

## Ball float steam trap

### Ball float steam trap ANSI125 / 150 / 300

- 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  
Cast steel  
Forged steel  
High temperature steel  
Stainless steel

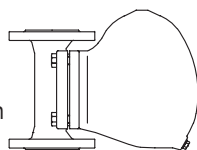


Fig. 631

Page 2

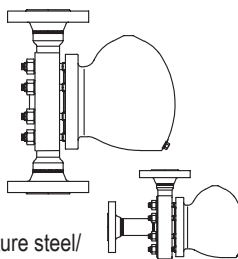
### Ball float steam trap ANSI900

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

#### Angle pattern design:

- with flanges
- with butt weld ends

(Fig. 631....1)  
(Fig. 631....3)  
(Fig. 631....4)



High temperature steel/  
Cast steel

Fig. 631 / Fig. 632

Page 6

### Ball float steam trap ANSI150 / 300

- with flanges R4-P
- with flanges

(Fig. 633....1)  
(Fig. 639....1)

Forged steel/  
Grey cast iron  
Forged steel/  
Cast steel  
Stainless steel

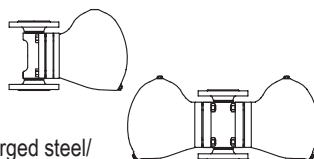


Fig. 633 / Fig. 639

Page 8

### Ball float steam trap for drainage of water from compressed air and gas systems (acc. to PED 97/23/EC fluid group 2)

#### ANSI125 / 150 / 300

- 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

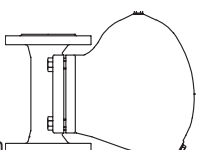


Fig. 630

Page 10

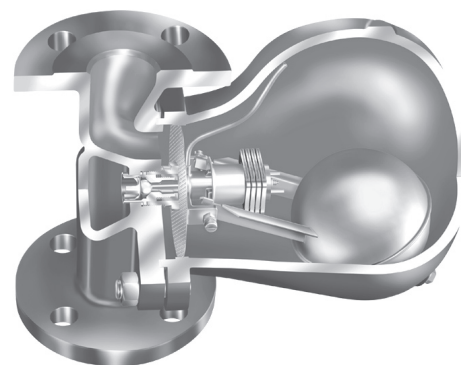


Fig. 631....1  
vertical installation

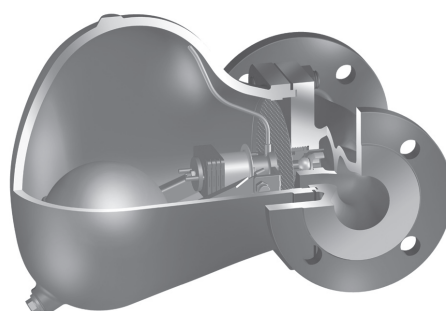


Fig. 631....1  
horizontal installation

#### Features:

- Back pressure-free condensate discharge even at extreme pressure- and quantity fluctuations
- Controller with integrated automatic ventilation (except Fig. 630)
- Robust and insensitive to waterhammer
- Non return protection (except Fig. 633)
- Union for pressure compension line and bypass possible
- On-site change of the installation position is possible according to the operating instructions (except Fig. 633)
- The controller may be changed without disturbing the pipe work
- Pressure test acc. to API 598
- CRN approved

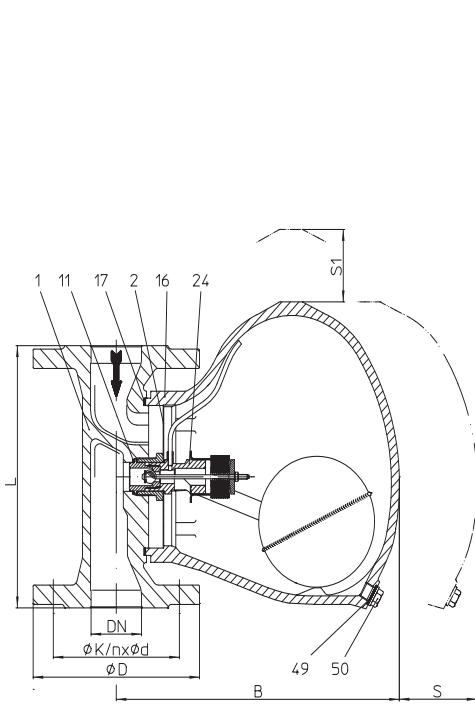
**Ball float steam trap (Grey cast iron, SG iron, Cast steel/Forged steel, Stainless steel)**


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

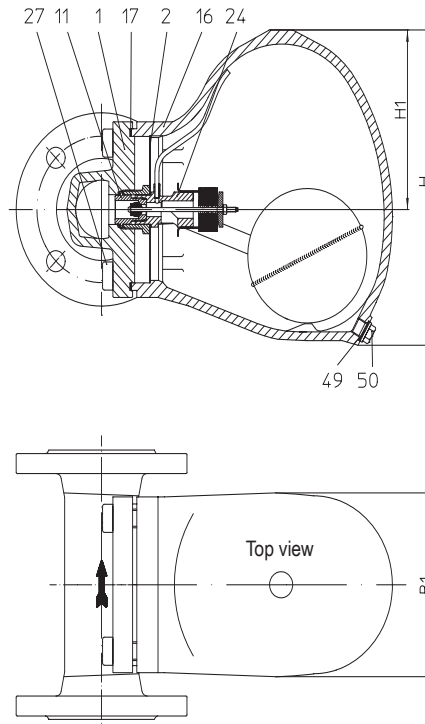
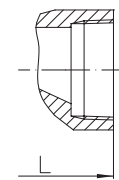
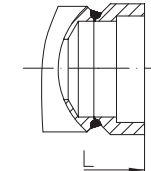
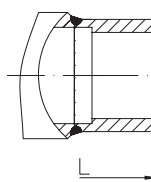


Fig. 631....1 with flanges - horizontal installation


 Fig. 631....2  
with screwed sockets

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

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

| Figure | Nominal pressure | Material                                           | NPS       | Operating pressure PS                          | Inlet temperature TS | allowable differential pressure ΔPMX | for controller                      |
|--------|------------------|----------------------------------------------------|-----------|------------------------------------------------|----------------------|--------------------------------------|-------------------------------------|
| 11.631 | ANSI125          | Body/Hood: EN-JL1040 (similar to ASTM A 126 Cl. B) | 1/2" - 2" | Flanges acc. to ANSI B16.1<br>8,6 barg         | 232 °C               | 2 bar<br>4 bar                       | R2<br>R4                            |
|        |                  |                                                    |           | Screwed sockets acc. to ANSI B16.4<br>8,6 barg | 178 °C               | 8 bar<br>8,6 bar                     | R8<br>R13                           |
| 22.631 | ANSI150          | Body/Hood: EN-JS1049 (similar to SA395)            | 1/2" - 2" | 12,8 barg                                      | 232 °C               | 2 bar<br>4 bar<br>8 bar<br>13 bar    | R2<br>R4<br>R8<br>R13               |
| 42.631 | ANSI150          | Body: SA105 / Hood: SA216WCB                       | 1/2" - 4" | 8,6 barg                                       | 343 °C               |                                      |                                     |
|        |                  |                                                    |           | 13 barg                                        | 225 °C               |                                      |                                     |
|        |                  |                                                    |           | 8 barg                                         | 360 °C               |                                      |                                     |
| 45.631 | ANSI300          | Body: SA105 / Hood: SA216WCB                       | 1/2" - 4" | 4 barg                                         | 427 °C               | ≥ ANSI300:<br>22 bar<br>32 bar       | R2<br>R4<br>R8<br>R13<br>R22<br>R32 |
| 52.631 | ANSI150          | Body: SA182F321 / Hood: SA351CF8                   | 1/2" - 4" | 32 barg                                        | 411 °C               |                                      |                                     |
|        |                  |                                                    |           | 22 barg                                        | 427 °C               |                                      |                                     |
|        |                  |                                                    |           | 13 barg                                        | 208 °C               |                                      |                                     |
|        |                  |                                                    |           | 8 barg                                         | 360 °C               |                                      |                                     |
| 55.631 | ANSI300          | Body: SA182F321 / Hood: SA351CF8                   | 1/2" - 4" | 4 barg                                         | 467 °C               |                                      |                                     |
|        |                  |                                                    |           | 2 barg                                         | 510 °C               |                                      |                                     |
|        |                  |                                                    |           | 32 barg                                        | 262 °C               |                                      |                                     |
|        |                  |                                                    |           | 22 barg                                        | 510 °C               |                                      |                                     |

DIN/EN-Constructions refer to data sheet CONA®S

| Types of connection                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                  | Other types of connection on request.                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Flanges ....1 _____ acc. to ASME B16.1 (ANSI125) / acc. to ASME B16.5 (ANSI150-300)</li><li>• Screwed sockets ....2 ____ NPT-Thread acc. to ASME B16.4 (ANSI125) / acc. to ASME B1.20.1 (ANSI150-300) or Rp-Thread acc. to DIN EN 10226-1)</li><li>• Socket weld ends ....3 ____ acc. to ASME B16.11</li><li>• Butt weld ends ....4 _____ ASME B16.25 (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 all kinds of steam systems</li><li>• Rapid system start-up due to thermostatic control element</li><li>• Inside strainer</li></ul>                                                                                                                                                                                                                                     | <ul style="list-style-type: none"><li>• Body with flanged hood</li><li>• Non return protection</li><li>• The controller maybe changed without disturbing the pipe work</li></ul> |                                                                                                                                                                                                                         |
| Mounting position                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                  |                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"><li>• Standard:</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                               | vertical                                                                                                                                                                         | <b>Please indicate when ordering!</b><br>Refer to: Information about the different installation positions (Page 17)<br>On-site change of the installation position is possible according to the operating instructions. |
| <ul style="list-style-type: none"><li>• Optional:</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                               | horizontal with inlet from right or left                                                                                                                                         |                                                                                                                                                                                                                         |
| Options                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                  | (Design refer to page 3)                                                                                                                                                                                                |
| <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 |     |   |       |   |       |   |   | Screwed sockets <sup>1)</sup><br>Socket weld ends <sup>2)</sup> |     |   |       |                 | Butt weld ends <sup>2)</sup> |     |   |       |   |
|---------------------|---------|-----|---|-------|---|-------|---|---|-----------------------------------------------------------------|-----|---|-------|-----------------|------------------------------|-----|---|-------|---|
| NPS                 | 1/2     | 3/4 | 1 | 1 1/2 | 2 | 2 1/2 | 3 | 4 | 1/2                                                             | 3/4 | 1 | 1 1/2 | 2 <sup>1)</sup> | 1/2                          | 3/4 | 1 | 1 1/2 | 2 |

