

**Ball float steam trap**

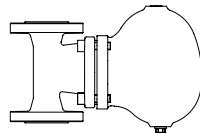
**Ball float steam trap**

**PN16 / PN40**

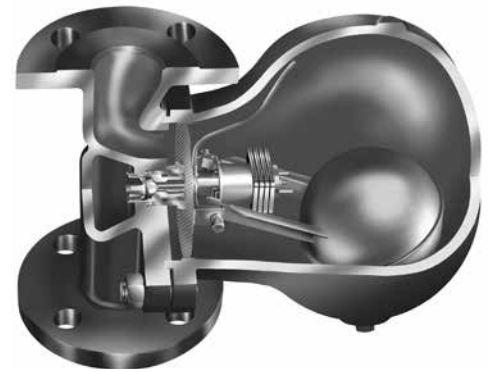
- with flanges
- with screwed sockets
- with socket weld ends
- with butt weld ends

(Fig. 631....1)  
(Fig. 631....2)  
(Fig. 631....3)  
(Fig. 631....4)

Grey cast iron  
SG iron  
Forged steel/  
Cast steel  
Stainless steel  
Low temperature steel



**Fig. 631** Page 4



**Fig. 631....1**  
vertical installation

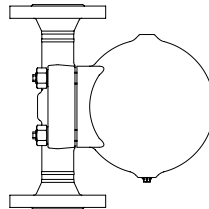
**Ball float steam trap**

**PN63 / PN100**

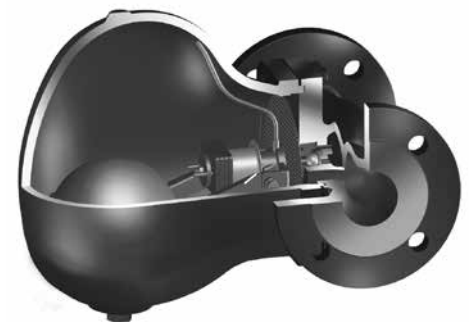
- with flanges
- with socket weld ends
- with butt weld ends

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

High temperature steel



**Fig. 631** Page 8



**Fig. 631....1**  
horizontal installation

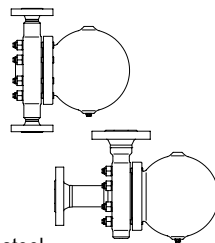
**Ball float steam trap**

**PN160**

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

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

High temperature steel



**Fig. 631 / Fig. 632** Page 10

**Angle pattern design:**

- with flanges
- with butt weld ends

(Fig. 632....1)  
(Fig. 632....4)

**Ball float steam trap**

**PN16 / PN40**

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

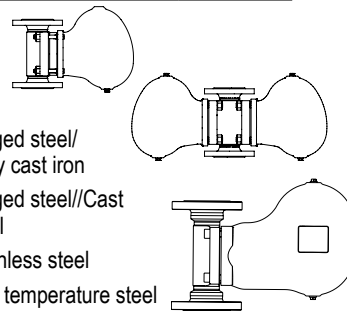
(BR 633....1)  
(BR 633....3)  
(BR 633....4)

Forged steel/  
Grey cast iron

Forged steel//Cast  
steel

Stainless steel

Low temperature steel



- with flanges R4-P

(BR 633....1)

- with flanges

(BR 639....1)

**BR 633**  
**BR 633 R4-P**  
**BR 639**

Page 12  
Page 16  
Page 18

**Ball float steam trap**

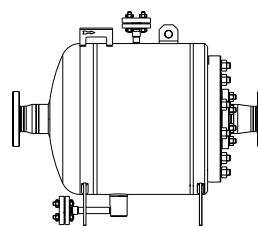
**PN16 / PN40**

- with flanges

(Fig. 637....1)

Steel

**Fig. 637**



Page 20

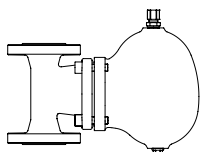
**Ball float steam trap for drainage of water from compressed air and gas systems**

**PN16 / PN40**

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

(Fig. 630....1)  
(Fig. 630....2)  
(Fig. 630....3)  
(Fig. 630....4)

Grey cast iron  
SG iron  
Forged steel/  
Cast steel  
Stainless steel  
Low temperature steel



**Fig. 630** Page 24



Description
Float-controlled steam trap are used to drain condensate and other liquids from steam and other gases. Discharge is continuous. The volume is adjusted immediately via the liquid level in the valve and a robust float. Steam traps can be supplied in EN materials and alternatively in ASME materials.
Features
<ul style="list-style-type: none"><li>• Backflow-free discharge even with extreme pressure and volume fluctuations</li><li>• integrated thermal control unit for automatic venting (except BR630)</li><li>• Integrated non return protection (except BR633 and BR637)</li><li>• Inside Strainer (except BR633 and BR637)</li><li>• Union for recovery pipe and bypass possible on customer request</li><li>• Flow direction can easily be changed on site (except BR633 R4-P and BR637)</li><li>• The controller can be replaced without removing the trap body from the pipework (except BR637)</li><li>• Drain plug</li></ul>
Options
<ul style="list-style-type: none"><li>• Blow down valve</li><li>• Manual venting valve</li></ul>
Types of connection (depends on material and nominal pressure)
<ul style="list-style-type: none"><li>• Flanges with flange facing and drilling acc. to DIN EN 1092-1</li><li>• Screwed sockets Rp acc. to DIN EN 10226-1</li><li>• Socket weld ends acc. to DIN EN 12760</li><li>• Butt weld ends with joint preparation type 1.3 acc. to EN ISO 9692-1</li><li>• Other connection types on request</li></ul>

