

## Ball float steam trap

### Ball float steam trap PN16 / PN40

- with flanges
- with screwed sockets
- with socket weld ends
- with butt weld ends

(Fig. 631....1)

(Fig. 631....2)

(Fig. 631....3)

(Fig. 631....4)

Grey cast iron

SG iron

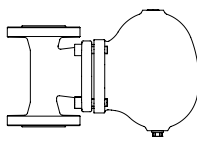
Forged steel/  
Cast steel

Stainless steel

Low temperature steel

Fig. 631

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### Ball float steam trap PN63 / PN100

- with flanges
- with socket weld ends
- with butt weld ends

(Fig. 631....1)

(Fig. 631....3)

(Fig. 631....4)

High

temperature steel

Fig. 631

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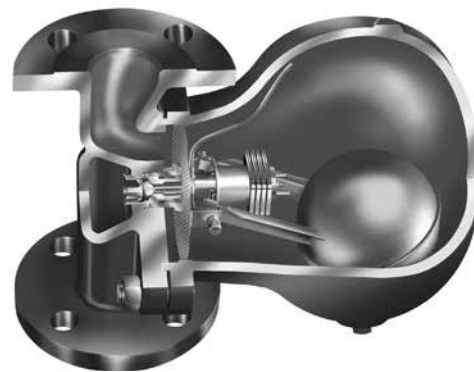
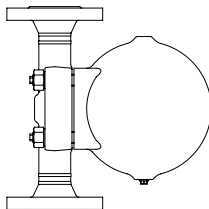


Fig. 631....1  
vertical installation

### Ball float steam trap PN160

- with flanges
- with socket weld ends
- with butt weld ends

(Fig. 631....1)

(Fig. 631....3)

(Fig. 631....4)

Angle pattern design:

- with flanges

(Fig. 632....1)

- with butt weld ends

(Fig. 632....4)

High

temperature steel

Fig. 631 / Fig. 632

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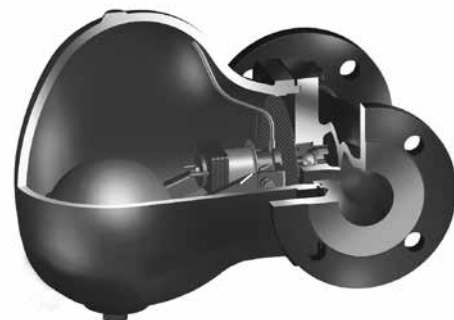
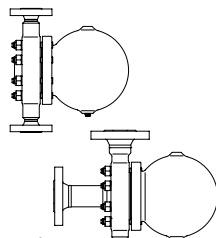


Fig. 631....1  
horizontal installation

### Ball float steam trap PN16 / PN40

- with flanges
- with socket weld ends
- with butt weld ends

(BR 633....1)

(BR 633....3)

(BR 633....4)

Forged steel/  
Grey cast iron

Forged steel//Cast  
steel

Stainless steel

Low temperature steel

(BR 633....1)

(BR 639....1)

BR 633

BR 633 R4-P

BR 639

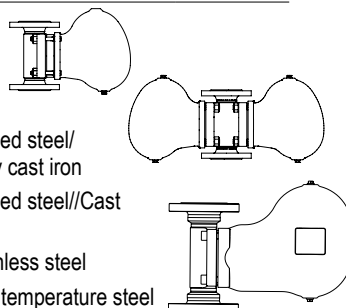
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- with flanges R4-P

- with flanges



### Ball float steam trap PN16 / PN40

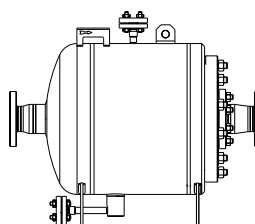
- with flanges

(Fig. 637....1)

Steel

Fig. 637

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### Ball float steam trap for drainage of water from compressed air and gas systems

#### PN16 / PN40

- with flanges
- with screwed sockets
- with socket weld ends
- with butt weld ends

(Fig. 630....1)

(Fig. 630....2)

(Fig. 630....3)

(Fig. 630....4)

Grey cast iron

SG iron

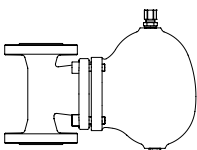
Forged steel/  
Cast steel

Stainless steel

Low temperature steel

Fig. 630

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#### Description

Float-controlled steam trap are used to drain condensate and other liquids from steam and other gases. Discharge is continuous. The volume is adjusted immediately via the liquid level in the valve and a robust float. Steam traps can be supplied in EN materials and alternatively in ASME materials.

#### Features

- Backflow-free discharge even with extreme pressure and volume fluctuations
- integrated thermal control unit for automatic venting (except BR630)
- Integrated non return protection (except BR633 and BR637)
- Inside Strainer (except BR633 and BR637)
- Union for recovery pipe and bypass possible on customer request
- Flow direction can easily be changed on site (except BR633 R4-P and BR637)
- The controller can be replaced without removing the trap body from the pipework (except BR637)
- Drain plug

#### Options

- Blow down valve
- Manual venting valve

#### Types of connection (depends on material and nominal pressure)

- Flanges with flange facing and drilling acc. to DIN EN 1092-1
- Screwed sockets Rp acc. to DIN EN 10226-1
- Socket weld ends acc. to DIN EN 12760
- Butt weld ends with joint preparation type 1.3 acc. to EN ISO 9692-1
- Other connection types on request



| Pressure-temperature limits |                                   |          | Intermediate values of the max. allowable operating pressures may be calculated by linear interpolation between the nearest lower and higher temperature values. |     |     |      |       |       |      |      |      |      |      |      |      |       |      |       |       |       |       |      |      |      |      |      |      |      |   |
|-----------------------------|-----------------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|------|-------|-------|------|------|------|------|------|------|------|-------|------|-------|-------|-------|-------|------|------|------|------|------|------|------|---|
| Fig.                        | Material                          | T (°C)   | -60                                                                                                                                                              | -50 | -10 | 20   | 38    | 50    | 100  | 120  | 150  | 200  | 250  | 300  | 325  | 350   | 370  | 400   | 450   | 480   | 490   | 500  | 510  | 520  | 525  | 530  | 540  | 545  |   |
| 12.631                      | EN-JL1040                         |          | -                                                                                                                                                                | -   | -   | -    | 16,0  | -     | -    | -    | 14,4 | 12,8 | 11,2 | 9,6  | -    | -     | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    |   |
| 25.631                      | EN-JS1049                         |          | -                                                                                                                                                                | -   | -   | -    | 40,0  | -     | -    | 38,8 | 36,8 | 34,8 | 32,0 | 28,0 | -    | 28,0  | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    |   |
| 45.631                      | Body: 1.0460 /<br>Hood: 1.0619+N  |          | -                                                                                                                                                                | -   | -   | -    | 40,0  | -     | -    | 38,1 | 35,1 | 32,0 | 28,0 | 24,5 | -    | 24,5  | -    | 21,0  | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 55.631                      | Body: 1.4541 /<br>Hood: 1.4301    |          | -                                                                                                                                                                | -   | -   | 40,0 | -     | 39,6  | 38,6 | 37,3 | 34,5 | 32,0 | 28,0 | 24,5 | -    | 24,5  | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 85.631                      | Body: 1.0571 /<br>Hood: 1.6220+QT |          | -                                                                                                                                                                | -   | -   | -    | 40,0  | -     | -    | -    | -    | -    | -    | 39,2 | -    | -     | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    |   |
| 86.631                      | Body: 1.5415 /<br>Hood: 1.7357    |          | -                                                                                                                                                                | -   | -   | -    | 63,0  | -     | -    | -    | -    | 61,5 | 54,0 | 51,0 | -    | 51,0  | -    | 47,1  | 43,5  | 34,1  | 31,0  | 27,9 | 22,2 | 17,7 | 15,9 | -    | -    | -    |   |
| 87.631                      | Body: 1.5415 /<br>Hood: 1.7357    |          | -                                                                                                                                                                | -   | -   | -    | 100,0 | -     | -    | -    | -    | 97,6 | 85,7 | 80,9 | -    | 80,9  | -    | 74,7  | 69,0  | 54,2  | 49,2  | 44,2 | 35,2 | 28,0 | 25,1 | -    | -    | -    |   |
| 87.631                      | Body: 1.7335 /<br>Hood: 1.7357    |          | -                                                                                                                                                                | -   | -   | -    | -     | 100,0 | -    | -    | -    | -    | -    | -    | -    | -     | 95,2 | -     | 90,0  | 84,2  | 72,0  | 68,0 | 65,2 | 55,2 | 44,7 | -    | 37,1 | -    | - |
| 88.631                      | Body: 1.7335 /<br>Hood: 1.7357    |          | -                                                                                                                                                                | -   | -   | -    | -     | 160,0 | -    | -    | -    | -    | -    | -    | -    | 152,3 | -    | 144,0 | 134,8 | 115,2 | 101,0 | 88,0 | 77,0 | 67,0 | -    | 57,5 | 46,4 | 41,8 |   |
| 45.633                      | Body: 1.0460 /<br>Hood: 1.0619+N  |          | -                                                                                                                                                                | -   | -   | -    | 40,0  | -     | -    | 38,1 | 35,1 | 32,0 | 28,0 | 24,5 | -    | 24,5  | -    | 21,0  | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 55.633                      | Body: 1.4541 /<br>Hood: 1.4301    |          | -                                                                                                                                                                | -   | -   | 40,0 | -     | 39,6  | 38,6 | 37,3 | 35,4 | 32,0 | 28,0 | 24,5 | -    | 24,5  | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 85.633                      | Body: 1.0571 /<br>Hood: 1.6220+QT |          | -                                                                                                                                                                | -   | -   | -    | -     | 40,0  | -    | -    | -    | -    | -    | -    | 39,2 | -     | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 42.639                      | Body: 1.0460 /<br>Hood: EN-JL1040 | P (barg) | -                                                                                                                                                                | -   | -   | 16,0 | -     | -     | -    | 14,4 | 12,8 | 11,2 | 9,6  | -    | -    | -     | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 45.639                      | Body: 1.0460 /<br>Hood: 1.0619+N  |          | -                                                                                                                                                                | -   | -   | 40,0 | -     | -     | 38,1 | 35,1 | 32,0 | 28,0 | 24,5 | -    | 24,5 | -     | 21,0 | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 55.639                      | Body: 1.4541 /<br>Hood: 1.4301    |          | -                                                                                                                                                                | -   | -   | 40,0 | -     | 39,6  | 38,6 | 37,3 | 35,4 | 32,0 | 28,0 | 24,5 | -    | 24,5  | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 85.639                      | Body: 1.0571 /<br>Hood: 1.6220+QT |          | -                                                                                                                                                                | -   | -   | -    | -     | 40,0  | -    | -    | -    | -    | -    | -    | 39,2 | -     | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 82.637                      | 1.0345; 1.0460; 1.0425            |          | -                                                                                                                                                                | -   | -   | 16,0 | -     | 15,0  | 14,7 | 14,2 | 13,4 | 12,3 | 11,1 | 10,7 | 10,4 | 10,0  | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 85.637                      | 1.0345; 1.0460; 1.0425            |          | -                                                                                                                                                                | -   | -   | 35,0 | -     | -     | -    | -    | 33,6 | 30,7 | 27,8 | 26,8 | 25,9 | 25,1  | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 85.637 geb.<br>CL150        | 1.0345; 1.0460<br>1.0425; 1.0432  |          | -                                                                                                                                                                | -   | -   | 19,6 | 19,2  | 17,7  | 16,9 | 15,8 | 13,8 | 12,1 | 10,2 | 9,3  | 9,4  | -     | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 85.637 geb.<br>CL300        | 1.0345; 1.0460<br>1.0425; 1.0432  |          | -                                                                                                                                                                | -   | -   | 35,0 | -     | -     | -    | -    | 33,6 | 30,7 | 27,8 | 26,8 | 25,9 | -     | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 12.630                      | EN-JL1040                         |          | -                                                                                                                                                                | -   | -   | 16,0 | -     | -     | -    | 14,4 | 12,8 | 11,2 | 9,6  | -    | -    | -     | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 25.630                      | EN-JS1049                         |          | -                                                                                                                                                                | -   | -   | 40,0 | -     | -     | -    | 38,8 | 36,8 | 34,8 | 32,0 | 28,0 | -    | 28,0  | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 45.630                      | Body: 1.0460 /<br>Hood: 1.0619+N  |          | -                                                                                                                                                                | -   | -   | 40,0 | -     | -     | -    | 38,1 | 35,1 | 32,0 | 28,0 | 24,5 | -    | 24,5  | -    | 21,0  | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 55.630                      | Body: 1.4541 /<br>Hood: 1.4301    |          | -                                                                                                                                                                | -   | -   | 40,0 | -     | 39,6  | 38,6 | 37,3 | 35,4 | 32,0 | 28,0 | 24,5 | -    | 24,5  | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 85.630                      | Body: 1.0571 /<br>Hood: 1.6220+QT |          | -                                                                                                                                                                | -   | -   | -    | -     | 40,0  | -    | -    | -    | -    | -    | 39,2 | -    | -     | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |
| 85.630                      | Body: 1.0571 /<br>Hood: 1.6220+QT |          | -                                                                                                                                                                | -   | -   | -    | -     | -     | -    | -    | -    | -    | -    | -    | -    | -     | -    | -     | -     | -     | -     | -    | -    | -    | -    | -    | -    | -    | - |

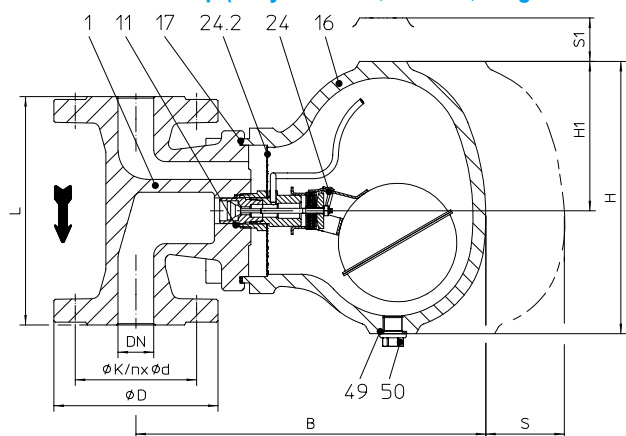
**Ball float steam trap (Grey cast iron, SG iron, Forged steel/Cast steel, Stainless steel, Low temperature steel)**


Fig. 631....1 with flanges - vertical installation

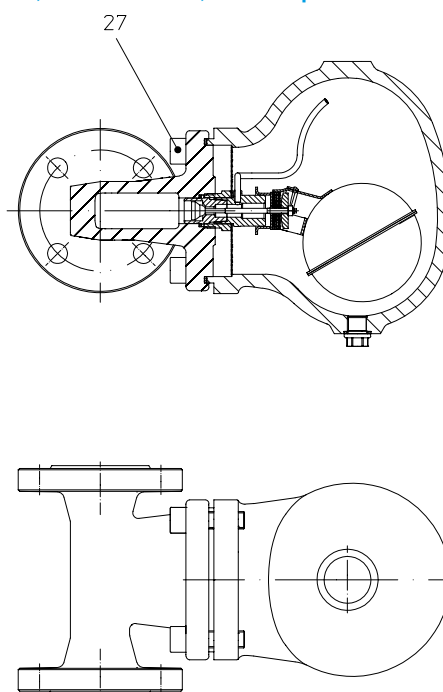
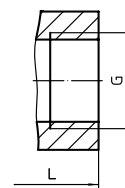
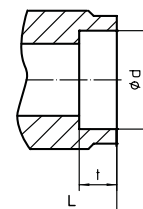
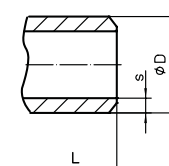


Fig. 631....1 with flanges - horizontal installation


Fig. 631....2  
with screwed sockets

Fig. 631....3  
with socket weld ends

Fig. 631....4  
with butt weld ends

| Figure | Nominal pressure | Material                       | Nominal diameter / NPS | max. allowable pressure PMA | min. allowable temperature TSmin | max. allowable temperature TMA | allowable differential pressure ΔPMX | for controller                                                                                            |
|--------|------------------|--------------------------------|------------------------|-----------------------------|----------------------------------|--------------------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 12.631 | PN16             | EN-JL1040                      | 15 - 50 / 1/2" - 2"    | 16 bar                      | -10°C                            | 300°C                          | 2 bar<br>4 bar<br>8 bar<br>13 bar    | R2 / R2 S <sup>1)</sup><br>R4 / R4S <sup>1)</sup><br>R8 / R8 S <sup>1)</sup><br>R13 / R13 S <sup>1)</sup> |
| 25.631 | PN40             | EN-JS1049                      | 15 - 50 / 1/2" - 2"    | 40 bar                      | -10°C                            | 350°C                          | 2 bar<br>4 bar                       | R2 / R2 S <sup>1)</sup><br>R4 / R4 S <sup>1)</sup>                                                        |
| 45.631 | PN40             | Body: 1.0460 / Hood: 1.0619+N  | 15 - 100 / 1/2" - 4"   | 40 bar                      | -10°C                            | 400°C                          | 8 bar                                | R8 / R8 S <sup>1)</sup>                                                                                   |
| 55.631 | PN40             | Body: 1.4541 / Hood: 1.4308    | 15 - 100 / 1/2" - 4"   | 40 bar                      | -60°C                            | 300°C                          | 13 bar                               | R13 / R13 S <sup>1)</sup>                                                                                 |
| 85.631 | PN40             | Body: 1.0571 / Hood: 1.6220+QT | 15 - 100 / 1/2" - 4"   | 40 bar                      | -50°C                            | 300°C                          | 22 bar<br>32 bar                     | R22<br>R32                                                                                                |

<sup>1)</sup> Controller R2 S, R4 S, R8 S and R13 S not for DN 15-25 and NPS 1/2"-1"

For versions rated to Class 150 and Class 300 refer to data sheet CONA®S-ANSI

**Types of connection**

Other types of connection on request.