<sup>1)</sup> NPS 2 1/2 not in EN-JL / EN-JS

<sup>2)</sup> not in EN-JL / EN-JS

<sup>1)</sup> NPS 2 1/2 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-JL/EN-JS)                                        | (mm) | 150 | 150 | 160 | 230 | 230 | --  | --  | --  | 150 | 150 | 160 | 230 | --  | --  | --  | --  | --  | --  |
| L (Steel)                                              | (mm) | 210 | 210 | 210 | 230 | 230 | 290 | 310 | 350 | 150 | 150 | 160 | 210 | 210 | 160 | 160 | 160 | 250 | 250 |

| Dimensions    |      |     |     |     |     |     |     |     |     |                                             |     |     |     |     |     |     |     |     |     |
|---------------|------|-----|-----|-----|-----|-----|-----|-----|-----|---------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|               |      |     |     |     |     |     |     |     |     | Standard-flange dimensions refer to page 17 |     |     |     |     |     |     |     |     |     |
| H             | (mm) | 162 | 162 | 187 | 270 | 270 | 270 | 270 | 270 | 162                                         | 162 | 187 | 270 | 270 | 162 | 162 | 187 | 270 | 270 |
| H1            | (mm) | 85  | 85  | 102 | 151 | 151 | 151 | 151 | 151 | 85                                          | 85  | 102 | 151 | 151 | 85  | 85  | 102 | 151 | 151 |
| B (EN-JS1049) | (mm) | 214 | 214 | 255 | 280 | 280 | --  | --  | --  | 214                                         | 214 | 255 | 280 | --  | --  | --  | --  | --  | --  |
| B (Steel)     | (mm) | 167 | 167 | 196 | 285 | 285 | 285 | 285 | 285 | 167                                         | 167 | 196 | 285 | 285 | 167 | 167 | 196 | 285 | 285 |
| B1            | (mm) | 95  | 95  | 118 | 157 | 157 | 157 | 157 | 157 | 95                                          | 95  | 118 | 157 | 157 | 95  | 95  | 118 | 157 | 157 |
| 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 |

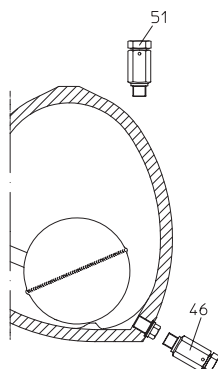
| Weights            |      |     |     |      |      |      |      |      |      |     |     |     |    |      |     |     |   |    |    |
|--------------------|------|-----|-----|------|------|------|------|------|------|-----|-----|-----|----|------|-----|-----|---|----|----|
| Fig. 631 (approx.) | (kg) | 7,9 | 8,1 | 10,9 | 24,7 | 25,3 | 27,2 | 29,2 | 32,7 | 7,3 | 7,3 | 8,5 | 20 | 20,5 | 6,9 | 7,9 | 9 | 21 | 22 |

| Parts |               |                       |                                                      |                                                 |                 |                 |
|-------|---------------|-----------------------|------------------------------------------------------|-------------------------------------------------|-----------------|-----------------|
| Pos.  | Sp.p.         | Description           | Fig. 11.631                                          | Fig. 22.631                                     | Fig. 42./45.631 | Fig. 52./55.631 |
| 1     |               | Body                  | EN-GJL-250, EN-JL1040 (similar to ASTM A 126 Cl. B)  | EN-GJS-400-18U-LT, EN-JS1049 (similar to SA395) | SA105           | SA182F321       |
| 2     |               | Strainer              | SA240Gr.304                                          |                                                 |                 |                 |
| 11    | x             | Sealing ring          | CU                                                   | SA182F321                                       |                 |                 |
| 16    |               | Hood                  | EN-GJL-250, EN-JL1040 (similar to ASTM A 126 Cl. B)  | EN-GJS-400-18U-LT, EN-JS1049 (similar to SA395) | SA216WCB        | SA351CF8        |
| 17    | x             | Gasket                | GRAPHIT (CrNi laminated with graphite)               |                                                 |                 |                 |
| 24    | x             | Controller, cpl.      | SA240Gr.304 / TB102/85 (corrosion resistant bimetal) |                                                 |                 |                 |
| 27    |               | Cheese head screw     | SA193Gr.B16 (with metric screw-thread)               |                                                 |                 |                 |
| 46    | x             | Blow down valve       | SA182F321                                            |                                                 |                 |                 |
| 49    | x             | Sealing ring          | CU                                                   | SA182F321                                       |                 |                 |
| 50    | x             | Plug (M14x1,5)        | SA182F321 (with metric screw-thread)                 |                                                 |                 |                 |
| 51    | x             | Manual air vent valve | SA182F321                                            |                                                 |                 |                 |
|       | └ Spare parts |                       |                                                      |                                                 |                 |                 |

Information / restriction of technical rules need to be observed!

Resistance and fitness must be verified (or contact the manufacturer for information).

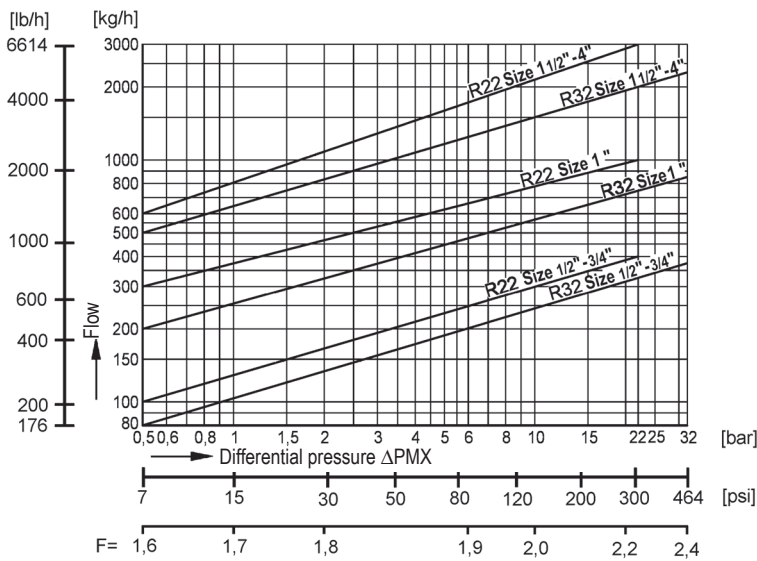
Operating and installation instructions can be downloaded at [www.ari-armaturen.com](http://www.ari-armaturen.com).

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

## Capacity chart

### Standard R22 and R32

NPS 1/2" - 4"



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

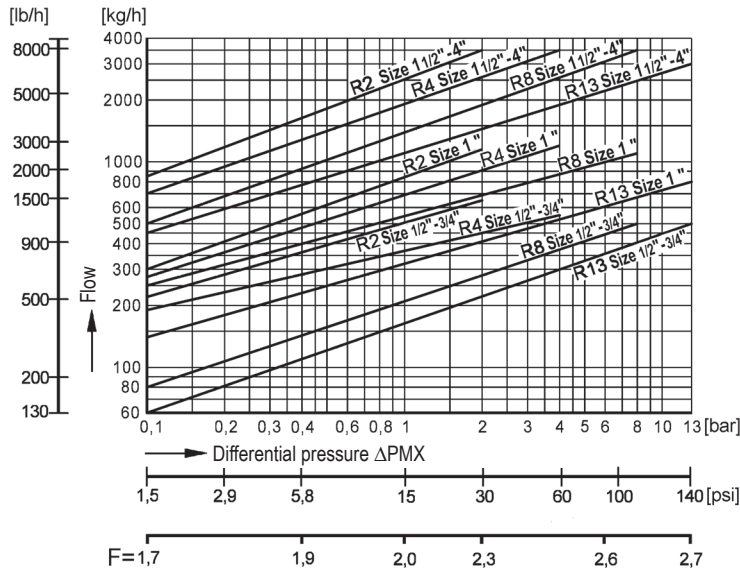
In common, the steam traps are fitted out with an controller as shown in the flow diagrams of this page acc. to the differential pressures and flow rates.

For very large flow rates with low differential pressures, steam traps at sizes 1 1/2" to 4" 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 th

### Standard R2 to R13

NPS 1/2" - 4"



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 1 1/2" to 4" can be fitted out with a super-controller.

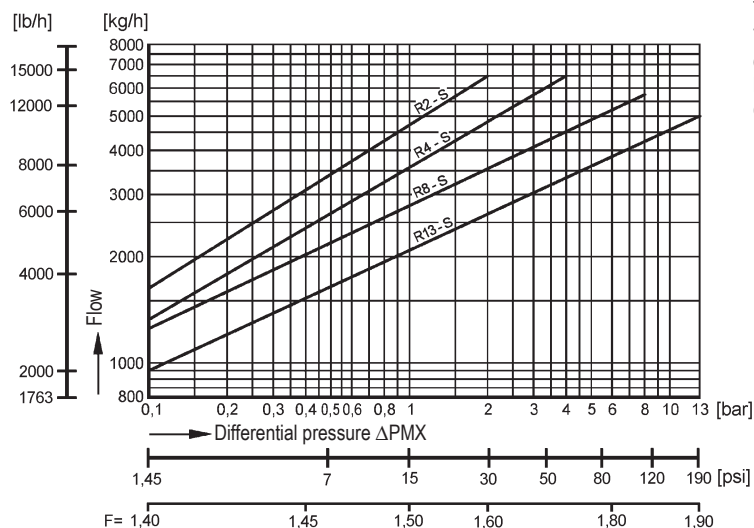
The maximum flow quantity of cold condensate at about 20°C can be determined by multiplication of the appropriate factor F (in the scale below the diagrams) with the hot condensate quantity determined by the capacity chart. (Factor F is related to th

## Capacity chart

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

R2-S to R13-S

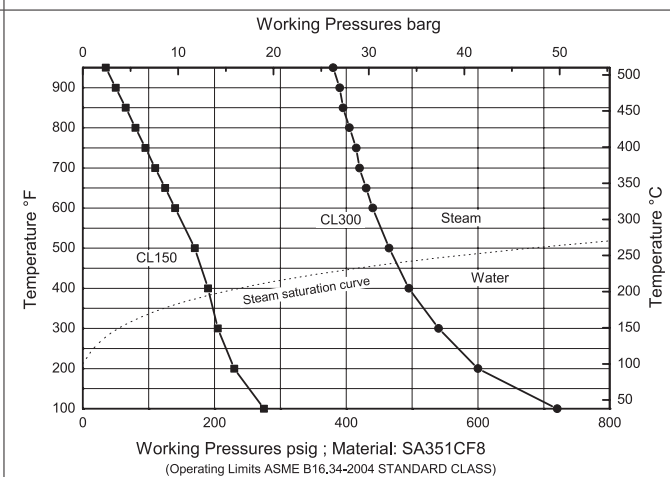
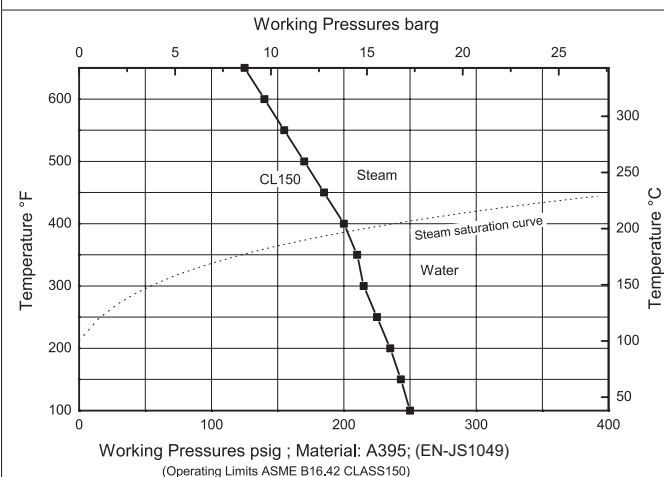
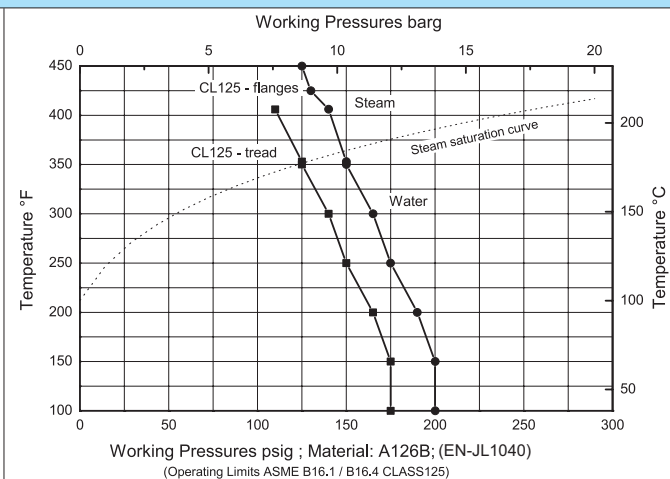
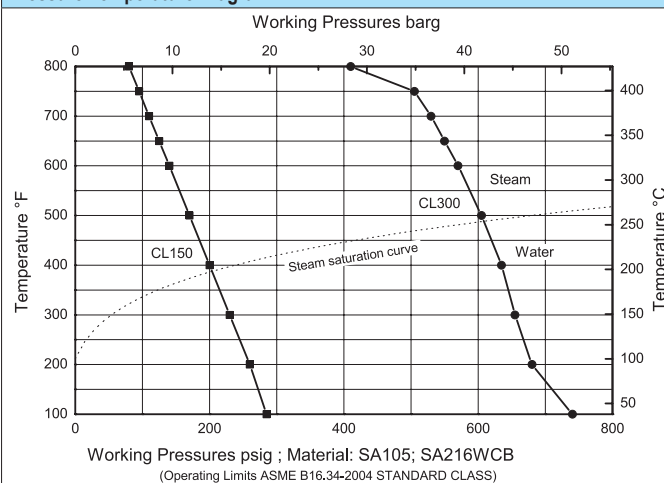
NPS 1 1/2" - 4"