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

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

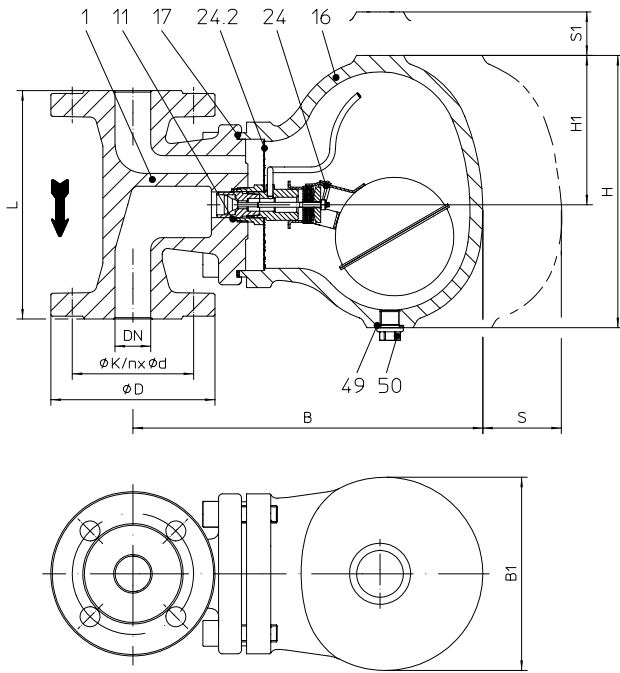


Fig. 631....1 with flanges - vertical installation

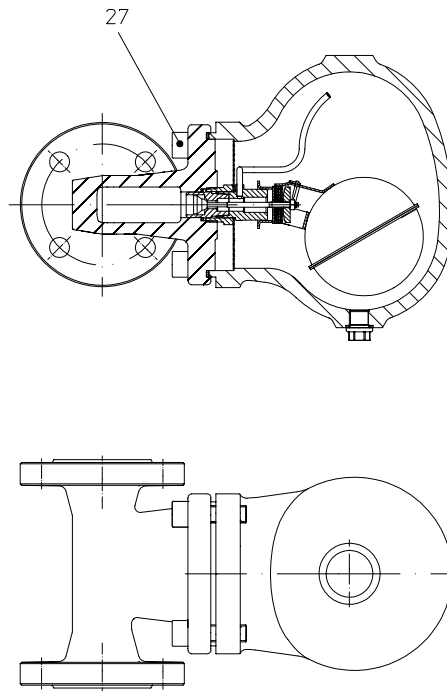


Fig. 631....1 with flanges - horizontal installation

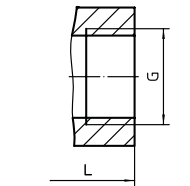


Fig. 631....2 with screwed sockets

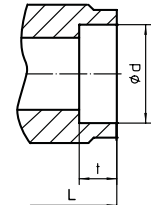


Fig. 631....3 with socket weld ends

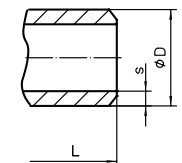


Fig. 631....4 with butt weld ends

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

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

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

Types of connection		Other types of connection on request.
<ul style="list-style-type: none"> <li>Flanges ....1 _____ acc. to DIN EN 1092-2 (EN-JL1040) and DIN EN 1092-1 (1.0460, 1.4541, 1.0571)</li> <li>Screwed sockets ....2 _____ Rp thread acc. to DIN EN 10226-1 or NPT thread acc. to ANSI B1.20.1</li> <li>Socket weld ends ....3 _____ acc. to DIN EN 12760</li> <li>Butt weld ends ....4 _____ with joint preparation type acc. to EN ISO 9692 No. 1.3 and 1.5 (Note restriction on operating pressure / inlet temperature depending to design!)</li> </ul>		
Features		
<ul style="list-style-type: none"> <li>Ball float steam trap with level control for the condensate-discharge from all kinds of steam systems</li> <li>Rapid system start-up due to thermostatic control element</li> <li>Inside strainer</li> <li>Body with flanged hood</li> </ul>		<ul style="list-style-type: none"> <li>Non return protection</li> <li>The controller can be replaced without removing the trap body from the pipework</li> <li>On-site change of the installation position is possible according to the operating instructions</li> </ul>
Mounting position		
Standard:	vertical	<b>Please indicate when ordering!</b> Refer to: Information about the different installation positions (Page 29) On-site change of the installation position is possible according to the operating instructions.
Optional:	horizontal with inlet from right or left	
Options		
<ul style="list-style-type: none"> <li>Air vent - (Pos. 51) or blow down valve (Pos. 46), manual operated</li> </ul>		

Types of connection		Flanges								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	15	20	25	40	50
NPS	(inch)	1/2"	3/4"	1"	1 1/2"	2"	2 1/2" <sup>2)</sup>	3" <sup>2)</sup>	4" <sup>2)</sup>	1/2"	3/4"	1"	1 1/2"	2"	1/2"	3/4"	1"	1 1/2"	2"

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

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

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

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

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

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

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

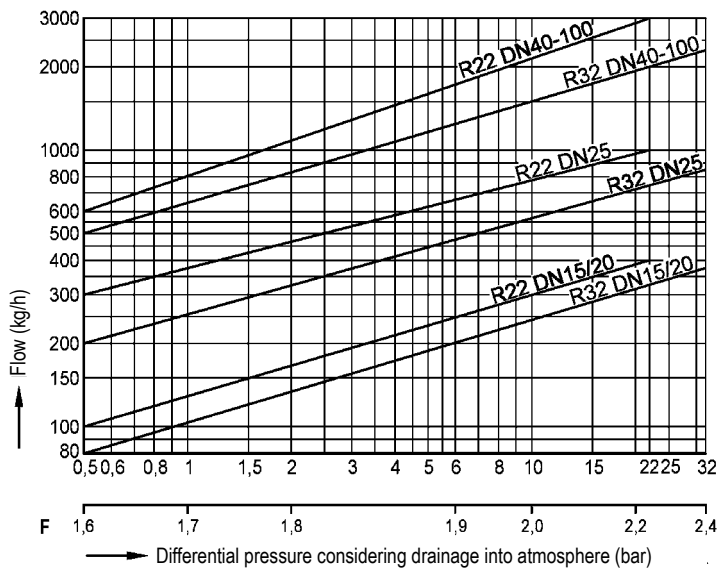
Information / restriction of technical rules need to be observed!  
Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).  
Operating and installation instructions can be downloaded at [www.ari-armaturen.com](http://www.ari-armaturen.com).

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

**Capacity chart**

**Standard R22 and R32**

**DN15 - DN100**



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

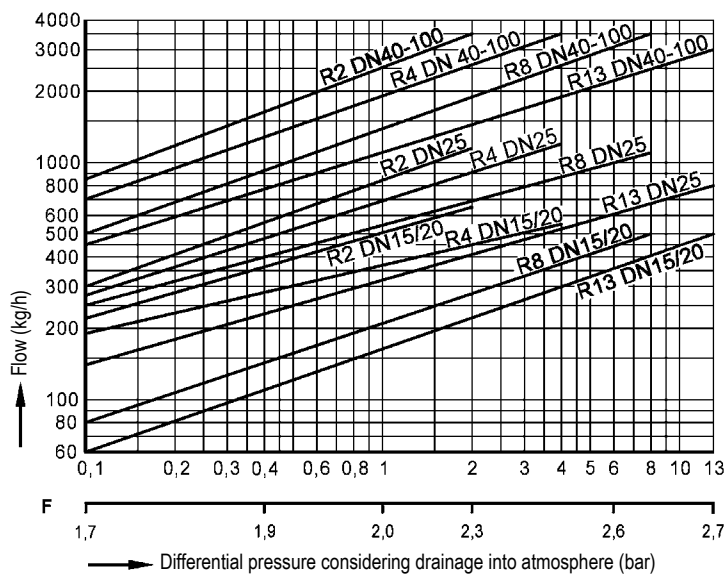
In common, the steam traps are fitted out with an controller as shown in the flow diagrams of this page acc. to the differential pressures and flow rates.

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

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

**Standard R2 to R13**

**DN15 - DN100**



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

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

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

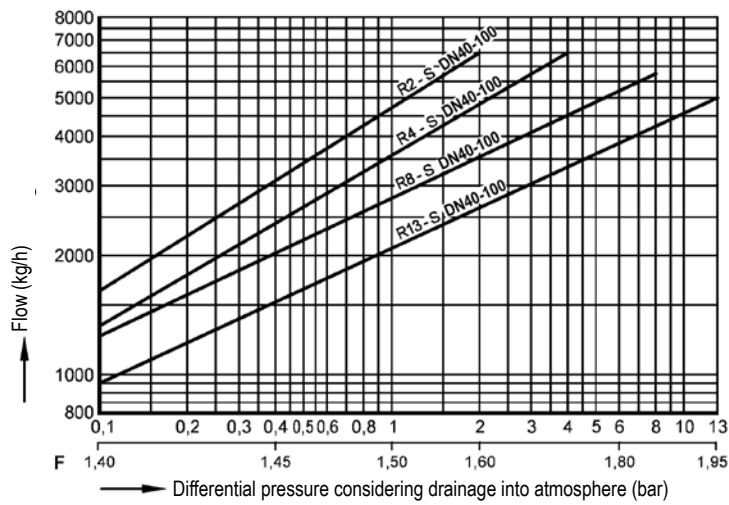
The maximum flow quantity of cold condensate at about 20°C can be determined by multiplication of the appropriate factor F (in the scale below the diagrams) with the hot condensate quantity determined by the capacity chart. (Factor F is related to the differential pressure)

