

Lift Check Valve

BOACHEM-RXA

Type Series Booklet



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Type Series Booklet BOACHEM-RXA

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Contents

Check Valves and Strainers	4
Lift Check Valves to DIN/EN	4
BOACHEM-RXA	4
Main applications.....	4
Fluids handled	4
Operating data.....	4
Valve body materials.....	4
Design details	4
Product benefits.....	4
Product information	4
Related documents	5
Purchase order specifications	5
Pressure/temperature ratings.....	5
Materials.....	6
Dimensions and weights.....	6
Installation information.....	7

Check Valves and Strainers

Lift Check Valves to DIN/EN

BOACHEM-RXA



Main applications

- Food industry / beverage industry
- Petrochemical industry
- Process engineering
- Sugar industry

Fluids handled

- Aggressive liquids
- Steam
- Explosive fluids
- Solids-laden fluids
- Flammable fluids
- Fluids containing gas
- Gas
- Fluids posing a health hazard
- Toxic fluids
- Hot water
- Highly aggressive fluids
- Condensate
- Corrosive fluids
- Valuable fluids
- Volatile fluids
- Fluids containing mineral oils
- Oil
- Polymerising/crystallising fluids
- Boiler feed water
- Thermal oil
- Other fluids on request.

Operating data

Table 1: 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)

Valve body materials

Table 2: Overview of available materials

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

Design details

Design

- Straight-way pattern
- Spring-loaded check disc
- Fully confined cover gasket

Variants

- Oil-free and grease-free
- Stellite seat/disc interface
- Serrated gasket (PTFE-coated)
- Valve disc with PTFE gasket (≤ 200 °C)
- Applications down to -60 °C
- Other flange designs

Product benefits

- High-grade surface finish: lapped seat/disc interface
- Risk of leakage minimised by fully confined cover gasket
- Equipped with closing spring as standard.

Product information

Product information as per Regulation No. 1907/2006 (REACH)

For information as per European chemicals regulation (EC) No. 1907/2006 (REACH) see <https://www.ksb.com/en-global/company/corporate-responsibility/reach>.

Product information as per European Pressure Equipment Directive 2014/68/EU (PED)

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.

Product information as per UK Pressure Equipment (Safety) Regulations 2016

The valves satisfy the safety requirements of the UK Pressure Equipment (Safety) Regulations 2016 (PER) for fluids in Groups 1 and 2.

Product information as per Directive 2014/34/EU (ATEX)

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 (zone 2+22) to ATEX 2014/34/EU.

Product information as per UK Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016

The valves do not have a potential internal source of ignition and can be used in accordance with the UK's Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016 in potentially explosive atmospheres, Group II, category 2 (zones 1+21) and category 3 (zone 2+22).

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

Related documents

Table 3: Information/documents

Document	Reference number
BOACHEM-ZXA type series booklet (globe valve with gland packing)	8149.1
BOACHEM-ZXAB type series booklet (bellows-type globe valve)	8146.1
BOACHEM-FSA type series booklet (strainer)	8150.1
BOACHEM operating manual	8115.8

Pressure/temperature ratings

Table 4: 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	29,7	28,5	27,4

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

Materials

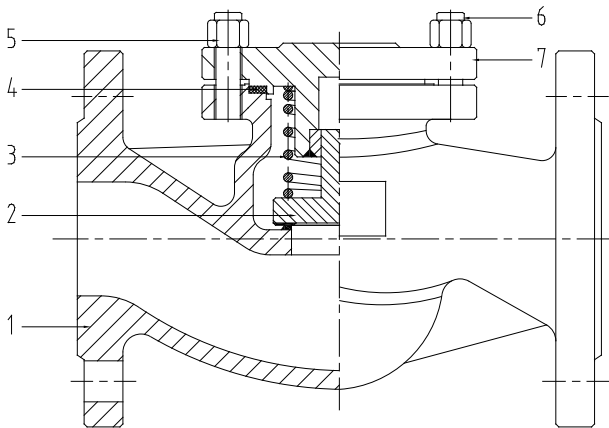


Fig. 1: Sectional drawing of BOACHEM-RXA

Table 5: Parts list

Part No.	Description	Material	Material number
1	Body	G X 5 CrNiMo 19-11-2	1.4408
2	Check disc	ASTM A182 F316	-
3	Spring	Stainless steel 316	-
4	Gasket ²⁾	Graphite + stainless steel 316	-
5	Nut	A4-80	-
6	Stud	A4-70	-
7	Cover	G X 5 CrNiMo 19-11-2	1.4408

