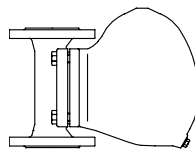


Ball float steam trap

**Ball float steam trap  
PN16 / PN40**

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

(Fig. 631....1) Grey cast iron  
 (Fig. 631....2) SG iron  
 (Fig. 631....3) Forged steel/  
 Cast steel  
 (Fig. 631....4) Stainless steel  
**Fig. 631**

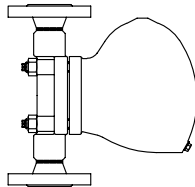


Page 2

**Ball float steam trap  
PN63 / PN100**

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

(Fig. 631....1)  
 (Fig. 631....3)  
 (Fig. 631....4) High  
 temperature steel  
**Fig. 631**



Page 6

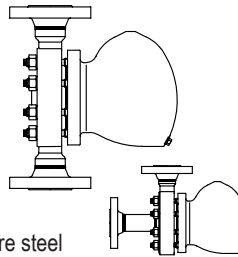
**Ball float steam trap  
PN160**

- 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)  
 (Fig. 632....1)  
 (Fig. 632....4) High  
 temperature steel  
**Fig. 631 / Fig. 632**

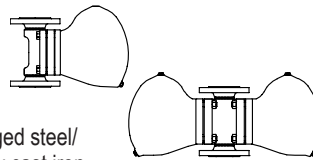


Page 8

**Ball float steam trap  
PN16 / PN40**

- with flanges R4-P
- with flanges

(Fig. 633....1) Forged steel/  
 Grey cast iron  
 (Fig. 639....1) Forged steel/Cast steel  
 Stainless steel  
**Fig. 633 / Fig. 639**



Page 10

Page 12

**Ball float steam trap  
PN40**

- with flanges
- Angle pattern design:**
- with flanges

(Fig. 637....1)  
 (Fig. 638....1)

Steel

**Fig. 637 / Fig. 638**

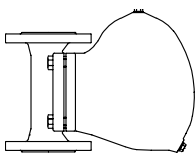
Page 14

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

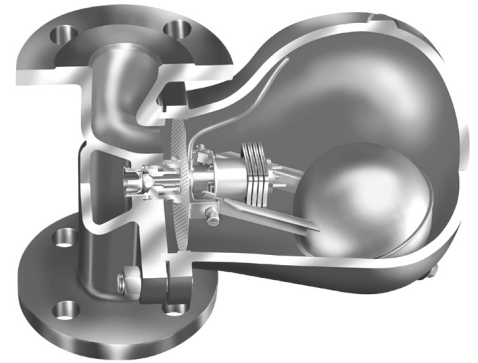
**PN16 / PN40**

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

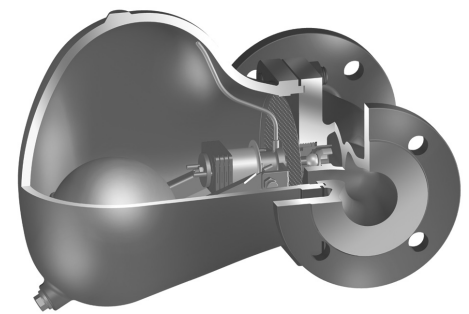
(Fig. 630....1) Grey cast iron  
 (Fig. 630....2) SG iron  
 (Fig. 630....3) Forged steel/  
 Cast steel  
 (Fig. 630....4) Stainless steel  
**Fig. 630**



Page 16



**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. 633/637/638)
- Union for pressure compensation line and bypass possible
- On-site change of the installation position is possible according to the operating instructions (except Fig. 633/637/638)
- The controller may be changed without disturbing the pipe work

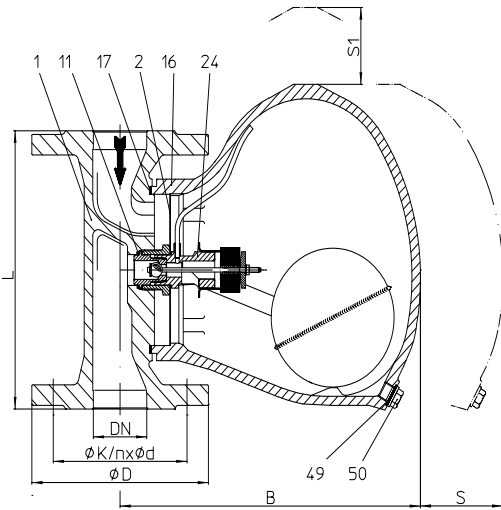
**Ball float steam trap (Grey cast iron, SG iron, Forged steel/Cast steel, Stainless steel)**


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

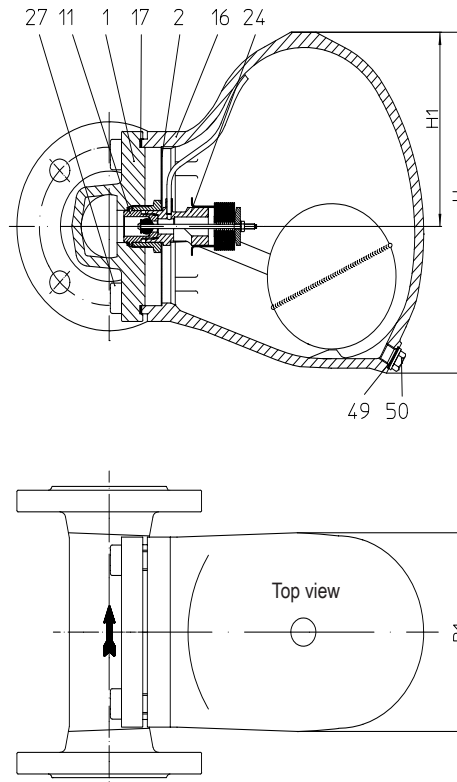


Fig. 631....1 with flanges - horizontal installation

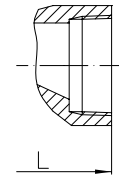


Fig. 631....2 with screwed sockets

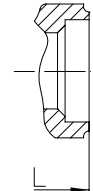


Fig. 631....3 with socket weld ends

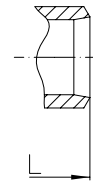


Fig. 631....4 with butt weld ends

Figure	Nominal pressure	Material	Nominal diameter / NPS	Operating pressure PS	Inlet temperature TS	allowable differential pressure ΔPMX	for controller		
12.631	PN16	Body/Hood: EN-JL1040	15 - 50 / 1/2" - 2"	12,8 barg	200 °C	2 bar	R2	≥ DN40 / ≥ NPS 1 1/2": R2-S	
				9,6 barg	300 °C	4 bar	R4	R4-S	
25.631	PN40	Body/Hood: EN-JS1049	15 - 50 / 1/2" - 2"	32 barg	250 °C	8 bar	R8	R8-S	
				22 barg	350 °C	13 bar	R13	R13-S	
45.631	PN40	Body: 1.0460 / Hood: 1.0619+N	15 - 100 / 1/2" - 4"	32 barg	250 °C	2 bar	R2	≥ DN40 / ≥ NPS 1 1/2": R2-S	
				21 barg	400 °C	4 bar	R4	R4-S	
55.631	PN40	Body: 1.4541 / Hood: 1.4308	15 - 100 / 1/2" - 4"	32 barg	250 °C	8 bar	R8	R8-S	
				28 barg	300 °C	13 bar	R13	R13-S	
							≥ PN40:	PN40:	R22
							32 bar	R32	R32

For ANSI versions refer to data sheet CONA®S-ANSI

**Types of connection**

Other types of connection on request.

- Flanges ....1 \_\_\_\_\_ acc. to DIN 2533 or DIN EN 1092-2 (PN16) and DIN 2635 or DIN EN 1092-1 (PN40)
- Screwed sockets ....2 \_\_\_\_Rp thread acc. to DIN EN 10226-1 or NPT thread acc. to ANSI B1.20.1
- Socket weld ends ....3 \_\_\_\_ acc. to DIN EN 12760
- Butt weld ends ....4 \_\_\_\_\_Weld preparation acc. to EN ISO 9692 identification No. 1.3 and 1.5 (Note restriction on operating pressure / inlet temperature depending to design!)

**Features**

- Ball float steam trap with level control for the condensate-discharge from all kinds of steam systems
- Rapid system start-up due to thermostatic control element
- Inside strainer
- Body with flanged hood

- Non return protection
- The controller maybe changed without disturbing the pipe work
- On-site change of the installation position is possible according to the operating instructions

**Mounting position**

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

**Please indicate when ordering!**  
 Refer to: Information about the different installation positions (Page 21)  
 On-site change of the installation position is possible according to the operating instructions.

**Options**

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

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

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

Face-to-face acc. to data sheet resp. customer request																			
L	(mm)	150	150	160	230	230	290	310	350	150	150	160	210	210	160	160	160	250	250

Dimensions		Standard-flange dimensions refer to page 21.																	
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)	214	214	255	280	280	280	280	280	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

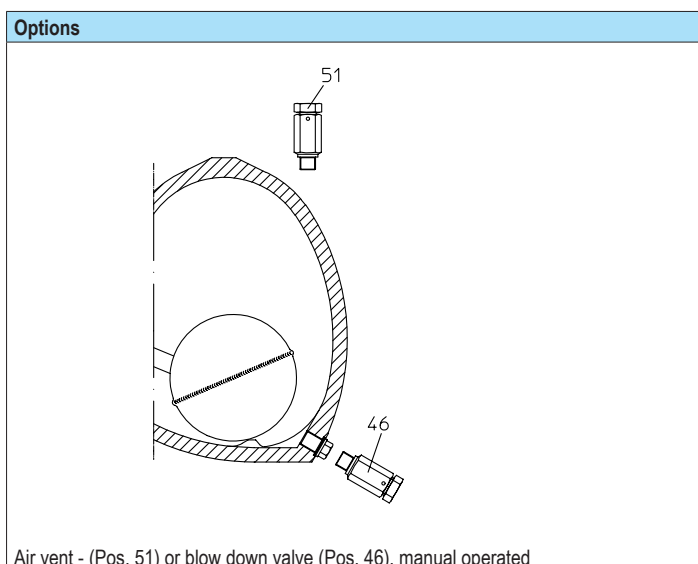
Weights																			
Fig. 631 (approx.)	(kg)	7,9	8,1	10,9	24,7	25,3	27,2	29,2	32,7	7,3	7,3	8,5	20	20,5	6,9	7,9	9	21	22

Parts						
Pos.	Sp.p.	Description	Fig. 12.631	Fig. 25.631	Fig. 45.631	Fig. 55.631
1		Body	EN-GJL-250, EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049	P250 GH, 1.0460	X6CrNiTi18-10, 1.4541
2		Strainer	X5CrNi18-10, 1.4301			
11	x	Sealing ring	CU	A4		
16		Hood	EN-GJL-250, EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049	GP240GH+N, 1.0619+N	GX5CrNi19-10, 1.4308
17	x	Gasket	Graphite (CrNi laminated with graphite)			
24	x	Controller, cpl.	X5CrNi18-10, 1.4301 / TB102/85 (corrosion resistant bimetal)			
27		Cheese head screw	A2-70 / 8.8	21CrMoV 5-7, 1.7709	21CrMoV 5-7, 1.7709	< DN40: A4-80 ≥ DN40: X6CrNiTi18-10, 1.4541
46	x	Blow down valve, cpl.	X6CrNiTi18-10, 1.4541			
49	x	Sealing ring	CU	A4		
50	x	Plug (M14x1,5)	11SMn30+C, 1.0715+C	C35E, 1.1181		X6CrNiTi18-10, 1.4541
51	x	Manual air vent valve	X8CrNiS18-9, 1.4305			
		L Spare parts				

Information / restriction of technical rules need to be observed!

