

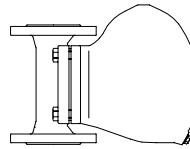


Ball float steam trap PN16 / PN40

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

(BR 631....1) Cast iron
 (BR 631....2) Nodular iron
 (BR 631....3) Cast steel
 (BR 631....4) Forged steel
 High temp. steel
 Stainless steel

BR 631



Page 2

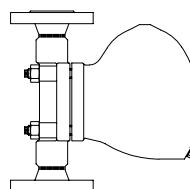
Ball float steam trap PN63 / PN100

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

(BR 631....1)
 (BR 631....3)
 (BR 631....4)

High temp. steel /
 Cast steel

BR 631



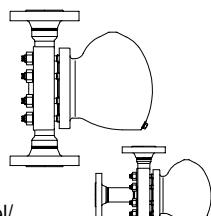
Page 6

Ball float steam trap PN160

- with flanges
- with socket weld ends
- with butt weld ends
- Angle pattern design:
- with flanges
- with butt weld ends

(BR 631....1)
 (BR 631....3)
 (BR 631....4)
 (BR 632....1) High temp. steel/
 Cast steel
 (BR 632....4)

BR 631 / BR 632



Page 8

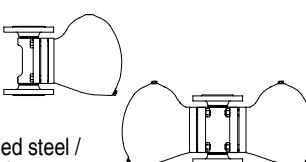
Ball float steam trap PN16 / PN40

- pilot operated with flanges
- R4-P
- with flanges

(BR 633....1)
 (BR 639....1)

Forged steel /
 Cast iron
 Stainless steel

BR 633 / BR 639



Page 10

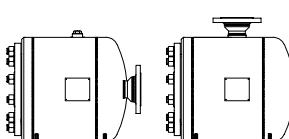
Ball float steam trap PN40

- with flanges
- Angle pattern design:
- with flanges

(BR 637....1)
 (BR 638....1)

Steel

BR 637/638



Page 14

Ball float steam trap

for drainage of water from compressed
air and gas systems

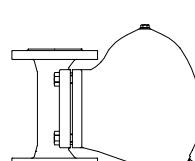
(acc. to PED 97/23/EC fluid group 2)

PN16 / PN40

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

(BR 630....1) Cast iron
 (BR 630....2) Nodular iron
 (BR 630....3) Forged steel/
 Cast steel
 (BR 630....4)

BR 630



Page 16

Features:

- Backpressure-free condensate discharge even at extreme pressure- and quantity fluctuations (except BR630)
- Controller with integrated automatic ventilation (except BR630)
- Robust and insensitive to waterhammer
- Integrated non return protection (except BR633/637/638)
- Union for pressure compensation line and bypass possible
- Optimum on-site handling, converts easily from vertical to horizontal installation position (except BR637/638)
- The exchange of the controller is possible without disturbing the pipe connections

Ball float steam trap made of cast iron, nodular iron, cast steel / forged steel, stainless steel

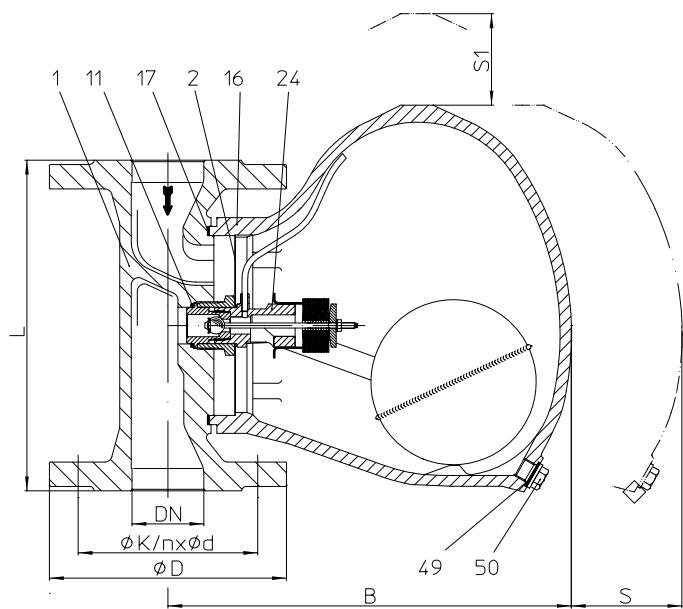


Fig. 631....1 with flanges - **vertical installation**

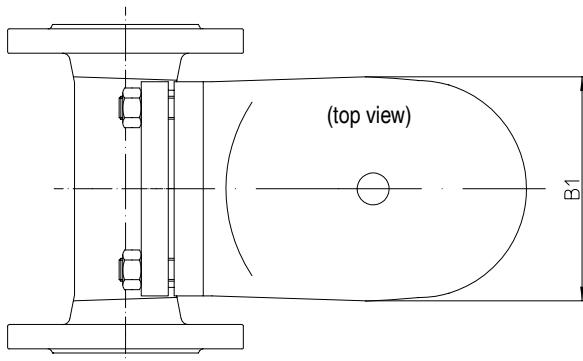
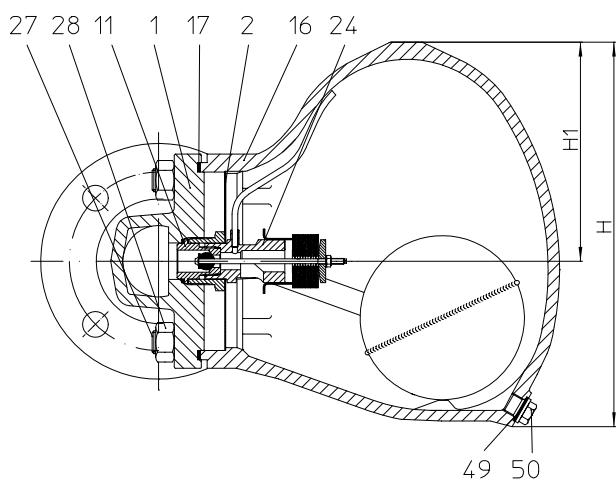


Fig. 631....1 with flanges - **horizontal installation**

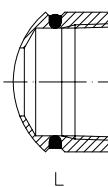


Fig. 631...2
with screwed sockets

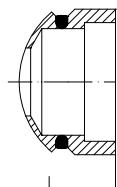


Fig. 631...3
with socket weld ends

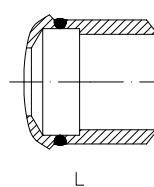


Fig. 631...4
with butt weld ends

- 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
 - Standard installation position: - vertical
 - Special installation position: - horizontal with inlet from right or left (Please indicate when ordering)
- Refer to supplement page:
„Information about the different installation positions“.
- Inside strainer
 - Body with flanged hood
 - Integrated non return protection
 - The exchange of the controller is possible without disturbing the pipe connections
 - On-site change of the installation position is possible according to the operating instructions
 - Option: - Air vent - (Pos. 51) or blow down valve (Pos. 46), manual operated