**Capacity chart**

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

R2-S to R13-S

DN 40 - 100



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

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

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

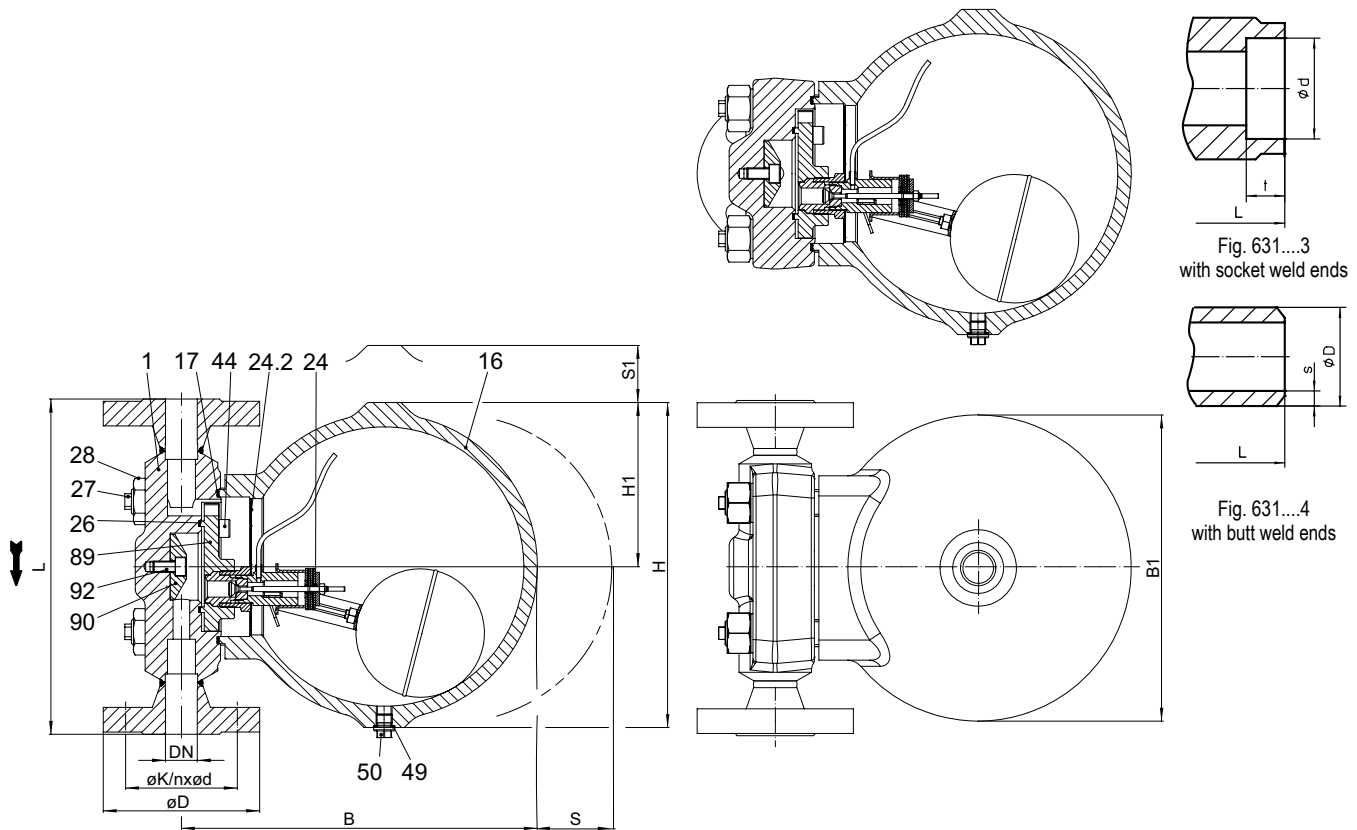


Fig. 631....1 with flanges - vertical installation (PN100)

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

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

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

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

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

**Features**

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

**Mounting position**

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

**Options**

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



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

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

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

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

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

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

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

Information / restriction of technical rules need to be observed!

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

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

**Options**

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

**Capacity chart**

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 (High temperature steel)**

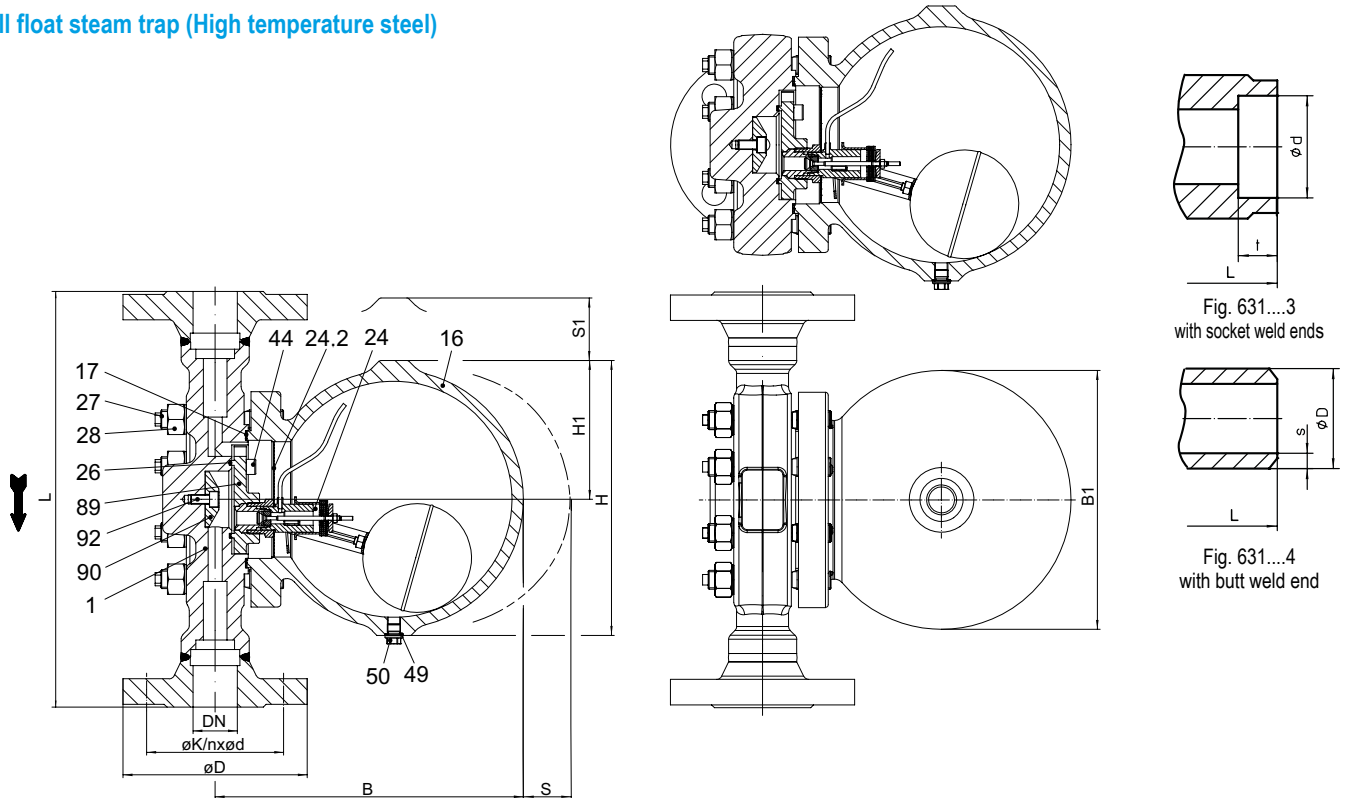


Fig. 631....1 Straight through with flanges - vertical installation

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

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

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

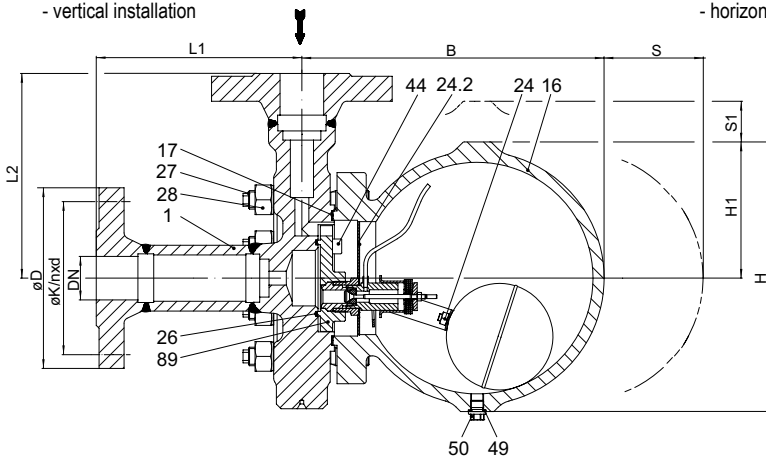


Fig. 632....1 Angle pattern design with flanges - vertical installation

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

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

Types of connection		Other types of connection on request.
<ul style="list-style-type: none"> <li>Flanges ....1 _____ acc. to DIN EN 1092-1</li> <li>Socket weld ends ....3 _____ acc. to DIN EN 12760</li> <li>Butt weld ends ....4 _____ with joint preparation type acc. to EN ISO 9692 No. 1.3 and 1.5 (Note restriction on operating pressure / inlet temperature depending to design!)</li> </ul>		
Features		
<ul style="list-style-type: none"> <li>Ball float steam trap with level control for the condensate-discharge from 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 can be replaced without removing the trap body from the pipework</li> </ul>
Mounting position		
Standard:	vertical	<b>Please indicate when ordering!</b> Refer to: Information about the different installation positions (Page 29) On-site change of the installation position is possible according to the operating instructions.
Optional:	horizontal with inlet from right or left	
Options		
<ul style="list-style-type: none"> <li>Air vent - (Pos. 51) or blow down valve (Pos. 46), manual operated</li> </ul>		

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

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

Dimensions														
H	(mm)	291	291	291	291	291	291	291	291	291	291	291	291	291
H1	(mm)	147	147	147	147	147	147	147	147	147	147	147	147	147
B	(mm)	327	327	327	327	327	327	327	327	327	327	327	327	327
B1	(mm)	274	274	274	274	274	274	274	274	274	274	274	274	274
S	(mm)	300	300	300	300	300	300	300	300	300	300	300	300	300
S1	(mm)	250	250	250	250	250	250	250	250	250	250	250	250	250

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

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

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

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

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

**Options**

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

**Capacity chart**

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).