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

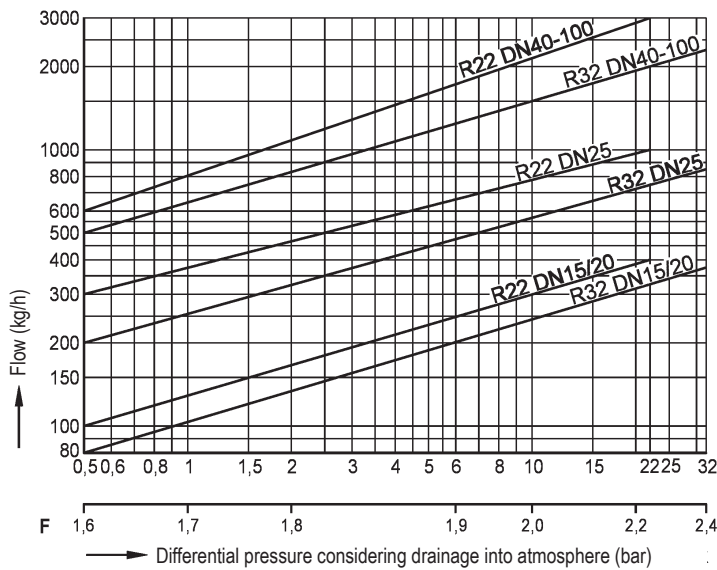
Operating and installation instructions can be downloaded at [www.ari-armaturen.com](http://www.ari-armaturen.com).



Capacity chart

Standard R22 and R32

DN15 - DN100



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

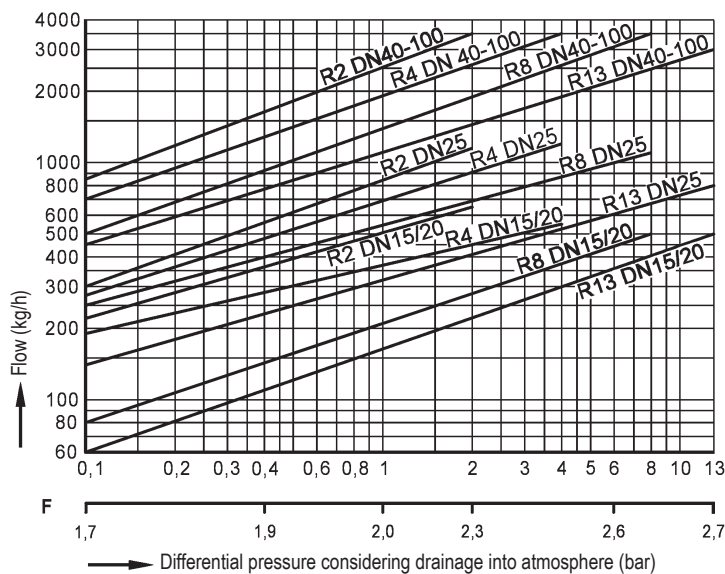
In common, the steam traps are fitted out with an controller as shown in the flow diagrams of this page acc. to the differential pressures and flow rates.

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

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

Standard R2 to R13

DN15 - DN100



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

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

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

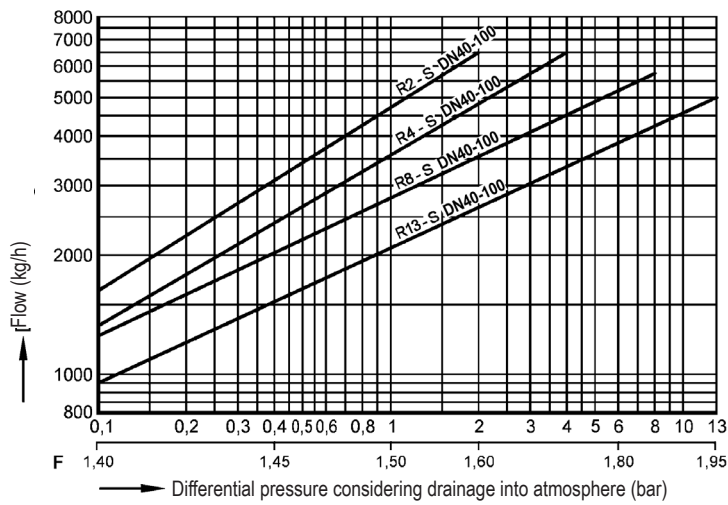
The maximum flow quantity of cold condensate at about 20°C can be determined by multiplication of the appropriate factor F (in the scale below the diagrams) with the hot condensate quantity determined by the capacity chart. (Factor F is related to the differential pressure)

**Capacity chart**

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

R2-S to R13-S

DN 40 - 100



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

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

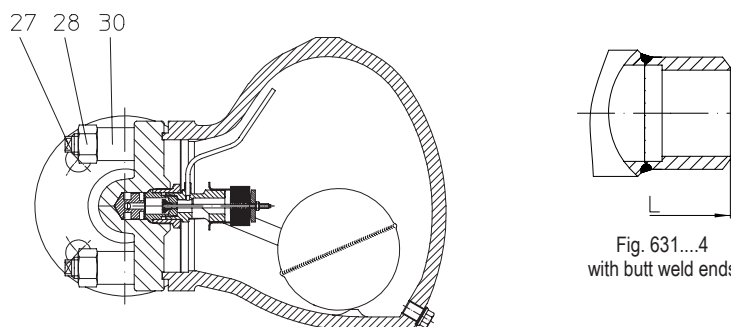
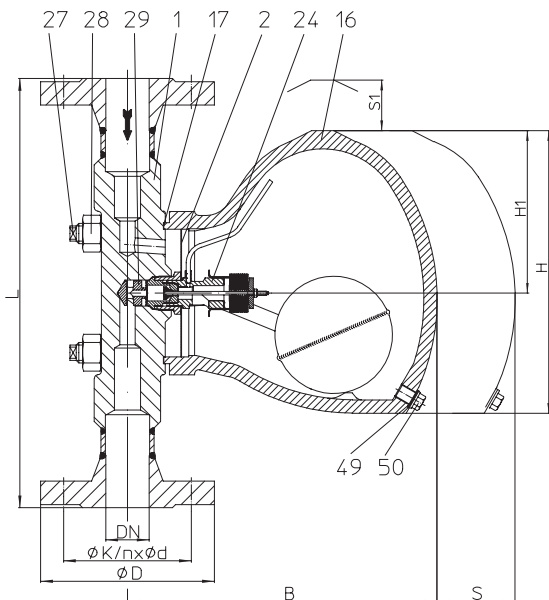
**Ball float steam trap (High temperature steel)**

 Fig. 631...4  
 with butt weld ends


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

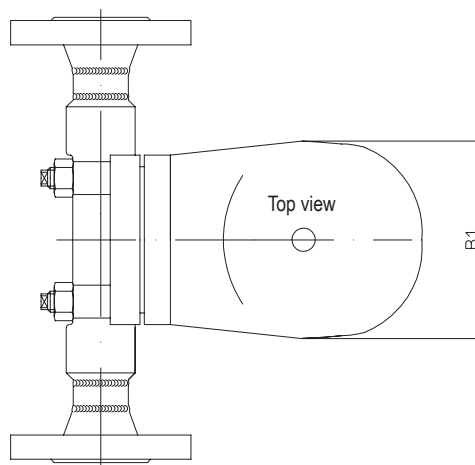


Fig. 631...1 with flanges - horizontal installation (PN100)

Figure	Nominal pressure	Material	Nominal diam. / NPS	Operating pressure PS	Inlet temperature TS	allowable differential pressure $\Delta PMX$	for controller
86.631	PN63	Body: 16Mo3 / Hood: G17CrMo5-5	15 - 50 / 1/2" - 2"	56 barg	300 °C	50 bar	R50
				50 barg	350 °C		
				45 barg	450 °C		
87.631	PN100	Body: 16Mo3 / Hood: G17CrMo5-5	15 - 50 / 1/2" - 2"	64 barg	400 °C	64 bar	R64
				50 barg	450 °C	50 bar	R50
87.631	PN100	Body: 13CrMo4-5 / Hood: G17CrMo5	15 - 50 / 1/2" - 2"	80 barg	480 °C	80 bar	R80
				60 barg	510 °C	64 bar	R64
				30 barg	525 °C	50 bar	R50

For ANSI versions refer to data sheet CONA®S-ANSI

**Types of connection**

Other types of connection on request.

- Flanges ....1 \_\_\_\_\_ acc. to DIN 2636 or DIN EN 1092-1 (PN63) and DIN 2637 or DIN EN 1092-1 (PN100)
- Butt weld ends ....4 \_\_\_\_\_ Weld preparation acc. to EN ISO 9692 identification No. 1.3 and 1.5 (Note restriction on operating pressure / inlet temperature depending to design!)

