

Globe Valve

BOACHEM ZXA

PN 10-40
DN 15-300
Gland Packing
Flanged Ends

Type Series Booklet



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Type Series Booklet BOACHEM ZXA

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Globe Valves

Globe Valves with Gland Packing

BOACHEM ZXA



Main applications

- Food and beverages industry
- Petrochemical industry
- Process engineering
- Sugar industry

Fluids handled

- Aggressive liquids
- Steam
- Explosive fluids
- Flammable fluids
- Fluids containing gas
- Gas
- High-temperature hot water
- Highly aggressive fluids
- Condensate
- Corrosive fluids
- Fluids containing mineral oils
- Oil
- Polymerising/crystallising fluids
- Feed water
- Other fluids on request.

Operating data

Operating properties

Characteristic	Value
Nominal pressure	PN 10-40
Nominal size	DN 15-300
Max. permissible pressure	40 bar
Max. permissible temperature	400 °C

Selection as per pressure/temperature ratings (⇒ Page 4)

Body materials

Overview of available materials

Material	Material number	Temperature limit
GX5CrNiMo19-11-2	1.4408	Up to 400 °C

Design details

Design

- Straight-way pattern
- Throttling plug up to DN 100
- On/off disc for DN 125 and above
- Pilot plug from:
 - PN 10 DN 250
 - PN 16 DN 200
 - PN 25 DN 150
 - PN 40 DN 125
- Rotating stem
- Rising handwheel
- Back seat
- Fully confined bonnet gasket
- Stem sealed by gland packing
- 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) to ATEX 94/9/EC.

Variants

- Throttling plug from DN 125
- Pilot plug
- Position indicator
- Valve disc with PTFE gasket (up to 200 °C)
- Oil and grease-free
- Serrated gasket (PTFE-coated)
- PTFE packing
- Applications down to -60 °C
- Heating jacket made of 1.4541/1.4301 or 1.4571/1.4404
- Other flange designs

Product benefits

- Long service life and high functional reliability of the gland packing due to stem with burnished shank.
- Reliable sealing: bonnet gasket fully confined to prevent creep.

- Additional safety and blow-out protection by standard back seat.

Related documents

- BOACHEM ZXAB bellows-type globe valve, see type series booklet 8150.1.
- BOACHEM ZYAB bellows-type Y-pattern globe valve, see type series booklet 8151.1.
- BOACHEM ZYA Y-pattern globe valve with gland packing, see type series booklet 8148.1.
- BOACHEM RXA non-return valve, see type series booklet 8147.1.
- BOACHEM FSA Y-pattern strainer, see type series booklet 8146.1.
- Operating manual 8115.8

On all enquiries/orders please specify

1. Type
2. Nominal pressure
3. Nominal size
4. Operating pressure
5. Differential pressure
6. Operating temperature
7. Fluid handled
8. Pipe connection
9. Variants
10. Number of type series booklet

