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Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
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Уфа (347)229-48-12
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Ярославль (4852)69-52-93

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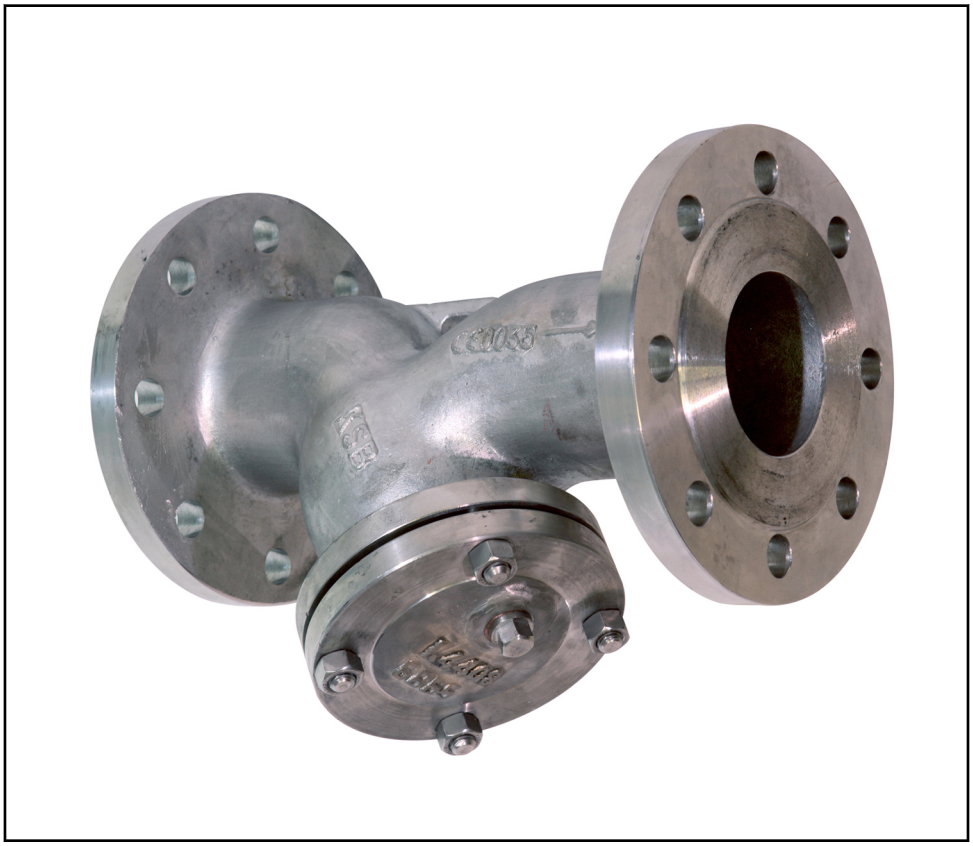
# Грязеуловители KSB. Техническое описание

Strainer

# BOACHEM-FSA

PN 10-40
DN 15-400
Flanged Ends

# Type Series Booklet



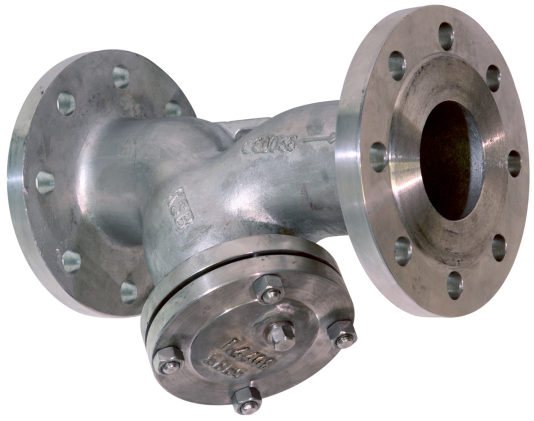
## Legal information/Copyright

Type Series Booklet BOACHEM-FSA

# Check Valves and Strainers

## Strainers to DIN/EN

# BOACHEM-FSA



### Main applications

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

### Fluids handled

- Aggressive fluids
- 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
- Feed water
- Thermal oil
- Other fluids on request.

### Operating data

Operating properties

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

- Y-pattern strainer
- Screen made of stainless steel
- Fully confined cover gasket
- Materials free from non-ferrous metals
- 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 2014/34/EU.

### Variants

- Oil and grease-free
- Serrated gasket (PTFE-coated)
- Applications down to -60 °C
- Fine screen
- Heating jacket made of 1.4541/1.4301 or 1.4571/1.4404
- Other flange designs

### Product benefits

- Fully confined cover gasket
- Strainer insert made of stainless steel

### 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-ZXA globe valve with gland packing, see type series booklet 8149.1.
- 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.
- Operating manual 8115.8

### On all enquiries/orders please specify

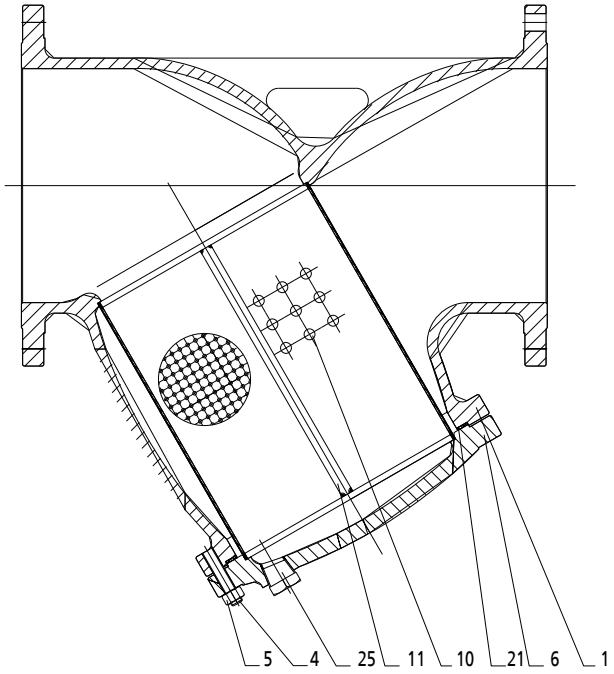
1. Type
2. Nominal pressure
3. Nominal size
4. Operating pressure
5. Differential pressure
6. Operating temperature
7. Fluid handled
8. Pipe connection
9. Variants
10. Number of type series booklet