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 th

## Pressure-Temperature-Diagram



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

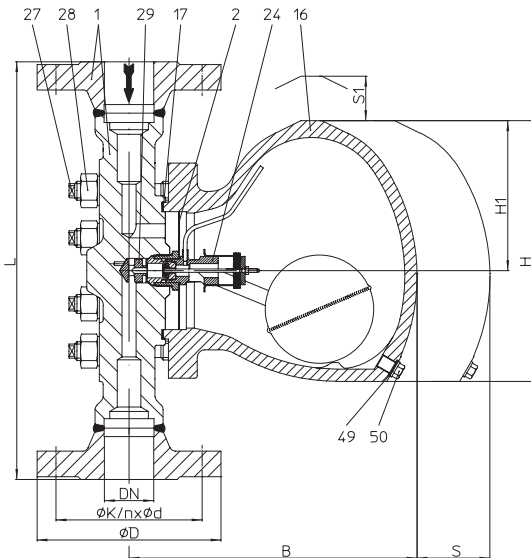


Fig. 631....1 with flanges - vertical installation

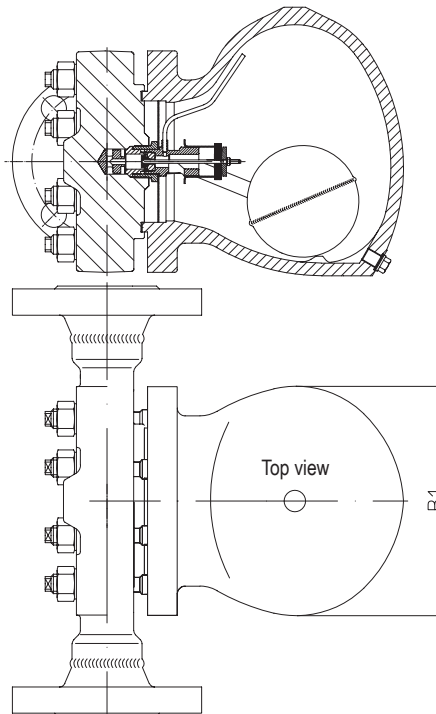


Fig. 631....1 with flanges - horizontal installation

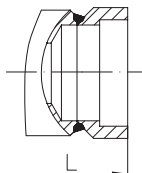


Fig. 631....3  
with socket weld ends

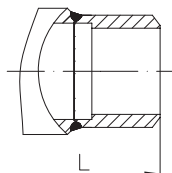


Fig. 631....4  
with butt weld ends

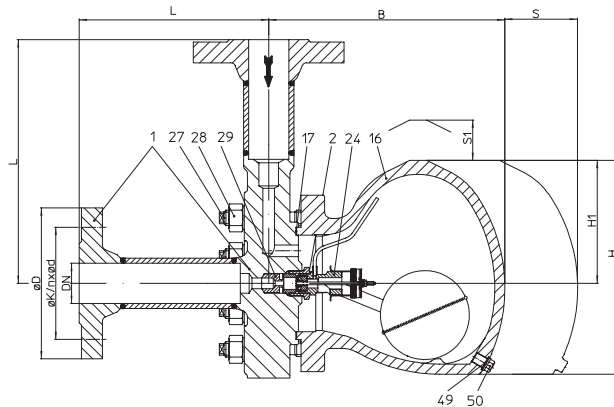


Fig. 632....1 Angle pattern design with flanges - vertical installation

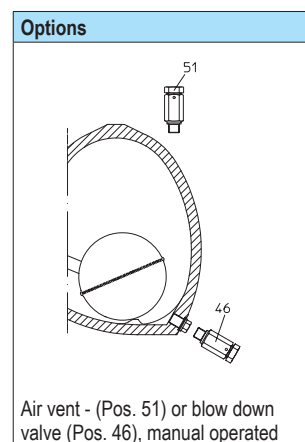
| Figure | Nominal pressure | Material                            | NPS       | Operating pressure PS | Inlet temperature TS | allowable differential pressure ΔPMX | for controller |
|--------|------------------|-------------------------------------|-----------|-----------------------|----------------------|--------------------------------------|----------------|
| 88.631 | ANSI900          | Body: SA182F12Cl.2 / Hood: SA217WC6 | 1/2" - 2" | 110 barg              | 399 °C               | 110 bar<br>80 bar                    | R110           |
| 88.632 |                  |                                     |           | 80 barg               | 479 °C               |                                      | R80            |
|        |                  |                                     |           | 45 barg               | 538 °C               |                                      |                |

DIN/EN-Constructions refer to data sheet CONA®S

| Types of connection                                                                                                                                                                                                                                                                    |                                          | Other types of connection on request.                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Flanges ....1 _____ acc. to ASME B16.5</li><li>• Socket weld ends ....3 _____ acc. to ASME B16.11</li><li>• Butt weld ends ....4 _____ ASME B16.25 (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 all kinds of steam systems</li><li>• Rapid system start-up due to thermostatic control element</li><li>• Inside strainer</li></ul>                                  |                                          | <ul style="list-style-type: none"><li>• Body with flanged hood</li><li>• Non return protection</li><li>• The controller maybe changed without disturbing the pipe work</li><li>• On-site change of the installation position is possible according to the operating instructions</li></ul> |
| Mounting position                                                                                                                                                                                                                                                                      |                                          |                                                                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"><li>• Standard:</li></ul>                                                                                                                                                                                                                            | vertical                                 | <b>Please indicate when ordering!</b><br>Refer to: Information about the different installation positions (Page 17)<br>On-site change of the installation position is possible according to the operating instructions.                                                                    |
| <ul style="list-style-type: none"><li>• Optional:</li></ul>                                                                                                                                                                                                                            | horizontal with inlet from right or left |                                                                                                                                                                                                                                                                                            |
| Options                                                                                                                                                                                                                                                                                |                                          | (Design refer to page 7)                                                                                                                                                                                                                                                                   |
| <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 |     |     |       |     | Socket weld ends |     |     |       |     |
|---------------------------------------------------------------|----------------|---------|-----|-----|-------|-----|------------------|-----|-----|-------|-----|
|                                                               |                |         |     |     |       |     | Butt weld ends   |     |     |       |     |
| NPS                                                           |                | 1/2     | 3/4 | 1   | 1 1/2 | 2   | 1/2              | 3/4 | 1   | 1 1/2 | 2   |
| <b>Face-to-face acc. to data sheet resp. customer request</b> |                |         |     |     |       |     |                  |     |     |       |     |
| L                                                             | (mm)           | 400     | 400 | 415 | 440   | 440 | 335              | 335 | 335 | 335   | 335 |
| L1 / L2 ECK                                                   | (mm)           | 200     | 200 | 208 | 220   | 220 | 168              | 168 | 168 | 168   | 168 |
| <b>Dimensions</b>                                             |                |         |     |     |       |     |                  |     |     |       |     |
| Standard-flange dimensions refer to page 17                   |                |         |     |     |       |     |                  |     |     |       |     |
| H                                                             | (mm)           | 280     | 280 | 280 | 280   | 280 | 280              | 280 | 280 | 280   | 280 |
| H1                                                            | (mm)           | 160     | 160 | 160 | 160   | 160 | 160              | 160 | 160 | 160   | 160 |
| B                                                             | (mm)           | 302     | 302 | 302 | 302   | 302 | 302              | 302 | 302 | 302   | 302 |
| B1                                                            | (mm)           | 185     | 185 | 185 | 185   | 185 | 185              | 185 | 185 | 185   | 185 |
| S                                                             | (mm)           | 300     | 300 | 300 | 300   | 300 | 300              | 300 | 300 | 300   | 300 |
| S1                                                            | (mm)           | 200     | 200 | 200 | 200   | 200 | 200              | 200 | 200 | 200   | 200 |
| <b>Weights</b>                                                |                |         |     |     |       |     |                  |     |     |       |     |
| Fig. 631                                                      | (approx.) (kg) | 46      | 48  | 49  | 52    | 56  | 53               | 40  | 41  | 40    | 38  |