- Flanges ....1 \_\_\_\_\_ acc. to DIN EN 1092-2 (EN-JL1040) and DIN EN 1092-1 (1.0460, 1.4541, 1.0571)
- Screwed sockets ....2 \_\_\_\_\_ Rp thread acc. to DIN EN 10226-1 or NPT thread acc. to ANSI B1.20.1
- Socket weld ends ....3 \_\_\_\_\_ acc. to DIN EN 12760
- Butt weld ends ....4 \_\_\_\_\_ with joint preparation type acc. to EN ISO 9692 No. 1.3 and 1.5  
(Note restriction on operating pressure / inlet temperature depending to design!)

**Features**

- Ball float steam trap with level control for the condensate-discharge from all kinds of steam systems
- Rapid system start-up due to thermostatic control element
- Inside strainer
- Body with flanged hood
- Non return protection
- The controller can be replaced without removing the trap body from the pipework
- On-site change of the installation position is possible according to the operating instructions

**Mounting position**

- Standard: vertical
  - Optional: horizontal with inlet from right or left
- Please indicate when ordering!**  
Refer to: Information about the different installation positions (Page 29)  
On-site change of the installation position is possible according to the operating instructions.

**Options**

- Air vent - (Pos. 51) or blow down valve (Pos. 46), manual operated

| Types of connection |        | Flanges |      |    |        |    |                      |                  |                   | Screw sockets <sup>1)</sup><br>Socket weld ends <sup>2)</sup> |      |    |        |    | Butt weld ends <sup>2)</sup> |      |    |        |    |
|---------------------|--------|---------|------|----|--------|----|----------------------|------------------|-------------------|---------------------------------------------------------------|------|----|--------|----|------------------------------|------|----|--------|----|
| DN                  | (mm)   | 15      | 20   | 25 | 40     | 50 | 65 <sup>2)</sup>     | 80 <sup>2)</sup> | 100 <sup>2)</sup> | 15                                                            | 20   | 25 | 40     | 50 | 15                           | 20   | 25 | 40     | 50 |
| NPS                 | (inch) | 1/2"    | 3/4" | 1" | 1 1/2" | 2" | 2 1/2" <sup>2)</sup> | 3" <sup>2)</sup> | 4" <sup>2)</sup>  | 1/2"                                                          | 3/4" | 1" | 1 1/2" | 2" | 1/2"                         | 3/4" | 1" | 1 1/2" | 2" |

<sup>1)</sup> DN50 (2") not in EN-JL/EN-JS      <sup>2)</sup> not in EN-JL / EN-JS

| Face-to-face acc. to data sheet resp. customer request |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|--------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L (EN-JL1040)                                          | (mm) | 150 | 150 | 160 | 230 | 230 | --  | --  | --  | 150 | 150 | 160 | 230 | --  | --  | --  | --  | --  | --  |
| L (EN-JS1049)                                          | (mm) | 150 | 150 | 160 | 230 | 230 | --  | --  | --  | 150 | 150 | 160 | 230 | --  | --  | --  | --  | --  | --  |
| L (1.0460, 1.4541, 1.0571)                             | (mm) | 150 | 150 | 160 | 230 | 230 | 290 | 310 | 350 | 150 | 150 | 160 | 210 | 210 | 160 | 160 | 160 | 250 | 250 |

| Dimensions    |      |     |     |     |     |     |     |     |     | Standard-flange dimensions refer to page 29. |     |     |     |     |     |     |     |     |     |
|---------------|------|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| H             | (mm) | 162 | 162 | 193 | 274 | 274 | 274 | 274 | 274 | 162                                          | 162 | 193 | 274 | 274 | 162 | 162 | 193 | 274 | 274 |
| H1            | (mm) | 87  | 87  | 107 | 157 | 157 | 157 | 157 | 157 | 87                                           | 87  | 107 | 157 | 157 | 87  | 87  | 107 | 157 | 157 |
| B (EN-JS1049) | (mm) | 215 | 215 | 245 | 289 | 289 | --  | --  | --  | 215                                          | 215 | 245 | 289 | --  | --  | --  | --  | --  | --  |
| B (Steel)     | (mm) | 217 | 217 | 249 | 292 | 292 | 292 | 292 | 292 | 170                                          | 170 | 197 | 292 | 292 | 170 | 170 | 197 | 292 | 292 |
| B1            | (mm) | 114 | 114 | 135 | 194 | 194 | 194 | 194 | 194 | 114                                          | 114 | 135 | 194 | 194 | 114 | 114 | 135 | 194 | 194 |
| S             | (mm) | 180 | 180 | 200 | 300 | 300 | 300 | 300 | 300 | 180                                          | 180 | 200 | 300 | 300 | 180 | 180 | 200 | 300 | 300 |
| S1            | (mm) | 150 | 150 | 180 | 200 | 200 | 200 | 200 | 200 | 150                                          | 150 | 180 | 200 | 200 | 150 | 150 | 180 | 200 | 200 |

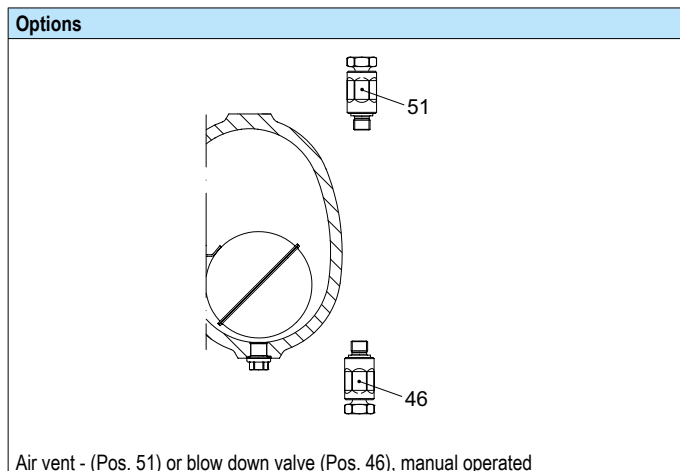
| Connection dimensions standard socket weld end |      |    |    |    |    |    |    |    |    |    |      |    |      |      |    |    |    |    |    |
|------------------------------------------------|------|----|----|----|----|----|----|----|----|----|------|----|------|------|----|----|----|----|----|
| ød                                             | (mm) | -- | -- | -- | -- | -- | -- | -- | -- | 22 | 27,3 | 34 | 48,9 | 61,3 | -- | -- | -- | -- | -- |
| t                                              | (mm) | -- | -- | -- | -- | -- | -- | -- | -- | 10 | 13   | 13 | 13   | 16   | -- | -- | -- | -- | -- |

| Connection dimensions standard butt weld end |      |    |    |    |    |    |    |    |    | Other welding end dimensions on request. |    |    |    |      |      |      |      |      |  |
|----------------------------------------------|------|----|----|----|----|----|----|----|----|------------------------------------------|----|----|----|------|------|------|------|------|--|
| øD                                           | (mm) | -- | -- | -- | -- | -- | -- | -- | -- | --                                       | -- | -- | -- | 21,3 | 26,9 | 33,7 | 48,3 | 60,3 |  |
| s                                            | (mm) | -- | -- | -- | -- | -- | -- | -- | -- | --                                       | -- | -- | -- | 2,0  | 2,3  | 2,6  | 2,6  | 2,9  |  |

| Weights            |      |     |     |      |      |      |    |    |      |     |     |     |      |      |     |     |      |      |      |
|--------------------|------|-----|-----|------|------|------|----|----|------|-----|-----|-----|------|------|-----|-----|------|------|------|
| Fig. 631 (approx.) | (kg) | 8,1 | 8,3 | 12,1 | 28,5 | 29,1 | 31 | 33 | 36,5 | 7,5 | 7,5 | 9,7 | 23,8 | 24,3 | 7,1 | 8,1 | 10,2 | 24,8 | 25,8 |

| Parts |               |                       |                                                 |             |             |             |             |
|-------|---------------|-----------------------|-------------------------------------------------|-------------|-------------|-------------|-------------|
| Pos.  | Sp.p.         | Description           | Fig. 12.631                                     | Fig. 25.631 | Fig. 45.631 | Fig. 55.631 | Fig. 85.631 |
| 1     |               | Body                  | EN-JL1040                                       | EN-JS1049   | 1.0460      | 1.4541      | 1.0571      |
| 11    | x             | Sealing ring          | CU                                              | A4          |             |             |             |
| 16    |               | Hood                  | EN-JL1040                                       | EN-JS1049   | 1.0619+N    | 1.4308      | 1.6220+QT   |
| 17    | x             | Gasket                | Graphite (CrNi laminated with graphite)         |             |             |             |             |
| 24    | x             | Controller, cpl.      | 1.4301 / TB102/85 (corrosion resistant bimetal) |             |             |             |             |
| 24.2  |               | Strainer              | 1.4301                                          |             |             |             |             |
| 27    |               | Cheese head screw     | A2-70                                           | 1.7709      | 1.7709      | A2-70       | 1.7218      |
| 46    | x             | Blow down valve, cpl. | 1.4541                                          |             |             |             |             |
| 49    | x             | Sealing ring          | CU                                              | A4          |             |             |             |
| 50    |               | Plug (M14x1,5)        | 1.1181                                          |             |             | 1.4541      |             |
| 51    | x             | Manual air vent valve | 1.4541                                          |             |             |             |             |
|       | L Spare parts |                       |                                                 |             |             |             |             |

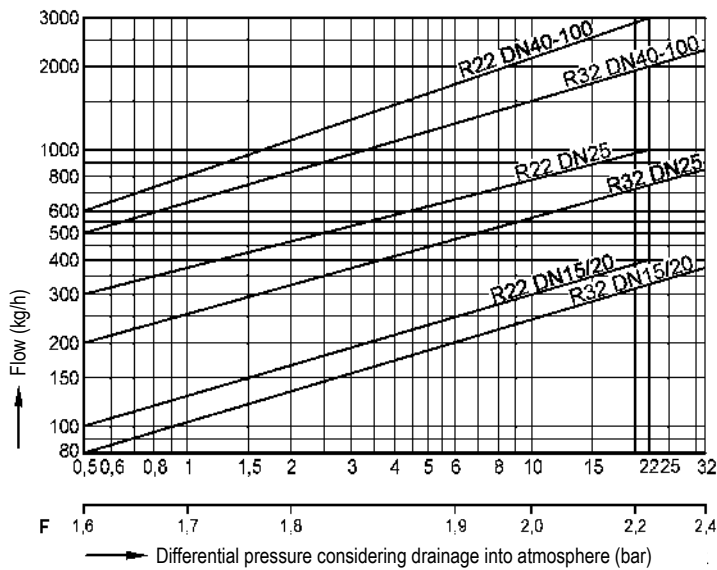
Information / restriction of technical rules need to be observed!  
Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).  
Operating and installation instructions can be downloaded at [www.ari-armaturen.com](http://www.ari-armaturen.com).



### Capacity chart

#### Standard R22 and R32

##### DN15 - DN100



The capacity chart shows the maximum flow quantities of hot condensate for the different controllers and steam trap sizes

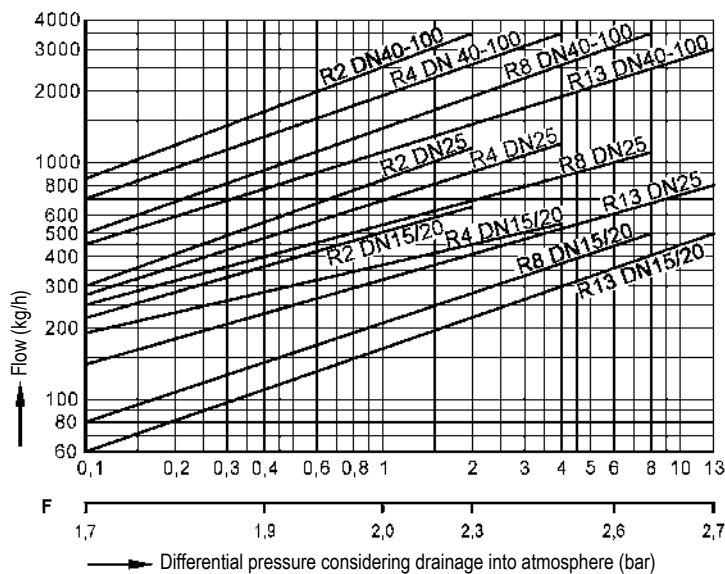
In common, the steam traps are fitted out with an controller as shown in the flow diagrams of this page acc. to the differential pressures and flow rates.

For very large flow rates with low differential pressures, steam traps at sizes DN40 up to DN100 can be fitted out with a super-controller

The maximum flow quantity of cold condensate at about 20°C can be determined by multiplication of the appropriate factor F (in the scale below the diagrams) with the hot condensate quantity determined by the capacity chart. (Factor F is related to the differential pressure)

#### Standard R2 to R13

##### DN15 - DN100



The capacity chart shows the maximum flow quantities of hot condensate for the different controllers and steam trap sizes

In common, the steam traps are fitted out with an controller as shown in the flow diagrams of this page acc. to the differential pressures and flow rates.

For very large flow rates with low differential pressures, steam traps at sizes DN40 up to DN100 can be fitted out with a super-controller

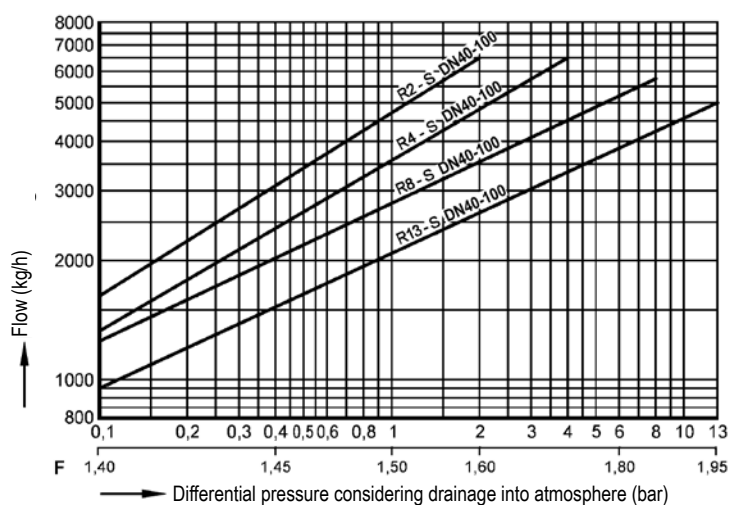
The maximum flow quantity of cold condensate at about 20°C can be determined by multiplication of the appropriate factor F (in the scale below the diagrams) with the hot condensate quantity determined by the capacity chart. (Factor F is related to the differential pressure)

## Capacity chart

Special design: Super-controller for very large flow rates with low differential pressures

R2-S to R13-S

DN 40 - 100



The capacity chart shows the maximum flow quantities of hot condensate for the Super-controller versions.

The maximum flow quantity of cold condensate at about 20°C can be determined by multiplication of the appropriate factor F (in the scale below the diagrams) with the hot condensate quantity determined by the capacity chart. (Factor F is related to the differential pressure)

**Ball float steam trap (High temperature steel)**

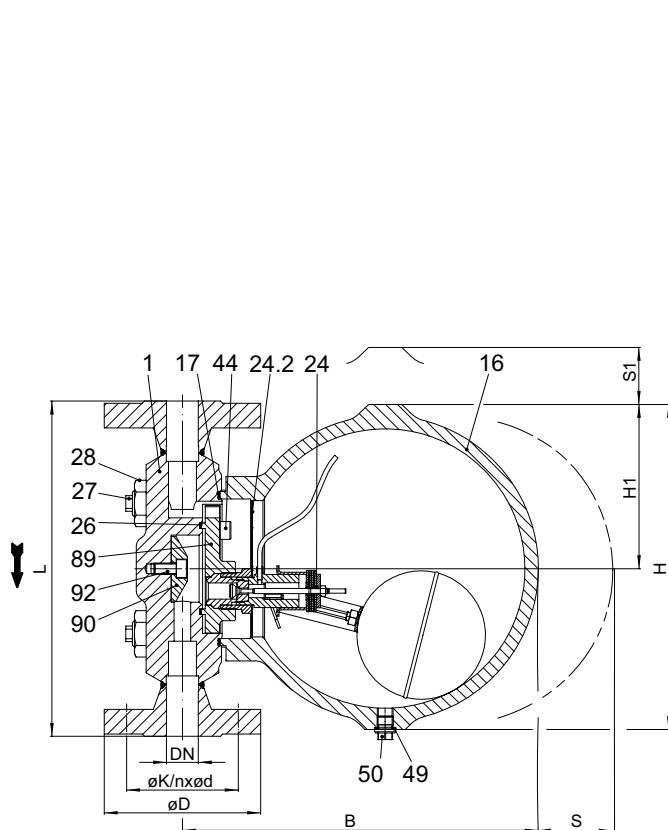


Fig. 631....1 with flanges - vertical installation (PN100)

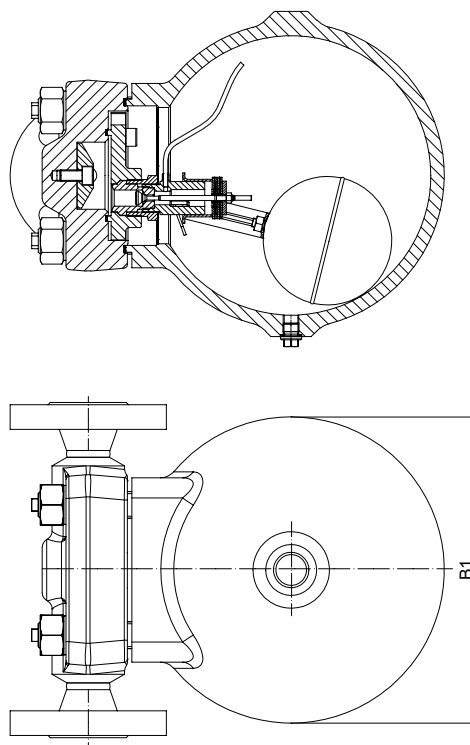


Fig. 631....1 with flanges - horizontal installation (PN100)

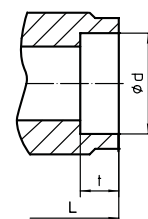


Fig. 631....3  
with socket weld ends

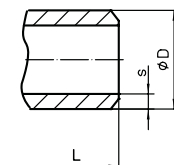


Fig. 631....4  
with butt weld ends

| Figure | Nominal pressure | Material                    | Nominal diam. / NPS | max. allowable pressure PMA | min. allowable temperature TSmin | max. allowable temperature TMA | allowable differential pressure ΔPMX | for controller    |
|--------|------------------|-----------------------------|---------------------|-----------------------------|----------------------------------|--------------------------------|--------------------------------------|-------------------|
| 86.631 | PN63             | Body: 1.5415 / Hood: 1.7357 | 15 - 50 / 1/2" - 2" | 63 bar                      | -10°C                            | 525°C                          | 50 bar                               | R50               |
| 87.631 | PN100            | Body: 1.5415 / Hood: 1.7357 | 15 - 50 / 1/2" - 2" | 100 bar                     | -10°C                            | 525°C                          | 50 bar<br>64 bar                     | R50<br>R64        |
| 87.631 | PN100            | Body: 1.7335 / Hood: 1.7357 | 15 - 50 / 1/2" - 2" | 100 bar                     | -10°C                            | 530°C                          | 50 bar<br>64 bar<br>80 bar           | R50<br>R64<br>R80 |

For versions rated to Class 600 refer to data sheet CONA®S-ANSI

**Types of connection**

Other types of connection on request.