### Pressure/temperature ratings

Permissible operating pressures in bar at temperatures in °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 | 29,7 | 28,5 | 27,4 |

### Materials

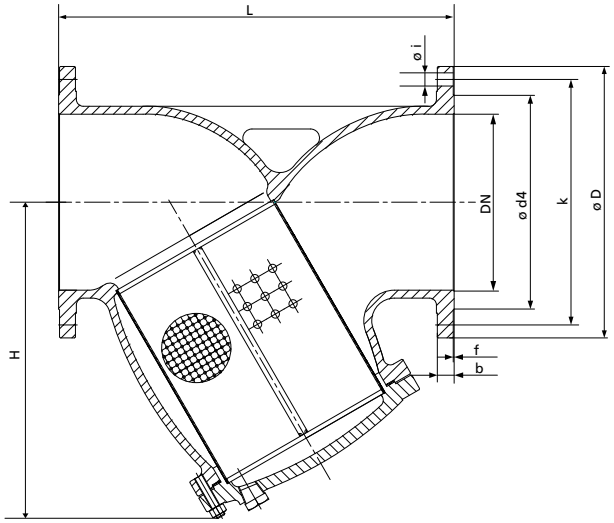



Parts list

| Part No. | Description | Material | Material number |
|---|---|---|---|
| 1 | Body | G X 5 CrNiMo 19-11-2 | 1.4408 |
| 4 | Bolt | A4-70 | |
| 5 | Nut | A4-70 | |
| 6 | Cover | G X 5 CrNiMo 19-11-2 | 1.4408 |
| 10 | Screen | X5 CrNiMo 18-10 | 1.4408 |
| 11 | Supporting cage | X5 CrNiMo 18-10 | 1.4401 |
| 21 | Gasket | CrNiSt/graphite | |
| 25 | Drain plug | X5 CrNiMo 18-10 | 1.4401 |

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

## Dimensions




Dimensions in mm

| PN | DN | L | Ø D | k | No. of bolt holes z | Ø i | Ø $d_4$ x f | b | H | [kg] |
|---|---|---|---|---|---|---|---|---|---|---|
| 10-40 | 15 | 130 | 95 | 65 | 4 | 14 | 45 x 2 | 16 | 100 | 5 |
| | 20 | 150 | 105 | 75 | 4 | 14 | 58 x 2 | 18 | 110 | 6 |
| | 25 | 160 | 115 | 85 | 4 | 14 | 68 x 2 | 18 | 120 | 7,5 |
| | 32 | 180 | 140 | 100 | 4 | 18 | 78 x 2 | 18 | 125 | 9 |
| | 40 | 200 | 150 | 110 | 4 | 18 | 88 x 2 | 18 | 150 | 10,5 |
| | 50 | 230 | 165 | 125 | 4 | 18 | 102 x 3 | 20 | 165 | 14 |
| 10/16 | 65 | 290 | 185 | 145 | 4 | 18 | 122 x 3 | 18 | 185 | 20 |
| | 80 | 310 | 200 | 160 | 8 | 18 | 138 x 3 | 20 | 190 | 24 |
| | 100 | 350 | 220 | 180 | 8 | 18 | 158 x 3 | 20 | 200 | 29 |
| | 125 | 400 | 250 | 210 | 8 | 18 | 188 x 3 | 22 | 280 | 53 |
| | 150 | 480 | 285 | 240 | 8 | 22 | 212 x 3 | 22 | 310 | 75 |
| 10 | 200 | 600 | 340 | 295 | 8 | 22 | 268 x 3 | 24 | 390 | 125 |
| | 250 | 730 | 395 | 350 | 12 | 22 | 320 x 3 | 26 | 455 | 235 |
| | 300 | 850 | 445 | 400 | 12 | 22 | 370 x 4 | 26 | 665 | 400 |
| | 350 | 980 | 505 | 460 | 16 | 22 | 430 x 4 | 26 | 725 | 600 |
| | 400 | 1100 | 565 | 515 | 16 | 26 | 482 x 4 | 26 | 783 | 900 |
| 16 | 200 | 600 | 340 | 295 | 12 | 22 | 268 x 3 | 24 | 390 | 125 |
| | 250 | 730 | 405 | 355 | 12 | 26 | 320 x 3 | 26 | 455 | 239 |
| | 300 | 850 | 460 | 410 | 12 | 26 | 378 x 4 | 28 | 665 | 408 |
| | 350 | 980 | 520 | 470 | 16 | 26 | 438 x 4 | 30 | 725 | 611 |
| | 400 | 1100 | 580 | 525 | 16 | 30 | 490 x 4 | 32 | 783 | 922 |
| 25/40 | 65 | 290 | 185 | 145 | 8 | 18 | 122 x 3 | 22 | 185 | 24 |
| | 80 | 310 | 200 | 160 | 8 | 18 | 138 x 3 | 24 | 190 | 28 |
| | 100 | 350 | 235 | 190 | 8 | 22 | 162 x 3 | 24 | 200 | 43 |
| | 125 | 400 | 270 | 220 | 8 | 26 | 188 x 3 | 26 | 280 | 71 |
| | 150 | 480 | 300 | 250 | 8 | 26 | 218 x 3 | 28 | 310 | 99 |
| 25 | 200 | 600 | 360 | 310 | 12 | 26 | 278 x 3 | 30 | 390 | 140 |
| | 250 | 730 | 425 | 370 | 12 | 30 | 335 x 3 | 32 | 455 | 252 |
| | 300 | 850 | 485 | 430 | 16 | 30 | 395 x 4 | 34 | 665 | 420 |
| | 350 | 980 | 555 | 490 | 16 | 33 | 450 x 4 | 38 | 725 | 630 |
| | 400 | 1100 | 620 | 550 | 16 | 36 | 505 x 4 | 40 | 783 | 945 |
| 40 | 200 | 600 | 375 | 320 | 12 | 30 | 285 x 3 | 34 | 390 | 148 |
| | 250 | 730 | 450 | 385 | 12 | 33 | 345 x 3 | 38 | 455 | 266 |
| | 300 | 850 | 515 | 450 | 16 | 33 | 410 x 4 | 42 | 665 | 499 |
| | 350 | 980 | 580 | 510 | 16 | 36 | 465 x 4 | 46 | 725 | 676 |
| | 400 | 1100 | 660 | 585 | 16 | 39 | 535 x 4 | 50 | 783 | 978 |