Fig. 12.631 - PN16
Body / Hood: GG-25

Operating limits

Operating pressure PS (bar-g)	13			
Operating temperature TS (°C)	300			
allowable diff. press. ΔPMX (bar): for controller:	2 R2 R2-S			
for special controller from DN40:	4 R4 R4-S	8 R8 R8-S	13 R13 R13-S	22 R22 R32

Fig. 25.631 - PN40
Body / Hood: GGG-40.3

Operating limits

Operating pressure PS (bar-g)	32		22	
Operating temperature TS (°C)	250		350	
allowable diff. press. ΔPMX (bar): for controller:	2 R2 R2-S			
for special controller from DN40:	4 R4 R4-S	8 R8 R8-S	13 R13 R13-S	22 R22 R32

Fig. 45.631 - PN40
Body: C22.8 / Hood: 1.0619+N

Operating limits

Operating pressure PS (bar-g)	32		21	
Operating temperature TS (°C)	250		400	
allowable diff. press. ΔPMX (bar): for controller:	2 R2 R2-S			
for special controller from DN40:	4 R4 R4-S	8 R8 R8-S	13 R13 R13-S	22 R22 R32

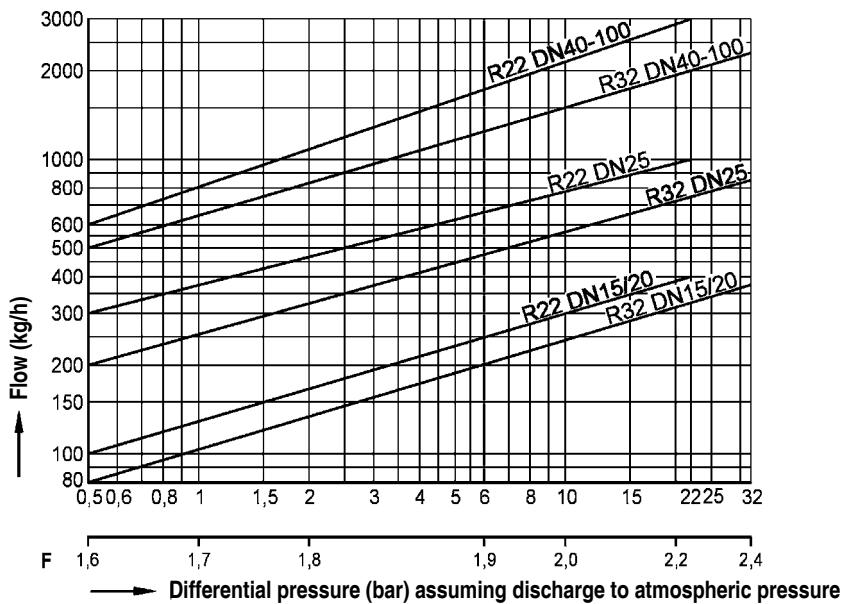
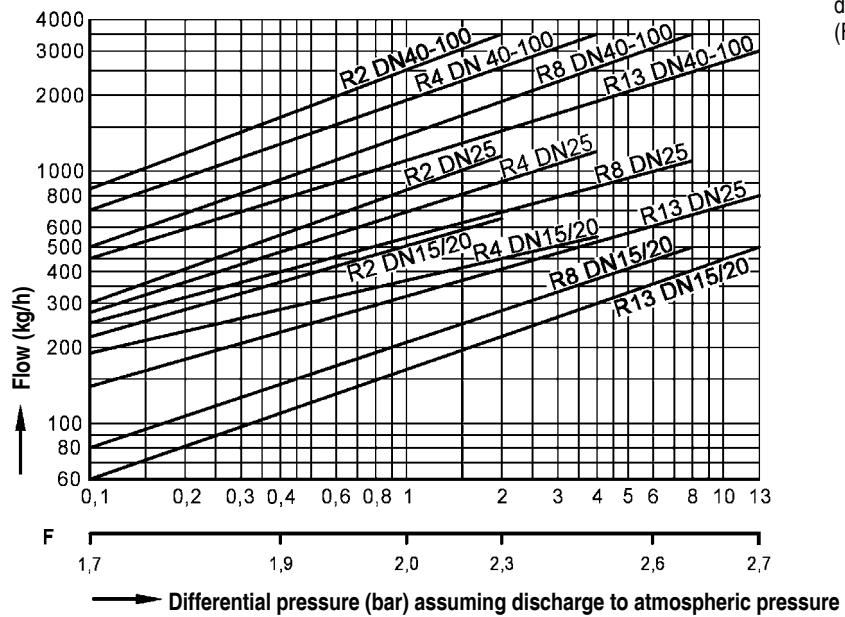
Fig. 55.631 - PN40
Body: 1.4541 / Hood: 1.4308

Operating limits

Operating pressure PS (bar-g)	32		28	
Operating temperature TS (°C)	250		300	
allowable diff. press. ΔPMX (bar): for controller:	2 R2 R2-S			
for special controller from DN40:	4 R4 R4-S	8 R8 R8-S	13 R13 R13-S	22 R22 R32

Types of connection

Flanges ....1	DIN PN16	DIN PN40 ANSI 150 / 300 RF
Screwed sockets ....2	R- and NPT-thread	
Socket weld ends ....3		
Butt weld ends ....4		
Other types of connection on request.		

**Standard R22 and R32
DN 15 - 100**

**Standard R2 to R13
DN 15 - 100**


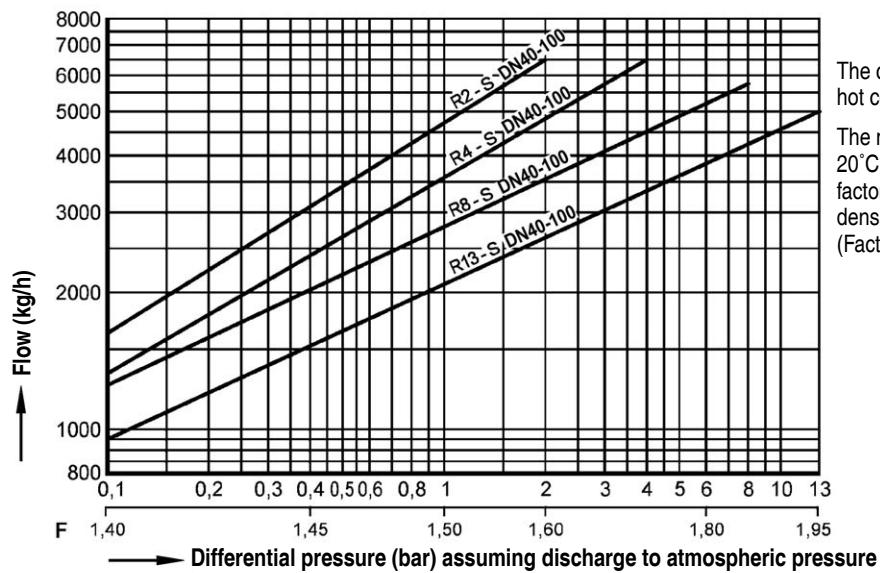
The capacity chart shows the maximum flow quantities of hot condensate for the different controllers and steam trap sizes.