- Flanges ....1 \_\_\_\_\_ acc. to DIN EN 1092-1
- Socket weld ends ....3 \_\_\_\_\_ acc. to DIN EN 12760
- Butt weld ends ....4 \_\_\_\_\_ with joint preparation type acc. to EN ISO 9692 No. 1.3 and 1.5  
(Note restriction on operating pressure / inlet temperature depending to design!)

**Features**

- Ball float steam trap with level control for the condensate-discharge from all kinds of steam systems
- Rapid system start-up due to thermostatic control element (for condensate with temperatures  $\geq 100^\circ\text{C}$ )
- Inside strainer
- Body with flanged hood
- Non return protection
- The controller can be replaced without removing the trap body from the pipework

**Mounting position**

- Standard: vertical
  - Optional: horizontal with inlet from right or left
- Please indicate when ordering!**  
Refer to: Information about the different installation positions (Page 29)  
On-site change of the installation position is possible according to the operating instructions.

**Options**

- Air vent - (Pos. 51) or blow down valve (Pos. 46), manual operated



| Types of connection |        | Flanges |      |    |        |    | Socket weld ends |      |    |        |    | Butt weld ends |      |    |        |    |
|---------------------|--------|---------|------|----|--------|----|------------------|------|----|--------|----|----------------|------|----|--------|----|
| DN                  | (mm)   | 15      | 20   | 25 | 40     | 50 | 15               | 20   | 25 | 40     | 50 | 15             | 20   | 25 | 40     | 50 |
| NPS                 | (inch) | 1/2"    | 3/4" | 1" | 1 1/2" | 2" | 1/2"             | 3/4" | 1" | 1 1/2" | 2" | 1/2"           | 3/4" | 1" | 1 1/2" | 2" |

| Face-to-face acc. to data sheet resp. customer request |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|--------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L                                                      | (mm) | 300 | 300 | 300 | 420 | 416 | 216 | 216 | 216 | 240 | 250 | 216 | 216 | 216 | 240 | 250 |

| Dimensions                                   |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|----------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Standard-flange dimensions refer to page 29. |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| H                                            | (mm) | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| H1                                           | (mm) | 147 | 147 | 147 | 147 | 147 | 147 | 147 | 147 | 147 | 147 | 147 | 147 | 147 | 147 | 147 |
| B                                            | (mm) | 319 | 319 | 319 | 319 | 319 | 319 | 319 | 319 | 319 | 319 | 319 | 319 | 319 | 319 | 319 |
| B1                                           | (mm) | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 |
| S                                            | (mm) | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| S1                                           | (mm) | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 |

| Connection dimensions standard socket weld end |      |    |    |    |    |    |    |      |    |      |      |    |    |    |    |    |
|------------------------------------------------|------|----|----|----|----|----|----|------|----|------|------|----|----|----|----|----|
| ød                                             | (mm) | -- | -- | -- | -- | -- | 22 | 27,3 | 34 | 48,9 | 61,3 | -- | -- | -- | -- | -- |
| t                                              | (mm) | -- | -- | -- | -- | -- | 10 | 13   | 13 | 13   | 16   | -- | -- | -- | -- | -- |

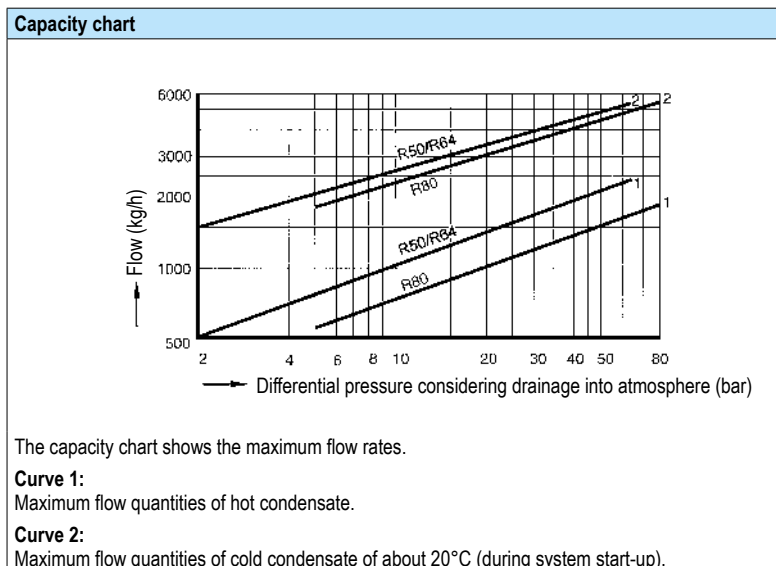
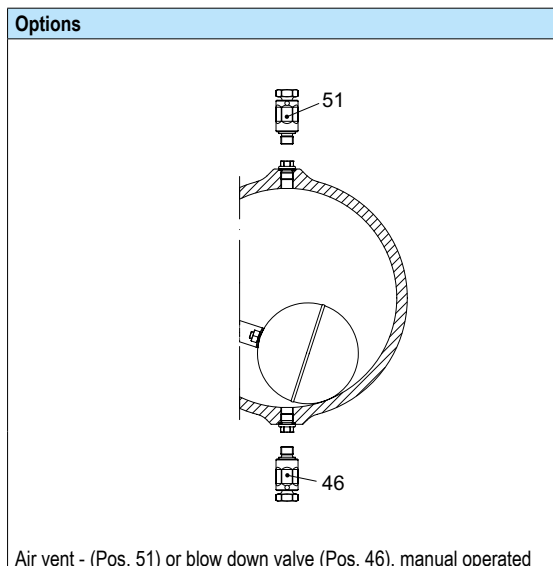
| Connection dimensions standard butt weld end |                |      |    |    |    |    |    |    |    |    |    |      |      |      |      |      |
|----------------------------------------------|----------------|------|----|----|----|----|----|----|----|----|----|------|------|------|------|------|
| Other welding end dimensions on request.     |                |      |    |    |    |    |    |    |    |    |    |      |      |      |      |      |
| øD                                           | (mm)           | --   | -- | -- | -- | -- | -- | -- | -- | -- | -- | 21,3 | 26,9 | 33,7 | 48,3 | 60,3 |
| s                                            | 1.5415 (PN63)  | (mm) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2,0  | 2,6  | 2,6  | 2,9  | 2,9  |
|                                              | 1.5415 (PN100) | (mm) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2,0  | 2,6  | 2,6  | 2,9  | 3,2  |
|                                              | 1.7335 (PN100) | (mm) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2,0  | 2,6  | 2,6  | 3,2  | 3,6  |

| Weights            |      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|--------------------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Fig. 631 (approx.) | (kg) | 41 | 43 | 44 | 48 | 52 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |

| Parts |               |                       |                                                 |             |
|-------|---------------|-----------------------|-------------------------------------------------|-------------|
| Pos.  | Sp.p.         | Description           | Fig. 86.631 / 87.631                            | Fig. 87.631 |
| 1     |               | Body                  | 1.5415                                          | 1.7335      |
| 16    |               | Hood                  | 1.7357                                          |             |
| 17    | x             | Gasket                | Graphite (CrNi laminated with graphite)         |             |
| 24    | x             | Controller, cpl.      | 1.4301 / TB102/85 (corrosion resistant bimetal) |             |
| 24.2  |               | Strainer              | 1.4301                                          |             |
| 26    | x             | Gasket                | Graphite (CrNi laminated with graphite)         |             |
| 27    |               | Stud                  | 1.7709                                          | 1.4923      |
| 28    |               | Hexagonal nut         | 1.7709                                          | 1.4923      |
| 44    |               | Cheese head screw     | A4-70                                           |             |
| 46    | x             | Blow down valve, cpl. | 1.4122+QT                                       |             |
| 49    | x             | Sealing ring          | 1.4541                                          |             |
| 50    |               | Plug (M14x1,5)        | 1.7709                                          |             |
| 51    | x             | Manual air vent valve | 1.4122+QT                                       |             |
| 89    |               | Adapter               | 1.4305                                          |             |
| 90    |               | Baffle plate          | 1.4122+QT                                       |             |
| 92    |               | Cheese head screw     | A4-70                                           |             |
|       | L Spare parts |                       |                                                 |             |

Information / restriction of technical rules need to be observed!

Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).

Operating and installation instructions can be downloaded at [www.ari-armaturen.com](http://www.ari-armaturen.com).


**Ball float steam trap (High temperature steel)**

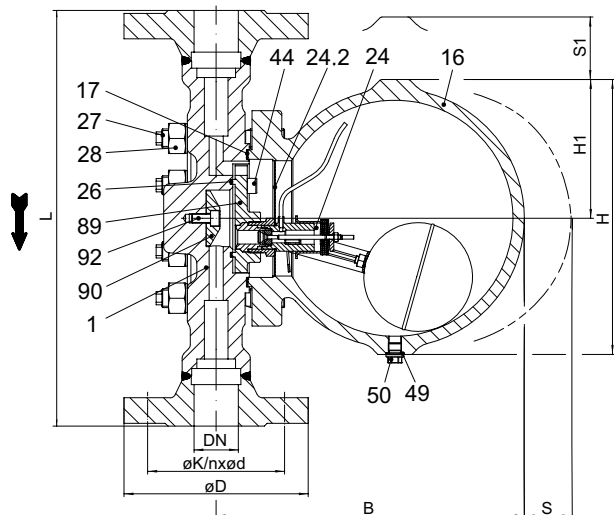


Fig. 631....1 Straight through with flanges  
- vertical installation

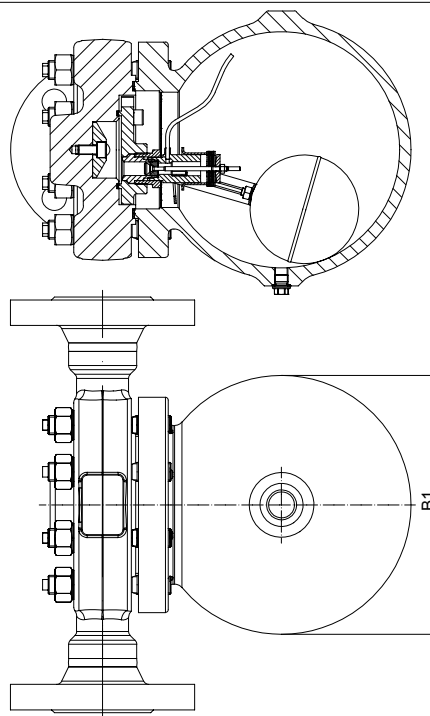


Fig. 631....1 Straight through with flanges  
- horizontal installation

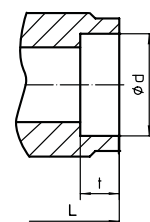


Fig. 631....3  
with socket weld ends

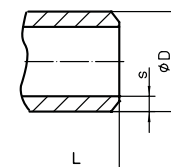


Fig. 631....4  
with butt weld end

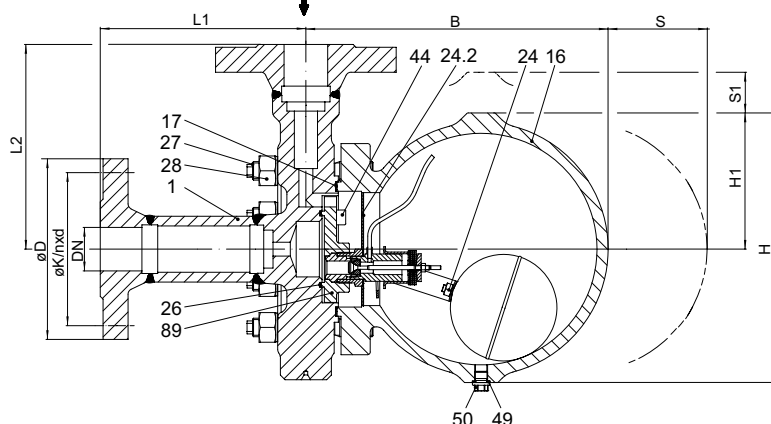


Fig. 632....1 Angle pattern design with flanges - vertical installation

| Figure | Nominal pressure | Material                    | Nominal diam. / NPS | max. allowable pressure PMA | min. allowable temperature TSmin | max. allowable temperature TMA | allowable differential pressure ΔPMX | for controller |
|--------|------------------|-----------------------------|---------------------|-----------------------------|----------------------------------|--------------------------------|--------------------------------------|----------------|
| 88.631 | PN160            | Body: 1.7335 / Hood: 1.7357 | 15 - 50 / 1/2" - 2" | 160 bar                     | -10°C                            | 545°C                          | 64 bar                               | R64            |
| 88.632 |                  |                             |                     |                             |                                  |                                | 80 bar                               | R80            |
|        |                  |                             |                     |                             |                                  |                                | 110 bar                              | R110           |

For versions rated to Class 900 refer to data sheet CONA®S-ANSI

**Types of connection**

Other types of connection on request.

- Flanges ....1 \_\_\_\_\_ acc. to DIN EN 1092-1
- Socket weld ends ....3 \_\_\_\_\_ acc. to DIN EN 12760
- Butt weld ends ....4 \_\_\_\_\_ with joint preparation type acc. to EN ISO 9692 No. 1.3 and 1.5  
(Note restriction on operating pressure / inlet temperature depending to design!)

**Features**

- Ball float steam trap with level control for the condensate-discharge from all kinds of steam systems
- Rapid system start-up due to thermostatic control element
- Inside strainer
- Body with flanged hood
- Non return protection
- The controller can be replaced without removing the trap body from the pipework

**Mounting position**

- Standard: vertical
- Optional: horizontal with inlet from right or left

**Please indicate when ordering!**

Refer to: Information about the different installation positions (Page 29)  
On-site change of the installation position is possible according to the operating instructions.

**Options**

- Air vent - (Pos. 51) or blow down valve (Pos. 46), manual operated



| Types of connection |        | Flanges |    |    | Socket weld ends |      |    |        |    | Butt weld ends |      |    |        |    |
|---------------------|--------|---------|----|----|------------------|------|----|--------|----|----------------|------|----|--------|----|
| DN                  | (mm)   | 15      | 25 | 50 | 15               | 20   | 25 | 40     | 50 | 15             | 20   | 25 | 40     | 50 |
| NPS                 | (inch) | 1/2"    | 1" | 2" | 1/2"             | 3/4" | 1" | 1 1/2" | 2" | 1/2"           | 3/4" | 1" | 1 1/2" | 2" |

| Face-to-face acc. to data sheet resp. customer request |      |     |     |     |     |     |     |     |     |     |     |     |     |     |
|--------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L                                                      | (mm) | 400 | 415 | 440 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 | 335 |
| L1 / L2 ECK                                            | (mm) | 200 | 208 | 220 | 168 | 168 | 168 | 168 | 168 | 168 | 168 | 168 | 168 | 168 |

| Dimensions                                   |      |     |     |     |     |     |     |     |     |     |     |     |     |     |
|----------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Standard-flange dimensions refer to page 29. |      |     |     |     |     |     |     |     |     |     |     |     |     |     |
| H                                            | (mm) | 291 | 291 | 291 | 291 | 291 | 291 | 291 | 291 | 291 | 291 | 291 | 291 | 291 |
| H1                                           | (mm) | 147 | 147 | 147 | 147 | 147 | 147 | 147 | 147 | 147 | 147 | 147 | 147 | 147 |
| B                                            | (mm) | 327 | 327 | 327 | 327 | 327 | 327 | 327 | 327 | 327 | 327 | 327 | 327 | 327 |
| B1                                           | (mm) | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 |
| S                                            | (mm) | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| S1                                           | (mm) | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 |

| Connection dimensions standard socket weld end |      |    |    |    |    |      |    |      |      |    |    |    |    |    |
|------------------------------------------------|------|----|----|----|----|------|----|------|------|----|----|----|----|----|
| ød                                             | (mm) | -- | -- | -- | 22 | 27,3 | 34 | 48,9 | 61,3 | -- | -- | -- | -- | -- |
| t                                              | (mm) | -- | -- | -- | 10 | 13   | 13 | 13   | 16   | -- | -- | -- | -- | -- |

| Connection dimensions standard butt weld end |      |    |    |    |    |    |    |    |    |      |      |      |      |      |
|----------------------------------------------|------|----|----|----|----|----|----|----|----|------|------|------|------|------|
| Other welding end dimensions on request.     |      |    |    |    |    |    |    |    |    |      |      |      |      |      |
| øD                                           | (mm) | -- | -- | -- | -- | -- | -- | -- | -- | 21,3 | 26,9 | 33,7 | 48,3 | 60,3 |
| s                                            | (mm) | -- | -- | -- | -- | -- | -- | -- | -- | 2,6  | 3,2  | 3,6  | 4,5  | 5,6  |