Dimensions in mm

| PN | DN | Standard mesh | | | | Fine mesh | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Kv [m³/h] | Zeta value | Mesh width | Wire diameter | Kv [m³/h] | Zeta value | Mesh width | Wire diameter |
| 10-40 | 15 | 9,0 | 1,0 | 0,75 | 1,0 | 8,6 | 1,1 | 0,5 | 1,0 |
| | 20 | 15,0 | 2,0 | 0,75 | 1,0 | 14,3 | 2,1 | 0,5 | 1,0 |
| | 25 | 21,0 | 2,0 | 0,75 | 1,0 | 20,0 | 2,1 | 0,5 | 1,0 |
| | 32 | 26,0 | 3,0 | 0,75 | 1,0 | 24,7 | 3,2 | 0,5 | 1,0 |
| | 40 | 32,0 | 4,0 | 1,0 | 1,0 | 30,4 | 4,2 | 0,8 | 1,0 |
| | 50 | 42,0 | 6,0 | 1,0 | 1,0 | 39,9 | 6,3 | 0,8 | 1,0 |
| 10/16 | 65 | 68,0 | 6,0 | 1,0 | 1,0 | 64,6 | 6,3 | 0,8 | 1,0 |
| | 80 | 100,0 | 7,0 | 1,0 | 1,0 | 95,0 | 7,4 | 0,8 | 1,0 |
| | 100 | 165,0 | 6,0 | 1,2 | 1,2 | 156,8 | 6,3 | 1,0 | 1,2 |
| | 125 | 237,0 | 7,0 | 1,2 | 1,2 | 225,2 | 7,4 | 1,0 | 1,2 |
| | 150 | 318,0 | 8,0 | 1,2 | 1,2 | 302,1 | 8,4 | 1,0 | 1,2 |
| 10 | 200 | 600,0 | 7,0 | 2,1 | 1,2 | 570,0 | 7,4 | 2,0 | 1,2 |
| | 250 | 824,0 | 9,0 | 3,0 | 2,0 | 782,8 | 9,5 | 2,1 | 2,0 |
| | 300 | 1520,0 | 6,0 | 3,0 | 2,0 | 1444,0 | 6,3 | 2,1 | 2,0 |
| | 350 | 1650,0 | 9,0 | 3,0 | 2,0 | 1567,5 | 9,5 | 2,1 | 2,0 |
| | 400 | 2150,0 | 9,0 | 3,0 | 2,0 | 2042,5 | 9,5 | 2,1 | 2,0 |
| 16 | 200 | 600,0 | 7,0 | 2,1 | 1,2 | 570,0 | 7,4 | 2,0 | 1,2 |
| | 250 | 824,0 | 9,0 | 3,0 | 2,0 | 782,8 | 9,5 | 2,1 | 2,0 |
| | 300 | 1520,0 | 6,0 | 3,0 | 2,0 | 1444,0 | 6,3 | 2,1 | 2,0 |
| | 350 | 1650,0 | 9,0 | 3,0 | 2,0 | 1567,5 | 9,5 | 2,1 | 2,0 |
| | 400 | 2150,0 | 9,0 | 3,0 | 2,0 | 2042,5 | 9,5 | 2,1 | 2,0 |
| 25/40 | 65 | 68,0 | 6,0 | 1,0 | 1,0 | 64,6 | 6,3 | 0,8 | 1,0 |
| | 80 | 100,0 | 7,0 | 1,0 | 1,0 | 95,0 | 7,4 | 0,8 | 1,0 |
| | 100 | 165,0 | 6,0 | 1,2 | 1,2 | 156,8 | 6,3 | 1,0 | 1,2 |
| | 125 | 237,0 | 7,0 | 1,2 | 1,2 | 225,2 | 7,4 | 1,0 | 1,2 |
| | 150 | 318,0 | 8,0 | 1,2 | 1,2 | 302,1 | 8,4 | 1,0 | 1,2 |
| 25 | 200 | 600,0 | 7,0 | 2,1 | 1,2 | 570,0 | 7,4 | 2,0 | 1,2 |
| | 250 | 824,0 | 9,0 | 3,0 | 2,0 | 782,8 | 9,5 | 2,1 | 2,0 |
| | 300 | 1520,0 | 6,0 | 3,0 | 2,0 | 1444,0 | 6,3 | 2,1 | 2,0 |
| | 350 | 1650,0 | 9,0 | 3,0 | 2,0 | 1567,5 | 9,5 | 2,1 | 2,0 |
| | 400 | 2150,0 | 9,0 | 3,0 | 2,0 | 2042,5 | 9,5 | 2,1 | 2,0 |
| 40 | 200 | 600,0 | 7,0 | 2,1 | 1,2 | 570,0 | 7,4 | 2,0 | 1,2 |
| | 250 | 824,0 | 9,0 | 3,0 | 2,0 | 782,8 | 9,5 | 2,1 | 2,0 |
| | 300 | 1520,0 | 6,0 | 3,0 | 2,0 | 1444,0 | 6,3 | 2,1 | 2,0 |
| | 350 | 1650,0 | 9,0 | 3,0 | 2,0 | 1567,5 | 9,5 | 2,1 | 2,0 |
| | 400 | 2150,0 | 9,0 | 3,0 | 2,0 | 2042,5 | 9,5 | 2,1 | 2,0 |

## 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 |

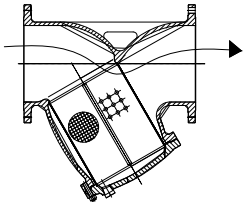
## Other flange designs

- 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

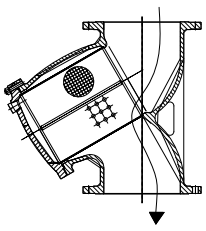
## Installation instructions

The flow direction must correspond to the arrow indicated on the valve body.