(For the flow rate of the R64 controller, please refer to the diagram of Type 87.631, page 9)

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

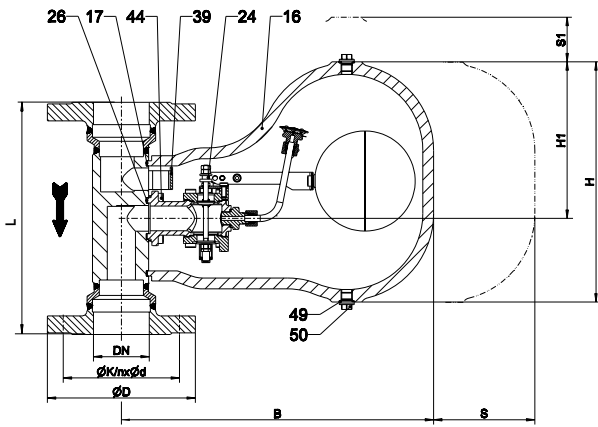


Fig. 633...1 mit Flanschen - vertikale Einbaulage

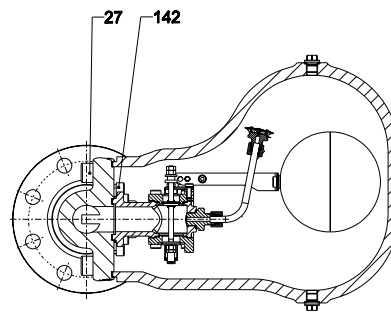


Fig. 633...1 mit Flanschen - horizontale Einbaulage

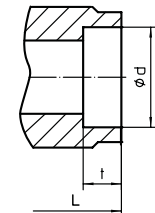


Fig. 633...3  
with socket weld ends

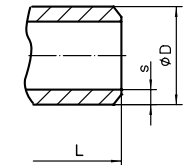


Fig. 633...4  
with butt weld ends

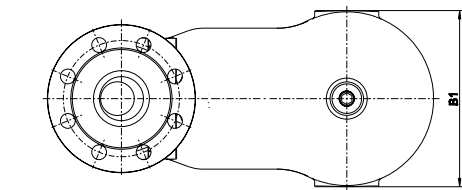


Fig. 633...1 mit Flanschen - vertikale Einbaulage

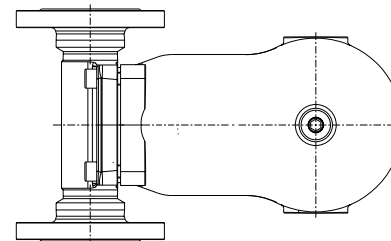


Fig. 633...1 mit Flanschen - horizontale Einbaulage

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

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

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

**Types of connection**

Other types of connection on request.

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

**Features**

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

**Mounting position**

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

**Please indicate when ordering!**

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

**Options**

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

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

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

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

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

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

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

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

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

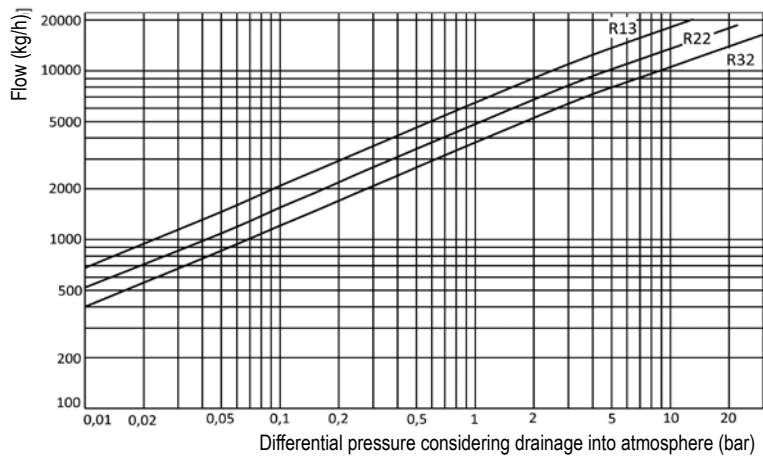
**Optionen**

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

**Capacity chart**

**Standard R13, R22 und R32**

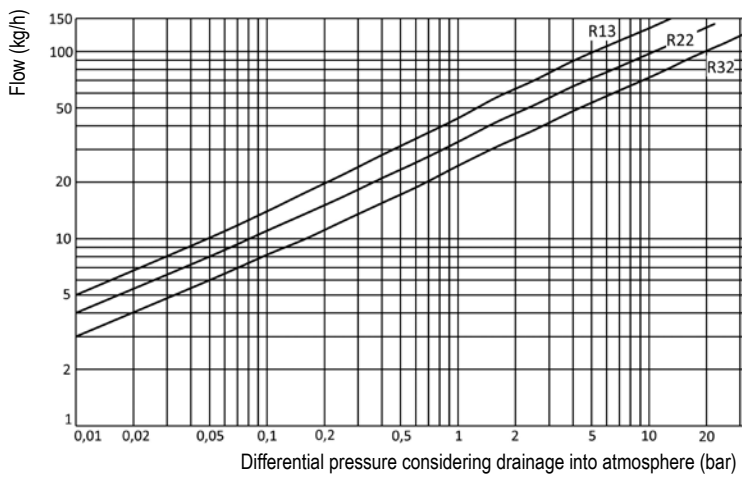
**DN40- DN100**



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

**Standard R13, R22 und R32**

**DN40- DN100**



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



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

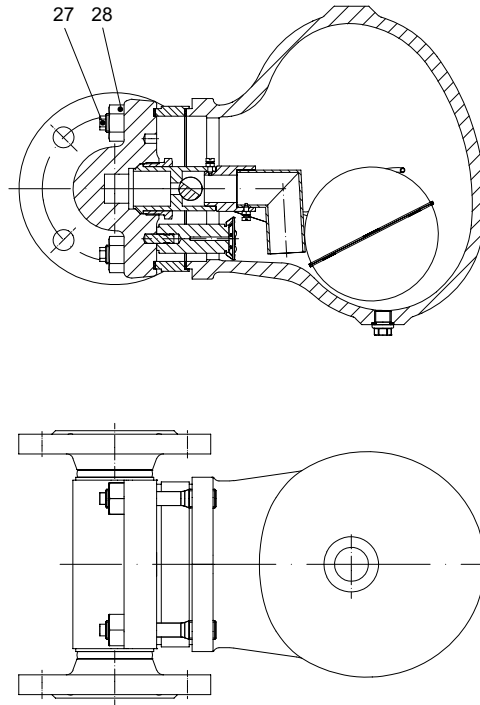
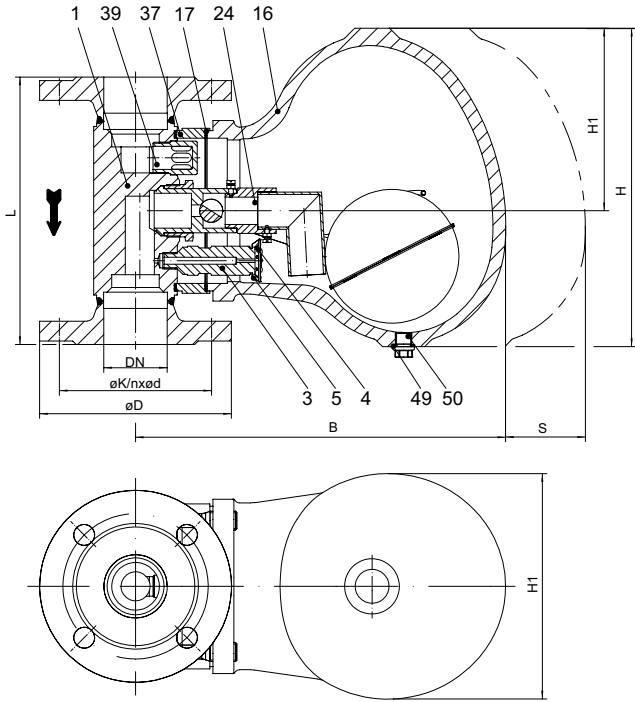