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 (refer to page 9).

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.)

**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 made of high temperature steel

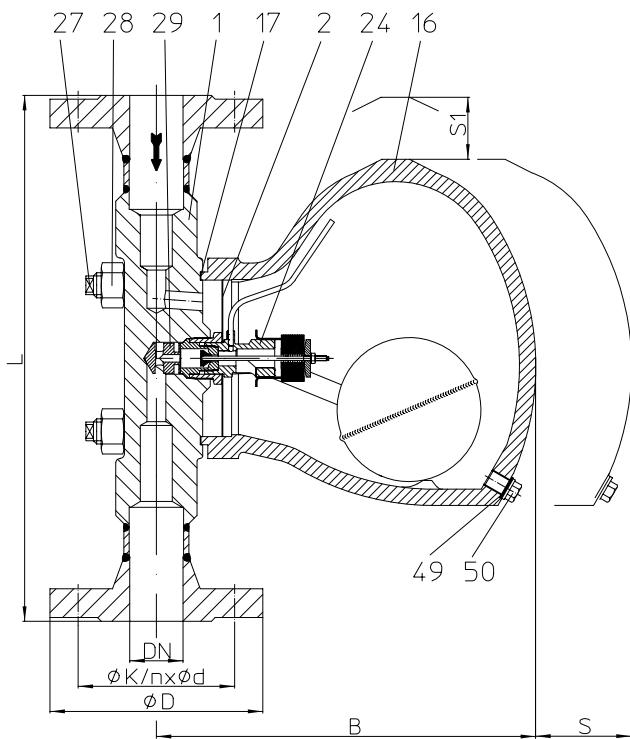


Fig. 631...1 with flanges - **vertical installation (PN100)**

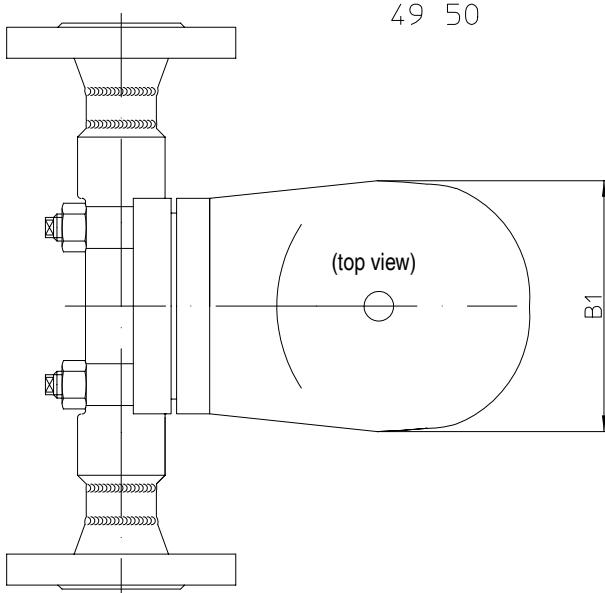
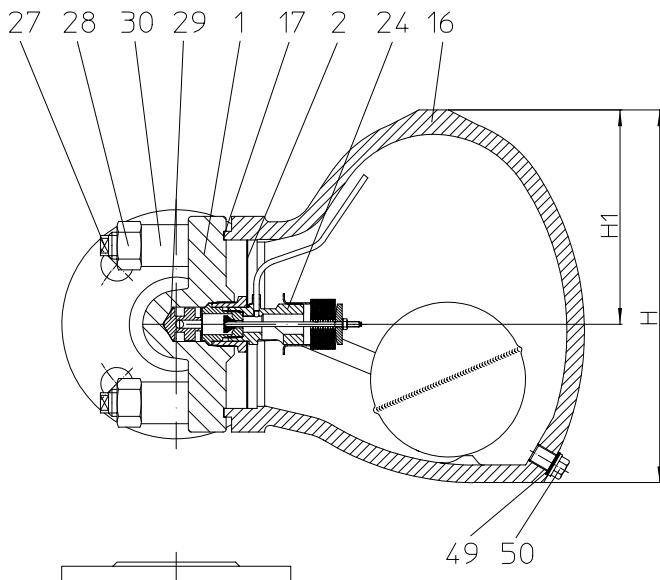


Fig. 631...1 with flanges - **horizontal installation (PN100)**

- 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
 - Standard installation position: - vertical
 - Special installation position: - horizontal with inlet from right or left (Please indicate when ordering)
- Refer to supplement page:
„Information about the different installation positions“.
- Inside strainer
 - Body with flanged hood
 - Integrated non return protection
 - The exchange of the controller is possible without disturbing the pipe connections
 - On-site change of the installation position is possible according to the operating instructions
 - Option: - Air vent - (Pos. 51) or blow down valve (Pos. 46), manual operated

Fig. 86.631 - PN63
Body: 15 Mo 3 /
Hood: GS - 17 CrMo 55

Operating limits

Operating pressure PS (bar-g)	56	50	45
Operating temperature TS (°C)	300	350	450
allowable diff. press. ΔPMX (bar): for controller:		50 R50	

Fig. 87.631 - PN100
Body: 15 Mo 3 /
Hood: GS - 17 CrMo 55

Operating limits

Operating pressure PS (bar-g)	64	50
Operating temperature TS (°C)	400	450
allowable diff. press. ΔPMX (bar): for controller:	64 R64	50 R50

Fig. 87.631 - PN100
Body: 13 CrMo 44 /
Hood: GS - 17 CrMo 55

Operating limits

Operating pressure PS (bar-g)	80	60	30
Operating temperature TS (°C)	480	510	525
allowable diff. press. ΔPMX (bar): for controller:	80 R80	64 R64	50 R50

Types of connection

Flanges ....1	DIN PN63 ANSI 400 RF	DIN PN100 ANSI 600 RF
Butt weld ends ....4		
Other types of connection on request.		