In both horizontal and vertical pipes, we recommend to install the strainer with the screen hanging downwards to facilitate cleaning.



Horizontal installation



Vertical installation

Strainer

# BOA-S

PN 6/16/25
DN 15-400

## Type Series Booklet


KSB

# Contents

# Check Valves and Strainers

## Strainers to DIN/EN

# BOA-S


### Main applications

- Hot-water heating systems
- Air-conditioning systems
- Process engineering
- Chemical industry
- Petrochemical industry
- Sugar industry
- Heat recovery systems
- Boiler feed applications
- Boiler recirculation
- Pulp and paper industry

### Fluids handled

- Hot water
- Saturated steam
- Thermal oil
- Liquids and gases not chemically or mechanically aggressive to the valve materials.
- Other fluids on request.

### Operating data

Operating properties

| Characteristic | Value | |
|---|---|---|
| | EN-GJL-250 | EN-GJS-400-18-LT |
| Nominal pressure | PN 6/16 | PN 16/25 |
| Nominal size | DN 15 - 400 | DN 15 - 300 |
| Max. permissible pressure [bar] | 16 | 25 |
| Min. permissible temperature [°C] | -10 | -10 |
| Max. permissible temperature [°C] | +300 | +350 |

Selection as per pressure/temperature ratings (⇨ Page 6)

### Body materials

Overview of available materials

| Material | Material number | Temperature limit |
|---|---|---|
| EN-GJL-250 | 5.1301 | ≤ 300 °C |
| EN-GJS-400-18-LT | 5.3103 | ≤ 350 °C |

### Design details

### Design

- Y-pattern strainer
- Screen made of stainless steel
- Screen accurately guided in cover and body
- Outside confined cover gasket
- Drain plug
- Size DN 150 and above: additional screen cage made of perforated stainless steel sheet
- Flanges to DIN EN 1092-2 Type 21
- Exterior coating: blue, RAL 5002
- 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

- Fine mesh
- High temperature resistant paint, aluminium grey (EN-GJS-400-18-LT only)
- Other flange designs (EN-GJS-400-18-LT only)
- Certification to customer specification

### Product benefits

- Long service life due to stainless steel screen.
- Time and cost saving replacement of screen without removing the body insulation by using the studs as centering aids.
- Standard drain plug for easy inspection and drainage of strainer, particularly of large-diameter strainers.

## Related documents

Information/documents

| Document | Reference number |
|---|---|
| Operating manual | 0570.8 |

## Purchase order specifications

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

1. Type
2. Nominal pressure
3. Nominal size
4. Material
5. Variants
6. Reference number

## Pressure/temperature ratings

Test pressure and operating pressure

| PN | Material | Shell and leak test | Permissible operating pressure [bar][1)2)] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | With water | | | | | | | | |
| | | Tests P10 and P11 to DIN EN 12266-1 | [°C] | | | | | | | |
| | | [bar] | -10 to +120 | 150 | 180 | 200 | 230 | 250 | 300 | 350 |
| 6 | EN-GJL-250 | 9 | 6 | 5,4 | 5 | 4,8 | 4,4 | 4,2 | 3,6 | - |
| 16 | | 24 | 16 | 14,4 | 13,4 | 12,8 | 11,8 | 11,2 | 9,6 | - |
| 16 | EN-GJS-400-18-LT | 24 | 16 | 15,5 | - | 14,7 | - | 13,9 | 12,8 | 11,2 |
| 25 | | 37,5 | 25 | 24,3 | - | 23 | - | 21,8 | 20 | 17,5 |

## Materials

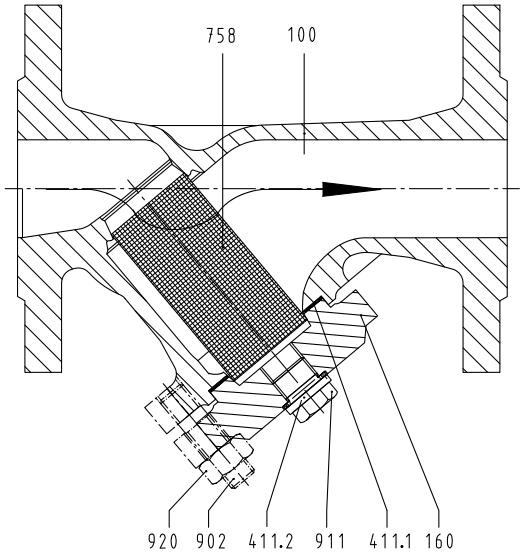



**Fig. 1:** BOA-S

Parts list

| Part No. | Description | PN | Material | Note |
|---|---|---|---|---|
| 100 | Body | 6, 16 | EN-GJL-250 (5.1301) | - |
| | | 16, 25 | EN-GJS-400-18-LT (5.3103) | - |
| 160[3)] | Cover | 6,16 | EN-GJL-250 (5.1301) | - |
| | | 16, 25 | EN-GJS-400-18-LT (5.3103) | - |
| 411.1[4)] | Joint ring | 6, 16 | CrNi steel/graphite | - |
| | | 16, 25 | CrNi steel/graphite | - |
| 411.2 | Joint ring | 6, 16, 25 | A4 | - |
| 758[4)] | Screen | 6, 16 | X 6 CrNiTi 18 10 (1.4541) | - |
| | | 16, 25 | X 5 CrNi 18 10 (1.4301) | - |
| 191 | Screen cage | 6, 16 | X 6 CrNiTi 18 10 (1.4541) | ≥ DN 150 |
| | | 16, 25 | X 5 CrNi 18 10 (1.4301) | ≥ DN 150 |
| 902 | Stud | 6, 16 | 5.6 or 8.8 | gal ZN |
| | | 16, 25 | C 35 E | gal ZN |

1) Intermediate temperatures can be derived by linear interpolation.
2) Static load
3) Spare part (complete with screw plug)
4) Spare part

| Part No. | Description | PN | Material | Note |
|---|---|---|---|---|
| 911 | Drain plug | 6, 16 | A4 or A2 | - |
| | | 16, 25 | C 35 E | gal ZN |
| 920 | Hexagon nut | 6, 16 | 5-2 or 8 | gal ZN |
| | | 16, 25 | C 35 E | gal ZN |