**Features**

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

**Mounting position**

- |             |  |   |
|-------------|--|---|
| • Standard: | vertical                                 | <b>Please indicate when ordering!</b><br>Refer to: Information about the different installation positions (Page 21)<br>On-site change of the installation position is possible according to the operating instructions. |
| • Optional: | horizontal with inlet from right or left |   |

**Options**

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

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

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

Dimensions		Standard-flange dimensions refer to page 21.									
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

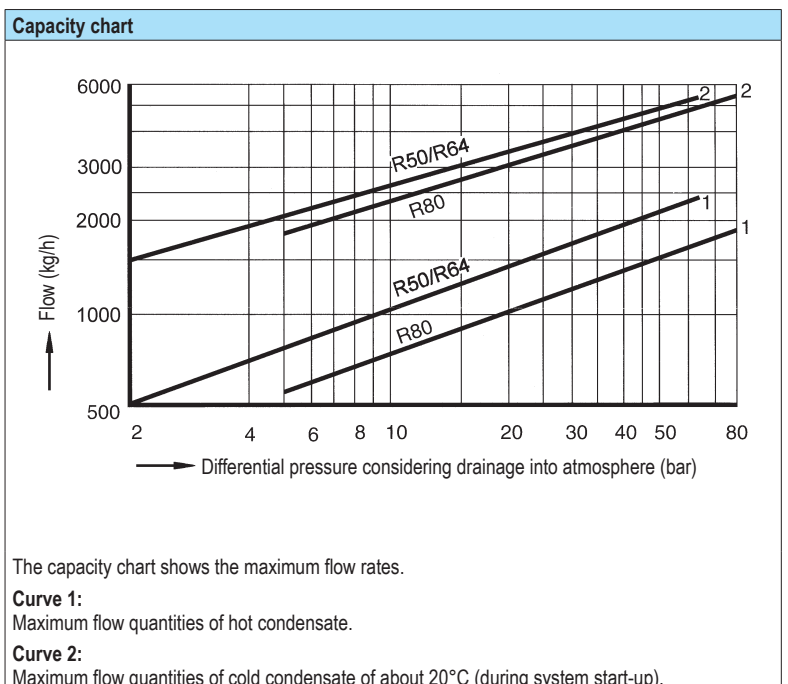
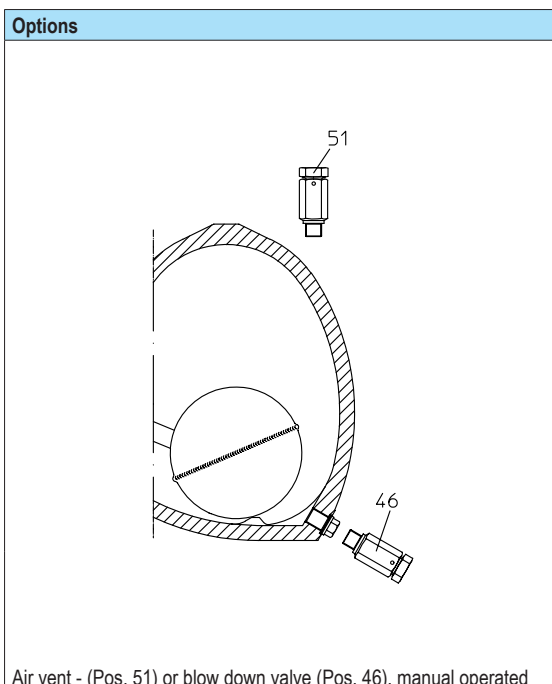
Weights											
Fig. 631 (approx.)	(kg)	30	32	34	38	42	26	26	26	26	28

Parts				
Pos.	Sp.p.	Description	Fig. 86.631 / 87.631	Fig. 87.631
1		Body	16Mo3, 1.5415	13CrMo4-5, 1.7335
2		Strainer	X5CrNi18-10, 1.4301	
16		Hood	G17CrMo5-5, 1.7357	
17	x	Gasket	Graphite (CrNi laminated with graphite)	
24	x	Controller, cpl.	X5CrNi18-10, 1.4301 / TB102/85 (corrosion resistant bimetal)	
27		Stud	21CrMoV 5-7, 1.7709	X22CrMoV12-1, 1.4923
28		Hexagonal nut	21CrMoV 5-7, 1.7709	X22CrMoV12-1, 1.4923
29	x	Erosion deflector (only PN100)	X17CrNi16-2, 1.4057	
30		Extension sleeve	21CrMoV 5-7, 1.7709	
46	x	Blow down valve, cpl.	X39CrMo17-1+QT, 1.4122+QT	
49	x	Sealing ring	X6CrNiTi18-10, 1.4541	
50	x	Plug (M14x1,5)	21CrMoV 5-7, 1.7709	
51	x	Manual air vent valve	X39CrMo17-1+QT, 1.4122+QT	
		L Spare parts		

Information / restriction of technical rules need to be observed!

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

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



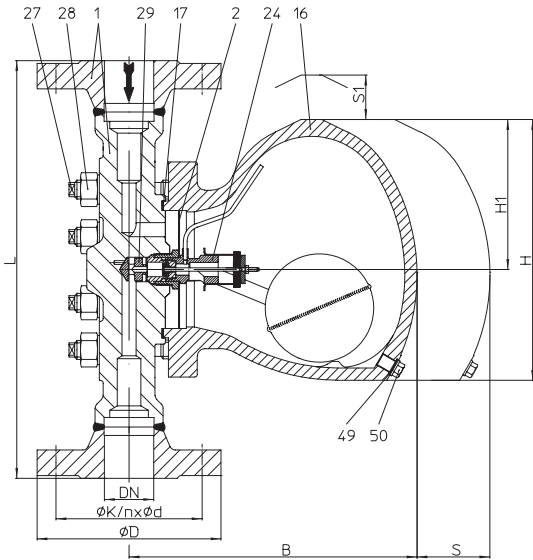
**Ball float steam trap (High temperature steel)**


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

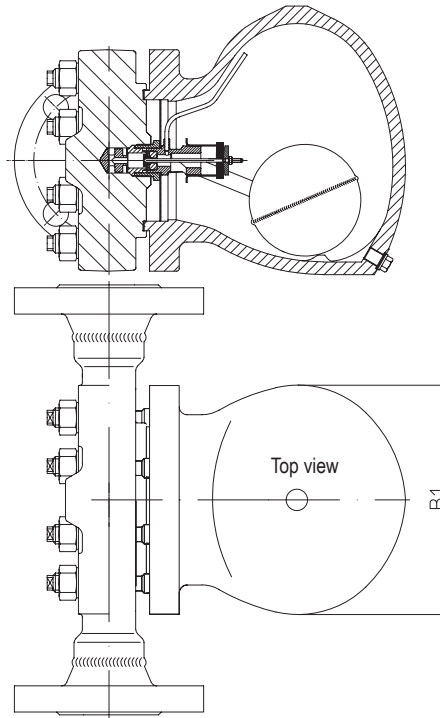


Fig. 631....1 with flanges - horizontal installation

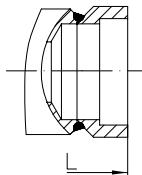
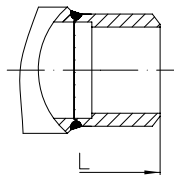
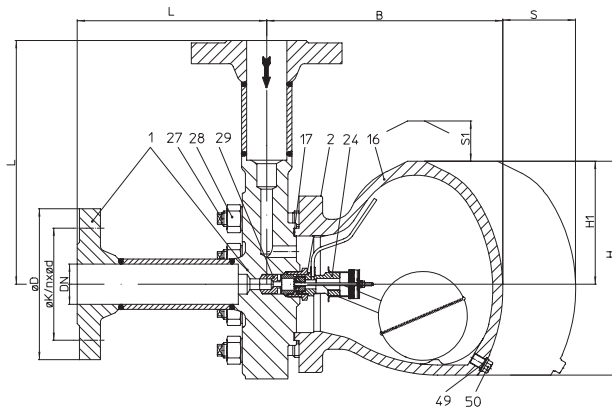

 Fig. 631....3  
with socket weld ends

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


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

Figure	Nominal pressure	Material	Nominal diam. / NPS	Operating pressure PS	Inlet temperature TS	allowable differential pressure ΔPMX	for controller
88.631	PN160	Body: 13CrMo4-5 / Hood: G17CrMo5-5	15 - 50 / 1/2" - 2"	110 barg	506 °C	110 bar	R110
88.632				80 barg	519 °C		80 bar
				35 barg	550 °C		

 For ANSI versions refer to data sheet CONA<sup>®</sup>S-ANSI

**Types of connection**

Other types of connection on request.

- Flanges ....1 \_\_\_\_\_ acc. to DIN 2638 or DIN EN 1092-1
- Socket weld ends ....3 \_\_\_\_\_ acc. to DIN EN 12760
- Butt weld ends ....4 \_\_\_\_\_ Weld preparation acc. to EN ISO 9692 identification No. 1.3 and 1.5 (Note restriction on operating pressure / inlet temperature depending to design!)

**Features**

- Ball float steam trap with level control for the condensate-discharge from all kinds of steam systems
- Rapid system start-up due to thermostatic control element
- Inside strainer
- Body with flanged hood
- Non return protection
- The controller maybe changed without disturbing the pipe work

**Mounting position**

- Standard: vertical
  - Optional: horizontal with inlet from right or left
- Please indicate when ordering!**  
Refer to: Information about the different installation positions (Page 21)  
On-site change of the installation position is possible according to the operating instructions.