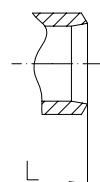


Fig. 631....4
with butt weld ends

Ball float steam trap made of high temperature steel

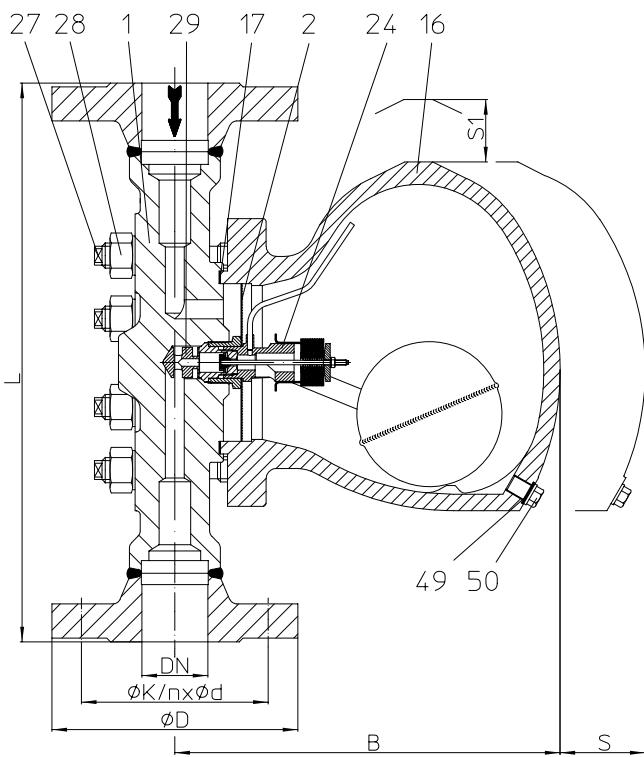


Fig. 631....1 with flanges - **vertical installation**

- 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
 - Standard installation position: - vertical
 - Special installation position: - horizontal with inlet from right or left
(Please indicate when ordering)
- Refer to supplement page:
„Information about the different installation positions“.
- Inside strainer
 - Body with flanged hood
 - Integrated non return protection
 - The exchange of the controller is possible without disturbing the pipe connections
 - On-site change of the installation position is possible according to the operating instructions
 - Option: - Air vent - (Pos. 51) or blow down valve (Pos. 46), manual operated

Fig. 88.631 / 88.632 - PN160 Body: 13 CrMo 44 / Hood: GS - 17 CrMo 55	Operating limits		
Operating pressure PS (bar-g)	110	80	35
Operating temperature TS (°C)	506	519	550
allowable diff. press. ΔPMX (bar): for controller:	110 R110	80 R80	

Types of connection	
Flanges ...1	DIN PN160 ANSI 900 RF
Socket weld ends ....3	
Butt weld ends ....4	
Other types of connection on request.	

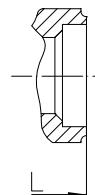


Fig. 631....3 / 632....3
with socket weld ends

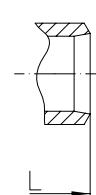


Fig. 631....4 / 632....4
with butt weld ends

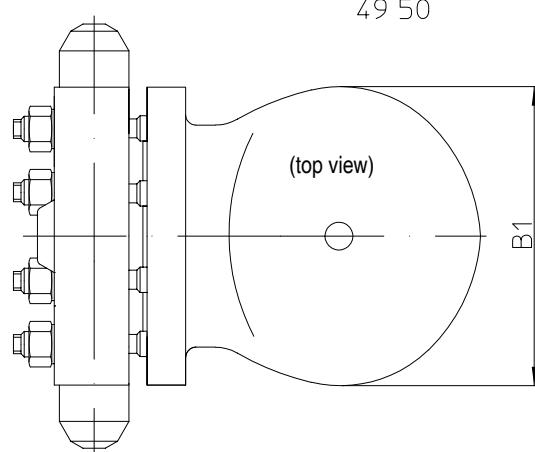


Fig. 631....4 with butt weld ends - **horizontal installation**

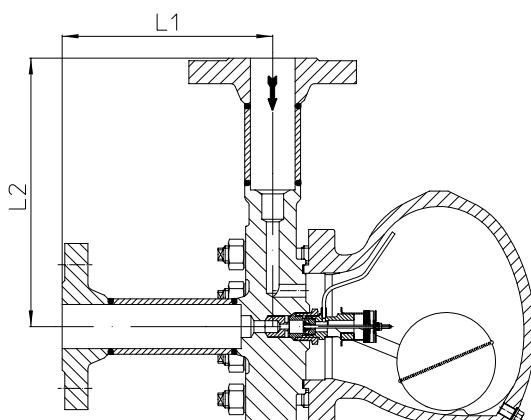


Fig. 632....1 Angle patter design with flanges - **vertical installation**

Dimension and weights		Types of connection acc. to DIN						Types of connection acc. to ANSI									
		Flanges			Butt weld ends Socket weld ends			Flanges					Butt weld ends Socket weld ends				
Nominal diameters	mm inch	15 1/2	25 1	50 2	15 1/2	25 1	50 2	15 1/2	20 3/4	25 1	40 1 1/2	50 2	15 1/2	20 3/4	25 1	40 1 1/2	50 2
Dimensions (mm)	L *	400	415	440	335	335	335	400	400	415	440	440	335	335	335	335	335
	L1*/L2*	200	208	220	168	168	168	200	200	208	220	220	168	168	168	168	168
	H	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
	H1	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
	B	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302
	B1	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185
Withdrawal distance (mm)	S	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
	S1	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
Weight approx. (kg)		46	49	56	43	41	38	48	50	51	54	58	43	42	41	39	38

* other face-to-face dimensions on request

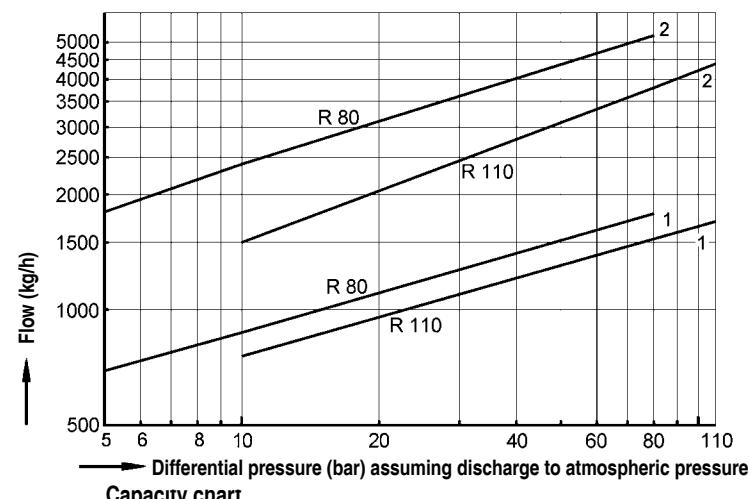
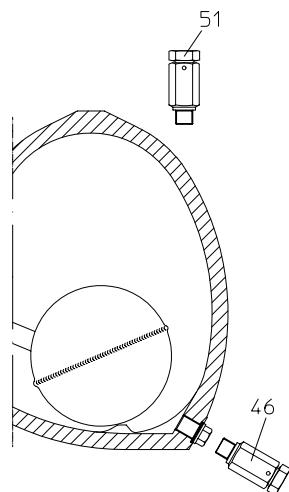
Standard-flange dimensions refer to page 25