Fig. 633....1 with flanges - vertical installation

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

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

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

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

Types of connection		Other types of connection on request.
• Flanges ....1 _____ acc. to DIN EN 1092-1		
Features		
<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 can be replaced without removing the trap body from the pipework</li> </ul>
Mounting position		
• Standard:	vertical	<b>Please indicate when ordering!</b> Refer to: Information about the different installation positions (Page 29) <b>Installation position can not be changed later on.</b>
• Optional:	horizontal with inlet from right or left	
Options		
• Air vent - (Pos. 51) or blow down valve (Pos. 46), manual operated		



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

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

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

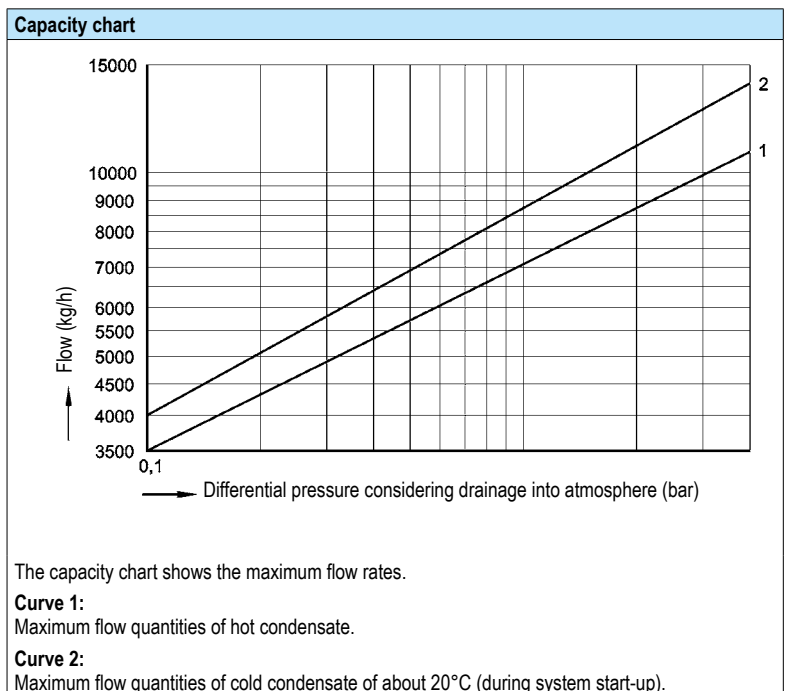
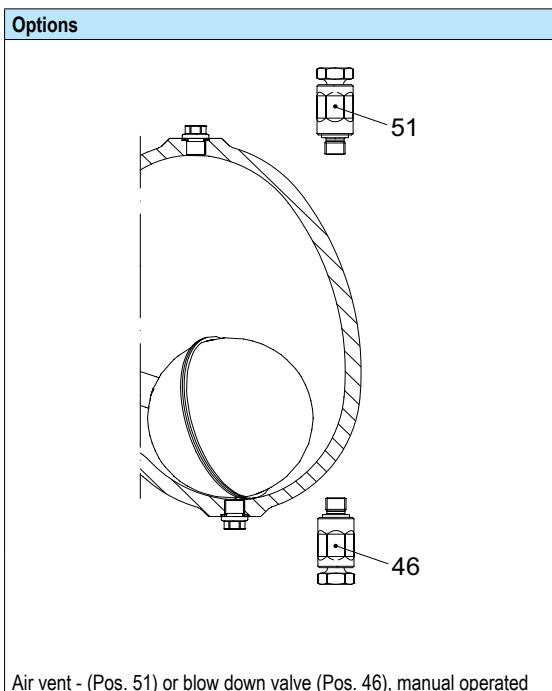
Weights						
Fig. 633 (approx.)	(kg)	29,6	30,2	32,6	34	37,6

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

Information / restriction of technical rules need to be observed!

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

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



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

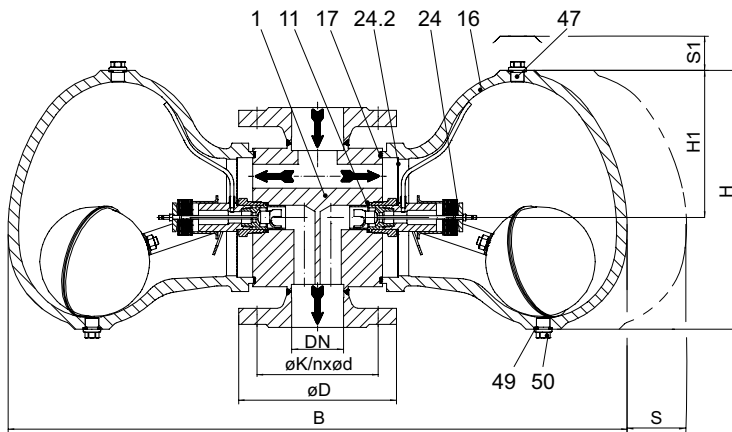


Fig. 639....1 with flanges - vertical installation

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

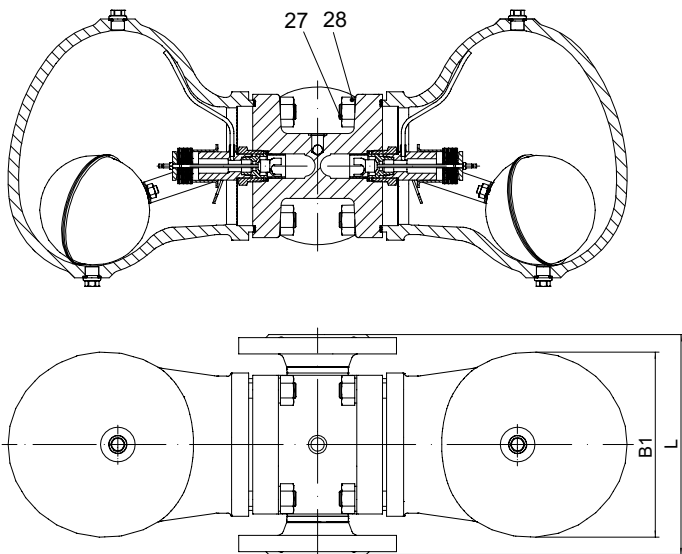


Fig. 639....1 with flanges - horizontal installation

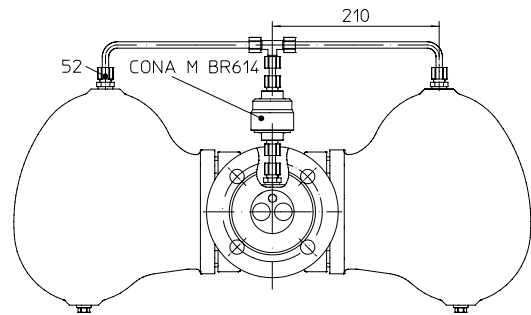


Fig. 639....1 with flanges - horizontal installation and external vent

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

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

Types of connection		Other types of connection on request.
• Flanges ....1 _____ acc. to DIN EN 1092-1		
Features		
<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 can be replaced without removing the trap body from the pipework</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
NPS	(inch)	2"	2 1/2"	3"	4"