**Options**

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



Types of connection		Flanges			Socket weld ends Butt weld ends		
DN	(mm)	15	25	50	15	25	50
NPS	(inch)	1/2	1	2	1/2	1	2

Face-to-face acc. to data sheet resp. customer request							
L	(mm)	400	415	440	335	335	335

Dimensions		Standard-flange dimensions refer to page 21.					
L1 / L2 ECK	(mm)	200	208	220	168	168	168
H	(mm)	280	280	280	280	280	280
H1	(mm)	160	160	160	160	160	160
B	(mm)	302	302	302	302	302	302
B1	(mm)	185	185	185	185	185	185
S	(mm)	300	300	300	300	300	300
S1	(mm)	200	200	200	200	200	200

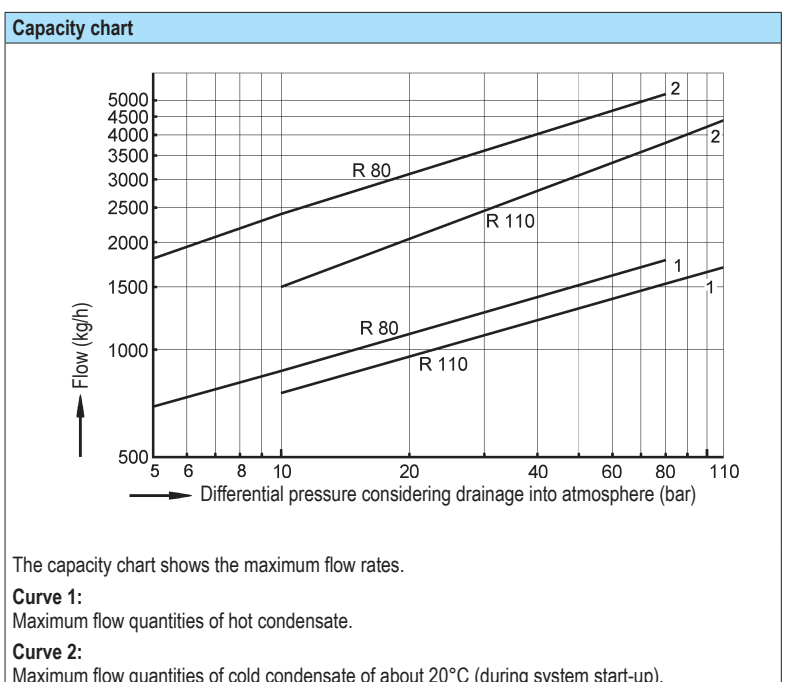
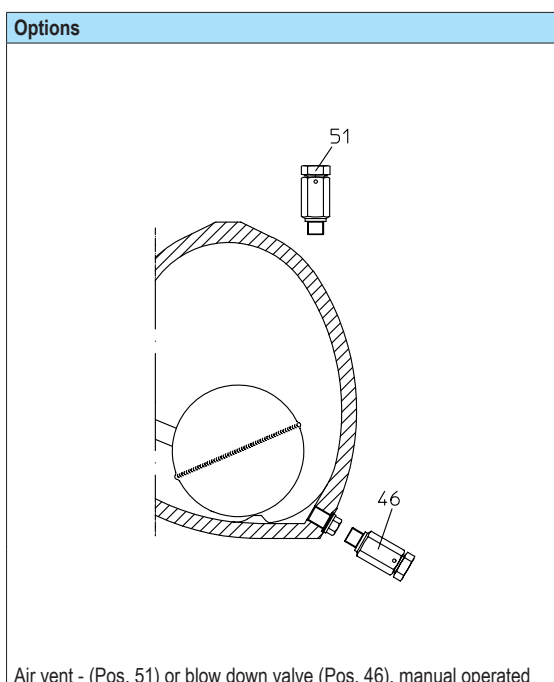
Weights							
Fig. 631/632 (appr.)	(kg)	46	49	56	53	41	38

Parts			
Pos.	Sp.p.	Description	Fig. 88.631 / 88.632
1		Body	13CrMo4-5, 1.7335
2		Strainer	X5CrNi18-10, 1.4301
16		Hood	G17CrMo5-5, 1.7357
17	x	Gasket	Graphite (CrNi laminated with graphite)
24	x	Controller, cpl.	X5CrNi18-10, 1.4301 / TB102/85 (corrosion resistant bimetal)
27		Stud	X22CrMoV12-1, 1.4923
28		Hexagonal nut	X22CrMoV12-1, 1.4923
29	x	Erosion deflector	X17CrNi16-2, 1.4057
46	x	Blow down valve, cpl.	X39CrMo17-1+QT, 1.4122+QT
49	x	Sealing ring	A4
50	x	Plug (M14x1,5)	21CrMoV 5-7, 1.7709
51	x	Manual air vent valve	X39CrMo17-1+QT, 1.4122+QT
		L Spare parts	

Information / restriction of technical rules need to be observed!

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

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



Ball float steam trap (Forged steel/Cast steel)

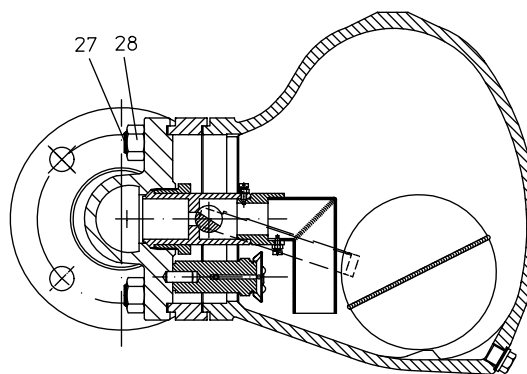


Fig. 633....1 with flanges - horizontal installation

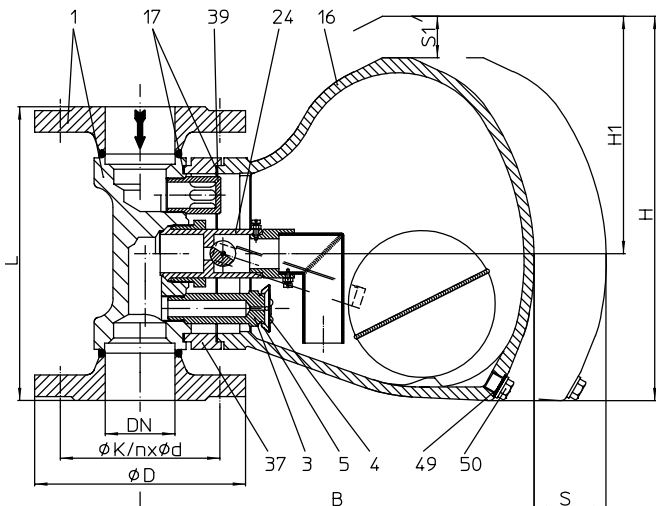


Fig. 633....1 with flanges - vertical installation

Figure	Nominal pressure	Material	Nominal diam. / NPS	Operating pressure PS	Inlet temperature TS	allowable differential pressure $\Delta PMX$	for controller
45.633	PN40	Body: 1.0460 / Hood: 1.0619+N	40 - 100	0,1 - 4 barg	350 °C	4 bar	R4-P

EN-JS1049 on request.

For ANSI versions refer to data sheet CONA®S-ANSI

**Types of connection** Other types of connection on request.

- Flanges ....1 \_\_\_\_\_ acc. to DIN 2635 or DIN EN 1092-1

**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> </ul> |
|--|---|

**Mounting position**

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Standard: vertical</li> <li>• Optional: horizontal with inlet from right or left</li> </ul> | <p><b>Please indicate when ordering!</b><br/>Refer to: Information about the different installation positions (Page 21)<br/><b>Installation position can not be changed later on.</b></p> |
|--|---|

**Options**

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

Types of connection		Flanges				
DN	(mm)	40	50	65	80	100

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

Dimensions		Standard-flange dimensions refer to page 21.				
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. 45.633
1		Body	P250 GH, 1.0460
3		Seat	X8CrNiS18-9, 1.4305
4	x	Capsule	Hastelloy / X5CrNi18-10, 1.4301
5	x	Spring actuated clip	X10CrNi18-8, 1.4310
16		Hood	GP240GH+N, 1.0619+N
17	x	Gasket	Graphite (CrNi laminated with graphite)
24	x	Controller, cpl.	X5CrNi18-10, 1.4301
27		Stud	21CrMoV 5-7, 1.7709
28		Hexagonal nut	21CrMoV 5-7, 1.7709
37		Intermediate flange	P250 GH, 1.0460
39		Baffle straightener	X8CrNiS18-9, 1.4305
46	x	Blow down valve, cpl.	X6CrNiTi18-10, 1.4541
49	x	Sealing ring	A4
50	x	Plug (M14x1,5)	C35E, 1.1181
51	x	Manual air vent valve	X6CrNiTi18-10, 1.4541
↳ Spare parts			

Information / restriction of technical rules need to be observed!

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

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

**Options**

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

**Capacity chart**

Differential pressure (bar)	Flow (kg/h) - Curve 1	Flow (kg/h) - Curve 2
0,1	3500	4000
0,2	4500	5000
0,3	5500	6000
0,4	6500	7000
0,5	7500	8000
0,6	8500	9000
0,8	10000	10500
1	11500	12000
2	14000	14500
3	16000	16500
4	18000	18500

The capacity chart shows the maximum flow rates.

**Curve 1:**  
Maximum flow quantities of hot condensate.

**Curve 2:**  
Maximum flow quantities of cold condensate of about 20°C (during system start-up).

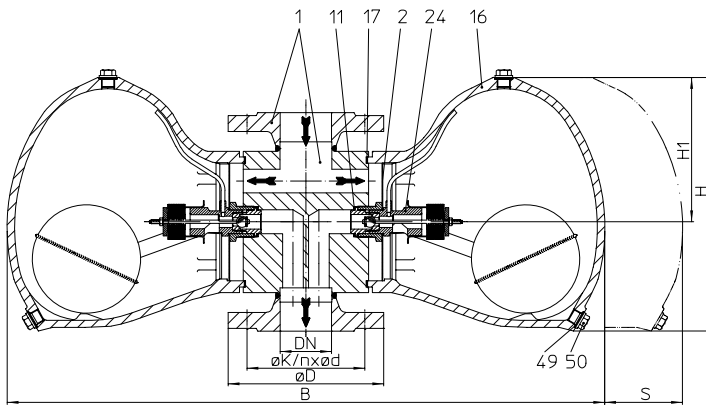
**Ball float steam trap (Forged steel/Grey cast iron, Forged steel/Cast steel, Stainless steel)**


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

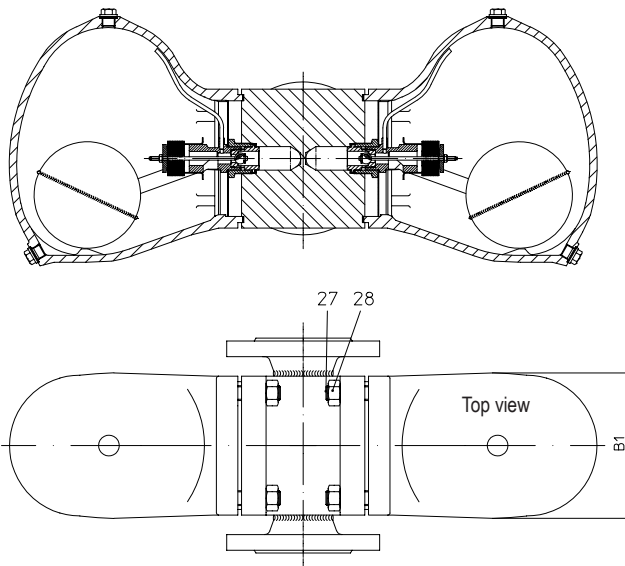


Fig. 639....1 with flanges - horizontal installation

The controller R4-P deviates in his construction from the shown controller on this side. Refer to Fig. 633 (page 10).