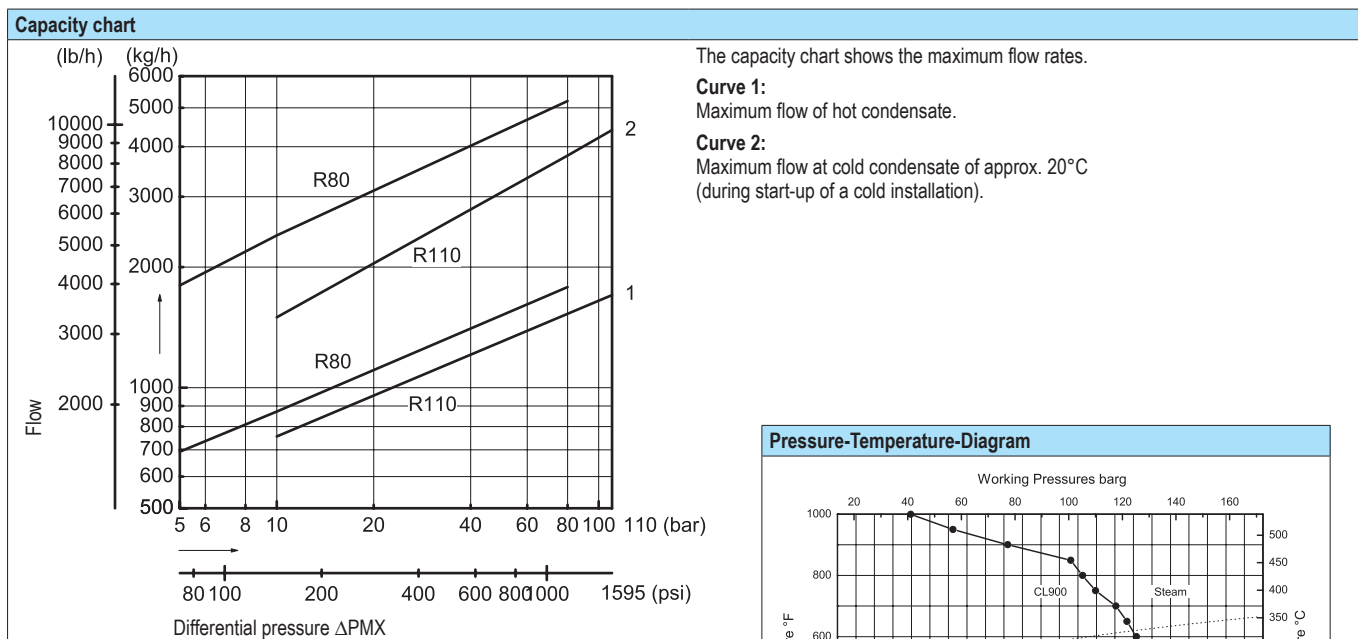
| Parts         |       |                       |                                                      |
|---------------|-------|-----------------------|------------------------------------------------------|
| Pos.          | Sp.p. | Description           | Fig. 88.631 / 88.632                                 |
| 1             |       | Body                  | SA182F12Cl.2                                         |
| 2             |       | Strainer              | SA240Gr.304                                          |
| 16            |       | Hood                  | SA217WC6                                             |
| 17            | x     | Gasket                | GRAPHIT (CrNi laminated with graphite)               |
| 24            | x     | Controller, cpl.      | SA240Gr.304 / TB102/85 (corrosion resistant bimetal) |
| 27            |       | Stud                  | SA453Gr.660b                                         |
| 28            |       | Hexagonal nut         | SA453Gr.660b                                         |
| 29            | x     | Erosion deflector     | AISI431                                              |
| 46            | x     | Blow down valve       | AISI440 (with metric screw-thread)                   |
| 49            | x     | Sealing ring          | SA182F321                                            |
| 50            | x     | Plug (M14x1,5)        | SA182F321                                            |
| 51            | x     | Manual air vent valve | AISI440 (with metric screw-thread)                   |
| L Spare parts |       |                       |                                                      |



Information / restriction of technical rules need to be observed!

Resistance and fitness must be verified (or contact the manufacturer for information).

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





Ball float steam trap (warmfester Baustahl)

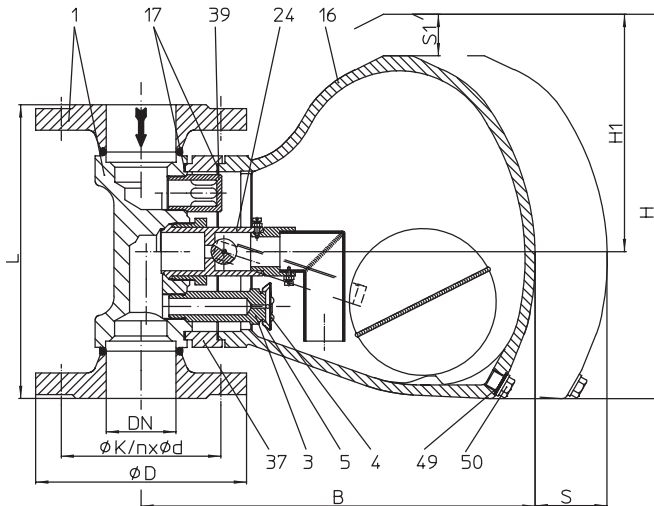


Fig. 633....1 with flanges - vertical installation

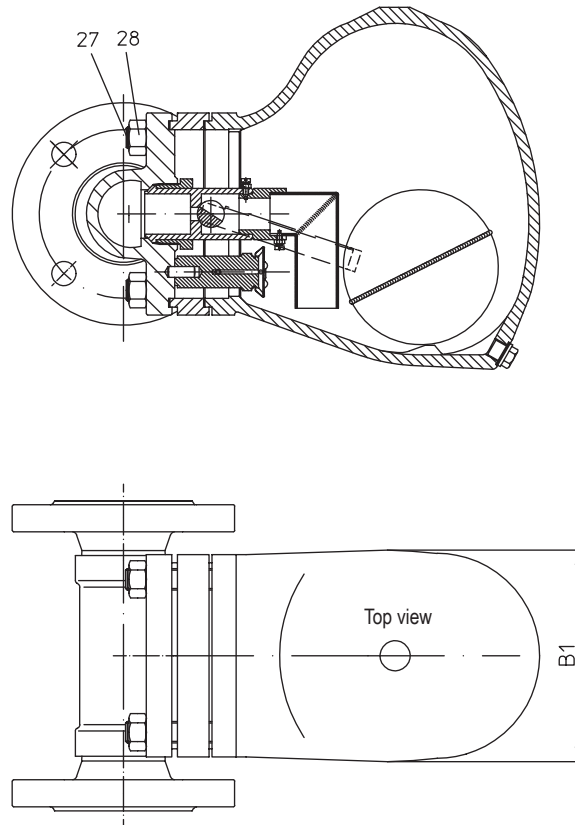


Fig. 633....1 with flanges - horizontal installation

| Figure | Nominal pressure | Material                     | NPS         | Operating pressure PS | Inlet temperature TS | allowable differential pressure ΔPMX | for controller |
|--------|------------------|------------------------------|-------------|-----------------------|----------------------|--------------------------------------|----------------|
| 42.633 | ANSI150          | Body: SA105 / Hood: SA216WCB | 1 1/2" - 4" | 4 barg                | 427 °C               | 4 bar                                | R4-P           |
| 45.633 | ANSI300          | Body: SA105 / Hood: SA216WCB | 1 1/2" - 4" | 4 barg                | 427 °C               | 4 bar                                | R4-P           |

EN-JL1040, EN-JS1049 and SA182F321 on request.

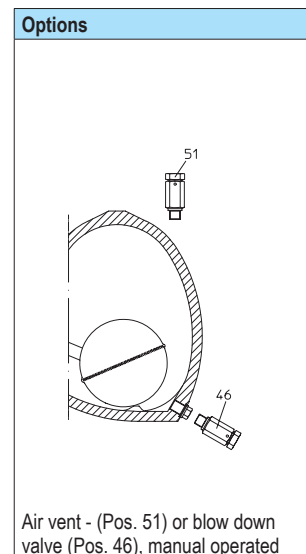
DIN/EN-Constructions refer to data sheet CONA®S

| Types of connection                                                                                                                                                                                                                                                                |                                          | Other types of connection on request.                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • Flanges ....1 _____ acc. to ASME B16.5                                                                                                                                                                                                                                           |                                          |                                                                                                                                                                                                                         |
| Features                                                                                                                                                                                                                                                                           |                                          |                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"><li>• Ball float steam trap with level control for the condensate-discharge from all kinds of steam systems</li><li>• Rapid system start-up due to thermostatic control element</li><li>• Immediate discharge of hot boiling condensat</li></ul> |                                          | <ul style="list-style-type: none"><li>• Body with flanged hood</li><li>• The controller maybe changed without disturbing the pipe work</li><li>• Installation position can not be changed <u>later</u> on</li></ul>     |
| Mounting position                                                                                                                                                                                                                                                                  |                                          |                                                                                                                                                                                                                         |
| • Standard:                                                                                                                                                                                                                                                                        | vertical                                 | <b>Please indicate when ordering!</b><br>Refer to: Information about the different installation positions (Page 17)<br>On-site change of the installation position is possible according to the operating instructions. |
| • Optional:                                                                                                                                                                                                                                                                        | horizontal with inlet from right or left |                                                                                                                                                                                                                         |
| Options                                                                                                                                                                                                                                                                            |                                          | (Design refer to page 9)                                                                                                                                                                                                |
| • Air vent - (Pos. 51) or blow down valve (Pos. 46), manual operated                                                                                                                                                                                                               |                                          |                                                                                                                                                                                                                         |

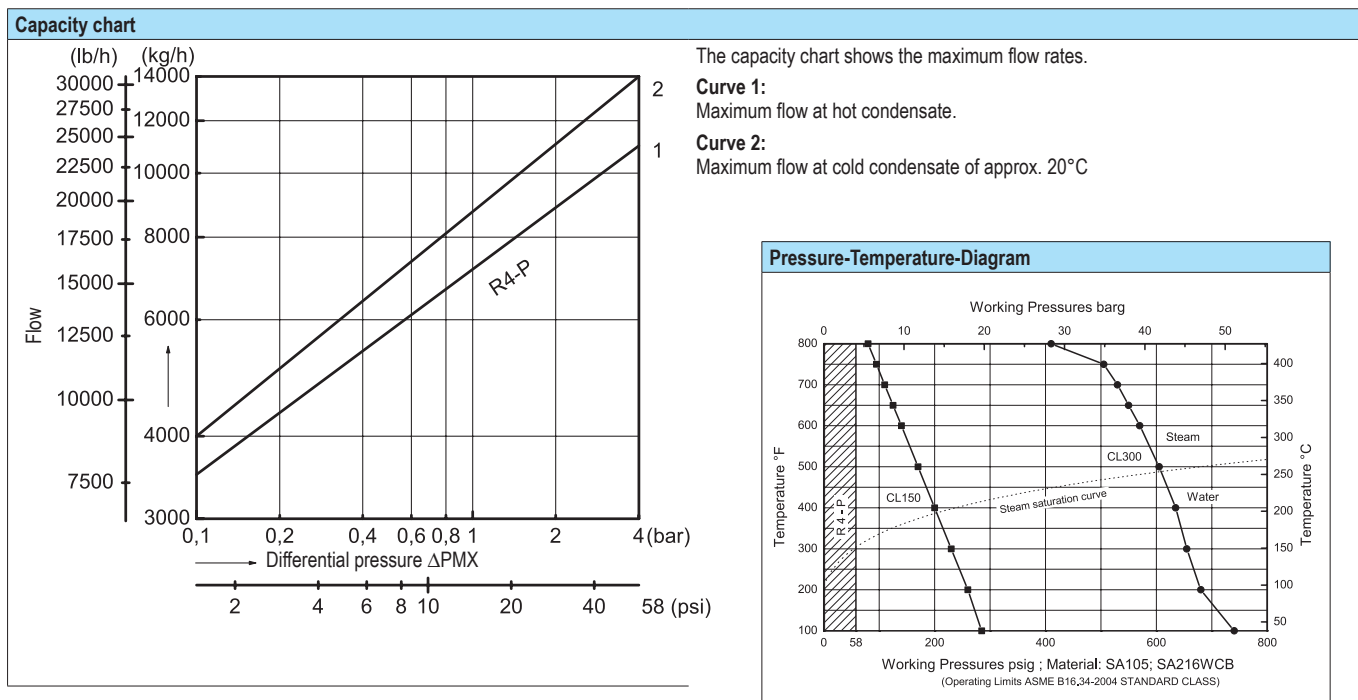


| Types of connection                                    |                | Flanges |      |       |      |      |
|--------------------------------------------------------|----------------|---------|------|-------|------|------|
| NPS                                                    |                | 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                                             |                |         |      |       |      |      |
| H                                                      | (mm)           | 270     | 270  | 270   | 270  | 270  |
| H1                                                     | (mm)           | 151     | 151  | 151   | 151  | 151  |
| B                                                      | (mm)           | 307     | 307  | 307   | 307  | 307  |
| B1                                                     | (mm)           | 157     | 157  | 157   | 157  | 157  |
| S                                                      | (mm)           | 300     | 300  | 300   | 300  | 300  |
| S1                                                     | (mm)           | 200     | 200  | 200   | 200  | 200  |
| Weights                                                |                |         |      |       |      |      |
| Fig. 633                                               | (approx.) (kg) | 24,7    | 25,3 | 27,2  | 29,2 | 32,7 |

