

Globe Valve

BOACHEM-ZXA

PN 10-40
DN 15-400

Type Series Booklet



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Type Series Booklet BOACHEM-ZXA

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Contents

Globe Valves	4
Globe Valves to DIN/EN with Gland Packing	4
BOACHEM-ZXA.....	4
Main applications.....	4
Fluids handled	4
Operating data.....	4
Body materials.....	4
Design details	4
Product benefits.....	5
Related documents	5
Purchase order specifications	5
Pressure/temperature ratings.....	5
Materials.....	6
Variants.....	7
Dimensions and weights.....	8
Installation information.....	9

Globe Valves

Globe Valves to DIN/EN with Gland Packing

BOACHEM-ZXA



Main applications

- Food industry 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 - 400
Max. permissible pressure [bar]	40
Min. permissible temperature [°C]	≥ -10
Max. permissible temperature [°C]	≤ +400

Selection as per pressure/temperature ratings (⇒ Page 5)

Body materials

Overview of available materials

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

Design details

Design

- Straight-way pattern
- Throttling plug ≤ DN 100
- On/off disc ≥ DN 125
- Balanced plug: PN 10/16 ≥ DN 200
PN 25/40 ≥ DN 150
- 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 2014/68/EU (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 2014/34/EU.

Variants

- Throttling plug ≥ DN 125
- Balanced plug: PN 10/16 DN 125 to 150
PN 25/40 DN 125
- Stellite seat/disc interface
- Leakage detection hole
- Position indicator
- Limit switch(es)
- Locking device
- Valve disc with PTFE gasket (≤ 200 °C)
- Oil and grease-free
- Serrated gasket (PTFE-coated)
- PTFE packing
- Applications down to -60 °C
- Other flange designs

Product benefits

- Longer service life
 - Sealed to atmosphere by gland packing and stem with burnished shank
 - Valve disc guided to prevent stem vibration (on large valve sizes)
- Reliable sealing of body-bonnet joint
 - Bonnet gasket fully confined to prevent creep
- Added safety
 - Back seat prevents stem blow-out.
- Suitable for various installation positions
 - Guided disc design (of large valve sizes) allows valve installation in any position (also with horizontal stem).
- Suitable for high differential pressures
 - Version with pilot plug (on large valve sizes) for valve duties up to the nominal pressure; no limitations for high differential pressures

Related documents

Information/documents

Document	Reference number
Type series booklet BOACHEM-ZXAB (bellows-type globe valve)	8146.1
Type series booklet BOACHEM-RXA (lift check valve)	8147.1
Type series booklet BOACHEM-FSA (strainer)	8150.1
Operating manual BOACHEM	8115.8

Purchase order specifications

Please specify the following information in all enquiries or purchase orders:

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. Reference number

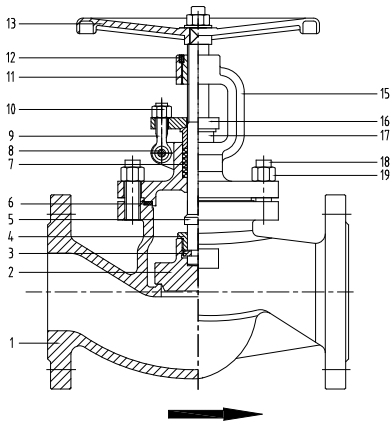
Pressure/temperature ratings

Permissible operating pressure [bar] (to EN 1092-1)¹⁾

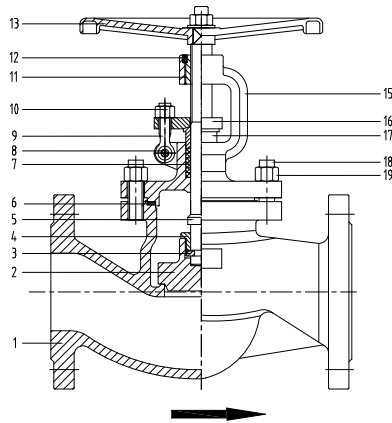
Nominal pressure PN	Material	[°C]							
		20	100	150	200	250	300	350	400
10	1.4408	10	10	9	8,4	7,9	7,4	7,1	6,8
16		16	16	14,5	13,4	12,7	11,8	11,4	10,9
25		25	25	22,7	21	19,8	18,5	17,8	17,1
40		40	40	36,3	33,7	31,8	28,5	28,5	27,4

