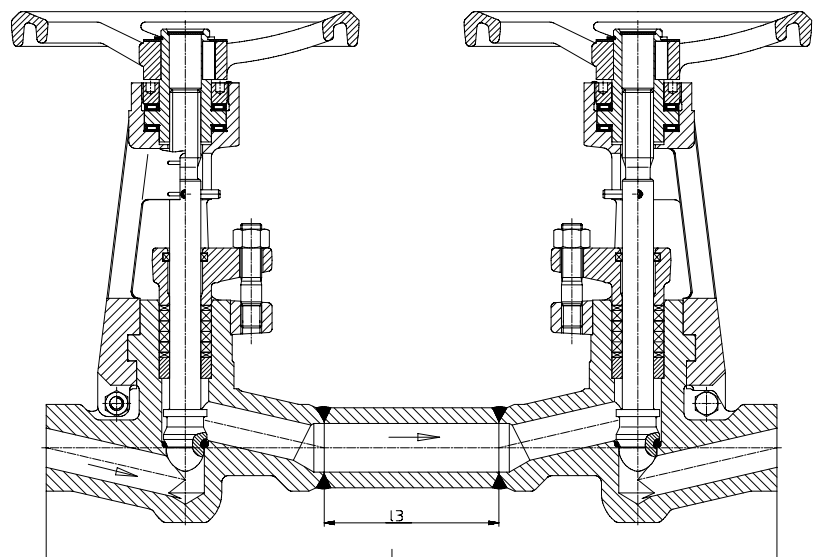
Dimensions in mm

Nom. pressure PN	Nominal diameter DN	Face-to-face length $l_1$	Flange $\phi D$	Bolt circle $\phi k$	Number of bolt holes z	Bolt hole $\phi i$	Raised face $\phi d_4 \times f$	Flange thickness b	Weight approx. kg
250	10	230	125	85	4	18	40 x 2	24	9.5
	15	230	130	90	4	18	45 x 2	26	10.5
	20	260	135	95	4	18	58 x 2	26	14.0
	25	260	150	105	4	22	68 x 2	28	15.0
	32	390	165	120	4	22	78 x 2	32	29.0
	40	390	185	135	4	26	88 x 3	34	31.0
320	50	410	200	150	8	26	102 x 3	38	33.0
	10	230	125	85	4	18	40 x 2	24	9.5
	15	230	130	90	4	18	45 x 2	26	10.5
	20	260	150	105	4	22	58 x 2	30	16.0
	25	260	160	115	4	22	68 x 2	34	18.0
	32	390	180	130	4	26	78 x 2	36	32.0
40	390	195	145	4	26	88 x 3	38	34.0	
50	410	210	160	8	26	102 x 3	42	38.0	

## Dimensions for “Valve combination” variant

Drainage, vent or manual start-up pipes are normally fitted with valve combinations consisting of a shut-off valve (pressure beneath the valve disc) and a throttling valve (pressure above the valve disc).

Nominal diameter	Valve combination		
	I 3	L	approx. kg
DN 10	60	360	12.0
15	60	360	12.0
20	100	420	18.0
25	100	420	18.0
32	60	560	38.0
40	60	560	38.0
50	60	560	38.0

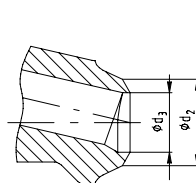
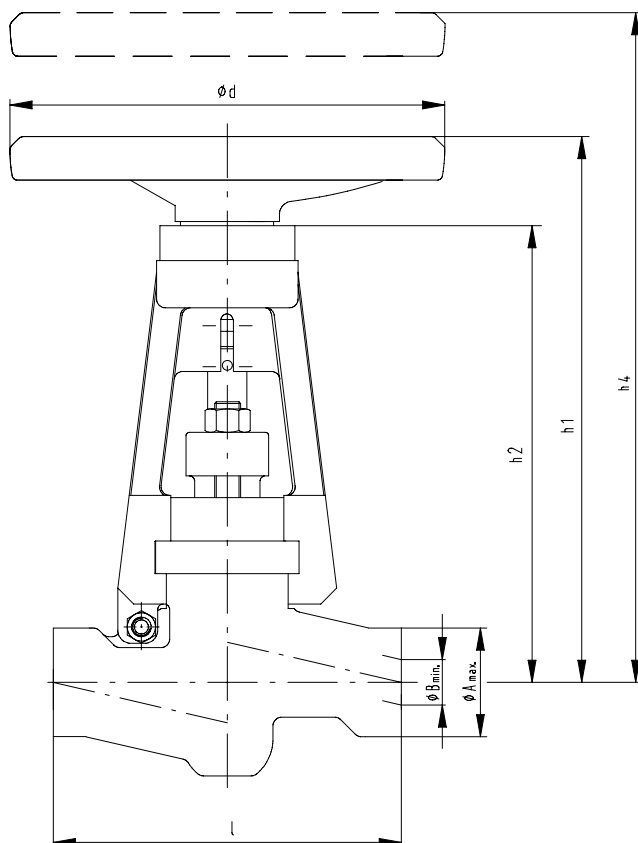


## Dimensions, type RXS

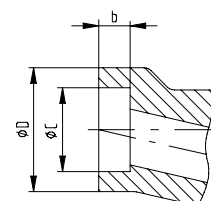
Face-to-face length - see table  
 Butt weld ends - DIN EN 12627 Fig. 2  
 Socket weld ends - as per DIN EN 12760

Different designs of butt weld ends, socket weld ends and welding groove types are possible, but only within the dimensions  $A_{max.}$  and  $B_{min.}$ .

Butt weld ends to DIN 3239 Type 1 or socket weld ends to ASME B16.11/DIN 3239/2 possible.