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

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

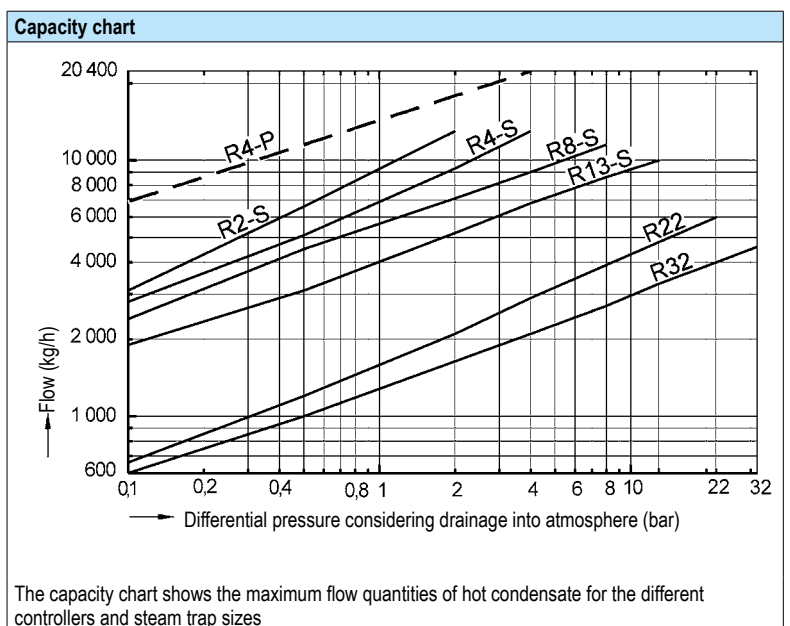
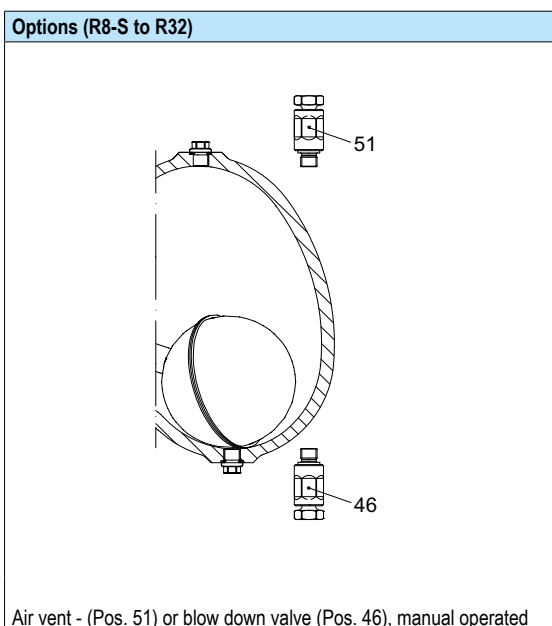
Weights					
Fig. 639 PN16	(approx.) (kg)	51,4	52,9	54,4	57,2
Fig. 639 PN40	(approx.) (kg)	52,7	55	57,2	61,7

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

Information / restriction of technical rules need to be observed!

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

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



**Ball float steam trap (Steel)**

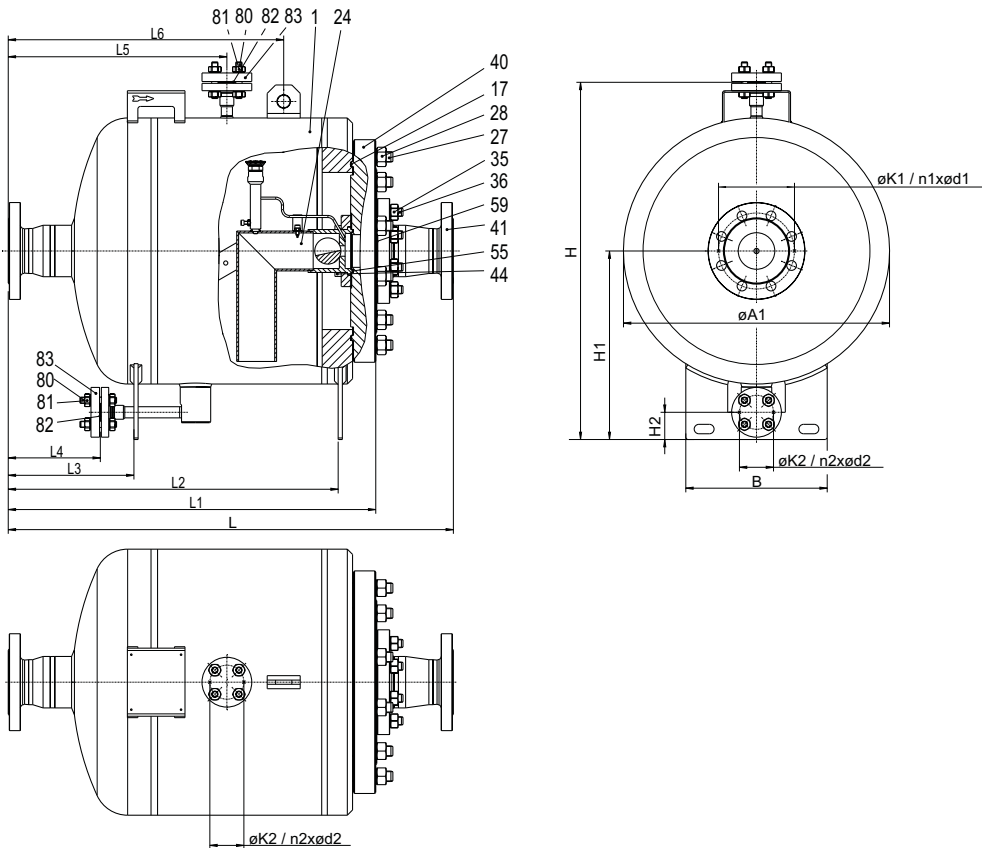


Fig. 637....1 Straight through with flanges (inlet from right)

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

**Types of connection** Other types of connection on request (possibly note different operating limits).  
• Flanges ....1 \_\_\_\_\_ PN16 / PN40 acc. to DIN EN 1092-1 or drilled CL150 and CL300 acc. to ASME B16.5

Features	
<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>Fluid group 2, Fluid group 1 on request</li> <li>Rapid system start-up and venting of air during operation due to thermostatic air venting capsule</li> <li>Immediate discharge of hot boiling condensat without backflow</li> <li>Vessel volume &lt; 85 Liter</li> </ul>	<ul style="list-style-type: none"> <li>Mounting position horizontal</li> <li>symmetrical housing design, Inlet from left or right possible</li> <li>Connection piece for venting and draining DN15</li> <li>foot</li> <li>Durable, low-wear closing element</li> <li>All internal parts made of corrosion-resistant stainless steel</li> <li>Simple assembly and disassembly of the control unit</li> </ul>

Mounting position	
• Standard:	horizontal
	Straight through (inlet from left or right)



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

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

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

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

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

**Connecting flange connection to the cover (Pos.40)**

Stud (DIN 939 - 1.7709)	M16x55
Hexagonal nut (DIN 2510 - 1.7709)	NF M16

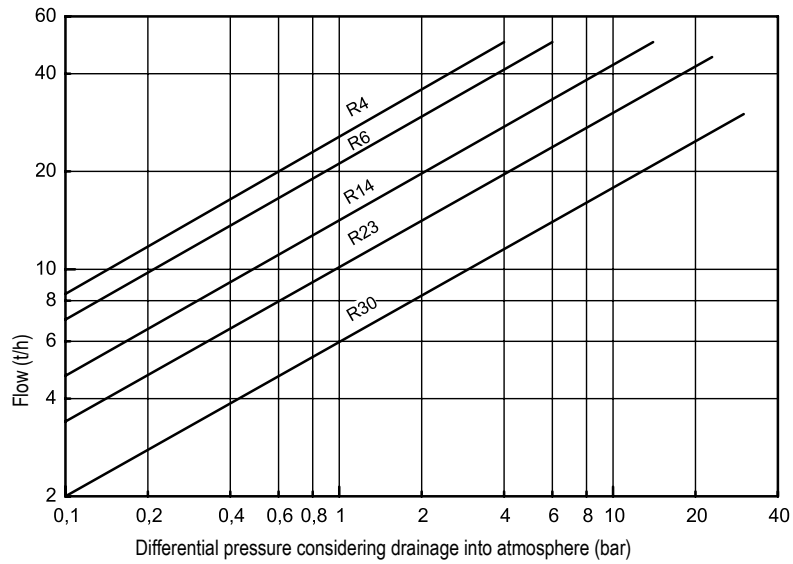
Parts				
Pos.	Sp. p.	Description	Fig. 82./85.637	Fig. 85.637 drilled CL150 / CL300
1		Body	1.0345 / 1.0460 / 1.0425	1.0345 / 1.0460 / 1.0425 / C21
17	x	Gasket	Graphite (mit CrNi-Stahlfolieneinlage)	
24	x	Controller, cpl.	Stainless steel	
27		Stud	1.7709	
28		Hexagonal nut	1.7709	
35		Hexagonal nut	1.7709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

Information / restriction of technical rules need to be observed!