## Dimensions and weights

### Dimensions and weights of EN-GJL-250 (5.1301) variant

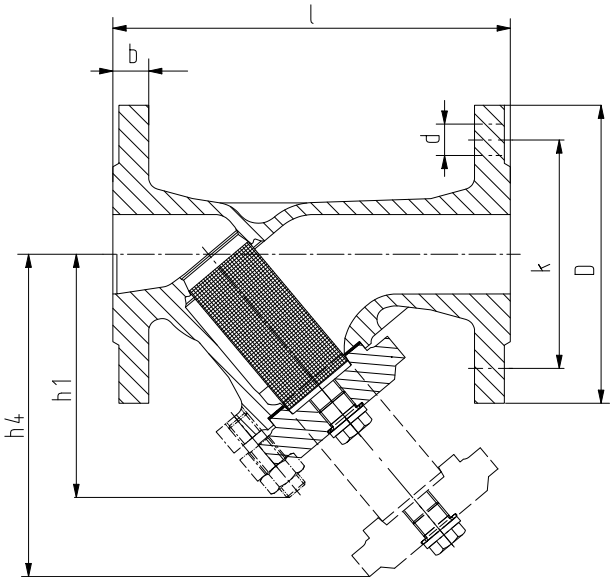



**Fig. 2:** BOA-S

Dimensions [mm] and weights [kg]

| PN | DN | l | D | k | n × d | b | $h_1$ | $h_4$ | Drain plug | [kg] |
|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 15 | 130 | 80 | 55 | 4 × 11 | 12 | 90 | 135 | G ⅜" | 2,5 |
| | 20 | 150 | 90 | 65 | 4 × 11 | 14 | 100 | 160 | G ⅜" | 3 |
| | 25 | 160 | 100 | 75 | 4 × 11 | 14 | 115 | 180 | G ⅜" | 4,5 |
| | 32 | 180 | 120 | 90 | 4 × 14 | 16 | 135 | 215 | G ⅜" | 5,5 |
| | 40 | 200 | 130 | 100 | 4 × 14 | 16 | 150 | 240 | G ⅜" | 7 |
| | 50 | 230 | 140 | 110 | 4 × 14 | 16 | 160 | 250 | G ⅜" | 9 |
| | 65 | 290 | 160 | 130 | 4 × 14 | 16 | 180 | 285 | G ½" | 13 |
| | 80 | 310 | 190 | 150 | 4 × 18 | 18 | 215 | 330 | G ½" | 19 |
| | 100 | 350 | 210 | 170 | 4 × 18 | 18 | 240 | 395 | G ½" | 26 |
| | 125 | 400 | 240 | 200 | 8 × 18 | 20 | 280 | 455 | G ½" | 38 |
| | 150 | 480 | 265 | 225 | 8 × 18 | 20 | 330 | 525 | G ½" | 54 |
| | 200 | 600 | 320 | 280 | 8 × 18 | 22 | 405 | 650 | G ½" | 110 |
| 16 | 15 | 130 | 95 | 65 | 4 × 14 | 14 | 90 | 135 | G ⅜" | 3 |
| | 20 | 150 | 105 | 75 | 4 × 14 | 16 | 100 | 160 | G ⅜" | 4 |
| | 25 | 160 | 115 | 85 | 4 × 14 | 16 | 115 | 180 | G ⅜" | 5 |
| | 32 | 180 | 140 | 100 | 4 × 18 | 18 | 135 | 215 | G ⅜" | 7 |
| | 40 | 200 | 150 | 110 | 4 × 18 | 18 | 150 | 240 | G ⅜" | 9 |
| | 50 | 230 | 165 | 125 | 4 × 18 | 20 | 160 | 250 | G ⅜" | 12 |
| | 65 | 290 | 185 | 145 | 4 × 18 | 20 | 180 | 285 | G ½" | 16 |
| | 80 | 310 | 200 | 160 | 8 × 18 | 22 | 215 | 330 | G ½" | 21 |
| | 100 | 350 | 220 | 180 | 8 × 18 | 24 | 240 | 395 | G ½" | 30 |
| | 125 | 400 | 250 | 210 | 8 × 18 | 26 | 280 | 455 | G ½" | 43 |
| | 150 | 480 | 285 | 240 | 8 × 22 | 26 | 330 | 525 | G ½" | 61 |
| | 200 | 600 | 340 | 295 | 12 × 22 | 30 | 405 | 650 | G ½" | 121 |
| | 250 | 730 | 405 | 355 | 12 × 26 | 32 | 540 | 870 | G ½" | 154 |
| | 300 | 850 | 460 | 410 | 12 × 26 | 32 | 680 | 1110 | G ½" | 255 |
| | 350 | 980 | 520 | 470 | 16 × 28 | 36 | 755 | 1200 | G 1 ½" | 373 |
| | 400 | 1100 | 580 | 525 | 16 × 31 | 38 | 835 | 1320 | G 1 ½" | 540 |

Dimensions [mm]