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

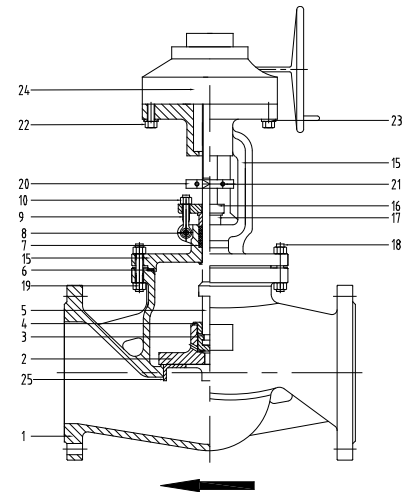
Materials



DN 15-100



DN 125-250



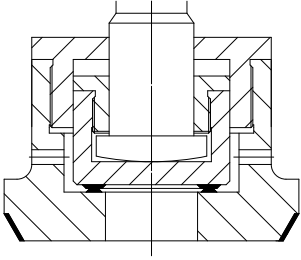
DN 300-400

Parts list

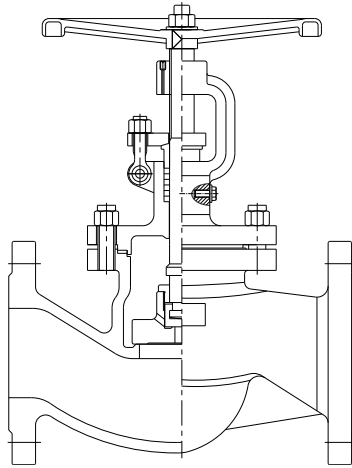
Part No.	Description	Material	Material number
1	Body	G X 5 CrNiMo 19-11-2	1.4408
2	Valve disc	ASTM A182 F316	-
3	Retaining ring (PN 10-16 DN 15-150; PN 25-40 DN 15-100)	ASTM A182 F316	-
	Pilot plug (PN 10-16 DN 200-400; PN 25-40 DN 150-400)	ASTM A182 F316	-
4	Valve disc nut	ASTM A276 316	-
5	Stem	ASTM A276 316	-
6	Gasket ²⁾	Graphite + stainless steel 316	-
7	Gland packing ²⁾	Graphite	-
8	Pin	ASTM A276 304	-
9	Eyebolt	A4-70	-
10	Nut	A4-80	-
11	Threaded bush	D-2	-
12	Bolt/screw	Stainless steel 304	-
13	Handwheel	EN-GJL-200	5.1300
14	Handwheel nut	Stainless steel	-
15	Body bonnet	G X 5 CrNiMo 19-11-2	1.4408
16	Gland follower	ASTM A276 304	-
17	Thrust insert	ASTM A276 316	-
18	Stud	A4-70	-
19	Nut	A4-80	-
20	Stop	ASTM A276 304	-
21	Bolt/screw	Stainless steel 304	-
22	Bolt/screw	A4-70	-
23	Washer	A4-70	-
24	Manual gearbox	Bought-in component	-
25	Disc guiding plate	ASTM A276 316	-