| Parts         |       |                       |                                        |
|---------------|-------|-----------------------|----------------------------------------|
| Pos.          | Sp.p. | Description           | Fig. 42./45.633                        |
| 1             |       | Body                  | SA105                                  |
| 3             |       | Seat                  | AISI303                                |
| 4             | x     | Capsule               | SA240Gr.304                            |
| 5             | x     | Spring actuated clip  | AISI301                                |
| 16            |       | Hood                  | SA216WCB                               |
| 17            | x     | Gasket                | GRAPHIT (CrNi laminated with graphite) |
| 24            | x     | Controller, cpl.      | SA240Gr.304                            |
| 27            |       | Stud                  | SA193Gr.B16 (with metric screw-thread) |
| 28            |       | Hexagonal nut         | SA194Gr.4 (with metric screw-thread)   |
| 37            |       | Intermediate flange   | SA105                                  |
| 39            |       | Baffle straightener   | AISI430F                               |
| 46            | x     | Blow down valve       | SA182F321 (with metric screw-thread)   |
| 49            | x     | Sealing ring          | SA182F321                              |
| 50            | x     | Plug (M14x1,5)        | SA182F321 (with metric screw-thread)   |
| 51            | x     | Manual air vent valve | SA182F321 (with metric screw-thread)   |
| L Spare parts |       |                       |                                        |



Information / restriction of technical rules need to be observed!  
 Resistance and fitness must be verified (or contact the manufacturer for information).  
 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)**

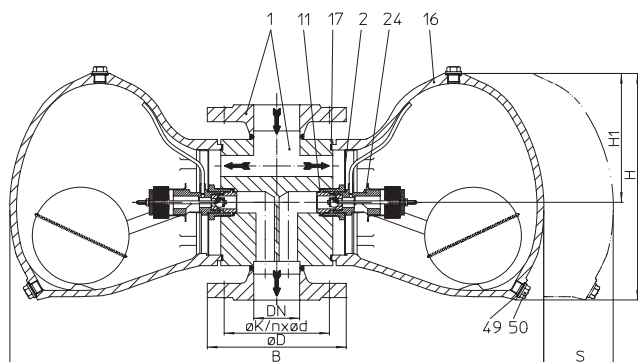


Fig. 639....1 with flanges - vertical installation

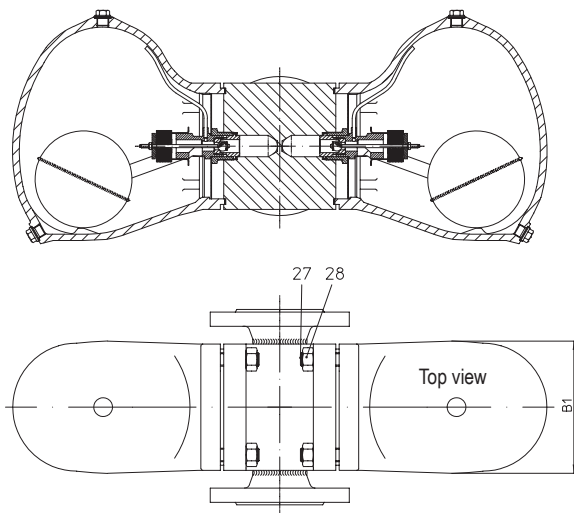


Fig. 639....1 with flanges - horizontal installation

The controller R4-P deviates in his construction from the shown controller on this side. Refer to Fig. 633 (Page 8).

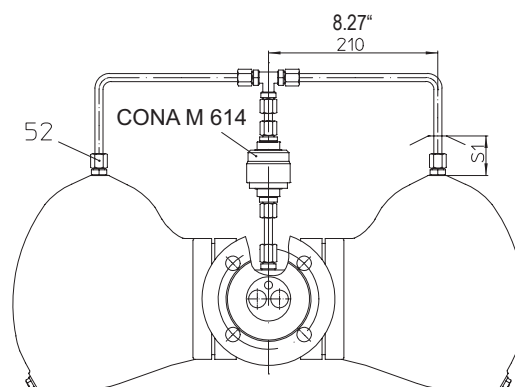


Fig. 639....1 with flanges - horizontal installation and äußere Entlüftung

| Figure | Nominal pressure | Material                         | NPS         | Operating pressure PS         | Inlet temperature TS       | allowable differential pressure ΔPMX | for controller                       |
|--------|------------------|----------------------------------|-------------|-------------------------------|----------------------------|--------------------------------------|--------------------------------------|
| 41.639 | ANSI125          | Body: SA105 / Hood: EN-JL1040    | 1 1/2" - 4" | 8,6 barg                      | 232 °C                     | 2 bar<br>4 bar<br>8 bar<br>8,6 bar   | R2-S<br>R4-S / R4-P<br>R8-S<br>R13-S |
| 42.639 | ANSI150          | Body: SA105 / Hood: SA216WCB     | 1 1/2" - 4" | 13 barg<br>8 barg<br>4 barg   | 225 °C<br>360 °C<br>427 °C | 2 bar<br>4 bar<br>8 bar<br>8,6 bar   | R2-S<br>R4-S / R4-P<br>R8-S<br>R13-S |
| 45.639 | ANSI300          | Body: SA105 / Hood: SA216WCB     | 1 1/2" - 4" | 32 barg<br>22 barg<br>13 barg | 411 °C<br>427 °C<br>208 °C | 2 bar<br>4 bar<br>8 bar<br>13 bar    | R2-S<br>R4-S / R4-P<br>R8-S<br>R13-S |
| 52.639 | ANSI150          | Body: SA182F321 / Hood: SA351CF8 | 1 1/2" - 4" | 8 barg<br>4 barg<br>2 barg    | 360 °C<br>467 °C<br>510 °C | 22 bar<br>32 bar                     | R22<br>R32                           |
| 55.639 | ANSI300          | Body: SA182F321 / Hood: SA351CF8 | 1 1/2" - 4" | 32 barg<br>22 barg            | 262 °C<br>510 °C           |                                      |                                      |

DIN/EN-Constructions refer to data sheet CONA®S

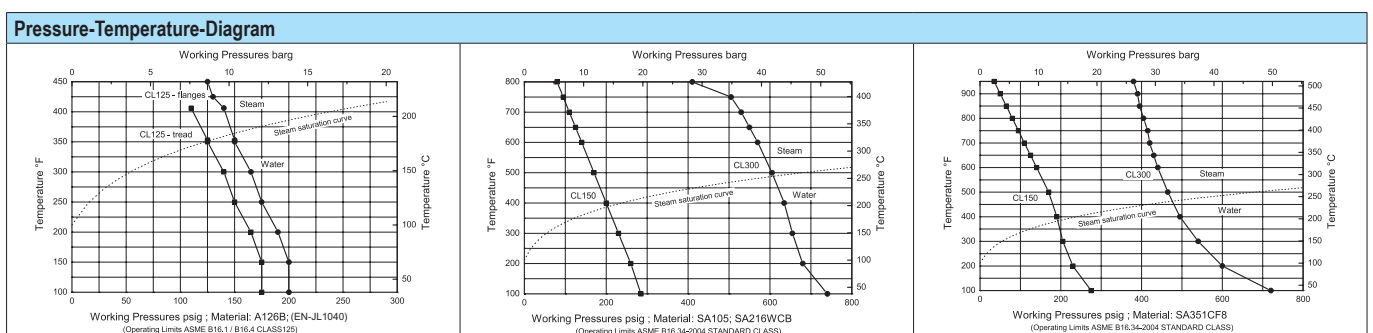
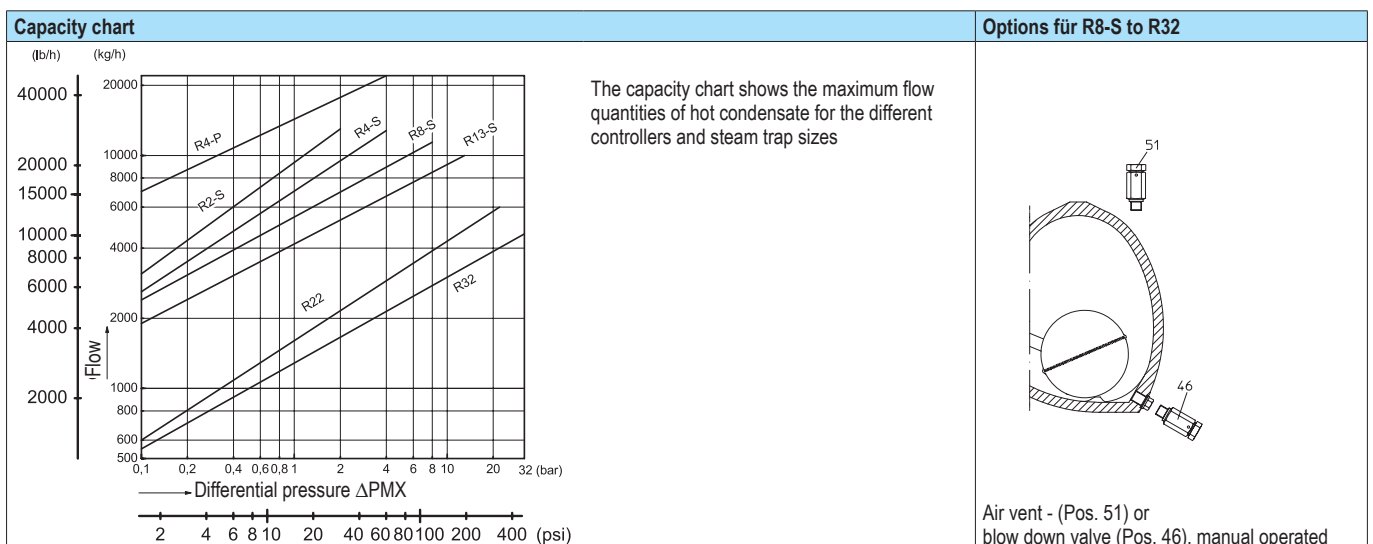
| Types of connection                                                                                                                                                                                                                                                                                                                                 |                                          | Other types of connection on request.                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • Flanges ....1 _____ acc. to ASME B16.5                                                                                                                                                                                                                                                                                                            |                                          |                                                                                                                                                                                                                                                                                                                                                                          |
| Features                                                                                                                                                                                                                                                                                                                                            |                                          |                                                                                                                                                                                                                                                                                                                                                                          |
| <ul style="list-style-type: none"> <li>• Ball float steam trap with level control for the condensate-discharge from all kinds of steam systems for large condensate flowrates</li> <li>• Discharge of great condensate quantities even at low differential pressure</li> <li>• Rapid system start-up due to thermostatic control element</li> </ul> |                                          | <ul style="list-style-type: none"> <li>• Inside strainer (except R4-P)</li> <li>• Body with flanged hood</li> <li>• Non return protection (except R4-P)</li> <li>• The controller maybe changed without disturbing the pipe work</li> </ul>                                                                                                                              |
| Mounting position                                                                                                                                                                                                                                                                                                                                   |                                          |                                                                                                                                                                                                                                                                                                                                                                          |
| • Standard:                                                                                                                                                                                                                                                                                                                                         | vertical                                 | <b>Please indicate when ordering!</b><br>Refer to: Information about the different installation positions (Page 17)<br>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. (except R4-P). |
| • Optional:                                                                                                                                                                                                                                                                                                                                         | horizontal with inlet from right or left |                                                                                                                                                                                                                                                                                                                                                                          |
| Options                                                                                                                                                                                                                                                                                                                                             |                                          | (Design refer to page 11)                                                                                                                                                                                                                                                                                                                                                |
| • 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 |       |      |      |
|--------------------------------------------------------|----------------|---------|-------|------|------|
| NPS                                                    |                | 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 17            |                |         |       |      |      |
| H                                                      | (mm)           | 270     | 270   | 270  | 270  |
| H1                                                     | (mm)           | 151     | 151   | 151  | 151  |
| B                                                      | (mm)           | 634     | 634   | 634  | 634  |
| B1                                                     | (mm)           | 157     | 157   | 157  | 157  |
| S                                                      | (mm)           | 300     | 300   | 300  | 300  |
| S1                                                     | (mm)           | 200     | 200   | 200  | 200  |
| Weights                                                |                |         |       |      |      |
| ANSI 150                                               | (approx.) (kg) | 44,7    | 46,2  | 47,7 | 50,5 |
| ANSI 300                                               | (approx.) (kg) | 46      | 48,3  | 50,5 | 55   |