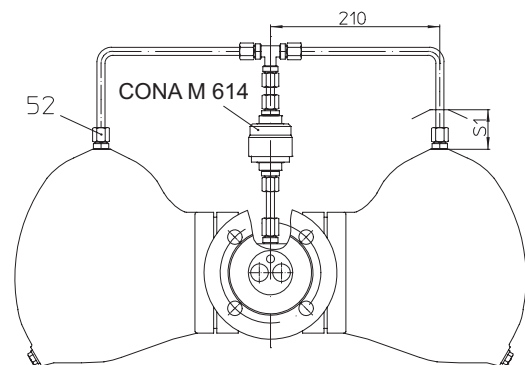


Fig. 639....1 with flanges - horizontal installation and external vent kpl.

Figure	Nominal pressure	Material	Nominal diam. / NPS	Operating pressure PS	Inlet temperature TS	allowable differential pressure ΔPMX	for controller
42.639	PN16	Body: 1.0460 / Hood: EN-JL1040	50 - 100 / 2" - 4"	12,8 barg	200 °C	2 bar	R2-S
						4 bar	R4-S / R4-P
				9,6 barg	300 °C	8 bar	R8-S
45.639	PN40	Body: 1.0460 / Hood: 1.0619+N	50 - 100 / 2" - 4"	32 barg	250 °C	13 bar	R13-S
						2 bar	R2-S
				21 barg	400 °C	4 bar	R4-S / R4-P
55.639	PN40	Body: 1.4541 / Hood: 1.4308	50 - 100 / 2" - 4"	32 barg	250 °C	8 bar	R8-S
						13 bar	R13-S
				28 barg	300 °C	22 bar	R22
						32 bar	R32

For ANSI versions refer to data sheet CONA®S-ANSI

Types of connection		Other types of connection on request.
• Flanges ....1 _____ acc. to DIN 2533 or DIN EN 1092-2 (PN16) and DIN 2635 or DIN EN 1092-1 (PN40)		
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</li> <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		
• Standard:	vertical	<b>Please indicate when ordering!</b> 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.
• Optional:	horizontal	
Options		
• External vent cpl. for venting of high quantities of air during start-up and operation (standard with controller R2-S, R4-S and R4-P)		

Types of connection		Flanges			
DN	(mm)	50	65	80	100

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

Dimensions		Standard-flange dimensions refer to page 21.			
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

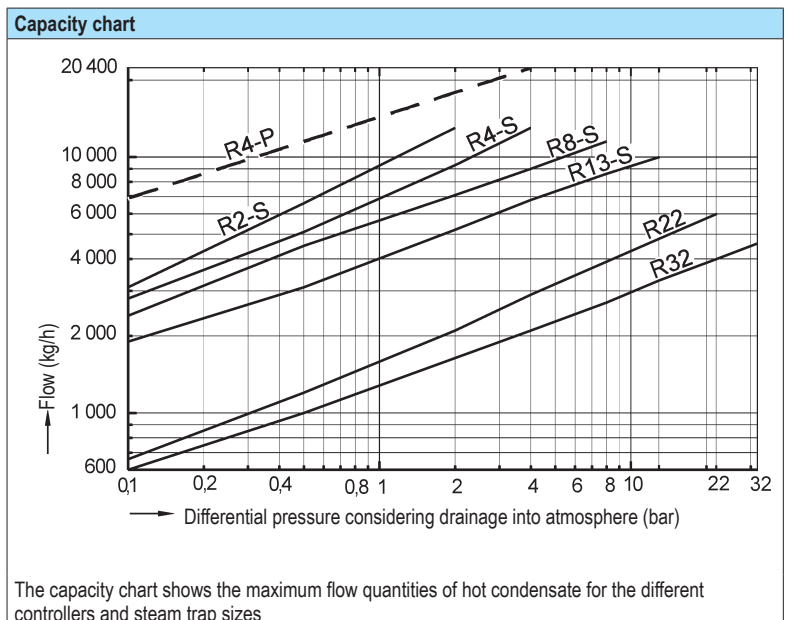
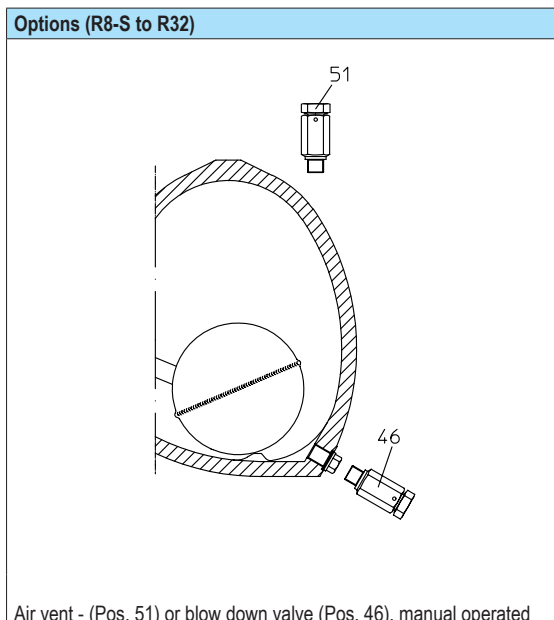
Weights					
Fig. 639 PN16	(approx.) (kg)	44,7	46,2	47,7	50,5
Fig. 639 PN40	(approx.) (kg)	46	48,3	50,5	55

Parts					
Pos.	Sp.p.	Description	Fig. 42.639	Fig. 45.639	Fig. 55.639
1		Body	P250 GH, 1.0460		X6CrNiTi18-10, 1.4541
2		Strainer	X5CrNi18-10, 1.4301		
11	x	Sealing ring	A4		
16		Hood	EN-GJL-250, EN-JL1040	GP240GH+N, 1.0619+N	GX5CrNi19-10, 1.4308
17		Gasket	Graphite (CrNi laminated with graphite)		
24	x	Controller, cpl.	X5CrNi18-10, 1.4301 / bimetallic TB102/85 (corrosion resistant bimetal)		
27		Stud	21CrMoV 5-7, 1.7709	21CrMoV 5-7, 1.7709	A4-70
28		Hexagonal nut	25CrMo4, 1.7218	25CrMo4, 1.7218	A4
46	x	Blow down valve, cpl.	X6CrNiTi18-10, 1.4541		
49	x	Sealing ring	A4		A4
50	x	Plug (M14x1,5)	C35E, 1.1181		X6CrNiTi18-10, 1.4541
51	x	Manual air vent valve	X6CrNiTi18-10, 1.4541		
52	x	Union for recovery pipe	X8CrNiS18-9, 1.4305		
L Spare parts					

Information / restriction of technical rules need to be observed!

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

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



**Ball float steam trap (Steel)**

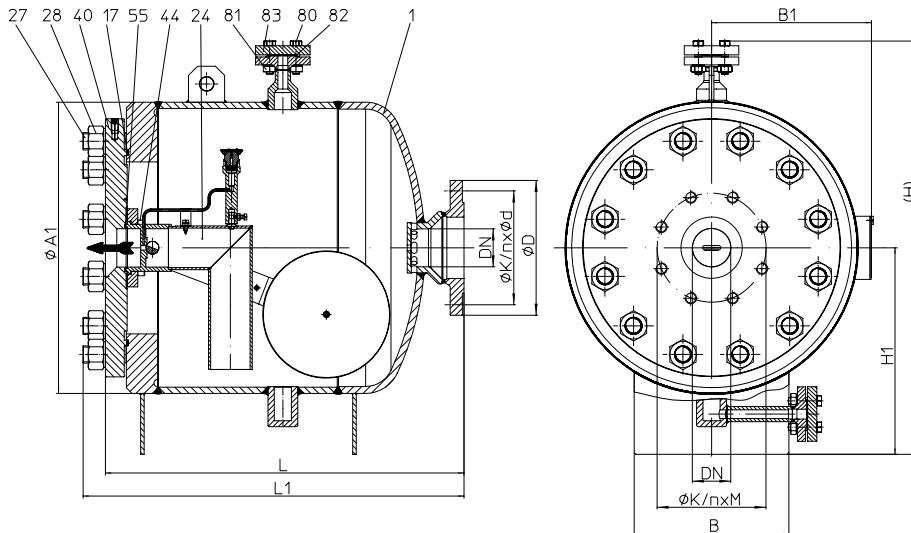


Fig. 637....1 with flanges

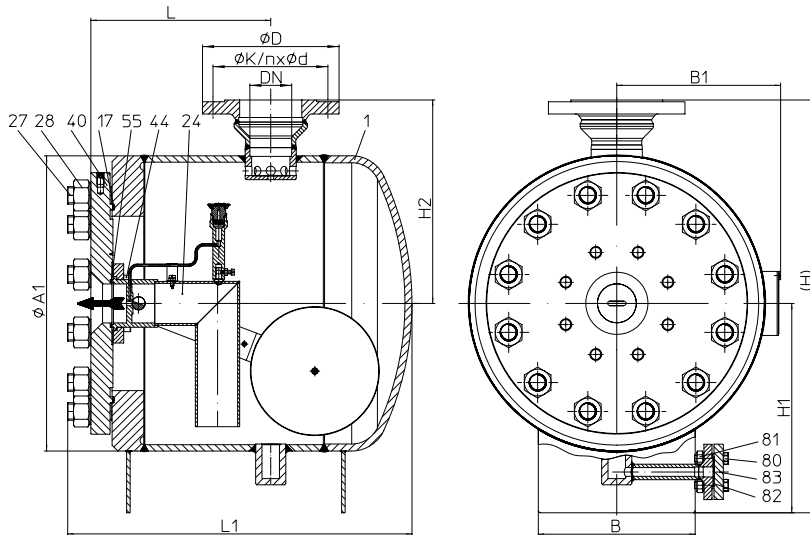


Fig. 638....1 Angle pattern design with flanges

Figure	Nominal pressure	Material	Nominal diameter	Operating pressure PS	Inlet temperature TS	allowable differential pressure $\Delta PMX$	for controller		
82.637	PN16	Body: P235GH-TC1 Cover: P355NH	50 - 100	16 barg	120 °C	4 bar	R4		
82.638				14 barg	200 °C				
84.637	PN25	Body: P235GH-TC1 Cover: P355NH	50 - 100	25 barg	120 °C			14 bar	R14
84.638				17 barg	300 °C			23 bar	R23
85.637	PN40	Body: P235GH-TC1 Cover: P355NH	50 - 100	40 barg	120 °C			30 bar	R30
85.638				29 barg	250 °C				
				25 barg	300 °C				
				22 barg	350 °C				

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

- Flanges ....1 \_\_\_\_\_ acc. to DIN 2633 or DIN EN 1092-2 (PN16), DIN 2634 or DIN EN 1092-2 (PN25) and DIN 2635 or DIN EN 1092-1 (PN40) on request: drilled acc. to ANSI150 and ANSI300

**Features**

- Ball float steam trap with level control for the condensate-discharge from all kinds of steam systems
- Rapid system start-up and venting of air during operation due to thermostatic air venting capsule
- Immediate discharge of hot boiling condensat
- Capacity: 74 litres
- Drain fitting (Pos. 80 - 83; DN15)
- Support points
- Simple exchange of controller.