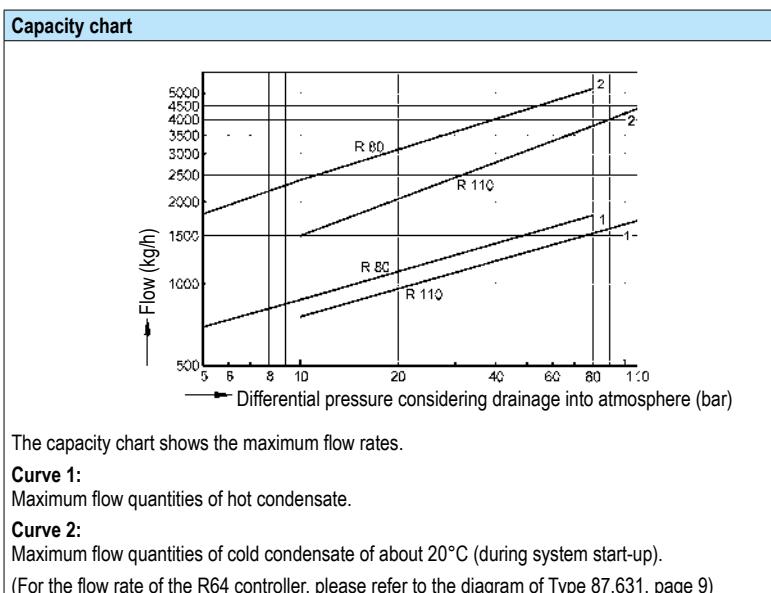
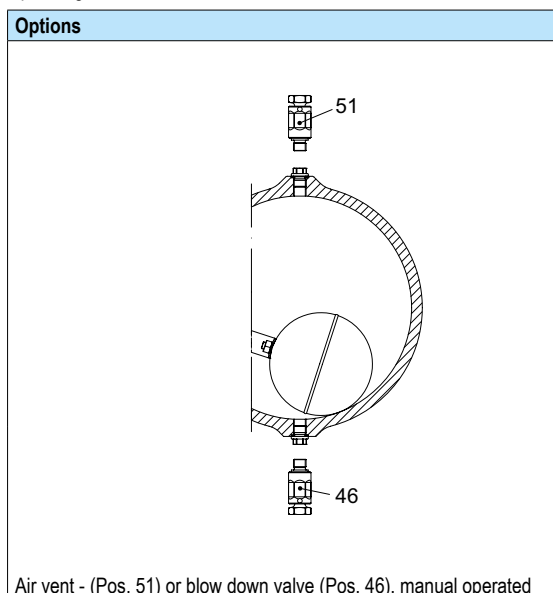
| Weights              |      |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----------------------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Fig. 631/632 (appr.) | (kg) | 54 | 56 | 64 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 |

| Parts         |       |                       |                                                 |
|---------------|-------|-----------------------|-------------------------------------------------|
| Pos.          | Sp.p. | Description           | Fig. 88.631 / 88.632                            |
| 1             |       | Body                  | 1.7335                                          |
| 16            |       | Hood                  | 1.7357                                          |
| 17            | x     | Gasket                | Graphite (CrNi laminated with graphite)         |
| 24            | x     | Controller, cpl.      | 1.4301 / TB102/85 (corrosion resistant bimetal) |
| 24.2          |       | Strainer              | 1.4301                                          |
| 26            | x     | Gasket                | Graphite (CrNi laminated with graphite)         |
| 27            |       | Stud                  | 1.4923                                          |
| 28            |       | Hexagonal nut         | 1.4923                                          |
| 44            |       | Cheese head screw     | A4-70                                           |
| 46            | x     | Blow down valve, cpl. | 1.4122+QT                                       |
| 49            | x     | Sealing ring          | A4                                              |
| 50            |       | Plug (M14x1,5)        | 1.7709                                          |
| 51            | x     | Manual air vent valve | 1.4122+QT                                       |
| 89            |       | Adapter               | 1.4305                                          |
| 90            |       | Baffle plate          | 1.4122+QT                                       |
| 92            |       | Cheese head screw     | A4-70                                           |
| L Spare parts |       |                       |                                                 |

Information / restriction of technical rules need to be observed!

Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).

Operating and installation instructions can be downloaded at [www.ari-armaturen.com](http://www.ari-armaturen.com).



**Ball float steam trap (Forged steel / Stainless steel)**

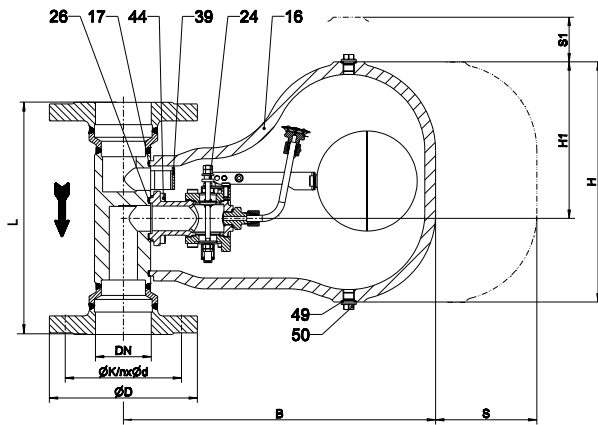


Fig. 633....1 mit Flanschen - vertikale Einbaulage

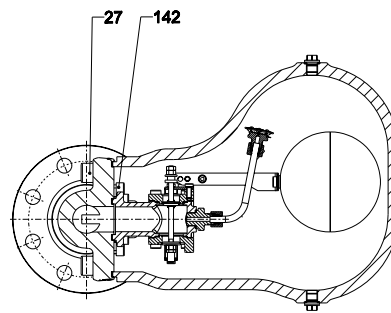


Fig. 633....1 mit Flanschen - horizontale Einbaulage

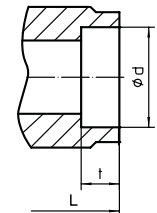


Fig. 633....3  
with socket weld ends

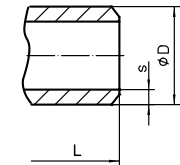
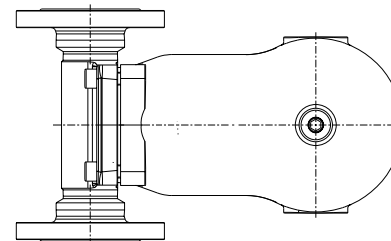
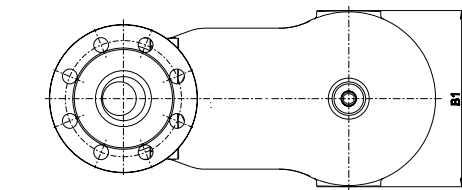


Fig. 633....4  
with butt weld ends



| Figure | Nominal pressure | Material                      | Nominal diam. / NPS   | max. allowable pressure PMA | min. allowable temperature TSmin | max. allowable temperature TMA | allowable differential pressure ΔPMX | for controller |
|--------|------------------|-------------------------------|-----------------------|-----------------------------|----------------------------------|--------------------------------|--------------------------------------|----------------|
| 45.633 | PN40             | Body: 1.0460 / Hood: 1.0619+N | 40 - 100<br>1 1/2"-4" | 40 bar                      | -10°C                            | 400°C                          | 13 bar                               | R13 DS         |
| 55.633 | PN40             | Body: 1.4541 / Hood: 1.4308   | 40 - 100<br>1 1/2"-4" | 40 bar                      | -60°C                            | 300°C                          | 22 bar                               | R22 DS         |
|        |                  |                               |                       |                             |                                  |                                | 32 bar                               | R32 DS         |

EN-JL1040, EN-JS1049 and 1.4541 on request.

For versions rated to Class 150 and Class 300 refer to data sheet CONA®S-ANSI

**Types of connection**

Other types of connection on request.

- Flanges ....1 \_\_\_\_\_ acc. to DIN EN 1092-1
- Socket weld ends ....3 \_\_\_\_\_ acc. to DIN EN 12760
- Butt weld ends ....4 \_\_\_\_\_ with joint preparation type acc. to EN ISO 9692 No. 1.3 and 1.5  
(Note restriction on operating pressure / inlet temperature depending to design!)

**Features**

- Ball float steam trap with level control for the condensate-discharge from all kinds of steam systems
- Rapid system start-up due to thermostatic control element
- Immediate discharge of hot boiling condensat
- Body with flanged hood
- The controller can be replaced without removing the trap body from the pipework

**Mounting position**

- Standard: vertical
- Optional: horizontal with inlet from right or left

**Please indicate when ordering!**

Refer to: Information about the different installation positions (Page 29)  
On-site change of the installation position is possible according to the operating instructions.

**Options**

- Air vent - (Pos. 51) or blow down valve (Pos. 46), manual operated

| Types of connection |        | Flanges |    |        |    |     | Socket weld ends |    |        |    |     | Butt weld ends |    |        |    |     |
|---------------------|--------|---------|----|--------|----|-----|------------------|----|--------|----|-----|----------------|----|--------|----|-----|
| DN                  | (mm)   | 40      | 50 | 65     | 80 | 100 | 40               | 50 | 65     | 80 | 100 | 40             | 50 | 65     | 80 | 100 |
| NPS                 | (inch) | 1 1/2"  | 2" | 2 1/2" | 3" | 4"  | 1 1/2"           | 2" | 2 1/2" | 3" | 4"  | 1 1/2"         | 2" | 2 1/2" | 3" | 4"  |

| Face-to-face acc. to data sheet resp. customer request |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|--------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L                                                      | (mm) | 230 | 230 | 290 | 310 | 350 | 230 | 230 | 250 | 280 | 300 | 230 | 230 | 250 | 280 | 300 |

| Dimensions                                   |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|----------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Standard-flange dimensions refer to page 29. |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| H                                            | (mm) | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| H1                                           | (mm) | 196 | 196 | 196 | 196 | 196 | 196 | 196 | 196 | 196 | 196 | 196 | 196 | 196 | 196 | 196 |
| B                                            | (mm) | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 |
| B1                                           | (mm) | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 |
| S                                            | (mm) | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 |
| S1                                           | (mm) | 40  | 40  | 40  | 40  | 40  | 40  | 40  | 40  | 40  | 40  | 40  | 40  | 40  | 40  | 40  |

| Connection dimensions standard socket weld end |      |    |    |    |    |    |      |      |      |    |       |    |    |    |    |    |
|------------------------------------------------|------|----|----|----|----|----|------|------|------|----|-------|----|----|----|----|----|
| ød                                             | (mm) | -- | -- | -- | -- | -- | 48,9 | 61,3 | 77,1 | 90 | 115,4 | -- | -- | -- | -- | -- |
| t                                              | (mm) | -- | -- | -- | -- | -- | 13   | 16   | 16   | 18 | 20    | -- | -- | -- | -- | -- |

| Connection dimensions standard butt weld end |      |    |    |    |    |    |    |    |    |    |    |      |      |      |      |       |
|----------------------------------------------|------|----|----|----|----|----|----|----|----|----|----|------|------|------|------|-------|
| Other welding end dimensions on request.     |      |    |    |    |    |    |    |    |    |    |    |      |      |      |      |       |
| øD                                           | (mm) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 48,3 | 60,3 | 76,1 | 88,9 | 114,3 |
| s                                            | (mm) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2,6  | 2,9  | 2,9  | 3,2  | 3,6   |

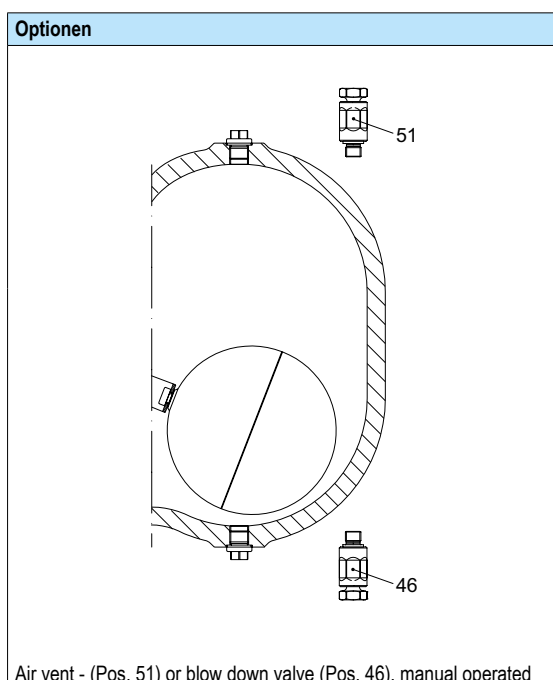
| Weights  |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Fig. 633 | (ca.) | (kg) | 40,2 | 41,5 | 44,2 | 45,8 | 50,7 | 36,6 | 36,5 | 37,0 | 39,9 | 40,3 | 36,5 | 36,5 | 36,6 | 37,2 |

| Parts |               |                       |                                         |             |
|-------|---------------|-----------------------|-----------------------------------------|-------------|
| Pos.  | Sp. p.        | Description           | Fig. 45.633                             | Fig. 55.633 |
| 1     |               | Body                  | 1.0460                                  | 1.4541      |
| 16    |               | Hood                  | 1.0619+N                                | 1.4308      |
| 17    | *             | Gasket                | Graphite (CrNi laminated with graphite) |             |
| 24    | *             | Controller, cpl.      | Stainless steel/Hastelloy               |             |
| 26    | *             | Gasket                | Graphite (CrNi laminated with graphite) |             |
| 27    |               | Stud                  | A2-70                                   |             |
| 39    |               | Baffle straightener   | 1.4301                                  |             |
| 44    |               | Cheese head screw     | A4-70                                   |             |
| 46    | *             | Blow down valve, cpl. | 1.4541                                  |             |
| 49    | *             | Sealing ring          | A4                                      |             |
| 50    |               | Plug (M14x1.5)        | 1.7709                                  | 1.4541      |
| 51    | *             | Manual air vent valve | 1.4541                                  |             |
| 142   |               | Cheese head screw     | A4-70                                   |             |
|       | L Spare parts |                       |                                         |             |

Information / restriction of technical rules need to be observed!

Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).

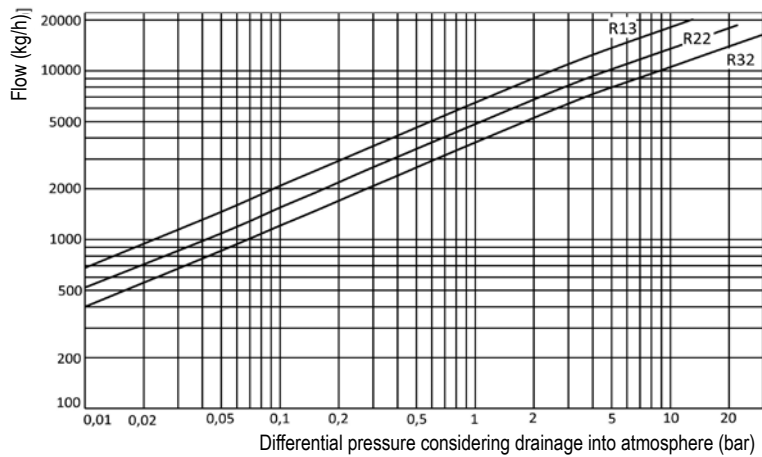
Operating and installation instructions can be downloaded at [www.ari-armaturen.com](http://www.ari-armaturen.com).



### Capacity chart

Standard R13, R22 und R32

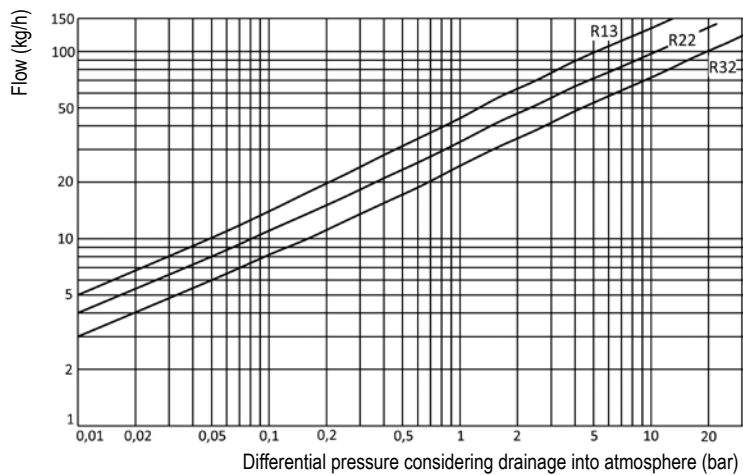
DN40- DN100



The capacity chart shows the maximum flow rate of condensate at a subcooling of 5K below saturated steam temperature for the controllers, R13, R22 and R32 in relation to the differential pressure.