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

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

Capacity chart



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



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

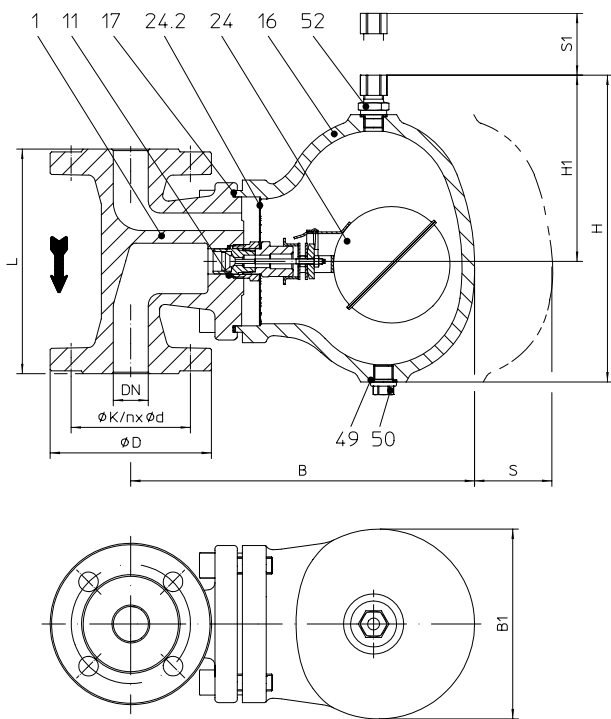


Fig. 630....1 with flanges - vertical installation

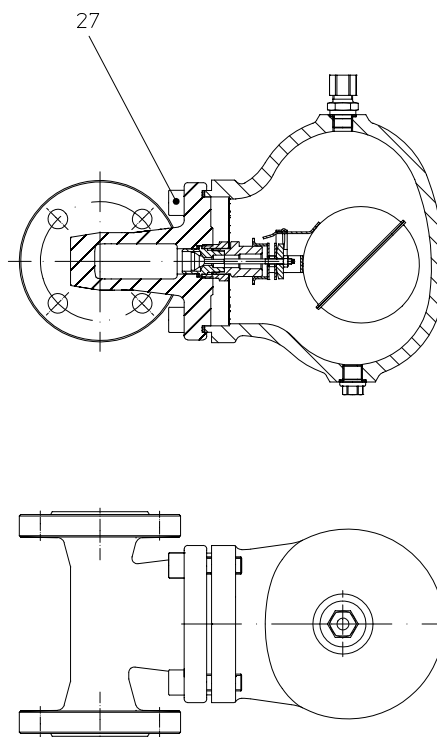


Fig. 630....1 with flanges - horizontal installation

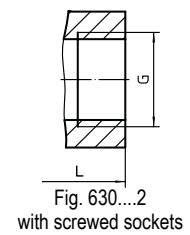


Fig. 630....2 with screwed sockets

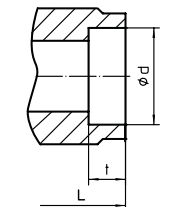


Fig. 630....3 with socket weld ends

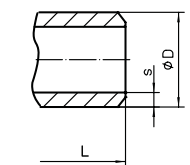


Fig. 630....4 with butt weld ends

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

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

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



Types of connection		Flanges								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	15	20	25	40	50
NPS	(inch)	1/2"	3/4"	1"	1 1/2"	2"	2 1/2" <sup>2)</sup>	3" <sup>2)</sup>	4" <sup>2)</sup>	1/2"	3/4"	1"	1 1/2"	2"	1/2"	3/4"	1"	1 1/2"	2"

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

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

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

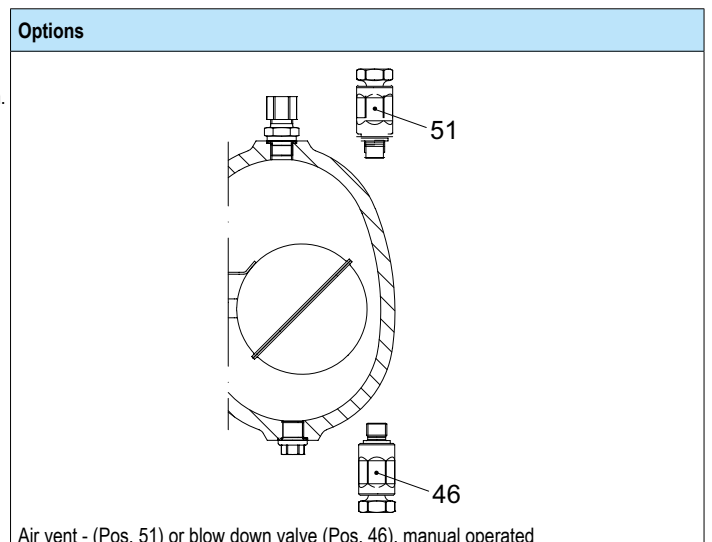
Connection dimensions standard socket weld end																			
ød	(mm)	--	--	--	--	--	--	--	--	22	27,3	34	48,9	61,3	--	--	--	--	--
t	(mm)	--	--	--	--	--	--	--	--	10	13	13	13	16	--	--	--	--	--

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

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

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

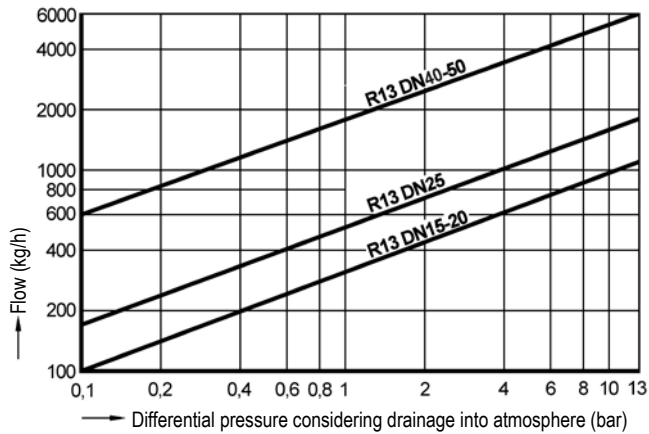
Information / restriction of technical rules need to be observed!  
Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).  
Operating and installation instructions can be downloaded at [www.ari-armaturen.com](http://www.ari-armaturen.com).



**Capacity chart**

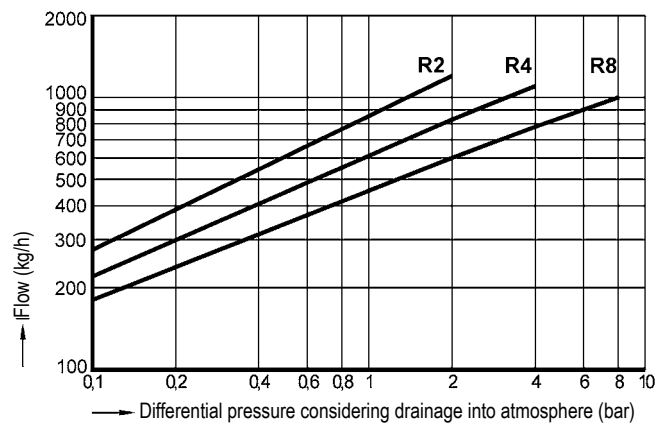
**PN16 - Standard R13**

**DN15 - DN50**



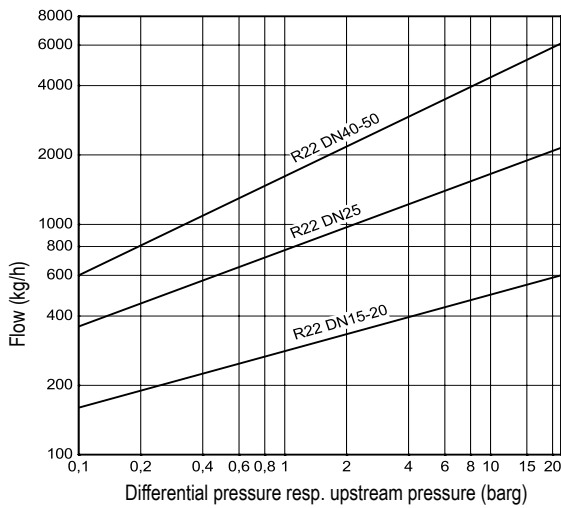
**PN16 - PN40 - Special execut. R2, R4, R8**