| Parts |               |                         |                                             |                 |                 |
|-------|---------------|-------------------------|---------------------------------------------|-----------------|-----------------|
| Pos.  | Sp.p.         | Description             | Fig. 41.639                                 | Fig. 42./45.639 | Fig. 52./55.639 |
| 1     |               | Body                    | SA105                                       |                 | SA182F321       |
| 2     |               | Strainer                | SA240Gr.304                                 |                 |                 |
| 11    | x             | Sealing ring            | SA182F321                                   |                 |                 |
| 16    |               | Hood                    | EN-GJL-250, EN-JL1040 (similar to A126Cl.B) | SA216WCB        | SA351CF8        |
| 17    |               | Gasket                  | GRAPHIT (CrNi laminated with graphite)      |                 |                 |
| 24    | x             | Controller              | SA240Gr.304 / bimetallic TB102/85           |                 |                 |
| 27    |               | Stud                    | SA193Gr.B16                                 |                 |                 |
| 28    |               | Hexagonal nut           | SA194Gr.4                                   |                 |                 |
| 46    | x             | Blow down valve         | SA182F321 (with metric screw-thread)        |                 |                 |
| 49    | x             | Sealing ring            | SA182F321                                   |                 |                 |
| 50    | x             | Plug (M14x1,5)          | SA182F321 (with metric screw-thread)        |                 |                 |
| 51    |               | Manual air vent valve   | SA182F321 (with metric screw-thread)        |                 |                 |
| 52    | x             | Union for recovery pipe | AISI303 (with metric screw-thread)          |                 |                 |
|       | L Spare parts |                         |                                             |                 |                 |

Information / restriction of technical rules need to be observed! / Resistance and fitness must be verified (or contact the manufacturer for information).

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



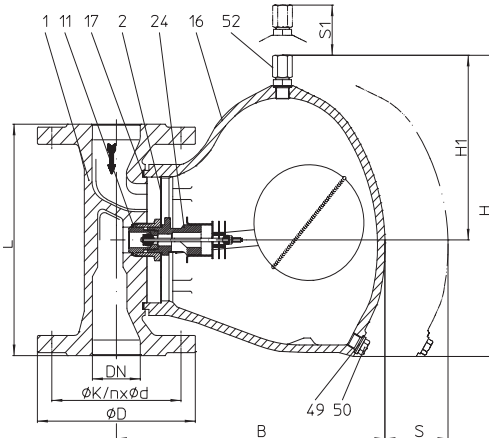
**Ball float steam trap (Grey cast iron, SG iron, Cast steel/Forged steel, Stainless steel)**


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

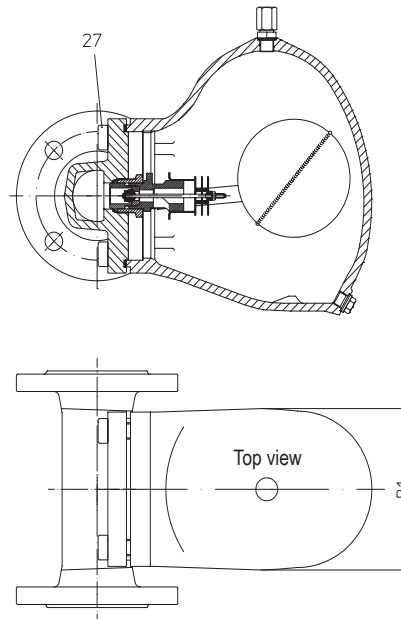
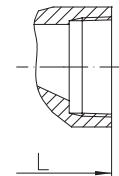
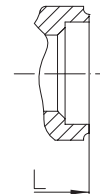
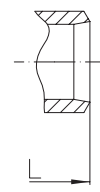


Fig. 630....1 with flanges - horizontal installation


 Fig. 630....2  
with screwed sockets

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

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

| Figure | Nominal pressure | Material                                           | NPS       | Operating pressure PS            | Inlet temperature TS | allowable differential pressure ΔPMX | for controller |
|--------|------------------|----------------------------------------------------|-----------|----------------------------------|----------------------|--------------------------------------|----------------|
| 11.630 | ANSI125          | Body/Hood: EN-JL1040 (similar to ASTM A 126 Cl. B) | 1/2" - 2" | Flanges acc. to ANSI B16.1       |                      | 2 bar                                | R2             |
|        |                  |                                                    |           | 8,6 barg                         | 232 °C               | 4 bar                                | R4             |
|        |                  |                                                    |           | Screw sockets acc. to ANSI B16.4 |                      | 8 bar                                | R8             |
| 22.630 | ANSI150          | Body/Hood: EN-JS1049 (similar to SA395)            | 1/2" - 2" | 8,6 barg                         | 178 °C               | 8,6 bar                              | R13            |
|        |                  |                                                    |           | 12,8 barg                        | 232 °C               |                                      |                |
|        |                  |                                                    |           | 8,6 barg                         | 343 °C               |                                      |                |
| 42.630 | ANSI150          | Body: SA105 / Hood: SA216WCB                       | 1/2" - 4" | 13 barg                          | 225 °C               |                                      |                |
|        |                  |                                                    |           | 8 barg                           | 360 °C               | 2 bar                                | R2             |
|        |                  |                                                    |           | 4 barg                           | 427 °C               | 4 bar                                | R4             |
| 45.630 | ANSI300          | Body: SA105 / Hood: SA216WCB                       | 1/2" - 4" | 32 barg                          | 411 °C               | 8 bar                                | R8             |
|        |                  |                                                    |           | 22 barg                          | 427 °C               | 13 bar                               | R13            |
|        |                  |                                                    |           | 13 barg                          | 208 °C               | 22 bar                               | R22            |
| 52.630 | ANSI150          | Body: SA182F321 / Hood: SA351CF8                   | 1/2" - 4" | 8 barg                           | 360 °C               | 32 bar                               | R32            |
|        |                  |                                                    |           | 4 barg                           | 467 °C               |                                      |                |
|        |                  |                                                    |           | 2 barg                           | 510 °C               |                                      |                |
| 55.630 | ANSI300          | Body: SA182F321 / Hood: SA351CF8                   | 1/2" - 4" | 32 barg                          | 262 °C               |                                      |                |
|        |                  |                                                    |           | 22 barg                          | 510 °C               |                                      |                |

DIN/EN-Constructions refer to data sheet CONA®S

| Types of connection                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                               | Other types of connection on request.                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Flanges ....1 _____ acc. to ASME B16.5</li><li>• Screwed sockets ....2 _____ NPT thread acc. to ANSI B1.20.1 or Rp thread acc. to DIN EN 10226-1</li><li>• Socket weld ends ....3 _____ acc. to ASME B16.11</li><li>• Butt weld ends ....4 _____ ASME B16.25 (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 97/23/EG fluid group 2, other fluid groups on request)</li><li>• Inside strainer</li></ul>                                                                                                                                        | <ul style="list-style-type: none"><li>• Body with flanged hood</li><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 maybe changed without disturbing the pipe work</li></ul> |                                                                                                                                                                                                                         |
| Mounting position                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"><li>• Standard:</li></ul>                                                                                                                                                                                                                                                                                                                                      | vertical                                                                                                                                                                                                                                                                                                                                                                      | <b>Please indicate when ordering!</b><br>Refer to: Information about the different installation positions (Page 17)<br>On-site change of the installation position is possible according to the operating instructions. |
| <ul style="list-style-type: none"><li>• Optional:</li></ul>                                                                                                                                                                                                                                                                                                                                      | horizontal with inlet from right or left                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                         |
| Options                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                               | (Design refer to page 13)                                                                                                                                                                                               |
| <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 |     |   |       |   | Screwed sockets<br>Socket weld ends <sup>2)</sup> |     |   |       |   | Butt weld ends <sup>2)</sup> |     |   |       |   |
|---------------------|---------|-----|---|-------|---|---------------------------------------------------|-----|---|-------|---|------------------------------|-----|---|-------|---|
| NPS                 | 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 |