Standard R13, R22 und R32

DN40- DN100



The capacity chart shows the minimum required condensate load for steam tight closing for controllers R13, R22 and R32



**Ball float steam trap (Forged steel/Cast steel, Stainless steel, Low temperature steel)**

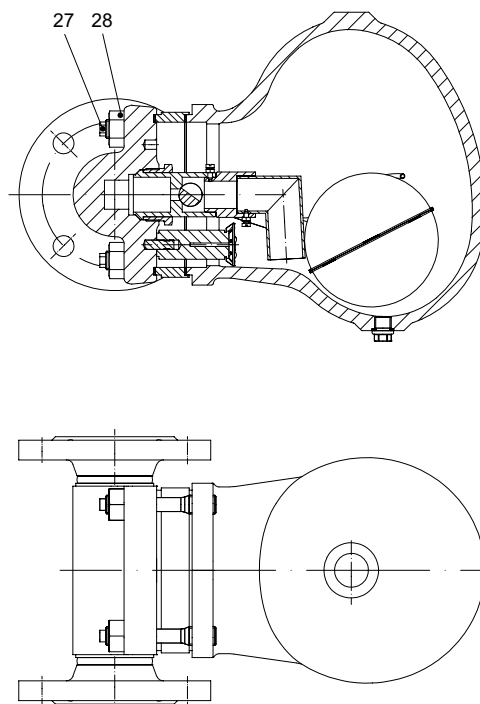
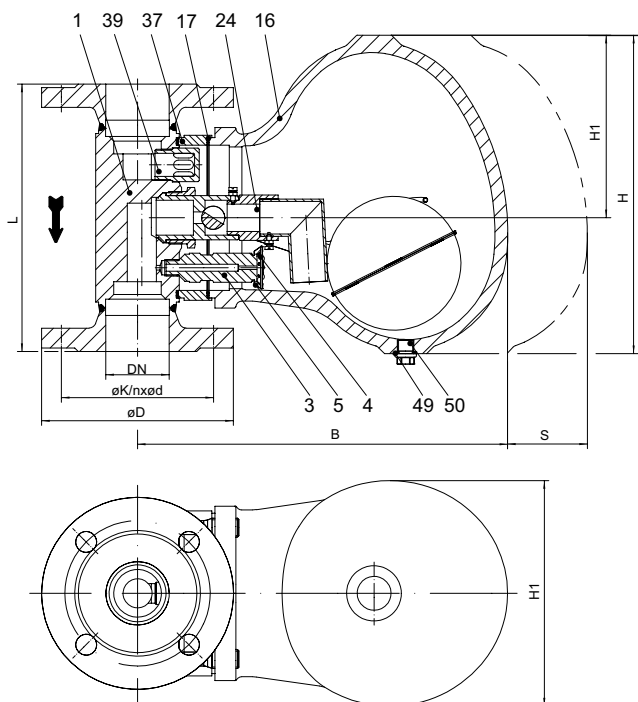


Fig. 633....1 with flanges - vertical installation

Fig. 633....1 with flanges - horizontal installation

| Figure | Nominal pressure | Material                       | Nominal diam. / NPS     | max. allowable pressure PMA | min. allowable temperature TSmin | max. allowable temperature TMA | allowable differential pressure ΔPMX | for controller |
|--------|------------------|--------------------------------|-------------------------|-----------------------------|----------------------------------|--------------------------------|--------------------------------------|----------------|
| 45.633 | PN40             | Body: 1.0460 / Hood: 1.0619+N  | 40 - 100<br>1 1/2" - 4" | 40 bar                      | -10°C                            | 400 °C                         | 4 bar                                | R4-P           |
| 55.633 | PN40             | Body: 1.4541 / Hood: 1.4308    | 40 - 100<br>1 1/2" - 4" | 40 bar                      | -60°C                            | 300 °C                         |                                      |                |
| 85.633 | PN40             | Body: 1.0571 / Hood: 1.6220+QT | 40 - 100<br>1 1/2" - 4" | 40 bar                      | -50°C                            | 300 °C                         |                                      |                |

EN-JL1040, EN-JS1049 and 1.4541 on request.

For versions rated to Class 150 and Class 300 refer to data sheet CONA®S-ANSI

| Types of connection                                                                                                                                                                                                      |                                          | Other types of connection on request                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • Flanges ....1 _____ acc. to DIN EN 1092-1                                                                                                                                                                              |                                          |                                                                                                                                                                                             |
| Features                                                                                                                                                                                                                 |                                          |                                                                                                                                                                                             |
| • Ball float steam trap with level control for the condensate-discharge from all kinds of steam systems<br>• Rapid system start-up due to thermostatic control element<br>• Immediate discharge of hot boiling condensat |                                          | • Body with flanged hood<br>• The controller can be replaced without removing the trap body from the pipework                                                                               |
| Mounting position                                                                                                                                                                                                        |                                          |                                                                                                                                                                                             |
| • Standard:                                                                                                                                                                                                              | vertical                                 | <b>Please indicate when ordering!</b><br><br>Refer to: Information about the different installation positions (Page 29)<br><b>Installation position can not be changed <u>later</u> on.</b> |
| • Optional:                                                                                                                                                                                                              | horizontal with inlet from right or left |                                                                                                                                                                                             |
| Options                                                                                                                                                                                                                  |                                          |                                                                                                                                                                                             |
| • Air vent - (Pos. 51) or blow down valve (Pos. 46), manual operated                                                                                                                                                     |                                          |                                                                                                                                                                                             |



| Types of connection |        | Flanges |    |        |    |     |
|---------------------|--------|---------|----|--------|----|-----|
| DN                  | (mm)   | 40      | 50 | 65     | 80 | 100 |
| NPS                 | (inch) | 1 1/2"  | 2" | 2 1/2" | 3" | 4"  |

| Face-to-face acc. to data sheet resp. customer request |      |     |     |     |     |     |
|--------------------------------------------------------|------|-----|-----|-----|-----|-----|
| L                                                      | (mm) | 230 | 230 | 290 | 310 | 350 |

| Dimensions |      | Standard-flange dimensions refer to page 29. |     |     |     |     |
|------------|------|----------------------------------------------|-----|-----|-----|-----|
| H          | (mm) | 274                                          | 274 | 274 | 274 | 274 |
| H1         | (mm) | 157                                          | 157 | 157 | 157 | 157 |
| B          | (mm) | 319                                          | 319 | 319 | 319 | 319 |
| B1         | (mm) | 194                                          | 194 | 194 | 194 | 194 |
| S          | (mm) | 300                                          | 300 | 300 | 300 | 300 |

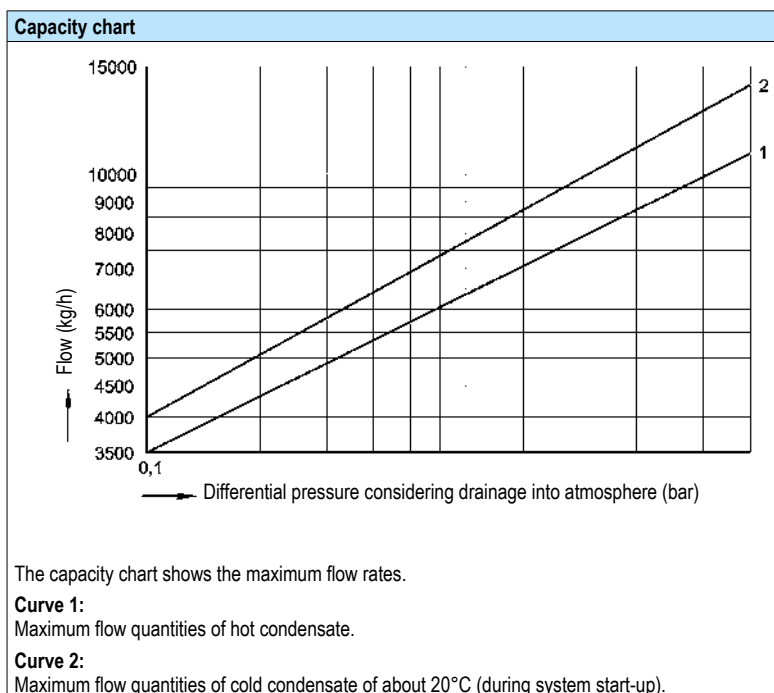
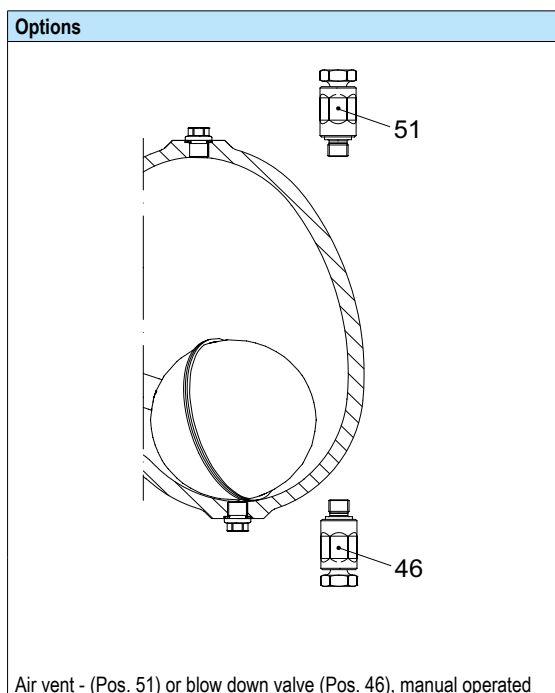
| Weights            |      |      |      |      |    |      |
|--------------------|------|------|------|------|----|------|
| Fig. 633 (approx.) | (kg) | 29,6 | 30,2 | 32,6 | 34 | 37,6 |

| Parts         |       |                       |                                         |             |             |  |
|---------------|-------|-----------------------|-----------------------------------------|-------------|-------------|--|
| Pos.          | Sp.p. | Description           | Fig. 45.633                             | Fig. 55.633 | Fig. 85.633 |  |
| 1             |       | Body                  | 1.0460                                  | 1.4541      | 1.0571      |  |
| 3             |       | Seat                  | 1.4305                                  |             |             |  |
| 4             | x     | Capsule               | Hastelloy / 1.4301                      |             |             |  |
| 5             | x     | Spring actuated clip  | 1.4310                                  |             |             |  |
| 16            |       | Hood                  | 1.0619+N                                | 1.4308      | 1.6220+QT   |  |
| 17            | x     | Gasket                | Graphite (CrNi laminated with graphite) |             |             |  |
| 24            | x     | Controller, cpl.      | 1.4301                                  |             |             |  |
| 27            |       | Stud                  | 1.7709                                  | A4-70       | 1.7218      |  |
| 28            |       | Hexagonal nut         | 1.7709                                  | A4-70       | 1.7218      |  |
| 37            |       | Intermediate flange   | 1.0460                                  | 1.4541      | 1.0571      |  |
| 39            |       | Baffle straightener   | 1.4305                                  |             |             |  |
| 46            | x     | Blow down valve, cpl. | 1.4541                                  |             |             |  |
| 49            | x     | Sealing ring          | A4                                      |             |             |  |
| 50            |       | Plug (M14x1,5)        | 1.1181                                  | 1.4541      |             |  |
| 51            | x     | Manual air vent valve | 1.4541                                  |             |             |  |
| L Spare parts |       |                       |                                         |             |             |  |

Information / restriction of technical rules need to be observed!

Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).

Operating and installation instructions can be downloaded at [www.ari-armaturen.com](http://www.ari-armaturen.com).



**Ball float steam trap (Forged steel/Grey cast iron, Forged steel/Cast steel, Stainless steel, Low temperature steel)**

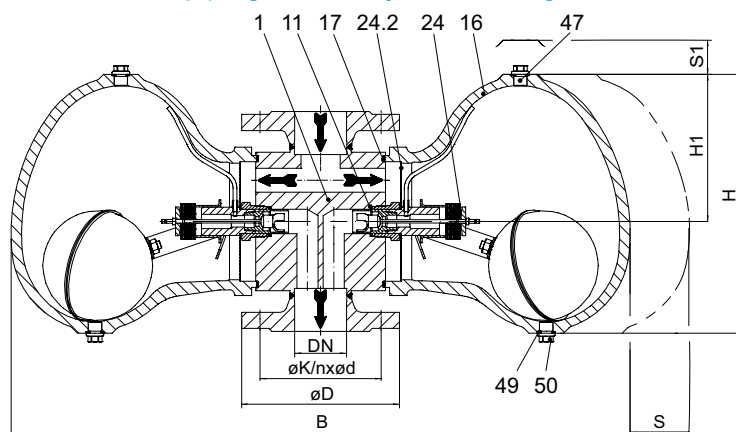


Fig. 639....1 with flanges - vertical installation

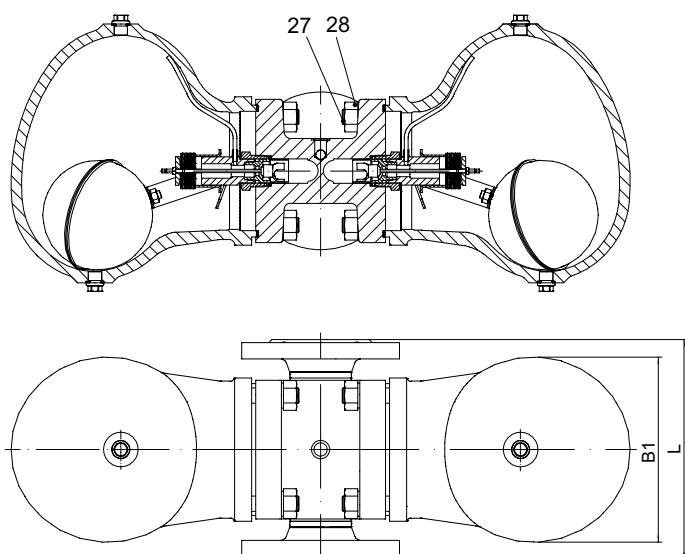


Fig. 639....1 with flanges - horizontal installation

The controller R4-P deviates in his construction from the shown controller on this side. Refer to Fig. 633 (page 16).

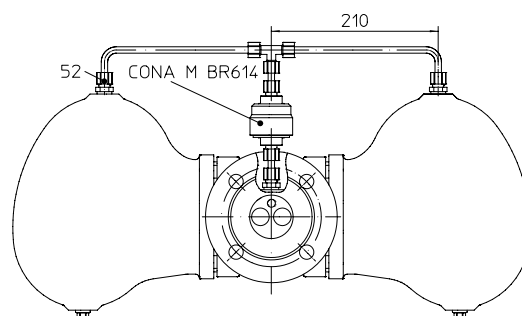


Fig. 639....1 with flanges - horizontal installation and external vent

| Figure | Nominal pressure | Material                       | Nominal diam. / NPS | max. allowable pressure PMA | min. allowable temperature TSmin | max. allowable temperature TMA | allowable differential pressure ΔPMX | for controller |
|--------|------------------|--------------------------------|---------------------|-----------------------------|----------------------------------|--------------------------------|--------------------------------------|----------------|
| 42.639 | PN16             | Body: 1.0460 / Hood: EN-JL1040 | 50 - 100 / 2" - 4"  | 16 bar                      | -10°C                            | 300°C                          | 2 bar                                | R2-S           |
| 45.639 | PN40             | Body: 1.0460 / Hood: 1.0619+N  | 50 - 100 / 2" - 4"  | 40 bar                      | -10°C                            | 400°C                          | 4 bar                                | R4-S           |
| 55.639 | PN40             | Body: 1.4541 / Hood: 1.4308    | 50 - 100 / 2" - 4"  | 40 bar                      | -60°C                            | 300°C                          | 8 bar                                | R8-S           |
| 85.639 | PN40             | Body: 1.0460 / Hood: 1.0619+N  | 50 - 100 / 2" - 4"  | 40 bar                      | -50°C                            | 300°C                          | 13 bar                               | R13-S          |
|        |                  |                                |                     |                             |                                  |                                | 22 bar                               | R22            |
|        |                  |                                |                     |                             |                                  |                                | 32 bar                               | R32            |

For versions rated to Class 150 and Class 300 refer to data sheet CONA®S-ANSI

**Types of connection**

Other types of connection on request.

- Flanges ....1 acc. to DIN EN 1092-1

**Features**

- Ball float steam trap with level control for the condensate-discharge from all kinds of steam systems for large condensate flowrates
- Discharge of great condensate quantities even at low differential pressure
- Rapid system start-up due to thermostatic control element
- Inside strainer
- Body with flanged hood
- Non return protection
- The controller can be replaced without removing the trap body from the pipework

**Mounting position**

- Standard: vertical
- Optional: horizontal

**Please indicate when ordering!**

On-site change of the installation position is possible according to the operating instructions; with an existing external vent there are modifies bypass parts needed due to the required installation position - please inquire.