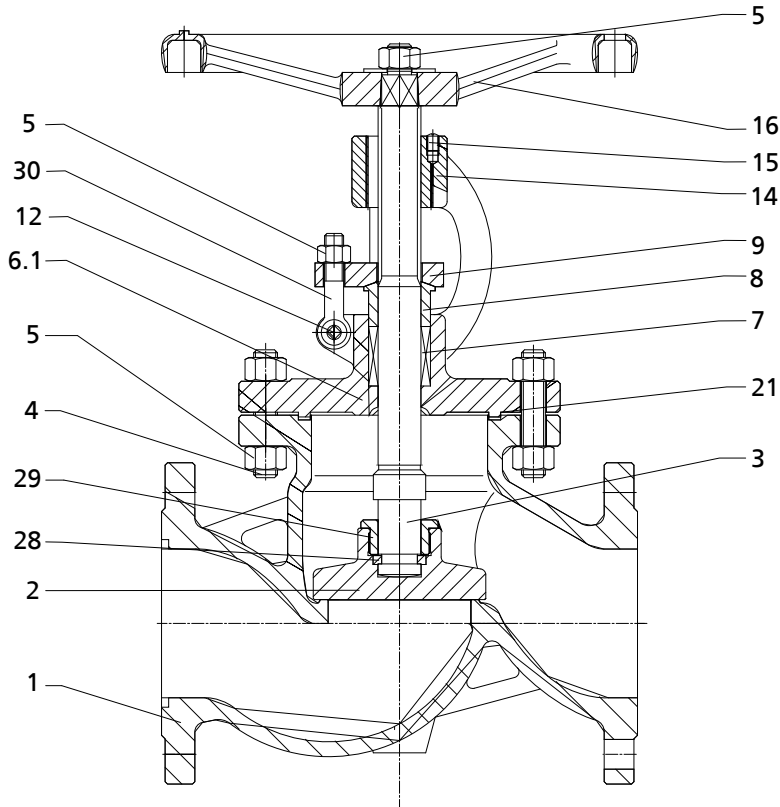
Pressure/temperature ratings

Permissible operating pressures in bar at a temperature of °C (to EN 1092-1)¹⁾

Nominal pressure PN	Material	20	100	150	200	250	300	350	400
10	1.4408	10	10	9	8,4	7,9	7,4	7,1	6,8
16		16	16	14,5	13,4	12,7	11,8	11,4	10,9
25		25	25	22,7	21	19,8	18,5	17,8	17,1
40		40	40	36,3	33,7	31,8	28,5	28,5	27,4

¹⁾ The valves are suitable for temperatures down to -10 °C.

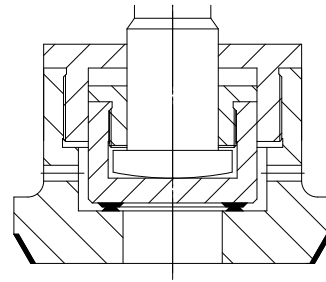
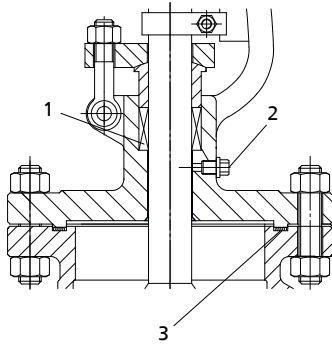
Materials



Overview of available materials

Part No..	Description	Material	Material number
1	Body	G X 5 CrNiMo 19-11-2	1.4408
2	Valve disc	X5 CrNiMo 18-10	1.4401
3	Stem	X6 CrNiMoTi 17-12-2	1.4571
4	Bolt	A4-70	
5	Nut	A4-70	
6.1	Bonnet	G X 5 CrNiMo 19-11-2	1.4408
7	Packing	Graphite	
8	Thrust insert	X5 CrNiMo 18-10	1.4401
9	Gland follower	G X 5 CrNiMo 19-11-2	1.4408
12	Pin	X5 CrNiMo 18-10	1.4401
14	Threaded bush	Bronze	
15	Pin	A4-70	
16	Handwheel	JL 1030	0.6020
21	Gasket	CrNiSt/graphite	
28	Retaining ring	X5 CrNiMo 18-10	1.4401
29	Threaded sleeve	G-X6 CrNi 18 9	1.4308
30	Eyebolt	A4-70	