**Mounting position**

- Standard: horizontal
- BR637: straight through (inlet from right or left)
- BR638: angle pattern design (inlet from the top)

**Options**

- Design of mounted connecting flange at the outlet

Types of connection		Fig. 637 (Straight through)				Fig. 638 (Angle pattern design)			
DN	(mm)	50	65	80	100	50	65	80	100

Face-to-face acc. to data sheet resp. customer request									
L	(mm)	620	620	620	620	310	310	310	310
L1	(mm)	664	664	664	664	592	592	592	592

Dimensions									
Standard-flange dimensions refer to page 21.									
H	(mm)	721	721	721	721	710	710	710	710
H1	(mm)	360	360	360	360	360	360	360	360
H2	(mm)	--	--	--	--	350	350	350	350
B	(mm)	270	270	270	270	270	270	270	270
B1	(mm)	280	280	280	280	280	280	280	280
Ø A1	(mm)	508	508	508	508	508	508	508	508
Ø K / n x M	(mm)	125 / 4 x M16	145 / 8 x M16	160 / 8 x M16	190 / 8 x M20	125 / 4 x M16	145 / 8 x M16	160 / 8 x M16	190 / 8 x M20
Ø K / n x d	(mm)	125 / 4 x 18	145 / 8 x 18	160 / 8 x 18	190 / 8 x 22	125 / 4 x 18	145 / 8 x 18	160 / 8 x 18	190 / 8 x 22

Weights									
Fig. 637 / 638 (approx.)	(kg)	195	195	197	199	195	196	197	199

Connection Rohrleitungsflansch am Cover (Pos. 40)									
Stud (DIN 939 - 1.7709)	M16 x 55	M16 x 55	M16 x 55	M20 x 55 (PN16: M16 x 55)	M16 x 55	M16 x 55	M16 x 55	M16 x 55	M20 x 55 (PN16: M16 x 55)
Hexagonal nut (DIN 2510 - 1.7709)	NF M16	NF M16	NF M16	NF M20 (PN16: NF M16)	NF M16	NF M16	NF M16	NF M16	NF M20 (PN16: NF M16)

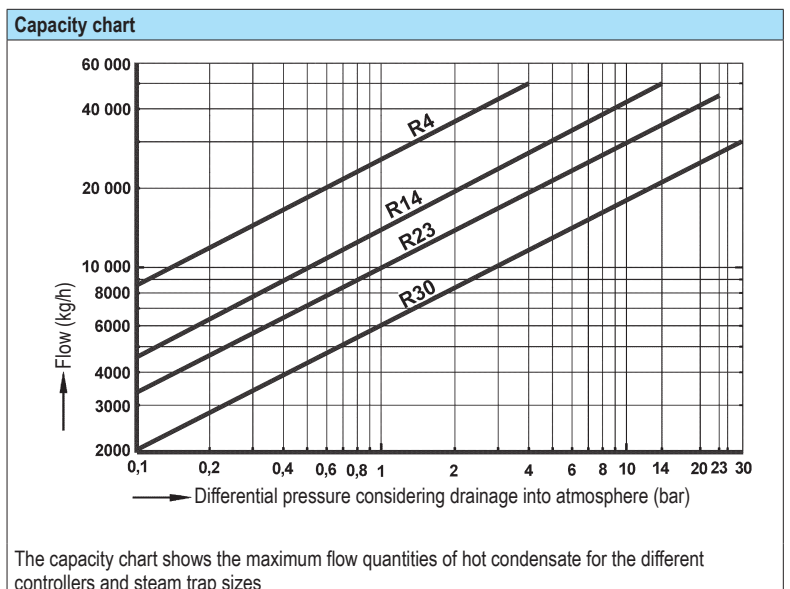
Parts			
Pos.	Sp.p.	Description	Fig. 82./84./85.637 / 82./84./85.638
1		Body	P235GH-TC1, 1.0345
17	x	Gasket	Graphite (CrNi laminated with graphite)
24	x	Controller, cpl.	X5CrNi18-10, 1.4301
27		Stud	21CrMoV 5-7, 1.7709
28		Hexagonal nut	21CrMoV 5-7, 1.7709
40		Cover	P355NH, 1.0565
44		Hexagonal screw (DN50)	A4-70
44		Head cap screw (DN65-100)	A4-70
55	x	Gasket	Graphite (CrNi laminated with graphite)
80		Hexagonal screw	21CrMoV 5-7, 1.7709
81		Hexagonal nut	21CrMoV 5-7, 1.7709
82		Gasket	Graphite (CrNi laminated with graphite)
83		Flange	P250 GH, 1.0460
L Spare parts			

Information / restriction of technical rules need to be observed!

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

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

Options					
Design of mounted connecting flange at the outlet					
		Fig. 637 Straight		Fig. 638 Angle	
DN		50 - 65	80 - 100	50 - 65	80 - 100
L	(mm)	750	800	435	485



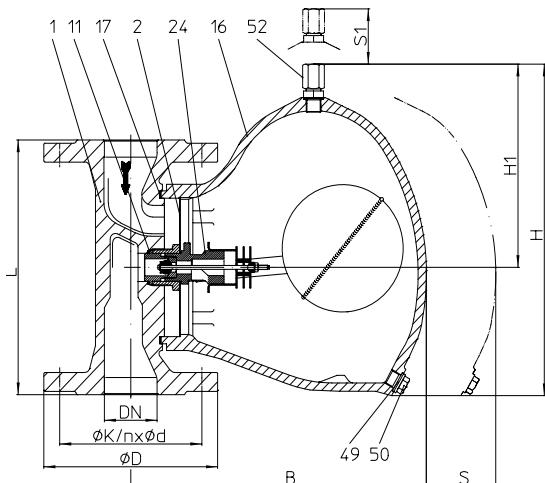
**Ball float steam trap (Grey cast iron, SG iron, Forged steel/Cast steel, Stainless steel)**


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

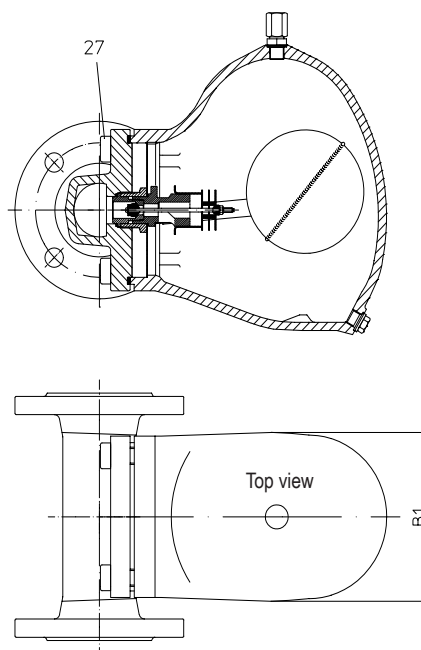


Fig. 630....1 with flanges - horizontal installation

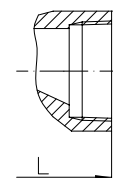


Fig. 630....2 with screwed sockets

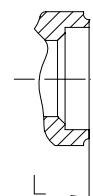


Fig. 630....3 with socket weld ends

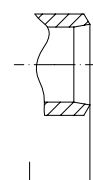


Fig. 630....4 with butt weld ends

Figure	Nominal pressure	Material	Nominal diam. / NPS	Operating pressure PS	Inlet temperature TS	allowable differential pressure ΔPMX	for controller
12.630	PN16	Body/Hood: EN-JL1040	15 - 50 / 1/2" - 2"	12,8 barg	200 °C	2 bar	R2
				9,6 barg	300 °C	4 bar	R4
25.630	PN40	Body/Hood: EN-JS1049	15 - 50 / 1/2" - 2"	32 barg	250 °C	8 bar	R8
				22 barg	350 °C	13 bar	R13
45.630	PN40	Body: 1.0460 / Hood: 1.0619+N	15 - 50 / 1/2" - 2"	32 barg	250 °C	2 bar	R2
				21 barg	400 °C	4 bar	R4
55.630	PN40	Body: 1.4541 / Hood: 1.4308	15 - 50 / 1/2" - 2"	32 barg	250 °C	8 bar	R8
				28 barg	300 °C	13 bar	R13
						22 bar	R22
						32 bar	R32

For ANSI versions refer to data sheet CONA®S-ANSI

**Types of connection**

Other types of connection on request.

- Flanges ....1 \_\_\_\_\_ acc. to DIN 2533 or DIN EN 1092-2 (PN16) and DIN 2635 or DIN EN 1092-1 (PN40)
- Screwed sockets ....2 \_\_\_\_\_ Rp thread acc. to DIN EN 10226-1 or NPT thread acc. to ANSI B1.20.1
- Socket weld ends ....3 \_\_\_\_\_ acc. to DIN EN 12760
- Butt weld ends ....4 \_\_\_\_\_ Weld preparation acc. to EN ISO 9692 identification No. 1.3 and 1.5 (Note restriction on operating pressure / inlet temperature depending to design!)