**Options**

- External vent cpl. for venting of high quantities of air during start-up and operation, Standard with controller R2-S, R4-S and R4-P

| Types of connection |        | Flanges |        |    |     |
|---------------------|--------|---------|--------|----|-----|
| DN                  | (mm)   | 50      | 65     | 80 | 100 |
| NPS                 | (inch) | 2"      | 2 1/2" | 3" | 4"  |

| Face-to-face acc. to data sheet resp. customer request |      |     |     |     |     |
|--------------------------------------------------------|------|-----|-----|-----|-----|
| L                                                      | (mm) | 230 | 290 | 310 | 350 |

| Dimensions |      | Standard-flange dimensions refer to page 29. |     |     |     |
|------------|------|----------------------------------------------|-----|-----|-----|
| H          | (mm) | 271                                          | 271 | 271 | 271 |
| H1         | (mm) | 154                                          | 154 | 154 | 154 |
| B          | (mm) | 648                                          | 648 | 648 | 648 |
| B1         | (mm) | 194                                          | 194 | 194 | 194 |
| S          | (mm) | 300                                          | 300 | 300 | 300 |
| S1         | (mm) | 200                                          | 200 | 200 | 200 |

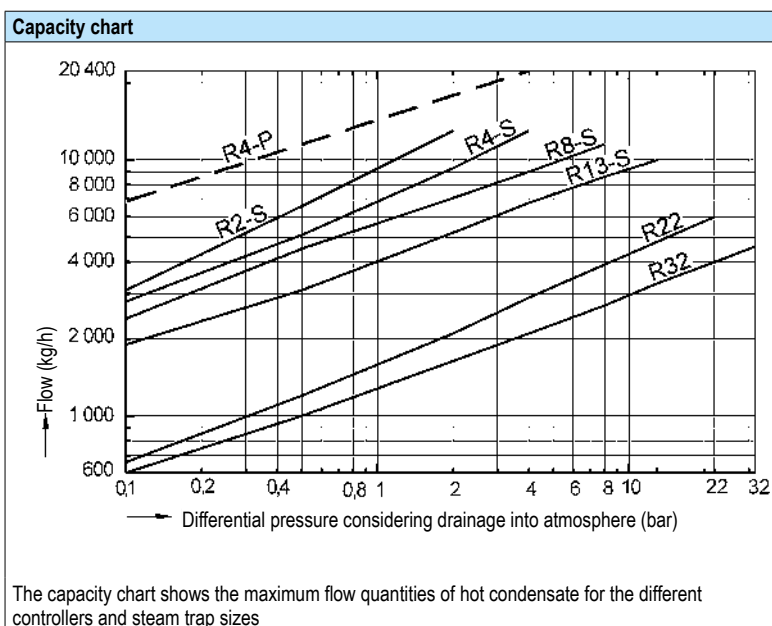
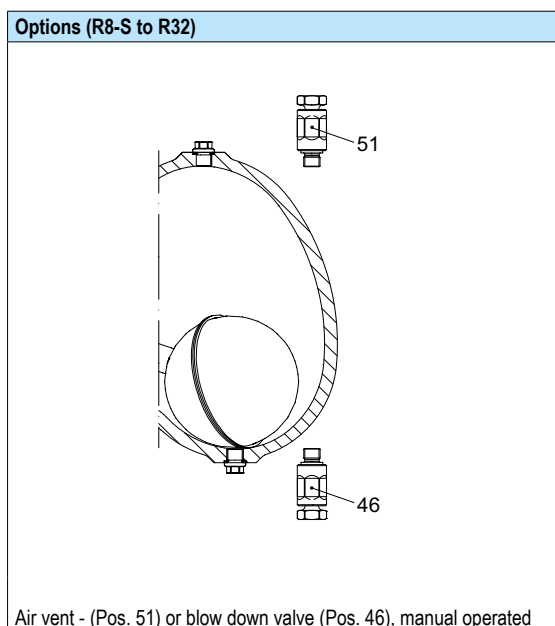
| Weights          |                |      |      |      |      |
|------------------|----------------|------|------|------|------|
| Fig. 639<br>PN16 | (approx.) (kg) | 51,4 | 52,9 | 54,4 | 57,2 |
| Fig. 639<br>PN40 | (approx.) (kg) | 52,7 | 55   | 57,2 | 61,7 |

| Parts         |       |                         |                                                            |             |             |             |
|---------------|-------|-------------------------|------------------------------------------------------------|-------------|-------------|-------------|
| Pos.          | Sp.p. | Description             | Fig. 42.639                                                | Fig. 45.639 | Fig. 55.639 | Fig. 85.639 |
| 1             |       | Body                    | 1.0460                                                     |             | 1.4541      | 1.0571      |
| 11            | x     | Sealing ring            | A4                                                         |             |             |             |
| 16            |       | Hood                    | EN-JL1040                                                  | 1.0619+N    | 1.4308      | 1.6220+QT   |
| 17            |       | Gasket                  | Graphite (CrNi laminated with graphite)                    |             |             |             |
| 24            | x     | Controller, cpl.        | 1.4301 / bimetallic TB102/85 (corrosion resistant bimetal) |             |             |             |
| 24.2          |       | Strainer                | 1.4301                                                     |             |             |             |
| 27            |       | Stud                    | 1.7709                                                     |             | A4-70       | 1.7218      |
| 28            |       | Hexagonal nut           | 1.7218                                                     |             | A4-70       | 1.7218      |
| 46            | x     | Blow down valve, cpl.   | 1.4541                                                     |             |             |             |
| 47            |       | Vent plug (M14x1,5)     | 1.1181                                                     |             | 1.4541      |             |
| 49            | x     | Sealing ring            | A4                                                         |             |             |             |
| 50            |       | Plug (M14x1,5)          | 1.1181                                                     |             | 1.4541      |             |
| 51            | x     | Manual air vent valve   | 1.4541                                                     |             |             |             |
| 52            | x     | Union for recovery pipe | 1.4305                                                     |             |             |             |
| L Spare parts |       |                         |                                                            |             |             |             |

Information / restriction of technical rules need to be observed!

Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).

Operating and installation instructions can be downloaded at [www.ari-armaturen.com](http://www.ari-armaturen.com).



## Ball float steam trap (Steel)

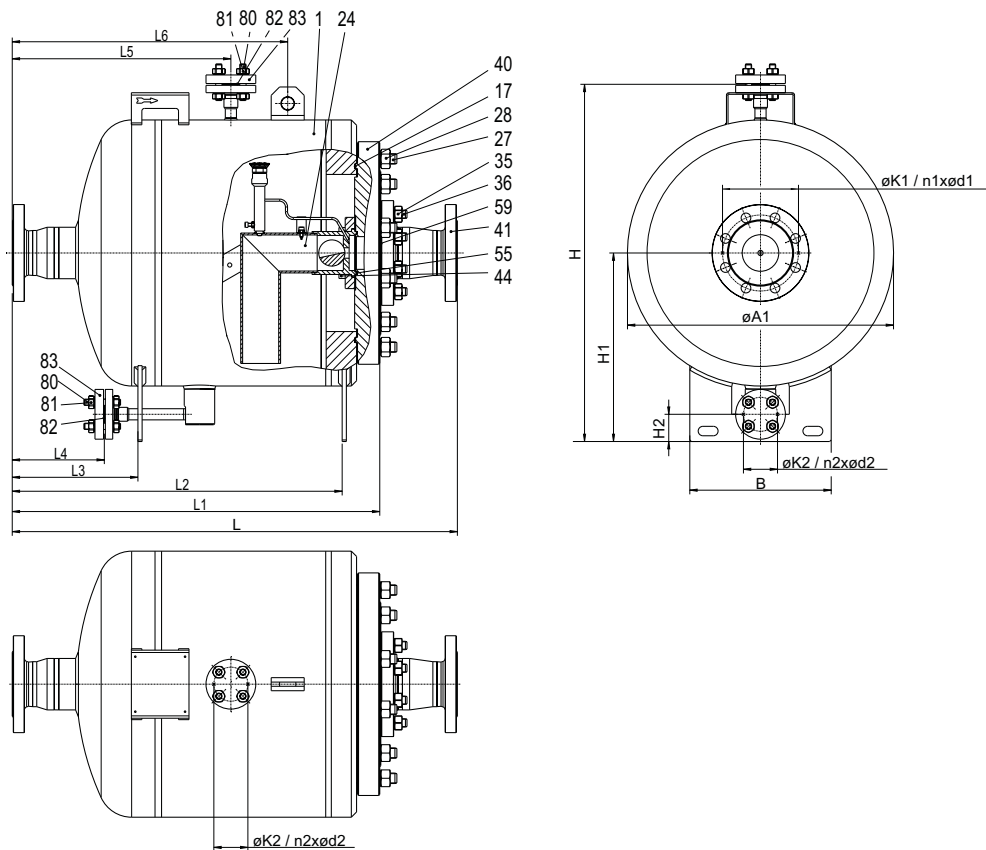


Fig. 637....1 Straight through with flanges (inlet from right)

| Figure | Nominal pressure   | Material                             | Nominal diam. / NPS | max. allowable pressure PMA | min. allowable temperature TSmin | max. allowable temperature TMA | allowable differential pressure $\Delta PMX$ | for controller                |
|--------|--------------------|--------------------------------------|---------------------|-----------------------------|----------------------------------|--------------------------------|----------------------------------------------|-------------------------------|
| 82.637 | PN16               | 1.0345<br>1.0425<br>1.0460           | DN 65 + 100         | 16 bar                      | -10 °C                           | 370 °C                         | 4 bar<br>6 bar<br>14 bar<br>23 bar<br>30 bar | R4<br>R6<br>R14<br>R23<br>R30 |
| 85.637 | PN40               | 1.0345<br>1.0425<br>1.0460           | DN 50 - 100         | 35 bar                      | -10 °C                           | 370 °C                         |                                              |                               |
| 85.637 | PN40 drilled CL150 | 1.0345<br>1.0425<br>1.0432<br>1.0460 | 2" - 4"             | 19,6 bar                    | -10 °C                           | 350 °C                         |                                              |                               |
| 85.637 | PN40 drilled CL300 | 1.0345<br>1.0425<br>1.0432<br>1.0460 | 2" - 4"             | 35 bar                      | -10 °C                           | 350 °C                         |                                              |                               |

### Types of connection Other types of connection on request (possibly note different operating limits).

- Flanges ....1 \_\_\_\_\_ PN16 / PN40 acc. to DIN EN 1092-1 or drilled CL150 and CL300 acc. to ASME B16.5

### Features

- Ball float steam trap with level control for the condensate-discharge from all kinds of steam systems
- Fluid group 2, Fluid group1 on request
- Rapid system start-up and venting of air during operation due to thermostatic air venting capsule
- Immediate discharge of hot boiling condensat without backflow
- Vessel volume < 85 Liter

- Mounting position horizontal
- symmetrical housing design, Inlet from left or right possible
- Connection piece for venting and draining DN15
- foot
- Durable, low-wear closing element
- All internal parts made of corrosion-resistant stainless steel
- Simple assembly and disassembly of the control unit

### Mounting position

- Standard: horizontal
- Straight through (inlet from left or right)



| Types of connection |        | Flanges |                  |    |               |               |               |        |    |    |               |        |    |    |
|---------------------|--------|---------|------------------|----|---------------|---------------|---------------|--------|----|----|---------------|--------|----|----|
| DN                  | (mm)   | 50      | 65 <sup>1)</sup> | 80 | 100<br>(PN16) | 100<br>(PN40) | drilled CL150 |        |    |    | drilled CL300 |        |    |    |
| NPS                 | (inch) | 2"      | 2 1/2"           | 3" | 4"<br>(PN16)  | 4"<br>(PN40)  | 2"            | 2 1/2" | 3" | 4" | 2"            | 2 1/2" | 3" | 4" |

| Face-to-face acc. to data sheet resp. customer request |      |     |     |     |     |     |     |     |     |     |     |     |     |     |
|--------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L                                                      | (mm) | 850 | 850 | 850 | 850 | 850 | 850 | 850 | 850 | 850 | 850 | 850 | 850 | 850 |
| L1                                                     | (mm) | 702 | 702 | 702 | 702 | 702 | 702 | 702 | 702 | 702 | 702 | 702 | 702 | 702 |

| Dimensions <span style="float: right;">Standard-flange dimensions refer to page 29.</span> |      |        |        |        |        |        |          |          |          |          |          |          |          |          |
|--------------------------------------------------------------------------------------------|------|--------|--------|--------|--------|--------|----------|----------|----------|----------|----------|----------|----------|----------|
| L2                                                                                         | (mm) | 630    | 630    | 630    | 630    | 630    | 630      | 630      | 630      | 630      | 630      | 630      | 630      | 630      |
| L3                                                                                         | (mm) | 240    | 240    | 240    | 240    | 240    | 240      | 240      | 240      | 240      | 240      | 240      | 240      | 240      |
| L4                                                                                         | (mm) | 176    | 176    | 176    | 176    | 176    | 176      | 176      | 176      | 176      | 176      | 176      | 176      | 176      |
| L5                                                                                         | (mm) | 418    | 418    | 418    | 418    | 418    | 418      | 418      | 418      | 418      | 418      | 418      | 418      | 418      |
| L6                                                                                         | (mm) | 526    | 526    | 526    | 526    | 526    | 526      | 526      | 526      | 526      | 526      | 526      | 526      | 526      |
| H                                                                                          | (mm) | 682    | 682    | 682    | 682    | 682    | 682      | 682      | 682      | 682      | 682      | 682      | 682      | 682      |
| H1                                                                                         | (mm) | 360    | 360    | 360    | 360    | 360    | 360      | 360      | 360      | 360      | 360      | 360      | 360      | 360      |
| H2                                                                                         | (mm) | 52     | 52     | 52     | 52     | 52     | 52       | 52       | 52       | 52       | 52       | 52       | 52       | 52       |
| B                                                                                          | (mm) | 270    | 270    | 270    | 270    | 270    | 270      | 270      | 270      | 270      | 270      | 270      | 270      | 270      |
| øA1                                                                                        | (mm) | 508    | 508    | 508    | 508    | 508    | 508      | 508      | 508      | 508      | 508      | 508      | 508      | 508      |
| øK1                                                                                        | (mm) | 125    | 145    | 160    | 180    | 190    | 120,7    | 139,7    | 152,4    | 190,5    | 127,0    | 149,2    | 168,3    | 200      |
| n1 x ød1                                                                                   | (mm) | 4 x 18 | 8 x 18 | 8 x 18 | 8 x 18 | 8 x 22 | 4 x 3/4" | 4 x 3/4" | 4 x 3/4" | 8 x 3/4" | 8 x 3/4" | 8 x 7/8" | 8 x 7/8" | 8 x 7/8" |
| øK2                                                                                        | (mm) | 65     | 65     | 65     | 65     | 65     | 60,3     | 60,3     | 60,3     | 60,3     | 66,7     | 66,7     | 66,7     | 66,7     |
| n2 x ød2                                                                                   | (mm) | 4 x 14 | 4 x 14 | 4 x 14 | 4 x 14 | 4 x 14 | 4 x 5/8" | 4 x 5/8" | 4 x 5/8" | 4 x 5/8" | 4 x 5/8" | 4 x 5/8" | 4 x 5/8" | 4 x 5/8" |

<sup>1)</sup> DN65 with 4-hole flanges on request.

| Weights  |       |      |     |     |     |     |     |     |     |     |     |     |     |     |     |
|----------|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Fig. 637 | (ca.) | (kg) | 226 | 228 | 230 | 231 | 234 | 223 | 227 | 228 | 232 | 225 | 228 | 231 | 239 |

| Connecting flange connection to the cover (Pos.40) |        |
|----------------------------------------------------|--------|
| Stud (DIN 939 - 1.7709)                            | M16x55 |
| Hexagonal nut (DIN 2510 - 1.7709)                  | NF M16 |

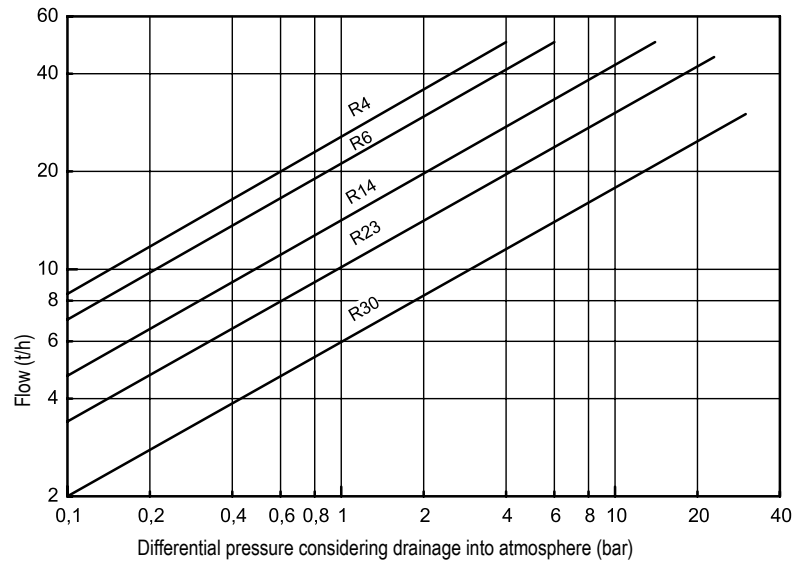
| Parts         |        |                   |                                        |                                   |
|---------------|--------|-------------------|----------------------------------------|-----------------------------------|
| Pos.          | Sp. p. | Description       | Fig. 82./85.637                        | Fig. 85.637 drilled CL150 / CL300 |
| 1             |        | Body              | 1.0345 / 1.0460 / 1.0425               | 1.0345 / 1.0460 / 1.0425 / C21    |
| 17            | x      | Gasket            | Graphite (mit CrNi-Stahlfolieneinlage) |                                   |
| 24            | x      | Controller, cpl.  | Stainless steel                        |                                   |
| 27            |        | Stud              | 1.7709                                 |                                   |
| 28            |        | Hexagonal nut     | 1.7709                                 |                                   |
| 35            |        | Hexagonal nut     | 1.7709                                 |                                   |
| 36            |        | Stud              | 1.7709                                 |                                   |
| 40            |        | Cover             | 1.0425                                 |                                   |
| 41            |        | Outlet flange     | 1.0460                                 | SA105/C21                         |
| 44            |        | Cheese head screw | A2-70                                  |                                   |
| 55            | x      | Gasket            | Graphite (mit CrNi-Stahlfolieneinlage) |                                   |
| 59            | x      | Gasket            | Graphite (mit CrNi-Stahlfolieneinlage) |                                   |
| 80            |        | Stud              | 1.7709                                 |                                   |
| 81            |        | Hexagonal nut     | 1.7709                                 |                                   |
| 82            | x      | Gasket            | Graphite (mit CrNi-Stahlfolieneinlage) |                                   |
| 83            |        | Blind flange      | 1.0460                                 | SA105/C21                         |
| ↳ Ersatzteile |        |                   |                                        |                                   |

Information / restriction of technical rules need to be observed!

Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).

Operating and installation instructions can be downloaded at [www.ari-armaturen.com](http://www.ari-armaturen.com).