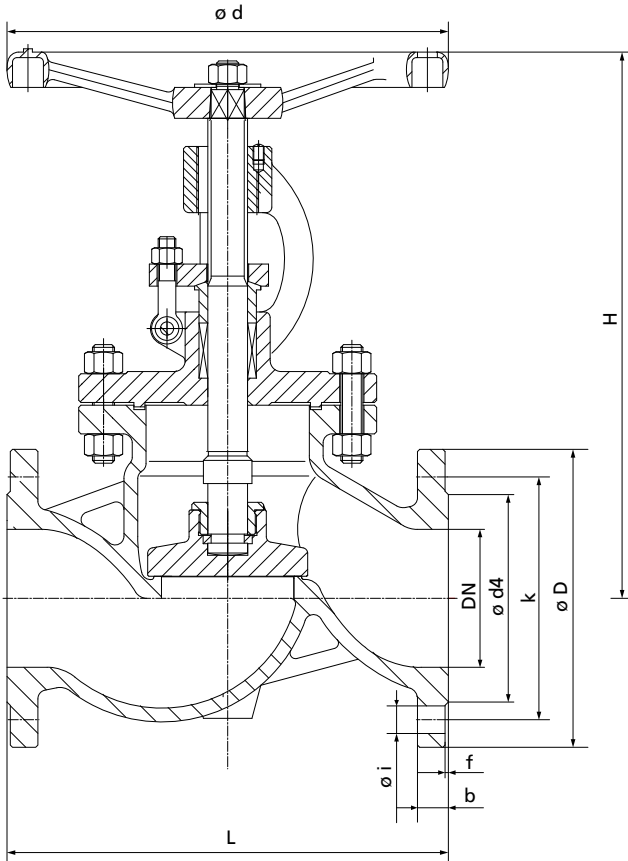
Variants



Pilot plug

- 1) PTFE packing
- 2) Leakage detection hole
- 3) Serrated gasket

Dimensions



Dimensions in mm

PN	DN	L	Ø D	k	No. of bolt holes z	Ø i	Ø d ₄ x f	b	H (closed)	H (open)	Ø d	[kg]
10-40	15	130	95	65	4	14	45 x 2	16	205	220	120	6,6
	20	150	105	75	4	14	58 x 2	18	210	235	140	7,7
	25	160	115	85	4	14	68 x 2	18	245	280	160	9,9
	32	180	140	100	4	18	78 x 2	18	265	295	160	13,2
	40	200	150	110	4	18	88 x 3	18	280	295	200	15,4
	50	230	165	125	4	18	102 x 3	18	300	320	220	20,9
10/16	65	290	185	145	8	18	122 x 3	22	320	345	260	30,8
	65	290	185	145	4	18	122 x 3	22	320	345	260	27,3
	80	310	200	160	8	18	138 x 3	24	370	395	280	37
	100	350	220	180	8	18	158 x 3	24	410	435	300	50,4
	125	400	250	210	8	18	188 x 3	26	462	507	350	75,9
10	150	480	285	240	8	22	212 x 3	28	520	580	400	100
	200	600	340	295	8	22	268 x 3	24	650	700	450	152
16	200	600	340	295	12	22	268 x 3	26	650	700	450	152
	250	730	405	355	12	26	320 x 3	28	655	735	500	290
	300	850	460	410	12	26	378 x 4	26	685	765	600	496
25/40	80	310	200	160	8	18	138 x 3	24	370	395	280	38,5
	100	350	235	190	8	22	162 x 3	24	410	435	300	59,4
	125	400	270	220	8	26	188 x 3	26	462	507	350	75,9
	150	480	300	250	8	26	218 x 3	26	520	580	400	105,6
25	200	600	360	310	12	26	278 x 3	30	650	700	450	190
	250	730	425	370	12	30	335 x 3	32	655	735	500	340
	300	850	485	430	16	30	395 x 4	34	685	765	600	567
40	200	600	375	320	12	30	285 x 3	34	650	700	450	202
	250	730	450	385	12	33	345 x 3	38	655	735	500	361
	300	850	515	450	16	33	410 x 4	42	685	765	600	678

Mating dimensions - Standards

Face-to-face lengths:	EN 558-1/1, ISO 5752/1
Flanges:	Mating dimensions to DIN EN 1092-1, ISO 7005
Flange facing:	DIN EN 1092-1, type B1

Other flange designs

- E.g. groove (type D), tongue (type C), recess (type F), spigot (type E) to EN 1092-1 at both ends
- Other flange designs on request

Installation instructions

i Shut-off globe valves must be installed in the line so as to ensure that the fluid enters the valve beneath the valve disc and flows out above the valve disc. They can also be installed in lines with alternating flow. If the max. permissible differential pressures for shut-off are exceeded for valves from DN 125 to 200, a pilot plug design is required. In this case the valve must be installed in such a way that the pressure to be sealed off lies above the valve disc. The pilot plug acts as a bypass and can only serve its purpose if backpressure builds up after opening, so that the max. permissible differential pressures for shut-off (see table) are not exceeded.

Differential pressures in bar

DN	125	150	200
Δp bar	33	21	12



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