<sup>2)</sup> not in EN-JL / EN-JS

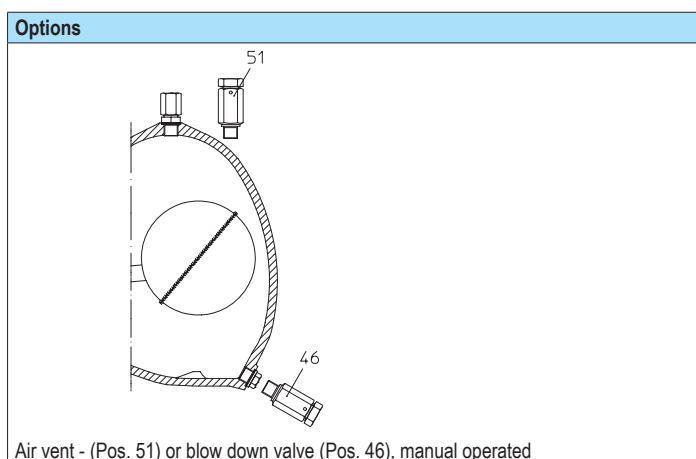
| Face-to-face acc. to data sheet resp. customer request |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|--------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L (EN-JL/EN-JS)                                        | (mm) | 150 | 150 | 160 | 230 | 230 | 150 | 150 | 160 | 230 | --  | --  | --  | --  | --  |
| L (Steel)                                              | (mm) | 210 | 210 | 210 | 230 | 230 | 150 | 150 | 160 | 210 | 210 | 160 | 160 | 160 | 250 |

| Dimensions                                  |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Standard-flange dimensions refer to page 17 |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| H                                           | (mm) | 162 | 162 | 187 | 270 | 270 | 162 | 162 | 187 | 270 | 270 | 162 | 162 | 187 | 270 |
| H1                                          | (mm) | 111 | 111 | 128 | 177 | 177 | 111 | 111 | 128 | 177 | 177 | 111 | 111 | 128 | 177 |
| B (EN-JL/EN-JS)                             | (mm) | 214 | 214 | 255 | 280 | 280 | 214 | 214 | 255 | 280 | --  | --  | --  | --  | --  |
| B (Steel)                                   | (mm) | 167 | 167 | 196 | 285 | 285 | 167 | 167 | 196 | 285 | 285 | 167 | 167 | 196 | 285 |
| B1                                          | (mm) | 95  | 95  | 118 | 157 | 157 | 95  | 95  | 118 | 157 | 157 | 95  | 95  | 118 | 157 |
| S                                           | (mm) | 180 | 180 | 200 | 300 | 300 | 180 | 180 | 200 | 300 | 300 | 180 | 180 | 200 | 300 |
| S1                                          | (mm) | 150 | 150 | 180 | 200 | 200 | 150 | 150 | 180 | 200 | 200 | 150 | 150 | 180 | 200 |

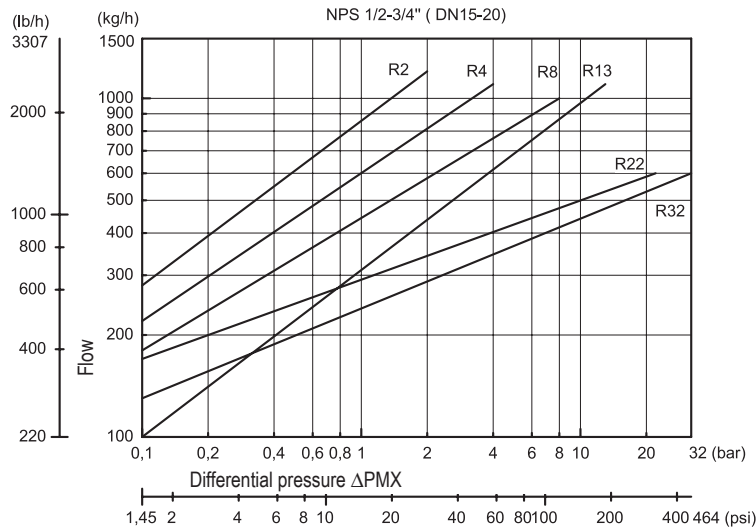
| Weights            |      |     |     |      |      |      |     |     |     |    |      |     |     |   |    |
|--------------------|------|-----|-----|------|------|------|-----|-----|-----|----|------|-----|-----|---|----|
| Fig. 631 (approx.) | (kg) | 7,9 | 8,1 | 10,9 | 24,7 | 25,3 | 7,3 | 7,3 | 8,5 | 20 | 20,5 | 6,9 | 7,9 | 9 | 21 |

| Parts |       |                       |                                                  |                                                 |                 |                 |
|-------|-------|-----------------------|--------------------------------------------------|-------------------------------------------------|-----------------|-----------------|
| Pos.  | Sp.p. | Description           | Fig. 11.630                                      | Fig. 22.630                                     | Fig. 42./45.630 | Fig. 52./55.630 |
| 1     |       | Body                  | EN-GJL-250, EN-JL1040 (similar ASTM A 126 Cl. B) | EN-GJS-400-18U-LT, EN-JS1049 (similar to SA395) | SA105           | SA182F321       |
| 2     |       | Strainer              | SA240Gr.304                                      |                                                 |                 |                 |
| 11    | x     | Sealing ring          | CU                                               | SA182F321                                       |                 |                 |
| 16    |       | Hood                  | EN-GJL-250, EN-JL1040 (similar ASTM A 126 Cl. B) | EN-GJS-400-18U-LT, EN-JS1049 (similar A395)     | SA216WCB        | SA351CF8        |
| 17    | x     | Gasket                | GRAPHIT (CrNi laminated with graphite)           |                                                 |                 |                 |
| 24    | x     | Controller, cpl.      | SA240Gr.304                                      |                                                 |                 |                 |
| 27    |       | Cheese head screw     | SA193Gr.B16 (with metric screw-thread)           |                                                 |                 |                 |
| 46    | x     | Blow down valve       | SA182F321 (with metric screw-thread)             |                                                 |                 |                 |
| 49    | x     | Sealing ring          | CU                                               | SA182F321                                       |                 |                 |
| 50    | x     | Plug (M14x1,5)        | SA182F321 (with metric screw-thread)             |                                                 |                 |                 |
| 51    | x     | Manual air vent valve | SA182F321 (with metric screw-thread)             |                                                 |                 |                 |
|       |       | L Spare parts         |                                                  |                                                 |                 |                 |

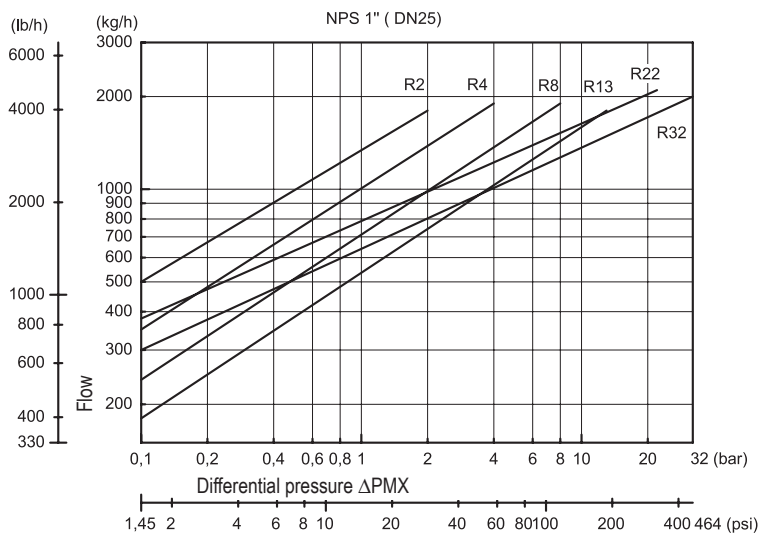
Information / restriction of technical rules need to be observed! / Resistance and fitness must be verified (or contact the manufacturer for information).

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


**Capacity chart**

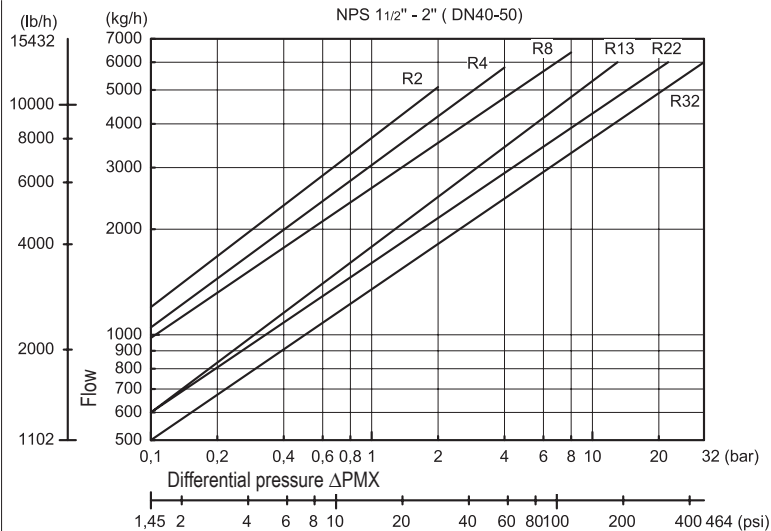


To determine the drainage quantity of cold water at about 20°C from compressed air and gas systems.



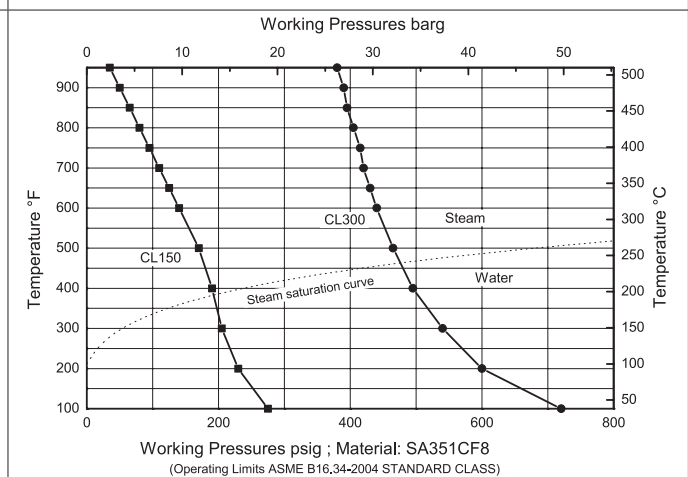
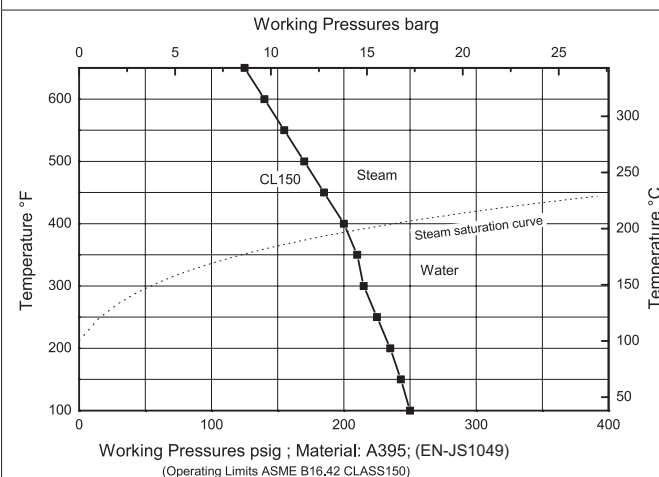
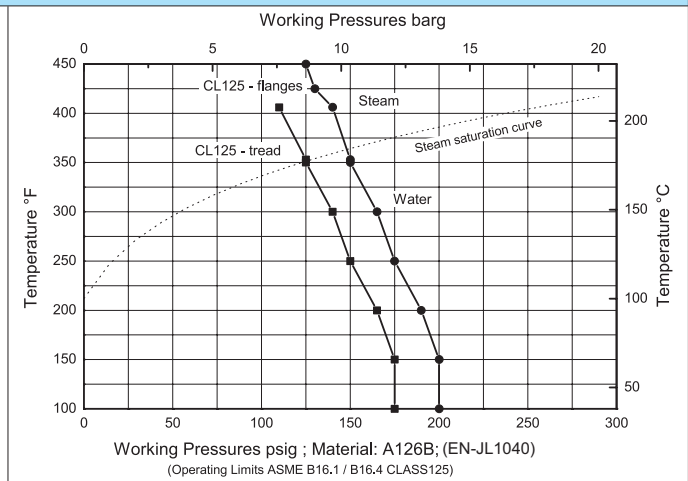
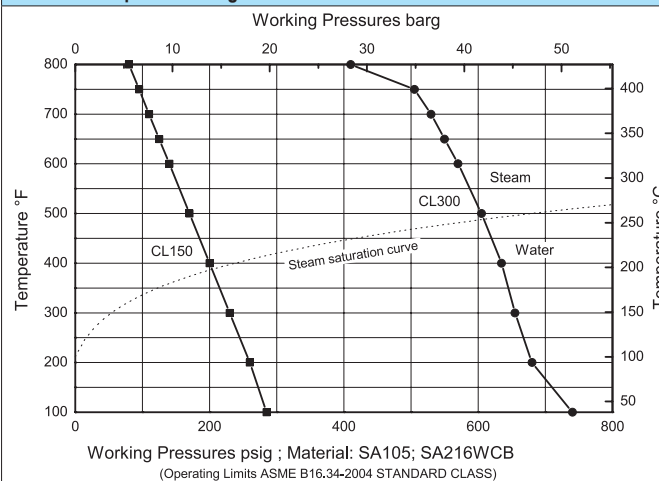
To determine the drainage quantity of cold water at about 20°C from compressed air and gas systems.