# Capacity chart



The capacity chart shows the maximum flow quantities of hot condensate for the different controllers and steam trap sizes



# Ball float steam trap (Grey cast iron, SG iron, Forged steel/Cast steel, Stainless steel, Low temperature steel)

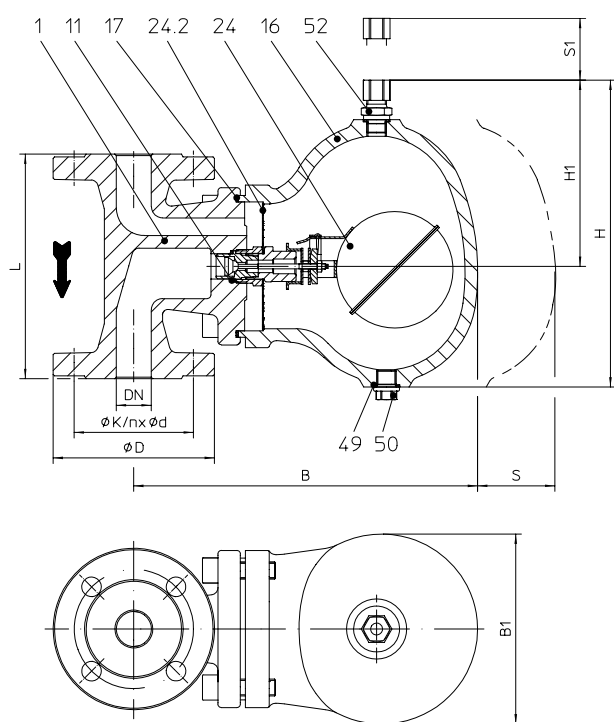


Fig. 630....1 with flanges - vertical installation

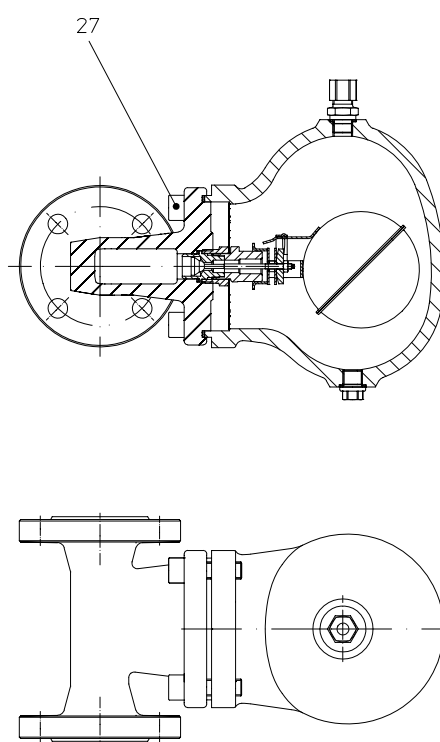
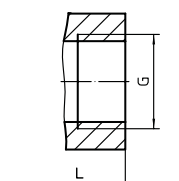
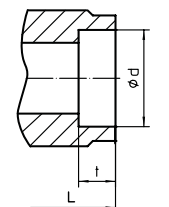
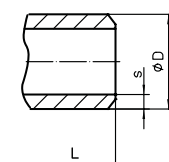


Fig. 630....1 with flanges - horizontal installation


Fig. 630....2  
with screwed sockets

Fig. 630....3  
with socket weld ends

Fig. 630....4  
with butt weld ends

| Figure | Nominal pressure | Material                       | Nominal diam. / NPS  | max. allowable pressure PMA | min. allowable temperature TSmin | max. allowable temperature TMA | allowable differential pressure ΔPMX | for controller        |
|--------|------------------|--------------------------------|----------------------|-----------------------------|----------------------------------|--------------------------------|--------------------------------------|-----------------------|
| 12.630 | PN16             | Body/Hood: EN-JL1040           | 15 - 50 / 1/2" - 2"  | 16 bar                      | -10 °C                           | 300 °C                         | 2 bar<br>4 bar<br>8 bar<br>13 bar    | R2<br>R4<br>R8<br>R13 |
| 25.630 | PN40             | Body/Hood: EN-JS1049           | 15 - 50 / 1/2" - 2"  | 40 bar                      | -10 °C                           | 350 °C                         | 2 bar<br>4 bar                       | R2<br>R4              |
| 45.630 | PN40             | Body: 1.0460 / Hood: 1.0619+N  | 15 - 100 / 1/2" - 4" | 40 bar                      | -10 °C                           | 400 °C                         | 8 bar                                | R8                    |
| 55.630 | PN40             | Body: 1.4541 / Hood: 1.4308    | 15 - 100 / 1/2" - 4" | 40 bar                      | -60 °C                           | 300 °C                         | 13 bar                               | R13                   |
| 85.630 | PN40             | Body: 1.0571 / Hood: 1.6220+QT | 15 - 50 / 1/2" - 4"  | 40 bar                      | -50 °C                           | 300 °C                         | 22 bar<br>32 bar                     | R22<br>R32            |

For versions rated to Class 150 and Class 300 refer to data sheet CONA®S-ANSI

| Types of connection                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                          | Other types of connection on request.                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Flanges ....1 acc. to DIN EN 1092-2 (EN-JL1040, EN-JS1049) and DIN EN 1092-1 (1.0460, 1.4541, 1.0571)</li> <li>Screwed sockets ....2 Rp thread acc. to DIN EN 10226-1 or NPT thread acc. to ANSI B1.20.1</li> <li>Socket weld ends ....3 acc. to DIN EN 12760</li> <li>Butt weld ends ....4 with joint preparation type acc. to EN ISO 9692 No. 1.3 and 1.5 (Note restriction on operating pressure / inlet temperature depending to design!)</li> </ul> |                                          |                                                                                                                                                                                                                                                                                                                                                              |
| Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                          |                                                                                                                                                                                                                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>Ball float steam trap with level control for the condensate-discharge from compressed air and gas systems (acc. to PED 2014/68/EU fluid group 2, other fluid groups on request)</li> <li>Fluid group 1 acc. to PED 2014/68/EU</li> <li>Inside strainer</li> <li>Body with flanged hood</li> </ul>                                                                                                                                                        |                                          | <ul style="list-style-type: none"> <li>Non return protection</li> <li>Union (Pos. 52) for recovery pipe (for connecting pipes with outside-Ø 8 x 1 mm acc. to EN 10305-4 steel or EN 10216-5 stainless steel, compression type fitting acc. to DIN 2353)</li> <li>The controller can be replaced without removing the trap body from the pipework</li> </ul> |
| Mounting position                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                          |                                                                                                                                                                                                                                                                                                                                                              |
| Standard:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | vertical                                 | <b>Please indicate when ordering!</b><br>Refer to: Information about the different installation positions (Page 29)<br>On-site change of the installation position is possible according to the operating instructions.                                                                                                                                      |
| Optional:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | horizontal with inlet from right or left |                                                                                                                                                                                                                                                                                                                                                              |
| Options                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                          |                                                                                                                                                                                                                                                                                                                                                              |
| <ul style="list-style-type: none"> <li>Air vent - (Pos. 51) or blow down valve (Pos. 46), manual operated</li> </ul>                                                                                                                                                                                                                                                                                                                                                                            |                                          |                                                                                                                                                                                                                                                                                                                                                              |



| Types of connection |        | Flanges |      |    |        |    |                      |                  |                   | Screw sockets <sup>1)</sup><br>Socket weld ends <sup>2)</sup> |      |    |        |    | Butt weld ends <sup>2)</sup> |      |    |        |    |
|---------------------|--------|---------|------|----|--------|----|----------------------|------------------|-------------------|---------------------------------------------------------------|------|----|--------|----|------------------------------|------|----|--------|----|
| DN                  | (mm)   | 15      | 20   | 25 | 40     | 50 | 65 <sup>2)</sup>     | 80 <sup>2)</sup> | 100 <sup>2)</sup> | 15                                                            | 20   | 25 | 40     | 50 | 15                           | 20   | 25 | 40     | 50 |
| NPS                 | (inch) | 1/2"    | 3/4" | 1" | 1 1/2" | 2" | 2 1/2" <sup>2)</sup> | 3" <sup>2)</sup> | 4" <sup>2)</sup>  | 1/2"                                                          | 3/4" | 1" | 1 1/2" | 2" | 1/2"                         | 3/4" | 1" | 1 1/2" | 2" |

<sup>1)</sup> DN50 (2") not in EN-JL/EN-JS      <sup>2)</sup> not in EN-JL/EN-JS

| Face-to-face acc. to data sheet resp. customer request |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|--------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L (EN-JL1040)                                          | (mm) | 150 | 150 | 160 | 230 | 230 | --  | --  | --  | 150 | 150 | 160 | 230 | --  | --  | --  | --  | --  | --  |
| L (EN-JS1049)                                          | (mm) | 150 | 150 | 160 | 230 | 230 | --  | --  | --  | 150 | 150 | 160 | 230 | --  | --  | --  | --  | --  | --  |
| L (1.0460, 1.4541, 1.0571)                             | (mm) | 150 | 150 | 160 | 230 | 230 | 290 | 310 | 350 | 150 | 150 | 160 | 210 | 210 | 160 | 160 | 160 | 250 | 250 |

| Dimensions    |      |     |     |     |     |     |     |     |     | Standard-flange dimensions refer to page 29. |     |     |     |     |     |     |     |     |     |
|---------------|------|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| H             | (mm) | 188 | 188 | 219 | 299 | 299 | 299 | 299 | 299 | 188                                          | 188 | 219 | 299 | 299 | 188 | 188 | 219 | 299 | 299 |
| H1            | (mm) | 113 | 113 | 133 | 182 | 182 | 182 | 182 | 182 | 113                                          | 113 | 133 | 182 | 182 | 113 | 113 | 133 | 182 | 182 |
| B (EN-JS1049) | (mm) | 215 | 215 | 245 | 289 | 289 | --  | --  | --  | 215                                          | 215 | 245 | 289 | --  | --  | --  | --  | --  | --  |
| B (Steel)     | (mm) | 217 | 217 | 249 | 292 | 292 | 292 | 292 | 292 | 170                                          | 170 | 197 | 292 | 292 | 170 | 170 | 197 | 292 | 292 |
| B1            | (mm) | 114 | 114 | 135 | 194 | 194 | 194 | 194 | 194 | 114                                          | 114 | 135 | 194 | 194 | 114 | 114 | 135 | 194 | 194 |
| S             | (mm) | 180 | 180 | 200 | 300 | 300 | 300 | 300 | 300 | 180                                          | 180 | 200 | 300 | 300 | 180 | 180 | 200 | 300 | 300 |
| S1            | (mm) | 35  | 35  | 50  | 65  | 65  | 65  | 65  | 65  | 35                                           | 35  | 50  | 65  | 65  | 35  | 35  | 50  | 65  | 65  |

| Connection dimensions standard socket weld end |      |    |    |    |    |    |    |    |    |    |      |    |      |      |    |    |    |    |    |
|------------------------------------------------|------|----|----|----|----|----|----|----|----|----|------|----|------|------|----|----|----|----|----|
| ød                                             | (mm) | -- | -- | -- | -- | -- | -- | -- | -- | 22 | 27,3 | 34 | 48,9 | 61,3 | -- | -- | -- | -- | -- |
| t                                              | (mm) | -- | -- | -- | -- | -- | -- | -- | -- | 10 | 13   | 13 | 13   | 16   | -- | -- | -- | -- | -- |

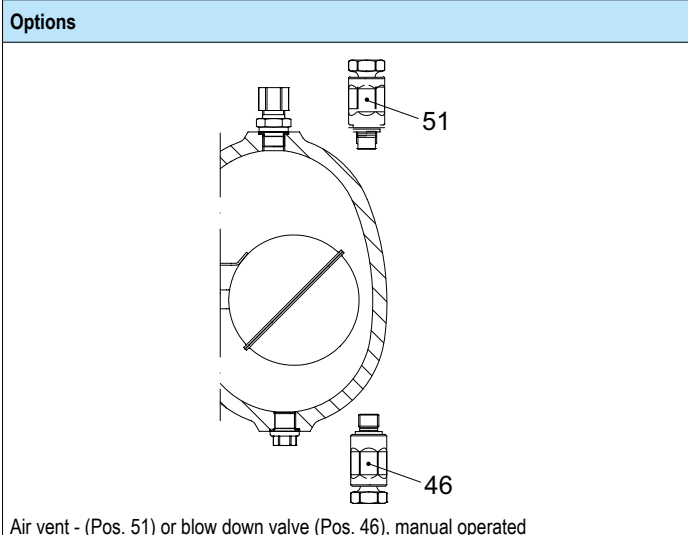
| Connection dimensions standard butt weld end |      |    |    |    |    |    |    |    |    | Other welding end dimensions on request. |    |    |    |      |      |      |      |      |  |
|----------------------------------------------|------|----|----|----|----|----|----|----|----|------------------------------------------|----|----|----|------|------|------|------|------|--|
| øD                                           | (mm) | -- | -- | -- | -- | -- | -- | -- | -- | --                                       | -- | -- | -- | 21,3 | 26,9 | 33,7 | 48,3 | 60,3 |  |
| s                                            | (mm) | -- | -- | -- | -- | -- | -- | -- | -- | --                                       | -- | -- | -- | 2,0  | 2,3  | 2,6  | 2,6  | 2,9  |  |

| Weights            |      |     |     |      |      |    |      |      |      |     |     |     |      |      |     |     |      |      |      |
|--------------------|------|-----|-----|------|------|----|------|------|------|-----|-----|-----|------|------|-----|-----|------|------|------|
| Fig. 630 (approx.) | (kg) | 8,1 | 8,3 | 12,1 | 29,4 | 30 | 32,7 | 34,3 | 39,2 | 7,5 | 7,5 | 9,7 | 24,7 | 25,2 | 7,1 | 8,1 | 10,2 | 25,7 | 26,7 |

| Parts |       |                         |                                         |             |             |             |             |
|-------|-------|-------------------------|-----------------------------------------|-------------|-------------|-------------|-------------|
| Pos.  | Sp.p. | Description             | Fig. 12.630                             | Fig. 25.630 | Fig. 45.630 | Fig. 55.630 | Fig. 85.630 |
| 1     |       | Body                    | EN-JL1040                               | EN-JS1049   | 1.0460      | 1.4541      | 1.0571      |
| 11    | x     | Sealing ring            | CU                                      | A4          |             |             |             |
| 16    |       | Hood                    | EN-JL1040                               | EN-JS1049   | 1.0619+N    | 1.4308      | 1.6220+QT   |
| 17    | x     | Gasket                  | Graphite (CrNi laminated with graphite) |             |             |             |             |
| 24    | x     | Controller, cpl.        | 1.4301                                  |             |             |             |             |
| 24.2  |       | Strainer                | 1.4301                                  |             |             |             |             |
| 27    |       | Cheese head screw       | A2-70                                   | 1.7709      | 1.7709      | A2-70       | 1.7218      |
| 46    | x     | Blow down valve, cpl.   | 1.4541                                  |             |             |             |             |
| 49    | x     | Sealing ring            | CU                                      | A4          |             |             |             |
| 50    |       | Plug (M14x1,5)          | 1.1181                                  |             |             | 1.4541      |             |
| 51    | x     | Manual air vent valve   | 1.4541                                  |             |             |             |             |
| 52    | x     | Union for recovery pipe | 1.4305                                  |             |             |             |             |
|       |       | L Spare parts           |                                         |             |             |             |             |

Information / restriction of technical rules need to be observed!

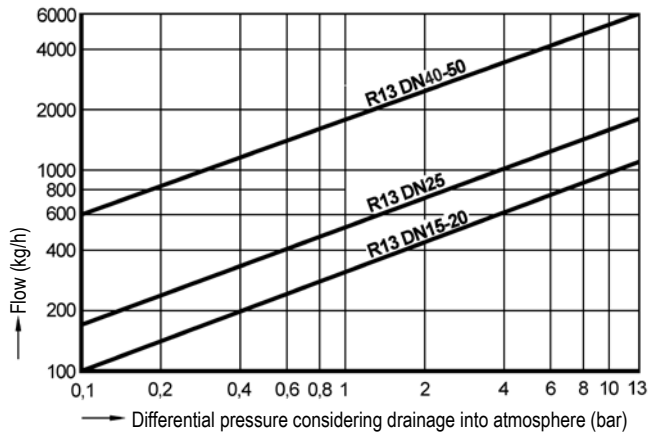
Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).

Operating and installation instructions can be downloaded at [www.ari-armaturen.com](http://www.ari-armaturen.com).


### Capacity chart

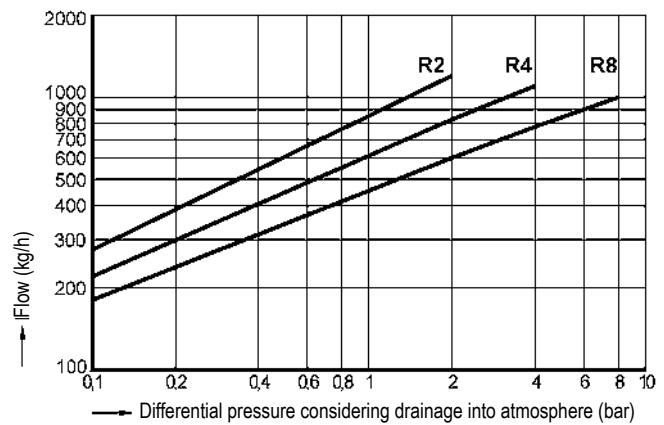
PN16 - Standard R13

DN15 - DN50



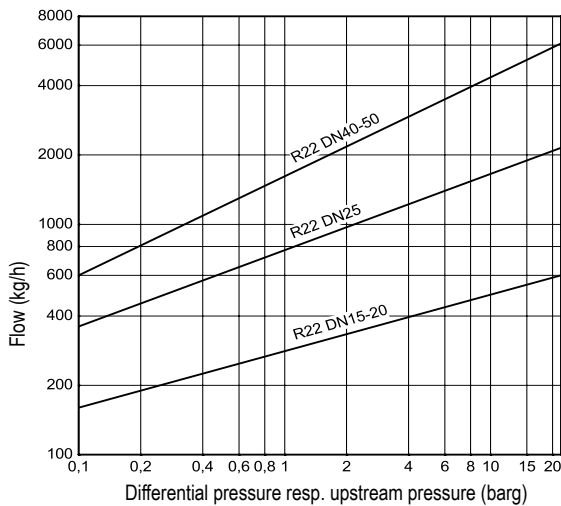
PN16 - PN40 - Special execut. R2, R4, R8