Parts

Pos.	Description	Material (Material-No.)	
		DIN	comparable with ASTM / AISI
1	Body	13 CrMo 44, 1.7335	SA 182 F12
2	Strainer	X5CrNi18-10, 1.4301	SA 240 Gr.304
16	Hood	GS-17CrMo55, 1.7357	SA 217 WC6
17	Gasket (Body / Hood) *	CrNi laminated both sides with pure graphite	
24	Controller *	X5CrNi18-10, 1.4301 / bimetal TB 102 / 85	SA 240 Gr.304 / bimetal TB 102 / 85
27	Studs	X22CrMoV12-1, 1.4923	SA 453 Gr. 660 b
28	Hexagon nuts	X22CrMoV12-1, 1.4923	SA 453 Gr. 660 b
29	Erosion deflector *	X17CrNi16-2, 1.4057	AISI 431
46	Blow down valve *	X39CrMo17-1+QT, 1.4122+QT	AISI 440 ¹⁾
49	Sealing ring for plug *	X6CrNiTi18-10, 1.4541	SA 182 F 321
50	Plug *	21CrMoV5-7, 1.7709	SA 193 Gr. B16
51	Manual air vent valve *	X39CrMo17-1+QT, 1.4122+QT	AISI 440 ¹⁾

* Spare parts

¹⁾ with metric screw-thread

Options
Capacity chart


Ball float steam trap made of cast steel / forged steel

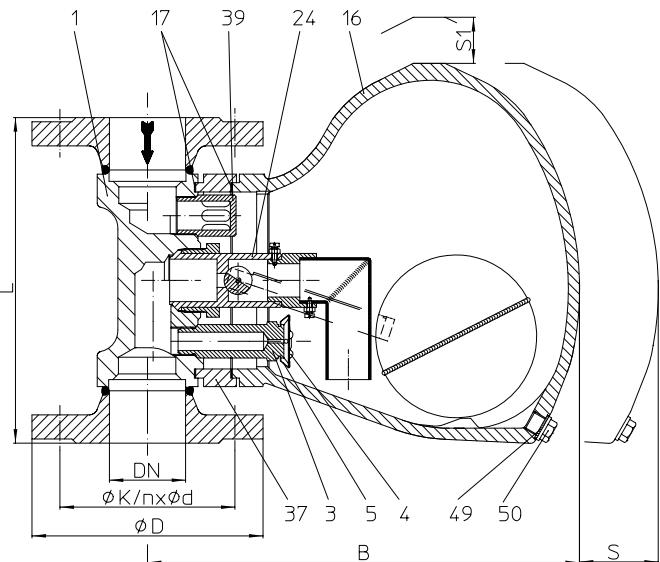


Fig. 633....1 with flanges - **vertical installation**

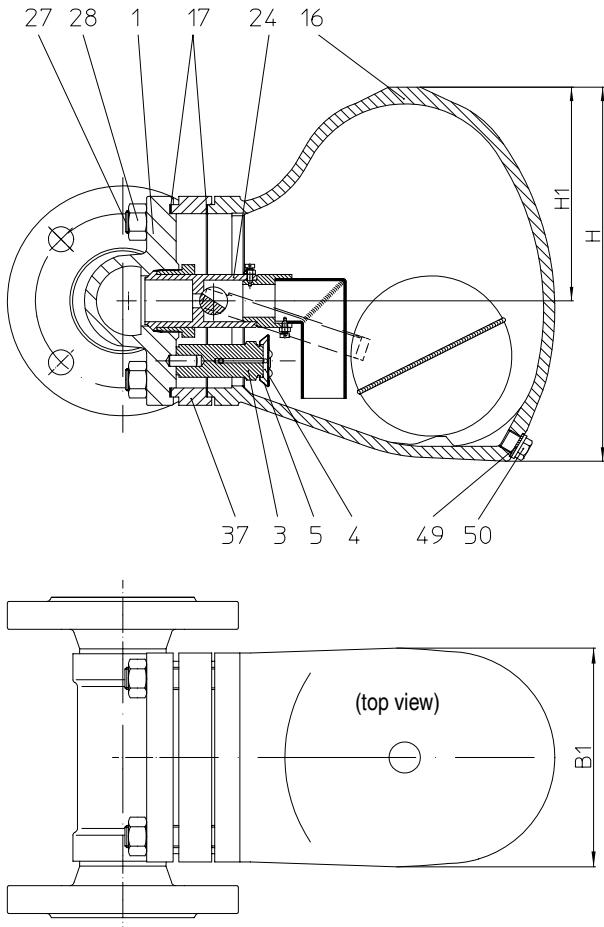


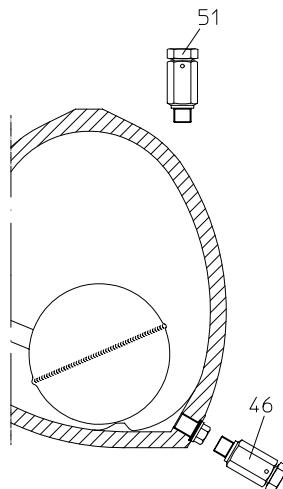
Fig. 633....1 with flanges - **horizontal installation**

- 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
 - Discharge of high condensate load even at low differential pressure
 - Standard installation position: - vertical
 - Special installation position: - horizontal with inlet from right or left
(Please indicate when ordering)
- Refer to supplement page:
„Information about the different installation positions“.
- Body with flanged hood
 - The exchange of the controller is possible without disturbing the pipe connections
 - Option: - Air vent - (Pos. 51) or blow down valve (Pos. 46), manual operated

Fig. 45.633 - PN40 Body: C22.8 / Hood: 1.0619+N	Operating limits
Operating pressure PS (bar-g)	0,1-4
Operating temperature TS (°C)	350
allowable diff. press. ΔPMX (bar): for controller:	4 R4-P

Types of connection	
Flanges ....1	DIN PN40 ANSI 300 RF
Other types of connection on request.	