| PN | DN | Standard mesh | | | | Fine mesh | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Kv [m³/h] | Zeta value | Mesh width | Wire diameter | Kv [m³/h] | Zeta value | Mesh width | Wire diameter |
| 6 | 15 | 5,7 | 2,5 | 1,0 | 0,5 | 5,3 | 2,9 | 0,25 | 0,16 |
| | 20 | 10,4 | 2,4 | 1,0 | 0,5 | 9,5 | 2,8 | 0,25 | 0,16 |
| | 25 | 16,4 | 2,3 | 1,0 | 0,5 | 15,1 | 2,7 | 0,25 | 0,16 |
| | 32 | 27,3 | 2,3 | 1,0 | 0,5 | 24,7 | 2,7 | 0,25 | 0,16 |
| | 40 | 42 | 2,3 | 1,0 | 0,5 | 38,2 | 2,8 | 0,25 | 0,16 |
| | 50 | 64,7 | 2,4 | 1,0 | 0,5 | 57,2 | 3,0 | 0,25 | 0,16 |
| | 65 | 96 | 3,1 | 1,25 | 0,63 | 81,1 | 4,3 | 0,25 | 0,16 |
| | 80 | 149 | 3,0 | 1,25 | 0,63 | 119 | 4,6 | 0,25 | 0,16 |
| | 100 | 223 | 3,2 | 1,6 | 1,0 | 181 | 4,9 | 0,25 | 0,16 |
| | 125 | 347 | 3,2 | 1,6 | 1,0 | 281 | 5,0 | 0,25 | 0,16 |
| | 150 | 480 | 3,5 | 1,6 | 1,0 | 380 | 5,6 | 0,25 | 0,16 |
| | 200 | 853 | 3,5 | 1,6 | 1,0 | 672 | 5,7 | 0,25 | 0,16 |
| 16 | 15 | 5,7 | 2,5 | 1,0 | 0,5 | 5,3 | 2,9 | 0,25 | 0,16 |
| | 20 | 10,4 | 2,4 | 1,0 | 0,5 | 9,5 | 2,8 | 0,25 | 0,16 |
| | 25 | 16,4 | 2,3 | 1,0 | 0,5 | 15,1 | 2,7 | 0,25 | 0,16 |
| | 32 | 27,3 | 2,3 | 1,0 | 0,5 | 24,7 | 2,7 | 0,25 | 0,16 |
| | 40 | 42 | 2,3 | 1,0 | 0,5 | 38,2 | 2,8 | 0,25 | 0,16 |
| | 50 | 64,7 | 2,4 | 1,0 | 0,5 | 57,2 | 3,0 | 0,25 | 0,16 |
| | 65 | 96 | 3,1 | 1,25 | 0,63 | 81,1 | 4,3 | 0,25 | 0,16 |
| | 80 | 149 | 3,0 | 1,25 | 0,63 | 119 | 4,6 | 0,25 | 0,16 |
| | 100 | 223 | 3,2 | 1,6 | 1,0 | 181 | 4,9 | 0,25 | 0,16 |
| | 125 | 347 | 3,2 | 1,6 | 1,0 | 281 | 5,0 | 0,25 | 0,16 |
| | 150 | 480 | 3,5 | 1,6 | 1,0 | 380 | 5,6 | 0,25 | 0,16 |
| | 200 | 853 | 3,5 | 1,6 | 1,0 | 672 | 5,7 | 0,25 | 0,16 |
| | 250 | 1104 | 5,1 | 1,6 | 1,0 | 838 | 8,9 | 0,25 | 0,16 |
| | 300 | 1450 | 6,1 | 1,6 | 1,0 | 1090 | 10,9 | 0,25 | 0,16 |
| | 350 | 1800 | 7,4 | 1,6 | 1,0 | 1339 | 13,1 | 0,25 | 0,16 |
| | 400 | 2200 | 8,4 | 1,6 | 1,0 | 1640 | 14,9 | 0,25 | 0,16 |

### Mating dimensions as per standard

| | |
|---|---|
| Face-to-face lengths: | DIN EN 558/1, ISO 5752/1 |
| Flanges: | DIN EN 1092-2, flange type 21 |
| Flange facing: | DIN EN 1092-2, type B |

## Dimensions and weights of EN-GJS-400-18-LT (5.3103) variant

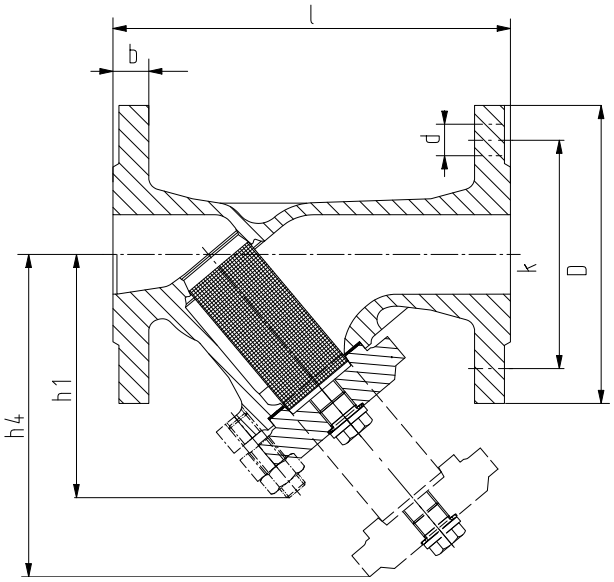



**Fig. 3:** BOA-S

Dimensions [mm] and weights [kg]

| PN | DN | l | D | k | n × d | b | $h_1$ | $h_4$ | Drain plug | [kg] |
|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 15 | 130 | 95 | 65 | 4 × 14 | 16 | 75 | 115 | G ½" | 3,5 |
| | 20 | 150 | 105 | 75 | 4 × 14 | 18 | 75 | 115 | G ½" | 4 |
| | 25 | 160 | 115 | 85 | 4 × 14 | 18 | 90 | 135 | G ½" | 5,5 |
| | 32 | 180 | 140 | 100 | 4 × 18 | 20 | 90 | 135 | G ½" | 7 |
| | 40 | 200 | 150 | 110 | 4 × 18 | 20 | 110 | 170 | G ½" | 9 |
| | 50 | 230 | 165 | 125 | 4 × 18 | 22 | 120 | 190 | G ½" | 12 |
| | 65 | 290 | 185 | 145 | 4 × 18 | 24 | 140 | 220 | G ½" | 16 |
| | 80 | 310 | 200 | 160 | 8 × 18 | 26 | 165 | 265 | G 1" | 21 |
| | 100 | 350 | 220 | 180 | 8 × 18 | 28 | 220 | 340 | G 1" | 28 |
| | 125 | 400 | 250 | 210 | 8 × 18 | 30 | 260 | 410 | G 1" | 41 |
| | 150 | 480 | 285 | 240 | 8 × 22 | 30 | 300 | 475 | G 1" | 58 |
| | 200 | 600 | 340 | 295 | 12 × 22 | 34 | 360 | 580 | G 1" | 121 |
| | 250 | 730 | 405 | 355 | 12 × 26 | 36 | 470 | 680 | G 1" | 154 |
| | 300 | 850 | 460 | 410 | 12 × 26 | 36 | 560 | 820 | G 1" | 255 |
| 25 | 15 | 130 | 95 | 65 | 4 × 14 | 16 | 75 | 115 | G ½" | 3,5 |
| | 20 | 150 | 105 | 75 | 4 × 14 | 18 | 75 | 115 | G ½" | 4 |
| | 25 | 160 | 115 | 85 | 4 × 14 | 18 | 90 | 135 | G ½" | 5,5 |
| | 32 | 180 | 140 | 100 | 4 × 18 | 20 | 90 | 135 | G ½" | 7 |
| | 40 | 200 | 150 | 110 | 4 × 18 | 20 | 110 | 170 | G ½" | 9 |
| | 50 | 230 | 165 | 125 | 4 × 18 | 22 | 120 | 190 | G ½" | 12 |
| | 65 | 290 | 185 | 145 | 8 × 18 | 24 | 140 | 220 | G ½" | 16 |
| | 80 | 310 | 200 | 160 | 8 × 18 | 26 | 165 | 265 | G 1" | 21 |
| | 100 | 350 | 235 | 190 | 8 × 22 | 28 | 220 | 340 | G 1" | 32 |
| | 125 | 400 | 270 | 220 | 8 × 26 | 30 | 260 | 410 | G 1" | 47 |
| | 150 | 480 | 300 | 250 | 8 × 26 | 34 | 300 | 475 | G 1" | 64 |
| | 200 | 600 | 360 | 310 | 12 × 26 | 34 | 360 | 580 | G 1" | 133 |