**Features**

- Ball float steam trap with level control for the condensate-discharge from compressed air and gas systems (acc. to PED 97/23/EG fluid group 2, other fluid groups on request)
- Inside strainer
- Body with flanged hood
- Non return protection
- 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)
- The controller maybe changed without disturbing the pipe work

**Mounting position**

- |             |  |   |
|-------------|--|---|
| • Standard: | vertical                                 | <b>Please indicate when ordering!</b><br>Refer to: Information about the different installation positions (Page 21)<br>On-site change of the installation position is possible according to the operating instructions. |
| • Optional: | horizontal with inlet from right or left |   |

**Options**

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



Types of connection		Flanges					Screwed sockets <sup>1)</sup> Socket weld ends <sup>2)</sup>					Butt weld ends <sup>2)</sup>				
DN	(mm)	15	20	25	40	50	15	20	25	40	50 <sup>1)</sup>	15	20	25	40	50
NPS	(inch)	1/2	3/4	1	1 1/2	2	1/2	3/4	1	1 1/2	2 <sup>1)</sup>	1/2	3/4	1	1 1/2	2

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

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

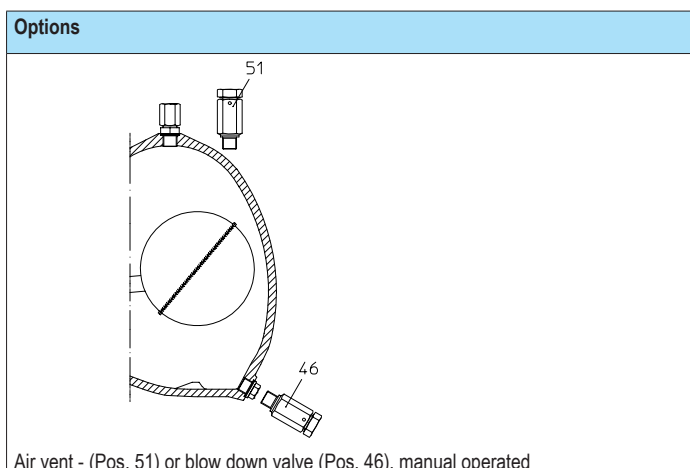
Dimensions												Standard-flange dimensions refer to page 21.				
H	(mm)	188	188	213	296	296	188	188	213	296	296	188	188	213	296	296
H1	(mm)	111	111	128	177	177	111	111	128	177	177	111	111	128	177	177
B (EN-JS1049)	(mm)	214	214	255	280	280	214	214	255	280	--	--	--	--	--	--
B (Steel)	(mm)	214	214	255	280	280	167	167	196	285	285	167	167	196	285	285
B1	(mm)	95	95	118	157	157	95	95	118	157	157	95	95	118	157	157
S	(mm)	180	180	200	300	300	180	180	200	300	300	180	180	200	300	300
S1	(mm)	150	150	180	200	200	150	150	180	200	200	150	150	180	200	200

Weights																
Fig. 630 (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	22

Parts						
Pos.	Sp.p.	Description	Fig. 12.630	Fig. 25.630	Fig. 45.630	Fig. 55.630
1		Body	EN-GJL-250, EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049	P250 GH, 1.0460	X6CrNiTi18-10, 1.4541
2		Strainer	X5CrNi18-10, 1.4301			
11	x	Sealing ring	CU	A4		
16		Hood	EN-GJL-250, EN-JL1040	EN-GJS-400-18U-LT, EN-JS1049	GP240GH+N, 1.0619+N	GX5CrNi19-10, 1.4308
17	x	Gasket	Graphite (CrNi laminated with graphite)			
24	x	Controller, cpl.	X5CrNi18-10, 1.4301 / TB102/85 (corrosion resistant bimetal)			
27		Cheese head screw	A2-70 / 8.8	21CrMoV 5-7, 1.7709	21CrMoV 5-7, 1.7709	< DN40: A4-80 ≥ DN40: X6CrNiTi18-10, 1.4541
46	x	Blow down valve, cpl.	X8CrNiS18-9, 1.4305			
49	x	Sealing ring	CU	A4		
50	x	Plug (M14x1,5)	11SMn30+C, 1.0715+C	C35E, 1.1181	X6CrNiTi18-10, 1.4541	
51	x	Manual air vent valve	X6CrNiTi18-10, 1.4541			
52	x	Union for recovery pipe	X8CrNiS18-9, 1.4305			
L Spare parts						

Information / restriction of technical rules need to be observed!

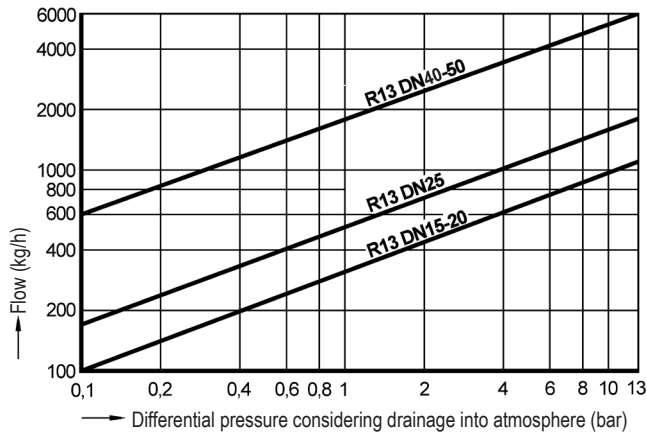
Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).

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


**Capacity chart**

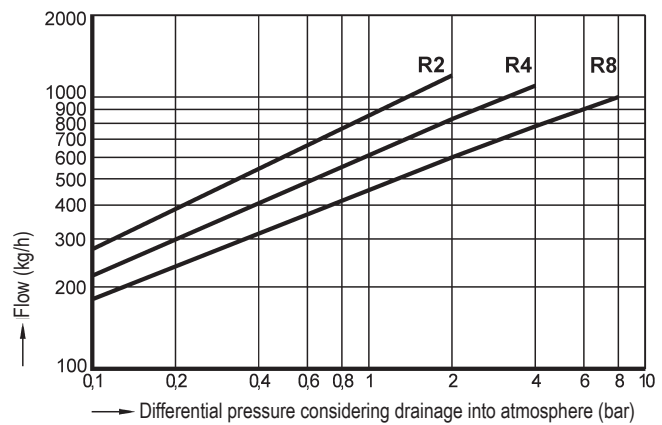
**PN16 - Standard R13**

**DN15 - DN50**



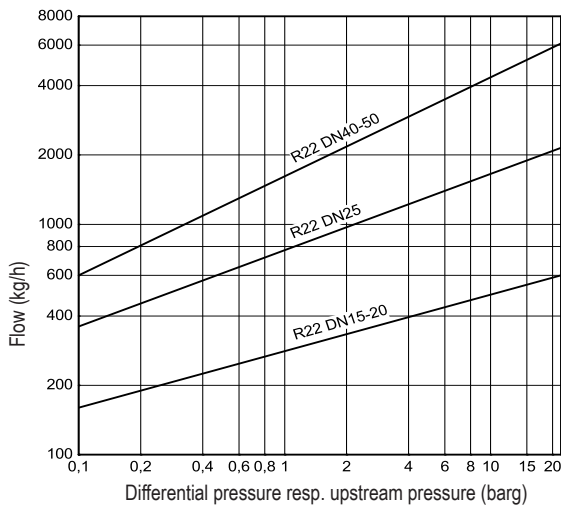
**PN16 - PN40 - Special execut. R2, R4, R8**

**DN 15 - DN 20**



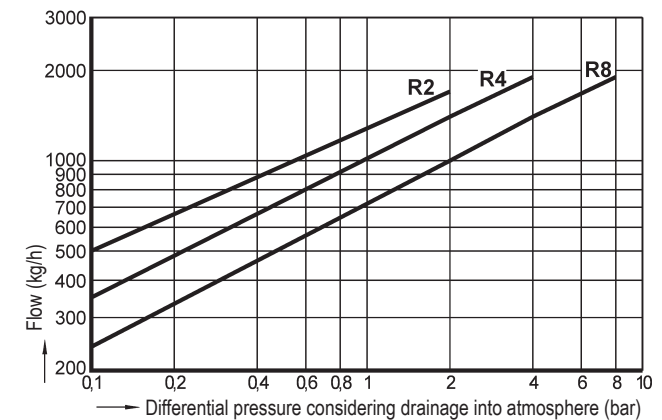
**PN40 - Standard R22**

**DN15 - DN50**



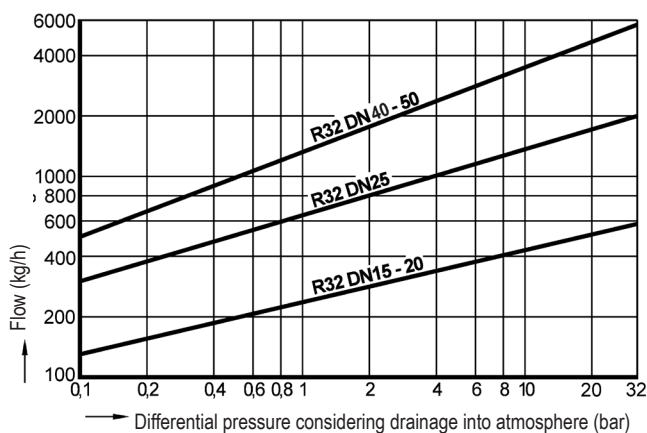
**PN16 - PN40 - Special execut. R2, R4, R8**

**DN 25**



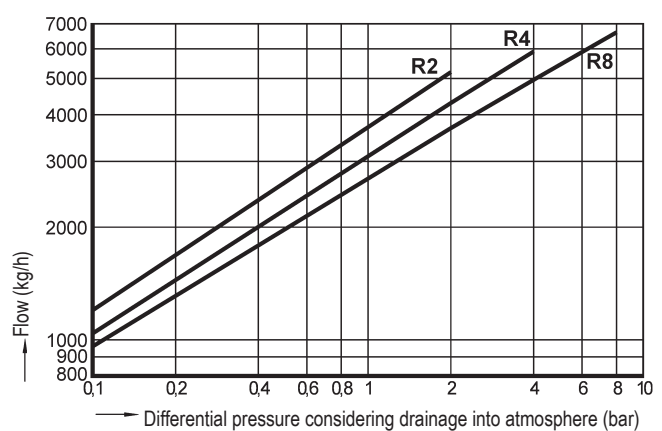
**PN40 - Standard R32**

**DN15 - DN50**



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

**DN 40 - DN 50**



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

**myValve® - Ihr Valve Sizing-Program.**

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

**myValve - Valve Sizing-Program**
**Contents:**
**Module ARI-Steam trap CONA-Calculation**

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

**Media:**

- Steam (saturated and superheated)
- Compressed air

**Special Features**

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

**System Requirements:**

Windows operating systems, Linux, etc.