Options



Dimensions and weights		Types of connection				
		Flanges				
Nominal diameters	mm inch	40	50	65	80	100
Dimensions (mm)	L*	230	230	290	310	350
	H	270	270	270	270	270
	H1	151	151	151	151	151
	B	307	307	307	307	307
	B1	157	157	157	157	157
Withdrawal distance (mm)	S	300	300	300	300	300
	S1	200	200	200	200	200
Weight approximate (kg)		24,7	25,3	27,2	29,2	32,7

* other face-to-face dimensions on request

Standard-flange dimensions refer to page 25

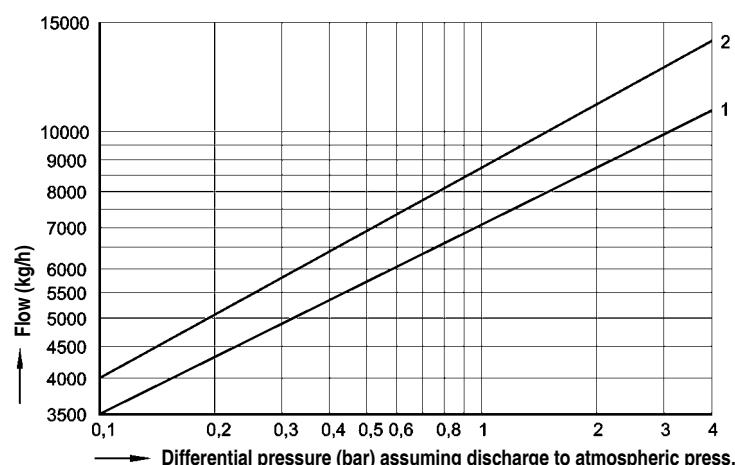
Parts

Pos.	Description	Material (Material-No.)	
		DIN	comparable with ASTM / AISI
1	Body	C22.8, 1.0460	SA 105
3	Seat	X8CrNiS18-9, 1.4305	AISI 303
4	Capsule *	Hastelloy	
	Capsule	X5CrNi18-10, 1.4301	SA 240 Gr.304
5	Spring actuated clip *	X12CrNi17-7, 1.4310	AISI 301
16	Hood	1.0619+N, 1.0619.01	SA 216 WCB
17	Gasket (body/hood) *	CrNi laminated both sides with pure graphite	
24	Controller, kpl. *	X5CrNi18-10, 1.4301 / bimetal TB 102 / 85	SA 240Gr.304 / bimetal TB 102 / 85
27	Studs	21CrMoV5-7, 1.7709	SA 193 Gr. B16 ¹⁾
28	Hexagon nuts	21CrMoV5-7, 1.7709	SA 194 Gr. 4 ¹⁾
37	Intermediate flange	C22.8, 1.0460	SA 105
39	Baffle straightener *	X14CrMoS17+QT, 1.4104+QT	AISI 430 F
46	Blow down valve *	X8CrNiS18-9, 1.4305	AISI 303 ¹⁾
49	Sealing ring for plug *	X6CrNiTi18-10, 1.4541	SA 182 F 321
50	Plug *	21CrMoV5-7, 1.7709	SA 193 Gr. B16 ¹⁾
51	Manual air vent valve *	X8CrNiS18-9, 1.4305	AISI 303 ¹⁾

* Spare parts

¹⁾ with metric screw-thread

Capacity chart



Capacity chart

Curve 1

Maximum flow quantities of hot condensate.

Curve 2

Maximum flow quantities of cold condensate of about 20°C

Ball float steam trap made of forged steel, stainless steel

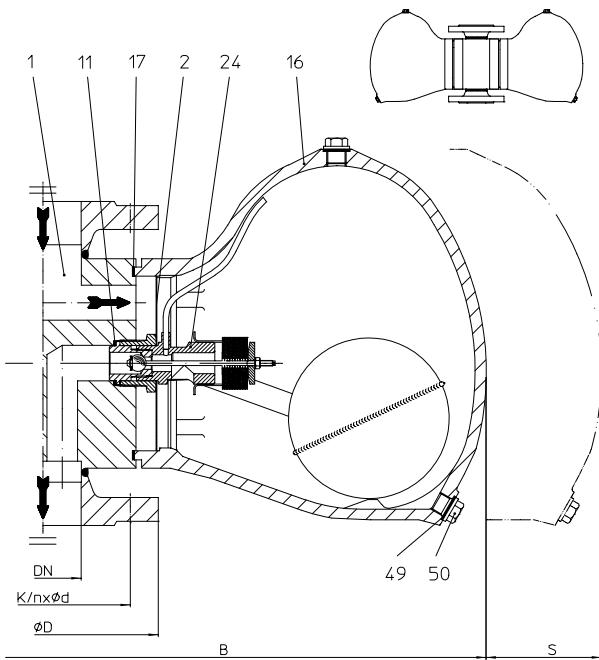


Fig. 639....1 with flanges - vertical installation

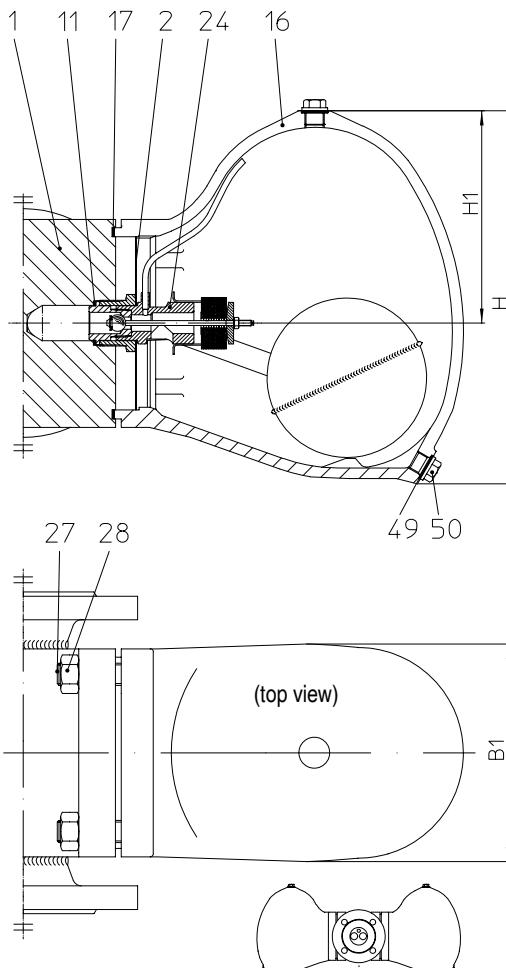


Fig. 639....1 with flanges - horizontal installation

The controller R4-P deviates in his construction from the shown controller on this side.

Refer to BR633 (page 14).

- Ball float steam trap with level control for the condensate-discharge from all kinds of steam systems for large condensate flowrates

- Discharge of great condensate volumes even at low differential pressure

- Rapid system start-up due to thermostatic control element

- Immediate discharge of hot boiling condensat

- Standard installation position: - vertical

- Special installation position: - horizontal with inlet from right or left
(Please indicate when ordering)

Refer to supplement page:

„Information about the different installation positions“.