Dimensions [mm]

| PN | DN | Standard mesh | | | | Fine mesh | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Kv [m³/h] | Zeta value | Mesh width | Wire diameter | Kv [m³/h] | Zeta value | Mesh width | Wire diameter |
| 16 | 15 | 6,3 | 2,1 | 1,25 | 0,71 | 5,0 | 3,2 | 0,25 | 0,17 |
| | 20 | 11,3 | 2,0 | 1,25 | 0,71 | 9,0 | 3,2 | 0,25 | 0,17 |
| | 25 | 18,5 | 1,8 | 1,25 | 0,71 | 14,8 | 2,9 | 0,25 | 0,17 |
| | 32 | 22,5 | 3,3 | 1,25 | 0,71 | 18,0 | 5,2 | 0,25 | 0,17 |
| | 40 | 37,5 | 2,9 | 1,25 | 0,71 | 30,0 | 4,6 | 0,25 | 0,17 |
| | 50 | 60,0 | 2,8 | 1,25 | 0,71 | 48,0 | 4,4 | 0,25 | 0,17 |
| | 65 | 110,5 | 2,3 | 2,0 | 0,50 | 85,0 | 4,0 | 0,25 | 0,17 |
| | 80 | 170,3 | 2,3 | 2,0 | 0,50 | 131,0 | 3,8 | 0,25 | 0,17 |

| PN | DN | Standard mesh | | | | Fine mesh | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Kv [m³/h] | Zeta value | Mesh width | Wire diameter | Kv [m³/h] | Zeta value | Mesh width | Wire diameter |
| 16 | 100 | 245,7 | 2,7 | 2,0 | 0,50 | 189,0 | 4,5 | 0,25 | 0,17 |
| | 125 | 416,0 | 2,3 | 2,0 | 0,50 | 320,0 | 3,8 | 0,25 | 0,17 |
| | 150 | 608,4 | 2,2 | 2,0 | 0,50 | 494,0 | 3,3 | 0,25 | 0,17 |
| | 200 | 999,7 | 2,6 | 2,0 | 0,50 | 818,0 | 3,8 | 0,25 | 0,17 |
| | 250 | 1440,4 | 3,0 | 2,0 | 0,50 | 1184,0 | 4,5 | 0,25 | 0,17 |
| | 300 | 1976,0 | 3,3 | 2,0 | 0,50 | 1631,0 | 4,9 | 0,25 | 0,17 |
| 25 | 15 | 6,3 | 2,1 | 1,25 | 0,71 | 5,0 | 3,2 | 0,25 | 0,17 |
| | 20 | 11,3 | 2,0 | 1,25 | 0,71 | 9,0 | 3,2 | 0,25 | 0,17 |
| | 25 | 18,5 | 1,8 | 1,25 | 0,71 | 14,8 | 2,9 | 0,25 | 0,17 |
| | 32 | 22,5 | 3,3 | 1,25 | 0,71 | 18,0 | 5,2 | 0,25 | 0,17 |
| | 40 | 37,5 | 2,9 | 1,25 | 0,71 | 30,0 | 4,6 | 0,25 | 0,17 |
| | 50 | 60,0 | 2,8 | 1,25 | 0,71 | 48,0 | 4,4 | 0,25 | 0,17 |
| | 65 | 110,5 | 2,3 | 2,0 | 0,50 | 85,0 | 4,0 | 0,25 | 0,17 |
| | 80 | 170,3 | 2,3 | 2,0 | 0,50 | 131,0 | 3,8 | 0,25 | 0,17 |
| | 100 | 245,7 | 2,7 | 2,0 | 0,50 | 189,0 | 4,5 | 0,25 | 0,17 |
| | 125 | 416,0 | 2,3 | 2,0 | 0,50 | 320,0 | 3,8 | 0,25 | 0,17 |
| | 150 | 608,4 | 2,2 | 2,0 | 0,50 | 494,0 | 3,3 | 0,25 | 0,17 |
| | 200 | 999,7 | 2,6 | 2,0 | 0,50 | 818,0 | 3,8 | 0,25 | 0,17 |

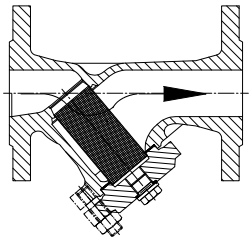
## Mating dimensions as per standard

| | |
|---|---|
| Face-to-face lengths: | DIN EN 558/1, ISO 5752/1 |
| Flanges: | DIN EN 1092-2, flange type 21-2 |
| Flange facing: | DIN EN 1092-2, type B |

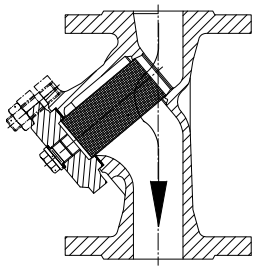
## Installation instructions

The flow direction must correspond to the arrow indicated on the valve body.