Butt weld ends

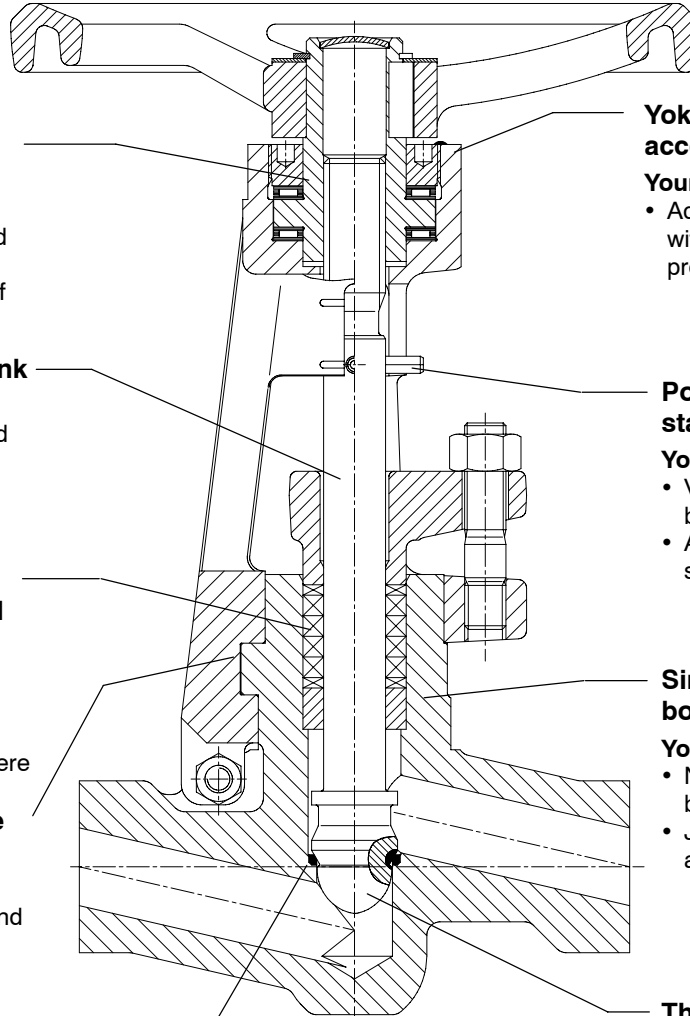


Socket weld ends

Dimensions in mm

Nom. diameter DN	Face-to-face length l	Butt weld ends unmachined PN 320		Butt weld ends to DIN EN 12627 Figure 2						Socket weld ends to DIN EN 12760 PN 320			Centre-to-top height		Disassembly height h <sub>4</sub>	Hand-wheel Ø d	Weight approx. kg	
		Ø A <sub>max.</sub>	Ø B <sub>min.</sub>	Ø d <sub>2</sub>	Ø d <sub>3</sub>	PN 160 Pipe dimensions	Ø d <sub>3</sub>	PN 250 Pipe dimensions	Ø d <sub>3</sub>	PN 320 *) Pipe dimensions	Ø D <sub>-0.5</sub>	Ø C <sub>+0.2</sub>	b <sub>min.</sub>	h <sub>1</sub>				h <sub>2</sub>
10	150	35	9	18	13.5	17.2 x 2.0	12.0	17.2 x 2.6	11.5	17.2 x 2.9	27	17.6	10.0	225	195	315	160	5.5
15	150	35	14	22	17.5	21.3 x 2.0	16.0	21.3 x 2.6	15.0	21.3 x 3.2	32.5	21.8	10.0	225	195	315	160	5.5
20	160	50	19	28	22.5	26.9 x 2.3	20.0	26.9 x 3.6	19.0	26.9 x 4.0	39.5	27.2	13.0	250	215	360	200	8.0
25	160	50	22	35	27.5	33.7 x 3.2	26.5	33.7 x 3.6	24.0	33.7 x 5.0	48	33.9	13.0	250	215	360	200	8.0
32	250	78	30	44	35.5	42.4 x 3.6	34.0	42.4 x 4.5	30.5	42.4 x 6.3	57	42.7	13.0	305	265	430	250	18.0
40	250	78	35	50	41.5	48.3 x 3.6	39.0	48.3 x 5.0	36.0	48.3 x 6.3	64.5	48.8	13.0	305	265	430	250	18.0
50	250	78	35	62	52.5	60.3 x 4.0	48.5	60.3 x 6.3	47.0	60.3 x 7.1	83	61.2	16.0	305	265	430	250	18.0

Product features - to our customers' benefit



**Stem nut supported by needle bearings on both sides, with cover disc**

**Your benefits:**

- Easy actuation in OPEN and CLOSED direction
- Protection against ingress of dirt

**Stem with burnished shank**

**Your benefit:**

- Long service life of the gland packing

**Pure graphite gland packing with packing end rings**

**Your benefits:**

- Excellent tightness
- Easy to service
- Reliable sealing to atmosphere

**Bayonet-type body / yoke connection**

**Your benefits:**

- Simple and fast assembly and disassembly
- Easy to service

**Valve seat made of wear-resistant and corrosion-proof stellite**

**Your benefits:**

- High functional reliability
- Long service life

**Yoke head designed to accept DIN ISO flange**

**Your benefit:**

- Actuators can be retrofitted without having to dismantle the pressure-retaining components

**Position indicator as a standard**

**Your benefits:**

- Valve disc position can always be checked
- Anti-rotation protection of the stem

**Single-piece valve body, bonnetless**

**Your benefits:**

- No retightening of bonnet bolts
- Just one sealing point to atmosphere

**Throttling valve disc as a standard**

**Your benefits:**

- One model for shut-off and throttling
- Reduced number of spares and spare parts stocks

Subject to technical modification without prior notice.

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