Dimensions and weights

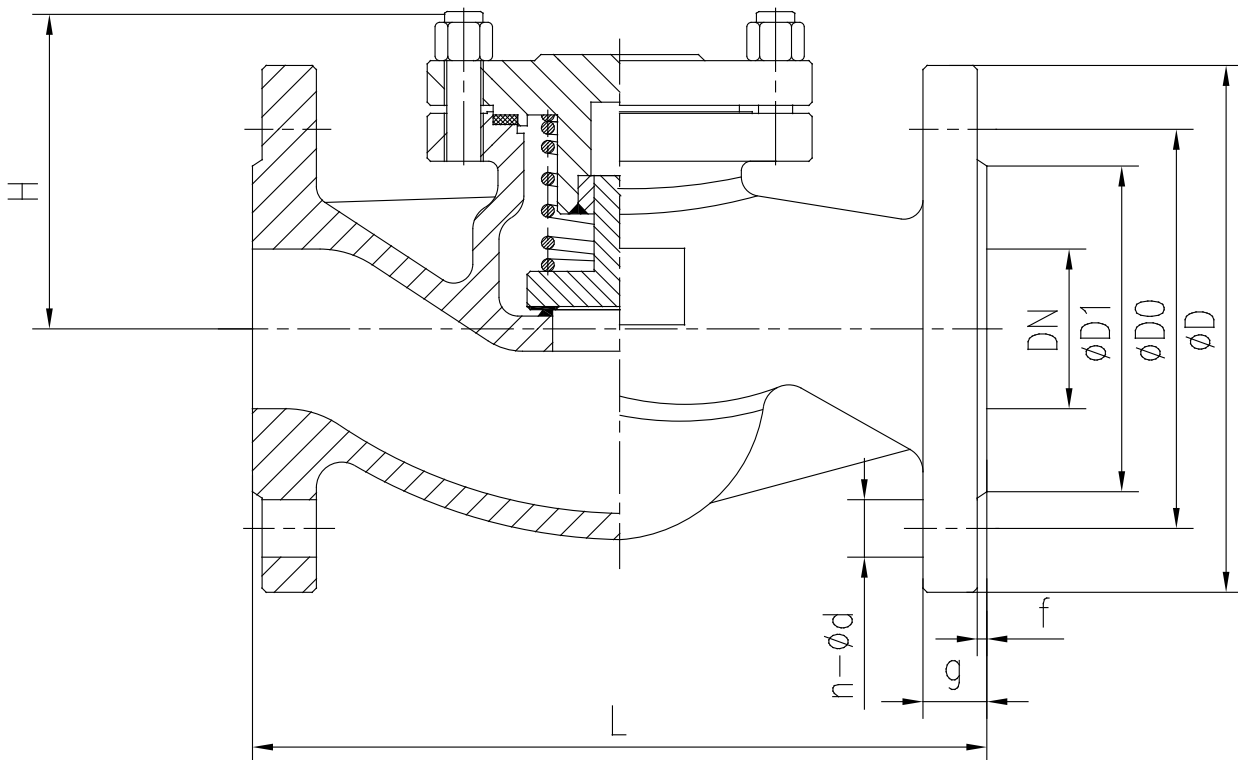


Fig. 2: Dimensions of BOACHEM-RXA

Table 6: Dimensions and weights

PN	DN	L	D	D0	D1	g	f	n x Ø d	H	[kg]
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
10-40	15	130	95	65	45	16	2	4 x 14	70	3,3

²⁾ Spare part

PN	DN	L	D	D0	D1	g	f	n × Ø d	H	[kg]
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
10-40	20	150	105	75	58	18	2	4 × 14	70	3,5
	25	160	115	85	68	18	2	4 × 14	80	4,8
	32	180	140	100	78	18	2	4 × 18	80	8,5
	40	200	150	110	88	18	3	4 × 18	85	8,5
	50	230	165	125	102	20	3	4 × 18	95	11,5
10/16	65	290	185	145	122	18	3	4 × 18	110	16,5
	80	310	200	160	138	20	3	8 × 18	130	22
	100	350	220	180	158	20	3	8 × 18	155	35,8
	125	400	250	210	188	22	3	8 × 18	165	50
	150	480	285	240	212	22	3	8 × 22	215	76
10	200	600	340	295	268	24	3	8 × 22	285	125
	250	730	395	350	320	26	3	12 × 22	325	230
	300	850	445	400	370	26	4	12 × 22	365	322
	350	980	505	460	430	26	4	16 × 22	410	485
	400	1100	565	515	482	26	4	16 × 26	480	625
16	200	600	340	295	268	24	3	12 × 22	285	125
	250	730	405	355	320	26	3	12 × 26	325	230
	300	850	460	410	378	28	4	12 × 26	365	322
	350	980	520	470	438	30	4	16 × 26	410	485
	400	1100	580	525	490	32	4	16 × 30	480	625
25/40	65	290	185	145	122	22	3	8 × 18	110	17,5
	80	310	200	160	138	24	3	8 × 18	130	23,5
	100	350	235	190	162	24	3	8 × 22	155	39
	125	400	270	220	188	26	3	8 × 26	165	54
	150	480	300	250	218	28	3	8 × 26	215	85
25	200	600	360	310	278	30	3	12 × 26	285	142
	250	730	425	370	335	32	3	12 × 30	325	245
	300	850	485	430	395	34	4	16 × 30	365	342
	350	980	555	490	450	38	4	16 × 33	410	530
	400	1100	620	550	505	40	4	16 × 36	480	675
40	200	600	375	320	285	34	3	12 × 30	285	150
	250	730	450	385	345	38	3	12 × 33	325	268
	300	850	515	450	410	42	4	16 × 33	365	360
	350	980	580	510	465	46	4	16 × 36	410	550
	400	1100	660	585	535	50	4	16 × 39	480	700

Mating dimensions as per standard

Face-to-face length:	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

Lift check 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.

Table 7: Differential pressure [bar]

DN	Δp [bar], with spring
10 to 50	0,15
65 to 200	0,07



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