**DN 15 - DN 20**



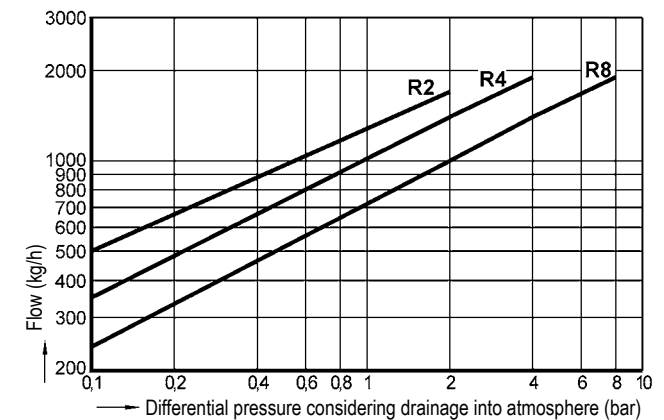
**PN40 - Standard R22**

**DN15 - DN50**



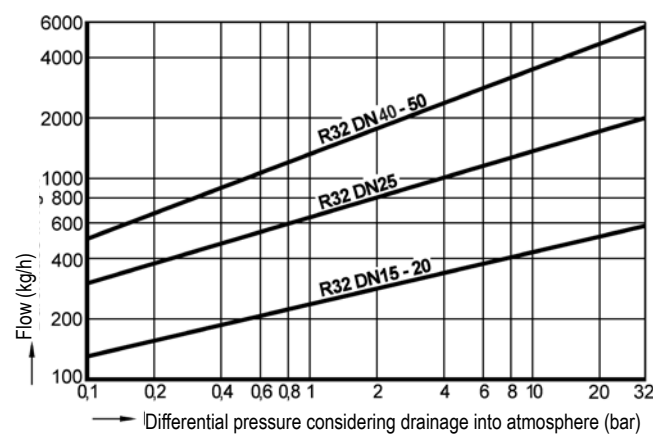
**PN16 - PN40 - Special execut. R2, R4, R8**

**DN 25**



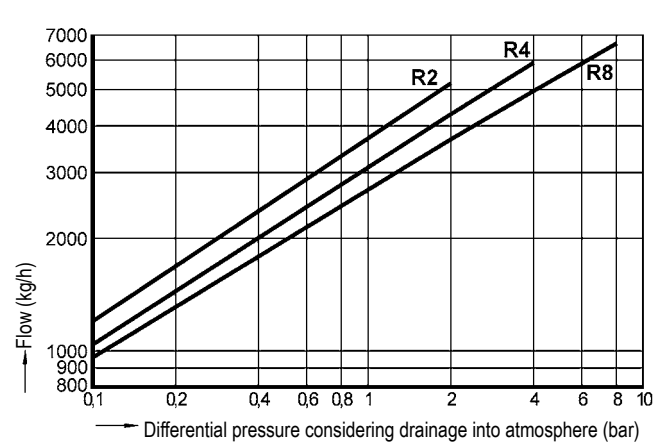
**PN40 - Standard R32**

**DN15 - DN50**



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

**DN 40 - DN 100**



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



**myValve® - Your VALVE Sizing-Program.**

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



**myValve - Valve Sizing-Program**

**Contents:**

**Module ARI-Steam trap CONA-Calculation**

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

**Media:**

- Steam (saturated and superheated)
- Compressed air

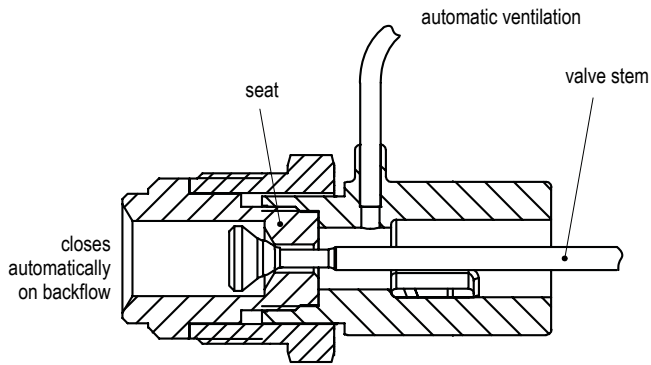
**Special Features**

- Project administration of the calculation and product data incl. spare part drawings concerning to project and tag number
- Direct output 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.

**Integrated non return protection**

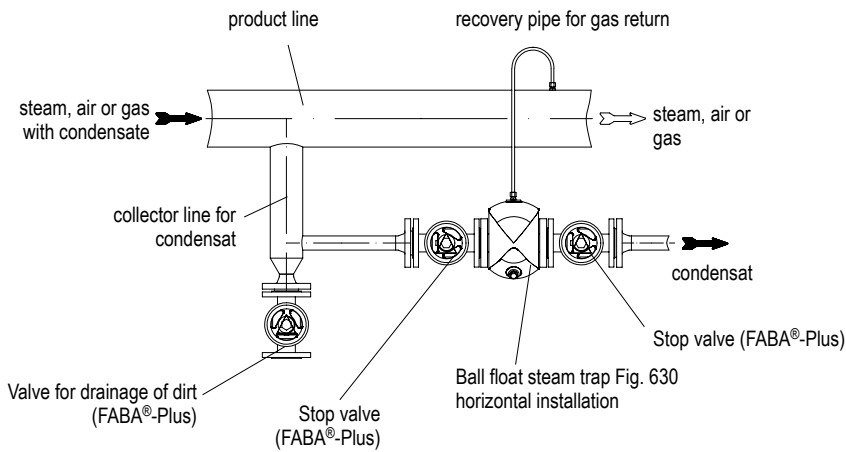


The integrated non return protection acts as a check valve (except BR633, BR637 and BR639 R4-P).

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

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

**Installation with recovery pipe**



**Important:**

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

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

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

\* Steel flanges with 4 holes subject to agreement

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.

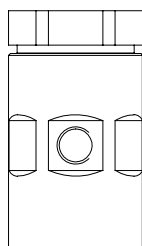
The steam trap shall preferably be installed at the lowest point of the system and the membrane capsule resp. the bleeding tube shall be installed in an upright position inside of the hood.

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

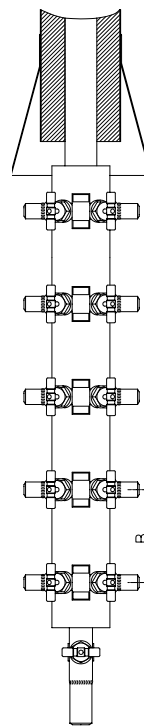
A modification of the installation position during the time of warranty shall be carried out by the AWH-Service or it shall be agreed between the customer and manufacturer.



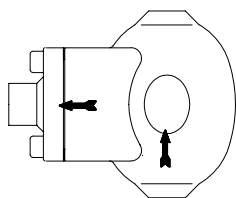
Multifunction tester  
**Sonaphone**



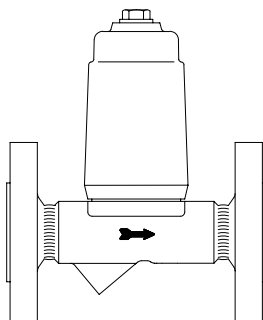
Vacuum breaker  
Fig. 655



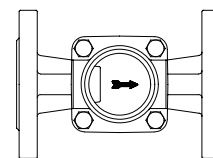
Condensate collection (B = 160), steam distribution (B = 120)  
**CODI®S** with gland packing Fig. 671/672;  
**CODI®B** with bellows seal, maintenance-free Fig. 675/676



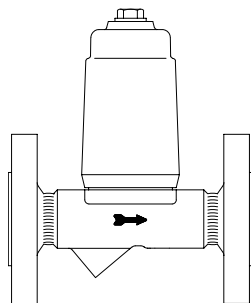
Automatic air vent for liquid systems  
Fig. 656



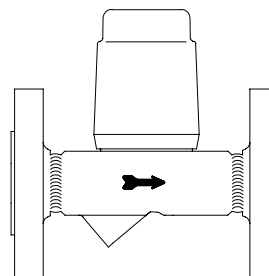
Condensate discharge temperature limiter  
Fig. 645/647



Flow indicator  
Fig. 660/661



Return temperature limiter  
Fig. 650



Liquid drainer  
Fig. 665

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