2) Spare part

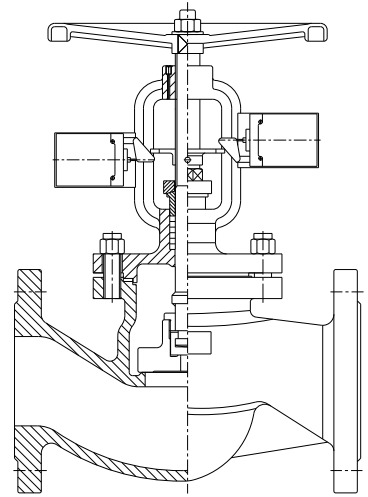
Variants



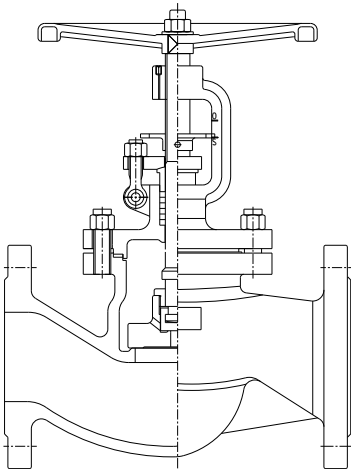
Balanced plug



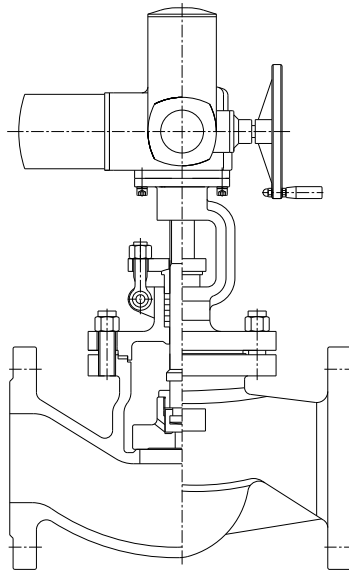
Leakage detection hole



Limit switches

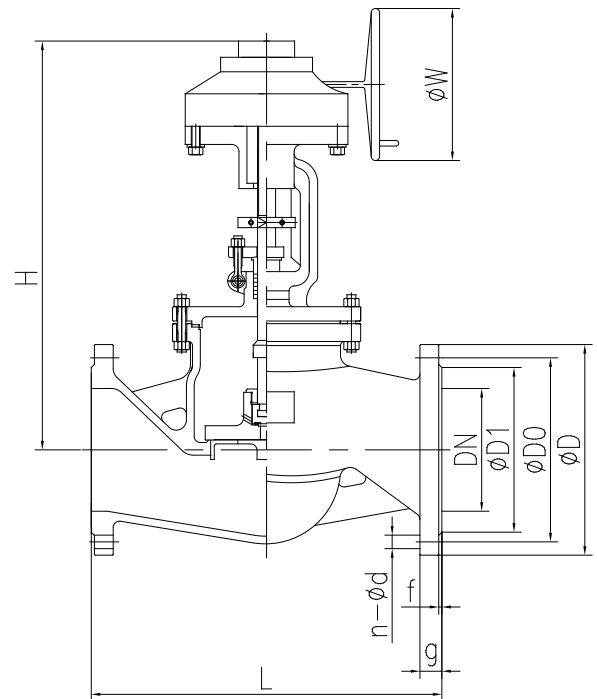
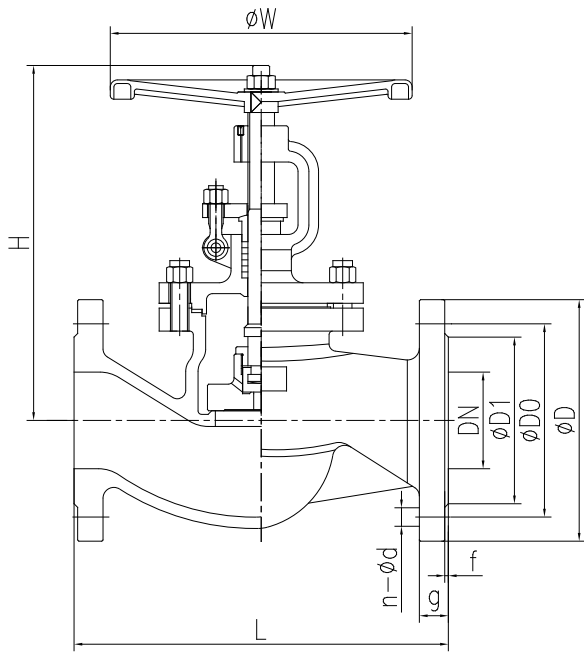


Position indicator



Mounting of electric actuator

Dimensions and weights



BOACHEM-ZXA with handwheel

BOACHEM-ZXA with gearbox

Dimensions [mm] and weights [kg]

PN	DN	L	D	D0	D1	g	f	n × Ø d	H (closed)	W	[kg]
10-40	15	130	95	65	45	16	2	4 × 14	190	140	4
	20	150	105	75	58	18	2	4 × 14	190	140	4,5
	25	160	115	85	68	18	2	4 × 14	195	160	5,5
	32	180	140	100	78	18	2	4 × 18	210	180	8
	40	200	150	110	88	18	3	4 × 18	220	180	10,5
10/16	50	230	165	125	102	20	3	4 × 18	230	200	13
	65	290	185	145	122	18	3	4 × 18	280	200	17,5
	80	310	200	160	138	20	3	8 × 18	290	250	21,8
	100	350	220	180	158	20	3	8 × 18	385	280	36,5
	125	400	250	210	188	22	3	8 × 18	410	300	48,2
10	150	480	285	240	212	22	3	8 × 22	500	350	77
	200	600	340	295	268	24	3	8 × 22	635	400	132
	250	730	395	350	320	26	3	12 × 22	680	450	265
	300	850	445	400	370	26	4	12 × 22	970	500	380
	350	980	505	460	430	26	4	16 × 22	1020	500	680
16	400	1100	565	515	482	26	4	16 × 26	1180	500	850
	200	600	340	295	268	24	3	12 × 22	635	400	132
	250	730	405	355	320	26	3	12 × 26	680	450	265
	300	850	460	410	378	28	4	12 × 26	970	500	380
	350	980	520	470	438	30	4	16 × 26	1020	500	680
25/40	400	1100	580	525	490	32	4	16 × 30	1180	500	850
	65	290	185	145	122	22	3	8 × 18	280	200	19,5
	80	310	200	160	138	24	3	8 × 18	290	250	23,5
	100	350	235	190	162	24	3	8 × 22	385	280	40,5
	125	400	270	220	188	26	3	8 × 26	410	300	57,5
25	150	480	300	250	218	28	3	8 × 26	500	350	90
	200	600	360	310	278	30	3	12 × 26	635	400	148
	250	730	425	370	335	32	3	12 × 30	680	450	265
	300	850	485	430	395	34	4	16 × 30	970	500	430
	350	980	555	490	450	38	4	16 × 33	1020	500	775
40	400	1100	620	550	505	40	4	16 × 36	1180	500	935
	200	600	375	320	285	34	3	12 × 30	635	400	155
	250	730	450	385	345	38	3	12 × 33	680	450	265
	300	850	515	450	410	42	4	16 × 33	1170	500	450

PN	DN	L	D	D0	D1	g	f	n × Ø d	H (closed)	W	[kg]
40	350	980	580	510	465	46	4	16 × 36	1320	500	810
	400	1100	660	585	535	50	4	16 × 39	1480	500	980


Mating dimensions as per standard

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 information

 The direction of flow through globe valves must correspond to the direction indicated by the arrow on the valve body.



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