DN 15 - DN 20



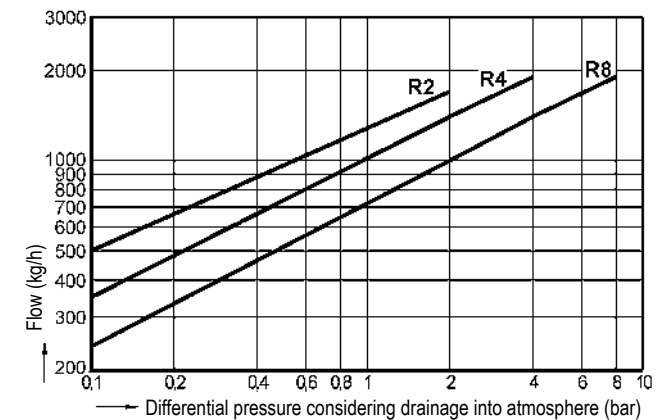
PN40 - Standard R22

DN15 - DN50



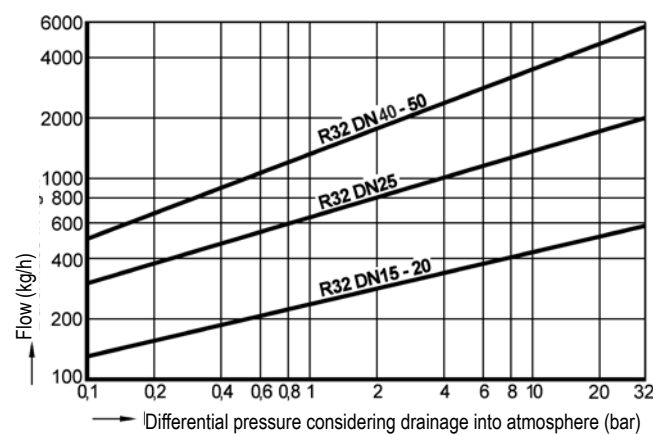
PN16 - PN40 - Special execut. R2, R4, R8

DN 25



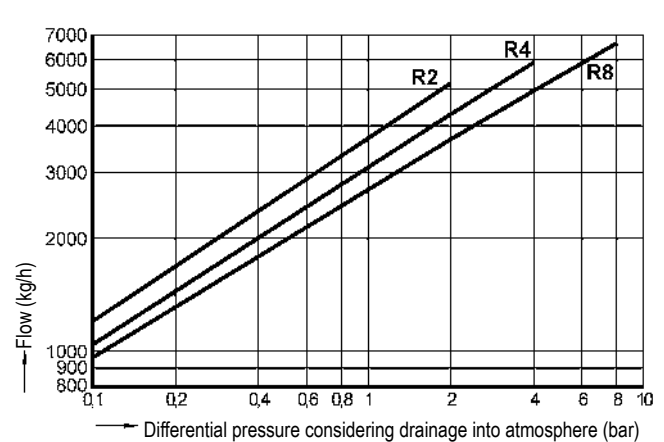
PN40 - Standard R32

DN15 - DN50



PN16 - PN40 - Special execut. R2, R4, R8

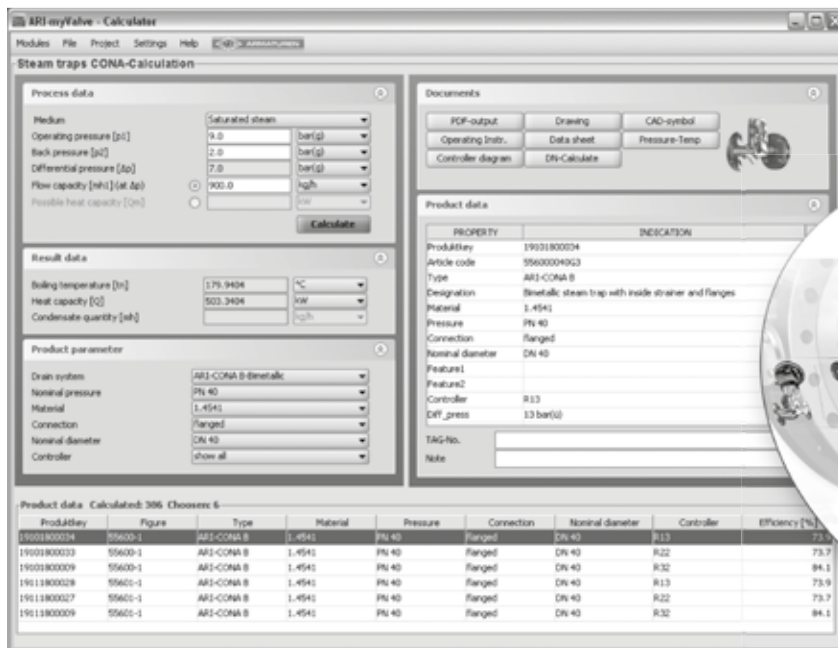
DN 40 - DN 100



To determine the drainage quantity of cold water at about 20°C from compressed air and gas systems.

## myValve® - Your VALVE Sizing-Program.

myValve is a powerful software tool that not only helps you size your system components; it also gives you instant access to all other data about the selected product, such as order information, spare parts drawings, operating instructions, data sheets, etc., whenever you need it.



### myValve - Valve Sizing-Program

#### Contents:

##### Module ARI-Steam trap CONA-Calculation

- Sizing (calculation of steam trap systems with given flow capacity or heat capacity)
- Calculation of nominal diameter acc. to given pressure, condensate quantity, condensate sub-cooling and speed

#### Media:

- Steam (saturated and superheated)
- Compressed air

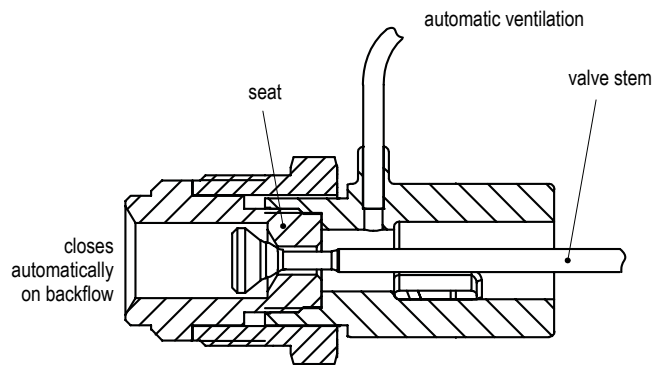
#### Special Features

- Project administration of the calculation and product data incl. spare part drawings concerning to project and tag number
- Direct output of calculation and product data in PDF format
- Product data could be taken for a direct order
- SI- and ANSI-units with direct conversion to another databank
- Settings with over pressure or absolute pressure
- All ARI products are integrated in one databank
- Direct access concerning to the product on data sheets, operating instructions, pressure-temperature-diagram and spare part drawings
- Operation in company networks possible (no complex installations on individually PC's necessary)
- Extensive catalogue extending over several product groups

#### System Requirements:

Windows operating systems, Linux, etc.

### Integrated non return protection

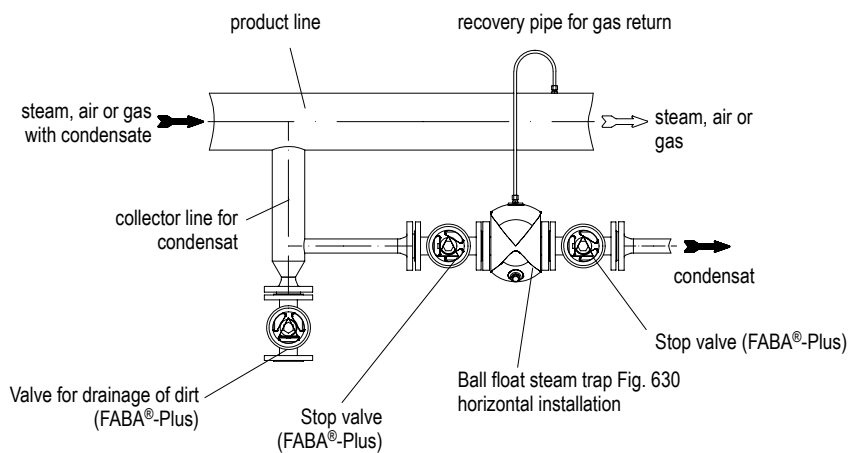


The integrated non return protection acts as a check valve (except BR633, BR637 and BR639 R4-P).

In case of parallel installed heat exchangers or heater batteries the non return protection prevents a shut down heat-exchangers for flooding with condensate from the downstream side and reverse heating up.

A check valve which otherwise has to be installed is not necessary.

### Installation with recovery pipe



#### Important:

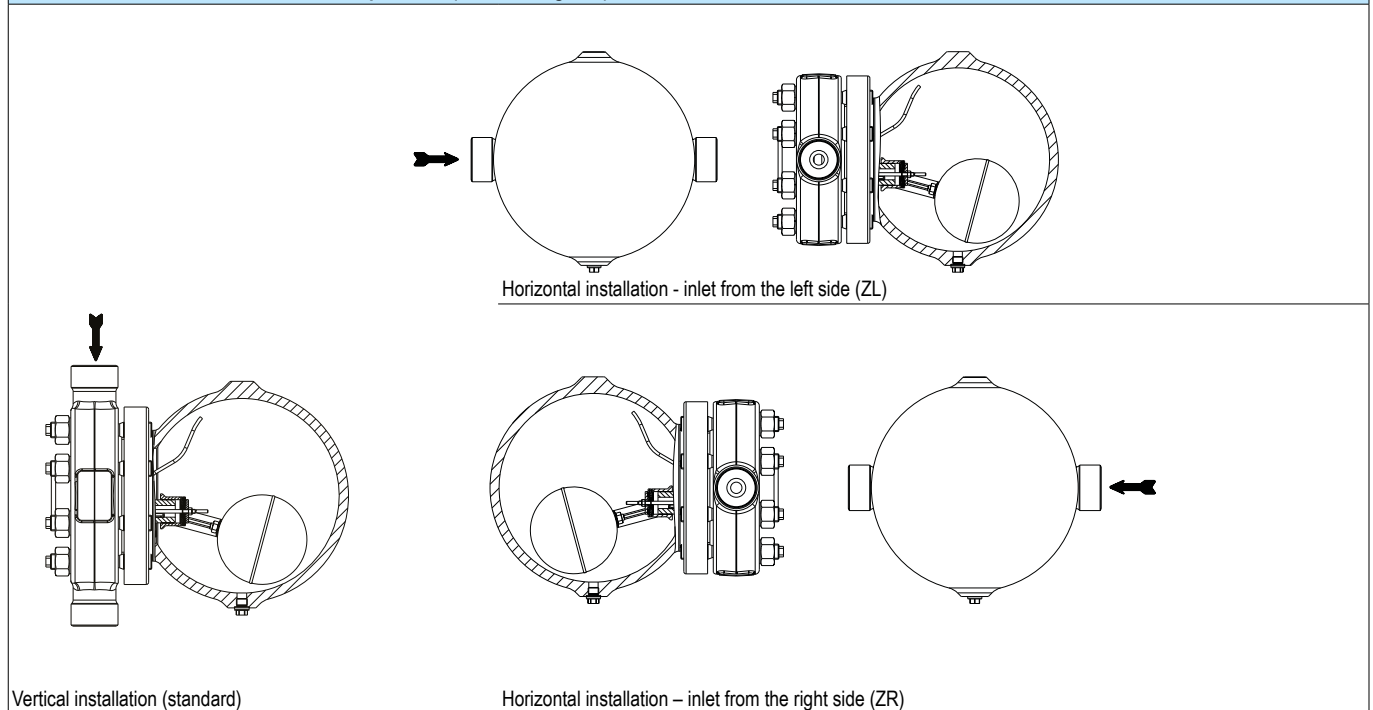
The installation of a recovery pipe for gas return is always recommended; especially if the ball float steam trap is installed horizontally.

| Selection criteria:                                                                                                                                             | Example for order data:                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Steam pressure</li> <li>• Back pressure</li> <li>• Quantity of condensate</li> <li>• Flow medium</li> </ul>            | <ul style="list-style-type: none"> <li>• Nominal diameter / pressure</li> <li>• Type of connection</li> <li>• Material</li> <li>• Place of service or kind of steam consumer</li> </ul> <p><b>Ball float steam trap CONA® S, Fig. 630, PN40, DN50, 1.0460/1.0619+N, Controller R22, with flanges, Face-to-face dimension 230 mm</b></p> |
| Other installation positions than standard (vertical) have to be indicated together with the information about the flow direction i.e. inlet from left or right |                                                                                                                                                                                                                                                                                                                                         |

| Standard-flange dimensions acc. to DIN EN 1092-1 / -2 |        |        |        |        |        |        |        |        |         |        |        |
|-------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|
| DN                                                    |        | (mm)   | 15     | 20     | 25     | 32     | 40     | 50     | 65      | 80     | 100    |
| NPS                                                   |        | (inch) | 1/2"   | 3/4"   | 1"     | 1 1/4" | 1 1/2" | 2"     | 2 1/2"  | 3"     | 4"     |
| PN16                                                  | ØD     | (mm)   | 95     | 105    | 115    | 140    | 150    | 165    | 185     | 200    | 220    |
|                                                       | ØK     | (mm)   | 65     | 75     | 85     | 100    | 110    | 125    | 145     | 160    | 180    |
|                                                       | n x Ød | (mm)   | 4 x 14 | 4 x 14 | 4 x 14 | 4 x 18 | 4 x 18 | 4 x 18 | 8 x 18* | 8 x 18 | 8 x 18 |
| PN25                                                  | ØD     | (mm)   | --     | --     | --     | --     | --     | --     | 185     | 200    | 235    |
|                                                       | ØK     | (mm)   | --     | --     | --     | --     | --     | --     | 145     | 160    | 190    |
|                                                       | n x Ød | (mm)   | --     | --     | --     | --     | --     | --     | 8 x 18  | 8 x 18 | 8 x 18 |
| PN40                                                  | ØD     | (mm)   | 95     | 105    | 115    | 140    | 150    | 165    | 185     | 200    | 235    |
|                                                       | ØK     | (mm)   | 65     | 75     | 85     | 100    | 110    | 125    | 145     | 160    | 190    |
|                                                       | n x Ød | (mm)   | 4 x 14 | 4 x 14 | 4 x 14 | 4 x 18 | 4 x 18 | 4 x 18 | 8 x 18  | 8 x 18 | 8 x 22 |
| PN63                                                  | ØD     | (mm)   | 105    | 130    | 140    | --     | 170    | 180    | --      | --     | --     |
|                                                       | ØK     | (mm)   | 75     | 90     | 100    | --     | 125    | 135    | --      | --     | --     |
|                                                       | n x Ød | (mm)   | 4 x 14 | 4 x 18 | 4 x 18 | --     | 4 x 22 | 4 x 22 | --      | --     | --     |
| PN100                                                 | ØD     | (mm)   | 105    | 130    | 140    | --     | 170    | 195    | --      | --     | --     |
|                                                       | ØK     | (mm)   | 75     | 90     | 100    | --     | 125    | 145    | --      | --     | --     |
|                                                       | n x Ød | (mm)   | 4 x 14 | 4 x 16 | 4 x 18 | --     | 4 x 22 | 4 x 26 | --      | --     | --     |
| PN160                                                 | ØD     | (mm)   | 105    | --     | 140    | --     | --     | 195    | --      | --     | --     |
|                                                       | ØK     | (mm)   | 75     | --     | 100    | --     | --     | 145    | --      | --     | --     |
|                                                       | n x Ød | (mm)   | 4 x 14 | --     | 4 x 18 | --     | --     | 4 x 26 | --      | --     | --     |

\* Steel flanges with 4 holes subject to agreement

\* Steel flanges with 4 holes subject to agreement

**Information about the different installation positions (shown at Fig. 631)**

**Installation (see picture)**

The ball float steam traps can be installed either in vertical (standard) or horizontal position. In case of horizontal installation please indicate whether the inlet is from the left or right side.

The steam trap can also be converted on site to match the different installation positions. Please observe the appropriate operating manuals (except BR633).

The steam trap must be fitted with the direction of flow as indicated by the arrow on the body.

Enough clearance (refer to dimension S) for the removal of the hood shall be provided.

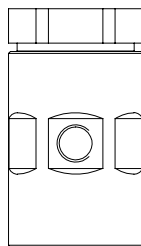
The steam trap shall preferably be installed at the lowest point of the system and the membrane capsule resp. the bleeding tube shall be installed in an upright position inside of the hood.

**For the modification of the installation position observe the operating manual.**

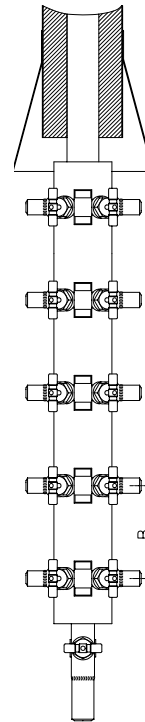
A modification of the installation position during the time of warranty shall be carried out by the AWH-Service or it shall be agreed between the customer and manufacturer.



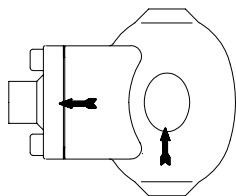
Multifunction tester  
**Sonaphone**



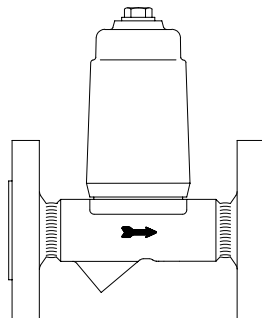
Vacuum breaker  
Fig. 655



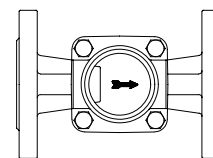
Condensate collection (B = 160), steam distribution (B = 120)  
**CODI®S** with gland packing Fig. 671/672;  
**CODI®B** with bellows seal, maintenance-free Fig. 675/676



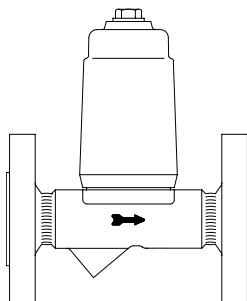
Automatic air vent for liquid systems  
Fig. 656



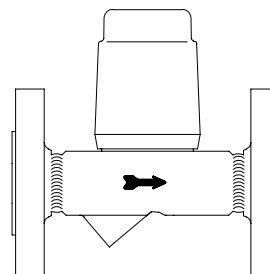
Condensate discharge temperature limiter  
Fig. 645/647



Flow indicator  
Fig. 660/661



Return temperature limiter  
Fig. 650



Liquid drainer  
Fig. 665

(Further informations about the accessories can be found in the appropriate data sheets.)