In both horizontal and vertical pipes, installing the strainer with the screen hanging downwards is recommended to facilitate cleaning.



Horizontal installation



Vertical installation

## Chemical resistance chart

The information provided in this chemical resistance chart is based on experience, the Dechema lists as well as manufacturer information. Corrosion resistance is largely dependent on the operating conditions, temperatures and concentrations. Hydroabrasive wear in fluids containing solids is not covered in this list. All information provided herein, therefore, only serves as an orientation. Warranty claims may not be asserted on the basis of this list!

Symbols key

| Symbol | Description |
|---|---|
| ✓ | The fluid handled is not normally aggressive toward the materials. |
| ✖ | The fluid handled is aggressive toward the materials. Valve cannot be used. |
| ○ | The material or valve can only be used under certain operating conditions. Please enquire accordingly, stating the operating conditions such as concentration, temperature, pH and composition of the fluid handled. |

Chemical resistance chart for water[5)]

| Fluids handled | A[6)] | B[7)] |
|---|---|---|
| Brackish water[8)] | ✖ | ✖ |
| Service water[8)] | ✓ | ✓ |
| Fire-fighting water | ✓ | ✓ |
| Chlorinated water (≤ 0.6 mg/kg) | ✓ | ✓ |
| Deionised water (demineralised water)[9)] | ○ | ○ |
| Distilled water[9)] | ○ | ○ |
| Boiler feed water | ✓ | ✓ |
| Hot water | ✓ | ✓ |
| High-temperature hot water | ✓ | ✓ |
| Condensate | ✓ | ✓ |
| Oil-free cooling water | ✓ | ✓ |
| Oil-containing cooling water | ✓ | ✓ |
| Ozonised water (≤ 0.5 mg/kg) | ✓ | ✓ |
| Pure water | ✓ | ✓ |
| Seawater | ✖ | ✖ |
| Scale-forming water[8)] | ○ | ○ |
| Raw water[8)] | ✓ | ✓ |
| Partly desalinated water[9)] | ○ | ○ |
| Fully desalinated water[9)] | ○ | ○ |
| Municipal waste water[8)10)] | ✓ | ✓ |
| Industrial waste water[8)11)] | ✓ | ✓ |

Chemical resistance chart for oils (aromatic content 5 mg/kg)

| Fluids handled | A[6)] | B[7)] |
|---|---|---|
| Vegetable oils | ✓ | ✓ |
| Mineral oils | ✓ | ✓ |
| Synthetic oils | ✓ | ✓ |
| Crude oil | ✓ | ✓ |
| Petroleum | ✓ | ✓ |
| Light fuel oil | ✓ | ✓ |
| Linseed oil | ✓ | ✓ |
| Oil/water emulsion[8)] | ✓ | ✓ |
| Jet fuel | ○[12)] | ✓ |
| Petrol | ○[12)] | ✓ |
| Kerosene | ○[12)] | ✓ |

Chemical resistance chart for refrigerants

| Fluids handled | A[6)] | B[7)] |
|---|---|---|
| Ammonium hydroxide (≤ 30 %, ≤ 25 °C) | ✓ | ✓ |
| Glycol (ethylene glycol) | ✓ | ✓ |
| Propylene glycol | ✓ | ✓ |
| Water/glycol mixture (20 % ≤ c ≤ 50 %, ≤ 90 °C) | ✓ | ✓ |
| Inorganic cooling brine, pH 7.5 | ✓ | ✓ |

Chemical resistance chart for thermal oils

| Fluids handled | A[6)] | B[7)] |
|---|---|---|
| Synthetic thermal oils | ✓ | ✓ |
| Mineral-based thermal oils | ✓ | ✓ |

Chemical resistance chart for acids

| Fluids handled | A[6)] | B[7)] |
|---|---|---|
| Hydrochloric acid | ✖ | ✖ |
| Sulphuric acid (pure, technical, concentrated) | ✖ | ✖ |
| Sulphurous acid | ✖ | ✖ |
| Fatty acid | ✖ | ✖ |
| Nitric acid | ✖ | ✖ |

Chemical resistance chart for cleaning agents

| Fluids handled | A[6)] | B[7)] |
|---|---|---|
| Lye for bottle rinsers (e.g. P3) ≤ 80 °C[8)] | ○ | ○ |
| Lye for metal cleaning ≤ 80 °C[8)] | ○ | ○ |

Chemical resistance chart for steam

| Fluids handled | A[6)] | B[7)] |
|---|---|---|
| Saturated steam | ○[12)] | ✓ |

Chemical resistance chart for other fluids

| Fluids handled | A[6)] | B[7)] |
|---|---|---|
| Sodium hydroxide (≤ 50 %, ≤ 50 °C) | ○ | ○ |
| Natural gas | ✓ | ✓ |
| Oil-containing compressed air | ✓ | ✓ |
| Dry chlorine (≤ 30 °C) | ○ | ✓ |
| Ammonia | ✓ | ✓ |
| Butane (liquefied gas) | ✓ | ✓ |
| Aqueous glycerine | ✓ | ✓ |
| Carbon dioxide (gas) | ✓ | ✓ |
| Carbon dioxide (aqueous solution) | ✖ | ✖ |

5) General criteria for water to be handled by products made of non-alloyed materials: pH > 7; chlorides (Cl-) < 150 mg/kg; chlorine (Cl) < 0.6 mg/kg. Other factors to be considered: hardness, carbon dioxide content ($CO_2$), oxygen ($O_2$) and dissolved substances. Contact KSB if limits are exceeded!
6) EN-GJL-250, Tmax. +300 °C
7) EN-GJS-400-18-LT, Tmax. +350 °C
8) Without solids
9) Can only be used for installations and the respective water quality as specified in the VdTÜV 1466 or VDI 2035 guidelines. A pH ≥ 9.5 and an oxygen content of ≤ 0.02 mg/l are also recommended.
10) Biologically treated
11) Non-corrosive, non-abrasive
12) EN-GJS-400-18-LT is recommended for safety reasons (ductility).

**По вопросам продаж и поддержки обращайтесь:**

Архангельск (8182)63-90-72
Астана (7172)727-132
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
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Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
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Череповец (8202)49-02-64
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