### Capacity chart



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

### Pressure-Temperature-Diagram





## Informations about pipe welding

### Welding groove acc. to ASME B16.25

The material used for ARI valves with butt weld ends are:

SA105

SA182F321

#### Note:

SA182F12Cl.2

Note restriction on operating pressure / inlet temperature depending to design!

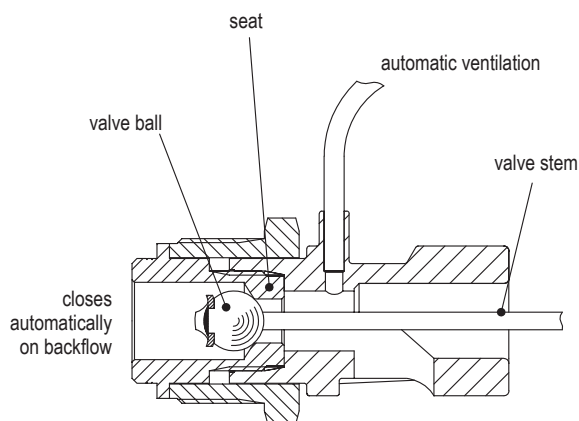
Due to our experience, we recommend to apply an electric welding process.

Because of the different material compositions and wall thickness of the steam traps and the pipe gas welding shall not be applied. Quenching cracks and coarse grain structure may develop.

Steam traps with socket-weld ends shall only be welded by arc welding (welding process 111 acc. to DIN EN 24063).

If during the time of warranty others than the manufacturer or by the manufacturer authorized persons are interfering in the product and/or the setting, the right of claim for warranty will lapse!

## Integrated non return protection

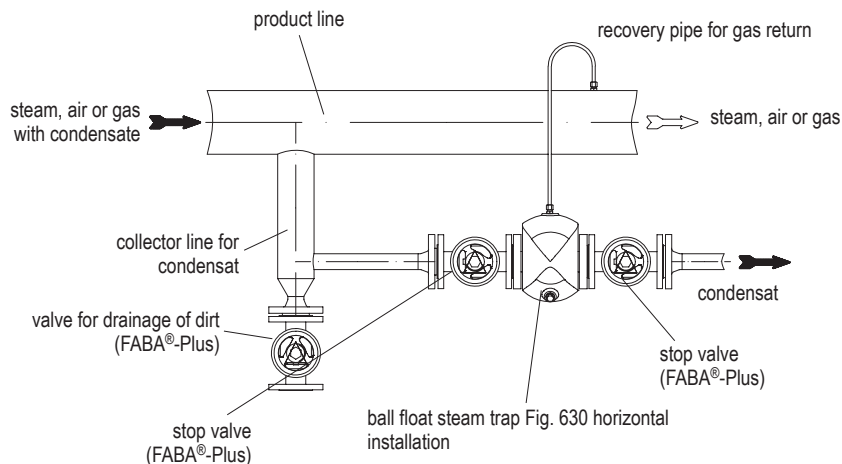


The integrated non return protection acts as a check valve (except BR633 and BR639 R4-P).

In case of parallel installed heat exchangers or heater batteries the non return protection prevents a shut down heat-exchanger from 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.

Dimensions in inch/mm

Weights in lb/kg

1 bar  $\triangleq$  10<sup>5</sup> Pa  $\triangleq$  0,1 MPa

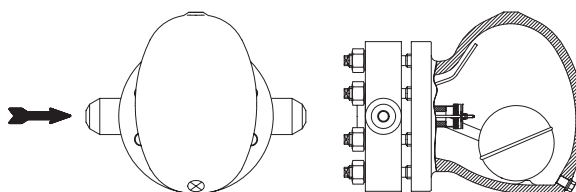
1 bar  $\triangleq$  14,5 psi

1 inch  $\triangleq$  25,4 mm

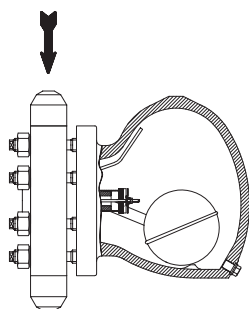
| Selection criteria:                                                                                                                                                                                                                                                                 | Example for order data:                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Steam pressure</li> <li>Back pressure</li> <li>Quantity of condensate</li> <li>Flow medium</li> <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,</b><br/> <b>Fig. 630, ANSI300, NPS 2", SA105/SA216WCB, Controller R22,</b><br/> <b>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 ASME B16.5 |        |      | 1/2    | 3/4    | 1      | 1 1/4  | 1 1/2  | 2      | 2 1/2  | 3      | 4      |
|-----------------------------------------------|--------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NPS                                           |        |      |        |        |        |        |        |        |        |        |        |
| ANSI150                                       | ØD     | (mm) | 89     | 99     | 108    | 117    | 127    | 153    | --     | --     | --     |
|                                               | ØK     | (mm) | 60     | 70     | 79     | 78     | 98     | 121    | --     | --     | --     |
|                                               | n x Ød | (mm) | 4 x 16 | 4 x 16 | 4 x 16 | 4 x 16 | 4 x 16 | 4 x 19 | --     | --     | --     |
| ANSI300                                       | ØD     | (mm) | 95     | 117    | 124    | 133    | 155    | 165    | 191    | 210    | 254    |
|                                               | ØK     | (mm) | 66,5   | 82,5   | 89     | 99     | 114    | 127    | 149    | 168    | 200    |
|                                               | n x Ød | (mm) | 4 x 16 | 4 x 19 | 4 x 19 | 4 x 19 | 4 x 22 | 8 x 19 | 8 x 22 | 8 x 22 | 8 x 22 |
| ANSI400                                       | ØD     | (mm) | 95     | 117    | 127    | 133    | 156    | 165    | --     | --     | --     |
|                                               | ØK     | (mm) | 67     | 83     | 89     | 99     | 114    | 127    | --     | --     | --     |
|                                               | n x Ød | (mm) | 4 x 16 | 4 x 19 | 4 x 19 | 4 x 19 | 4 x 22 | 4 x 19 | --     | --     | --     |
| ANSI600                                       | ØD     | (mm) | 95     | 117    | 127    | 133    | 156    | 165    | --     | --     | --     |
|                                               | ØK     | (mm) | 67     | 83     | 89     | 99     | 114    | 127    | --     | --     | --     |
|                                               | n x Ød | (mm) | 4 x 16 | 4 x 19 | 4 x 19 | 4 x 19 | 4 x 22 | 4 x 19 | --     | --     | --     |
| ANSI900                                       | ØD     | (mm) | 121    | 130    | 149    | 160    | 180    | 215    | --     | --     | --     |
|                                               | ØK     | (mm) | 83     | 89     | 102    | 111    | 124    | 165    | --     | --     | --     |
|                                               | n x Ød | (mm) | 4 x 22 | 4 x 22 | 4 x 25 | 4 x 25 | 4 x 28 | 4 x 25 | --     | --     | --     |

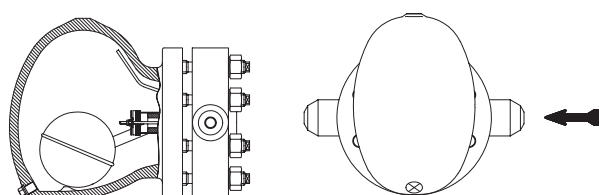
## Information about the different installation positions (shown at BR631)



Horizontal installation - inlet from the left side (ZL)



Vertical installation (standard)



Horizontal installation – inlet from the right side (ZR)

**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).

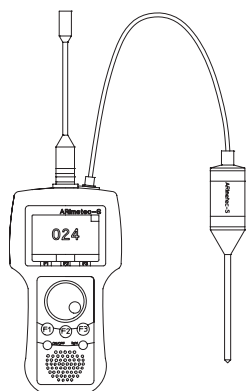
The steam trap must be fitted with the direction of flow as indicated by the arrow on the body..

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

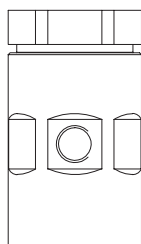
The steam trap shall preferably be installed at the lowest point of the system and the membrane capsule resp. the bleeding tube shall be installed in an upright position inside of the hood.

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

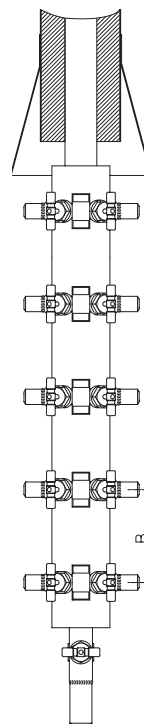
A modification of the installation position during the time of warranty shall be carried out by the AWH-Service or it shall be agreed between the customer and manufacturer.



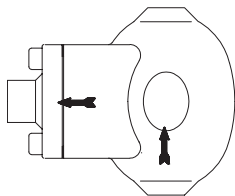
Multifunction tester **ARImetec®-S**



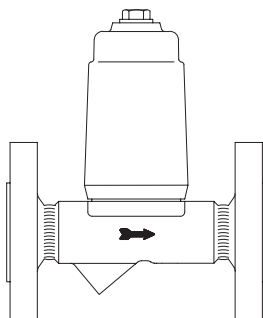
Vacuum breaker  
Fig. 655



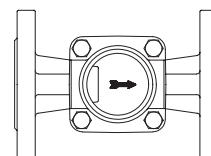
**CODI®S** with gland packing Fig. 671/672;  
**CODI®B** with bellows seal, maintenance-free Fig. 675/676



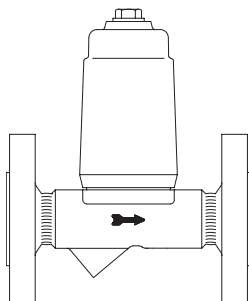
Automatic air vent for liquid systems  
Fig. 656



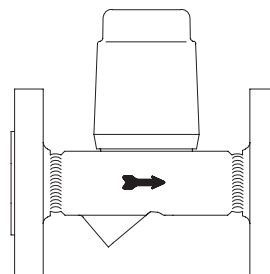
Condensate discharge temperature limiter  
Fig. 645/647



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.)