- Inside strainer

- Body with flanged hood

- Integrated non return protection

- The exchange of the controller is possible without disturbing the pipe connections

- On-site change of the installation position is possible according to the operating instructions
(With an existing bypass there are modifies bypass parts needed due to the required installation position - please inquire)

- Bypass cpl. for venting of high quantities of air during start-up and operation (standard with controller R2-S, R4-S and R4-P)

Fig. 42.639 - PN16
Body: C22.8 / Hood: GG-25

Operating limits

Operating pressure PS (bar-g)	13			
Operating temperature TS (°C)	300			
allowable diff. press. ΔPMX (bar): for controller:	2 R2-S 4 R4-S 8 R8-S 13 R13-S			
	2 R2-S	4 R4-S	8 R8-S	13 R13-S

Fig. 45.639 - PN40
Body: C22.8 / Hood: 1.0619+NN

Operating limits

Operating pressure PS (bar-g)	32		21	
Operating temperature TS (°C)	250		400	
allowable diff. press. ΔPMX (bar): for controller:	2 R2-S 4 R4-S 8 R8-S 13 R13-S 22 R22 32 R32			
	2 R2-S	4 R4-S	8 R8-S	13 R13-S

Fig. 55.639 - PN40
Body: 1.4541 / Hood: 1.4308

Operating limits

Operating pressure PS (bar-g)	32		28	
Operating temperature TS (°C)	250		300	
allowable diff. press. ΔPMX (bar): for controller:	2 R2-S 4 R4-S 8 R8-S 13 R13-S 22 R22 32 R32			
	2 R2-S	4 R4-S	8 R8-S	13 R13-S

Types of connection

Flanges ....1	DIN PN16 ANSI 150 RF	DIN PN40 ANSI 300 RF
Other types of connection on request.		

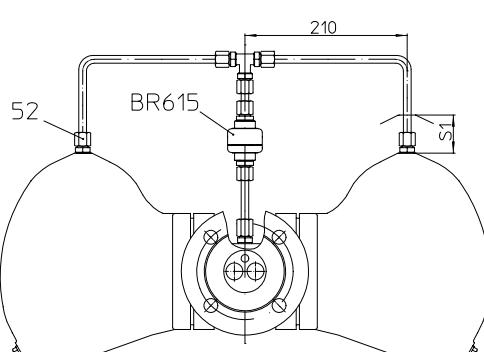


Fig. 639....1
with flanges - horizontal installation and bypass kpl.

Dimensions and weights		Types of connection							
		Flanges, PN16				Flanges, PN40			
Nominal diameters	mm inch	50 2	65 2 1/2	80 3	100 4	50 2	65 2 1/2	80 3	100 4
Dimensions (mm)	L*	230	290	310	350	230	290	310	350
	H	270	270	270	270	270	270	270	270
	H1	151	151	151	151	151	151	151	151
	B	634	634	634	634	634	634	634	634
	B1	157	157	157	157	157	157	157	157
Withdrawal distance (mm)	S	300	300	300	300	300	300	300	300
	S1	200	200	200	200	200	200	200	200
Weight approximate (kg)		44,7	46,2	47,7	50,5	26	48,3	50,5	55

* other face-to-face dimensions on request

Standard-flange dimensions refer to page 25

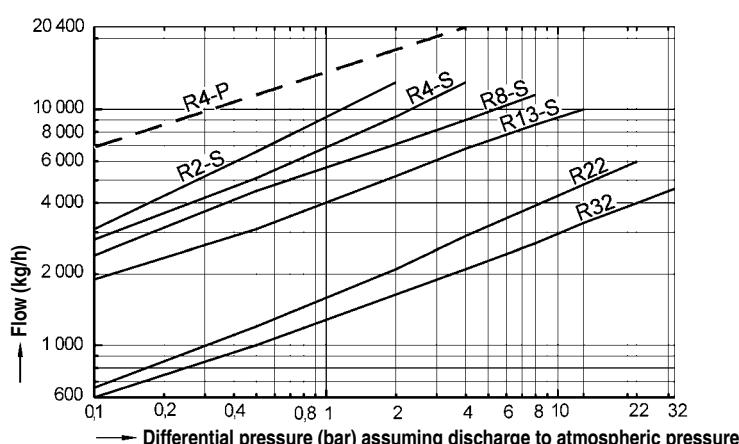
Parts

Pos.	Description	Material (Material-No.)					
		DIN	comparable with ASTM / AISI	DIN	comparable with ASTM / AISI	DIN	comparable with ASTM / AISI
1	Body	C22.8, 1.0460	SA 105, 1.0432	C22.8, 1.0460	SA 105, 1.0432	X6CrNiTi18-10, 1.4541	SA 182 F 321
2	Strainer	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301	SA 240 Gr.304
11	Sealing ring (body/seat) *	R-Cu99		R-Cu99		X6CrNiTi18-10, 1.4541	SA 182 F 321
16	Hood	GG-25, 0.6025	SA 278 Class No.40	1.0619+N, 1.0619.01	SA 216 WCB	GX5CrNi19-10, 1.4308	SA 351 CF-8
17	Gasket (body/hood) *	CrNi laminated both sides with pure graphite		CrNi laminated both sides with pure graphite		CrNi laminated both sides with pure graphite	
24	Controller, kpl. *	X5CrNi18-10, 1.4301 / Bimetall TB 102/85	SA 240 Gr.304 Bimetall TB 102/85	X5CrNi18-10, 1.4301 / Bimetall TB 102/85	SA 240 Gr.304 Bimetall TB 102/85	X5CrNi18-10, 1.4301 / Bimetall TB 102/85	SA 240 Gr.304 Bimetall TB 102/85
27	Studs	C35E, 1.1181	1035 / 1038	21CrMoV5-7, 1.7709	SA 193 Gr. B16 ¹⁾	X6CrNiTi18-10, 1.4541	SA 182 F 321 ¹⁾
28	Hexagon nuts	C35E, 1.1181	1035 / 1038	21CrMoV5-7, 1.7709	SA 194 Gr. 4 ¹⁾	X6CrNiTi18-10, 1.4541	SA 182 F 321 ¹⁾
46	Blow down valve *	X8CrNiS18-9, 1.4305	AISI 303	X8CrNiS18-9, 1.4305	AISI 303	X8CrNiS18-9, 1.4305	AISI 303
49	Sealing ring for plug *	R-Cu99		R-Cu99		X6CrNiTi18-10, 1.4541	SA 182 F 321
50	Plug *	21CrMoV5-7, 1.7709	SA 193 Gr. B16 ¹⁾	21CrMoV5-7, 1.7709	SA 193 Gr. B16 ¹⁾	X6CrNiTi18-10, 1.4541	SA 182 F 321 ¹⁾
51	Manual air vent valve *	X8CrNiS18-9, 1.4305	AISI 303	X8CrNiS18-9, 1.4305	AISI 303	X8CrNiS18-9, 1.4305	AISI 303
52	Union for pressure comp. line *	X8CrNiS18-9, 1.4305	AISI 303 ¹⁾	X8CrNiS18-9, 1.4305	AISI 303 ¹⁾	X8CrNiS18-9, 1.4305	AISI 303 ¹⁾