**Informations about pipe welding**
**Welding groove acc. to DIN 2559**

The material used for ARI valves with butt weld ends are:	1.0619+N	GP240GH+N acc. to DIN EN 10213-2
	1.0460	P250GH acc. to DIN EN 10222-2
<b>Note:</b>	1.5415	16Mo3 acc. to DIN EN 10028
Note restriction on operating pressure / inlet temperature depending to design!	1.4541	X6CrNiTi18-10 acc. to DIN EN 10088
	1.7335	13CrMo4-5 acc. to DIN EN 10028

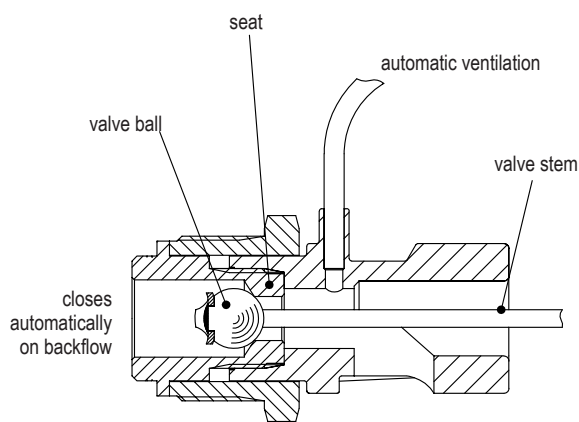
Due to our experience, we recommend to apply an electric welding process.

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.

On bimetallic steam traps face-to-face of 95 mm or less, the bimetallic controller has to be disassembled prior to welding. After the traps have cooled down to the ambient temperature the bimetallic controller shall be fitted again into the body.

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

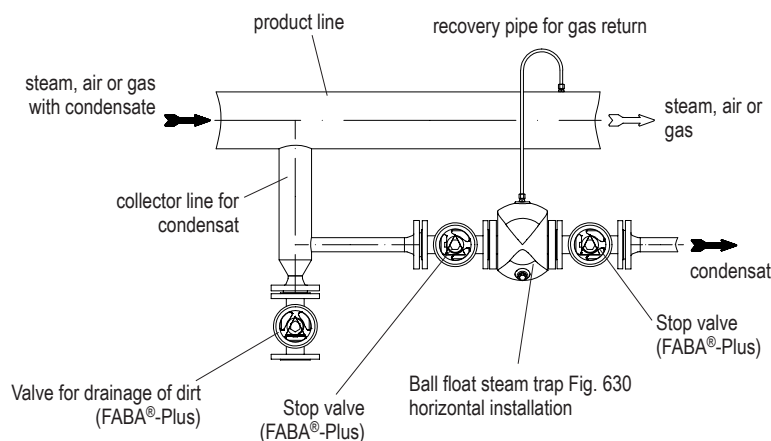
If during the time of warranty others than the manufacturer or by the manufacturer authorized persons are interfering in the product and/or the setting, the right of claim for warranty will lapse!

**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.

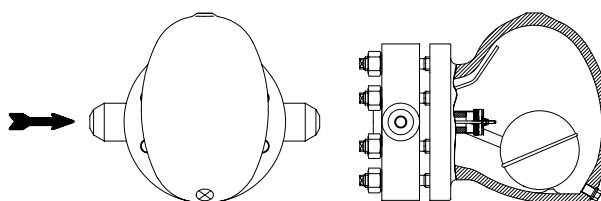
A check valve which otherwise has to be installed is not necessary.

**Installation with recovery pipe**

**Important:**

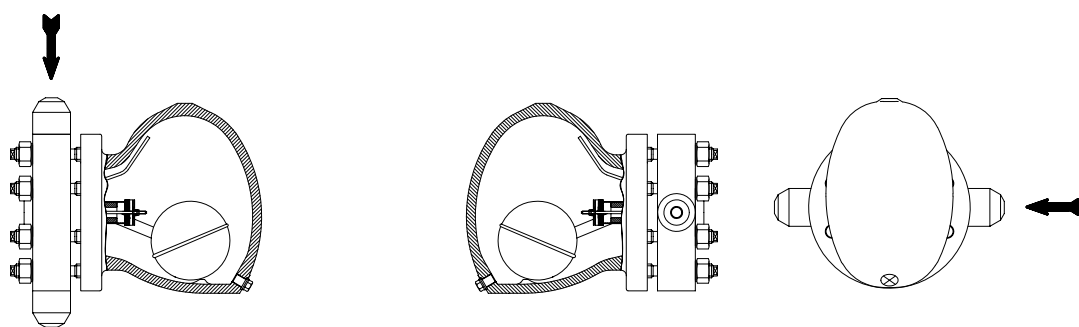
The installation of a recovery pipe for gas return is always recommended; especially if the ball float steam trap is installed horizontally.

Selection criteria:		Example for order data:
<ul style="list-style-type: none"> <li>• Steam pressure</li> <li>• Back pressure</li> <li>• Quantity of condensate</li> <li>• Flow medium</li> </ul>	<ul style="list-style-type: none"> <li>• Nominal diameter / pressure</li> <li>• Type of connection</li> <li>• Material</li> <li>• Place of service or kind of steam consumer</li> </ul>	<b>Ball float steam trap CONA® S, Fig. 630, PN40, DN50, 1.0460/1.0619+N, Controller R22, with flanges, Face-to-face dimension 230 mm</b>
<b>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</b>		

Standard-flange dimensions acc. to DIN 2533 / DIN 2633 / DIN 2634 / DIN 2635 / 2636 / 2638 or DIN EN 1092-1 / -2											
DN		(mm)	15	20	25	32	40	50	65	80	100
NPS		(inch)	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
PN16	ØD	(mm)	95	105	115	140	150	165	185	200	220
	ØK	(mm)	65	75	85	100	110	125	145	160	180
	n x Ød	(mm)	4 x 14	4 x 14	4 x 14	4 x 18	4 x 18	4 x 18	4 x 18	8 x 18	8 x 18
PN25	ØD	(mm)	--	--	--	--	--	--	185	200	235
	ØK	(mm)	--	--	--	--	--	--	145	160	190
	n x Ød	(mm)	--	--	--	--	--	--	8 x 18	8 x 18	8 x 18
PN40	ØD	(mm)	95	105	115	140	150	165	185	200	235
	ØK	(mm)	65	75	85	100	110	125	145	160	190
	n x Ød	(mm)	4 x 14	4 x 14	4 x 14	4 x 18	4 x 18	4 x 18	8 x 18	8 x 18	8 x 22
PN63	ØD	(mm)	105	130	140	--	170	180	--	--	--
	ØK	(mm)	75	90	100	--	125	135	--	--	--
	n x Ød	(mm)	4 x 14	4 x 18	4 x 18	--	4 x 22	4 x 22	--	--	--
PN100	ØD	(mm)	105	130	140	--	170	195	--	--	--
	ØK	(mm)	75	90	100	--	125	145	--	--	--
	n x Ød	(mm)	4 x 14	4 x 16	4 x 18	--	4 x 22	4 x 26	--	--	--
PN160	ØD	(mm)	130	--	140	--	--	195	--	--	--
	ØK	(mm)	75	--	100	--	--	4 x 26	--	--	--
	n x Ød	(mm)	4 x 14	--	4 x 18	--	--	4 x 26	--	--	--

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


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 (except BR633).

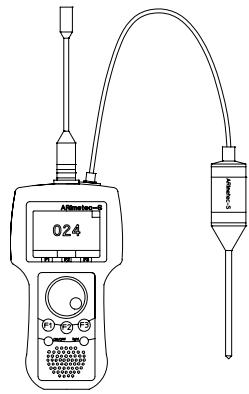
The steam trap must be fitted with the direction of flow as indicated by the arrow on the body.

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

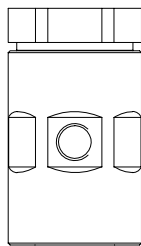
The steam trap shall preferably be installed at the lowest point of the system and the membrane capsule resp. the bleeding tube shall be installed in an upright position inside of the hood.

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

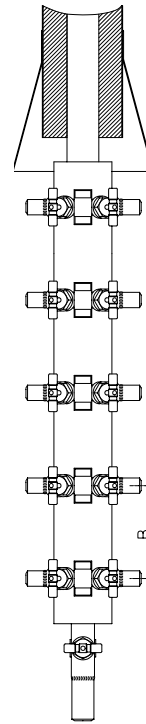
A modification of the installation position during the time of warranty shall be carried out by the AWH-Service or it shall be agreed between the customer and manufacturer.



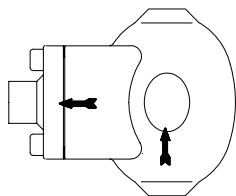
Multifunction tester ARImetec<sup>®</sup>-S



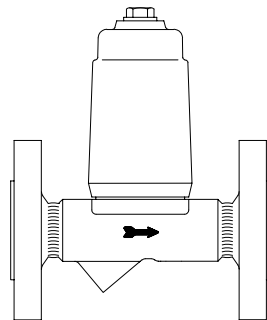
Vacuum breaker  
Fig. 655



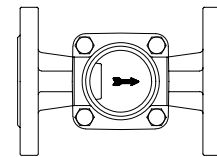
Condensate collection (B = 160), steam distribution (B = 120)  
CODIS<sup>®</sup>S with gland packing Fig. 671/672;  
CODIS<sup>®</sup>B with bellows seal, maintenance-free Fig. 675/676



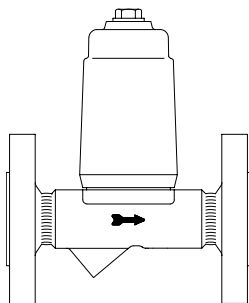
Automatic air vent for liquid systems  
Fig. 656



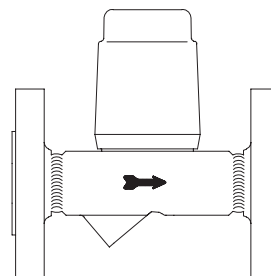
Condensate discharge temperature limiter  
Fig. 645/647



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.)