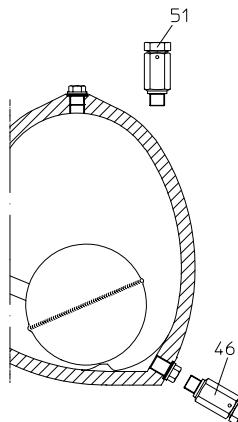
* Spare parts

¹⁾ with metric screw-thread

Capacity chart



Options with controller R8-S to R32



Ball float steam trap made of steel

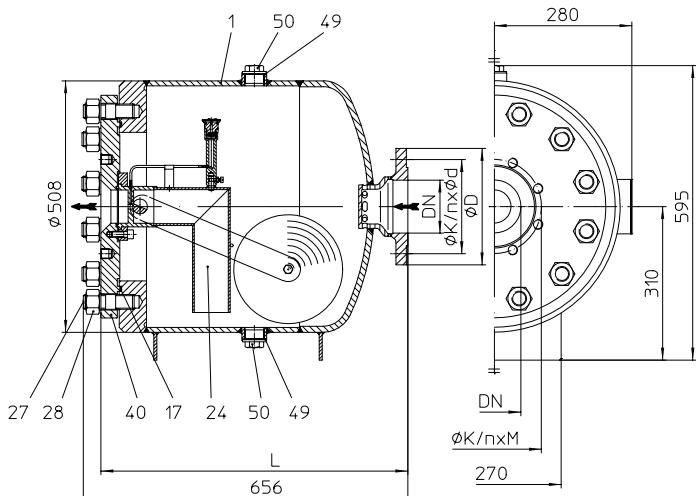


Fig. 637....1 with flanges

Design for DN65-100

on DN50 connecting flange at the outlet (refer to page 19)

- 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
- Venting of air during start-up and operation due to the thermostatic element (necessary only at BR637)
- Immediate discharge of hot boiling condensat
- Standard installation position: - vertical
- BR 637: straight through (inlet from right or left)
BR 638: angle pattern (inlet from the top)
- Capacity: 74 litres
- Drain plug
- Support points
- Simple exchange of controller
- Option: - pre-assembled welding neck flanges to the inlet - and outlet (standard on DN50)

Fig. 45.637 / 45.638 - PN40

**Body: St 35.8 / P265GH /
Cover: WStE 355**

Operating limits

Operating pressure PS (bar-g)	40	29	25	22
Operating temperature TS (°C)	120	250	300	350
allowable diff. press. ΔPMX (bar): for controller:	4 R4	14 R14	23 R23	30 R30

Types of connection

Flanges ....1	DIN PN16 and PN25	DIN PN40 ANSI 150 and 300 RF
Other types of connection on request.		

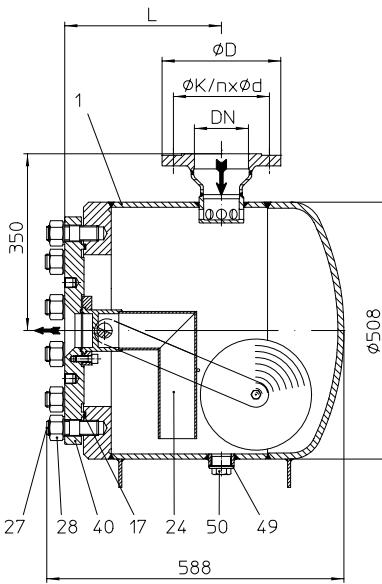


Fig. 638....1 angle pattern with flanges

Design for DN65-100

on DN50 connecting flange at the outlet (refer to page 19)

Dimensions and weights		Types of connection							
		BR 637 (straight through)				BR 638 (angle pattern)			
Nominal diameters	mm inch	50 2	65 2 1/2	80 3	100 4	50 2	65 2 1/2	80 3	100 4
Dimensions (mm)	L	750	620	620	620	445	310	310	310
	\emptyset K / n x M	*	145 / 8 x M16	160 / 8 x M16	190 / 8 x M20	*	145 / 4 x M16	160 / 8 x M16	190 / 8 x M20
	\emptyset K / n x \emptyset d	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
Weight approximate (kg)		280	260	265	270	201	194	195	197

* on DN50 connecting flange at the outlet standard (see at the bottom)

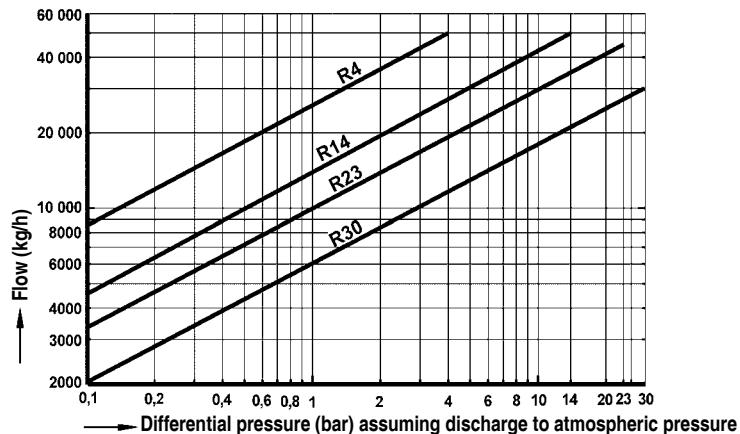
Parts

Pos.	Description	Material (Material-No.)	
		DIN	comparable with ASTM / AISI
1	Body	St 35.8 / P 265 GH, 1.0425	SA 106 Gr. A / SA 516 Gr. 60
17	Gasket (body/hood) *	CrNi laminated both sides with pure graphite	
24	Controller, kpl. *	X5CrNi18-10, 1.4301 Bimetall TB 102/85	SA 240 Gr.304 Bimetall TB 102/85
27	Studs	21CrMoV5-7, 1.7709	SA 193 Gr. B16 ¹⁾
28	Hexagon nuts	21CrMoV5-7, 1.7709	SA 194 Gr. 4 ¹⁾
40	Cover	P355NH, 1.0565	
49	Sealing ring for plug *	R-Cu99	
50	Plug *	21CrMoV5-7, 1.7709	SA 193 Gr. B16

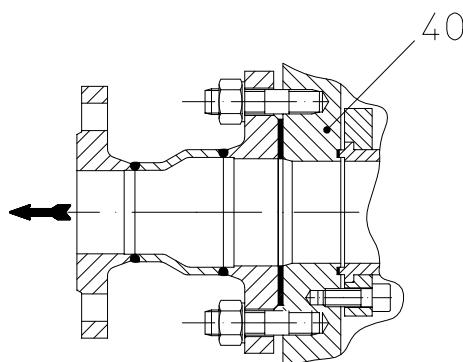
* Spare parts

¹⁾ with metric screw-thread

Capacity chart



Design of outlet connecting flange on DN50



DN	Dimension and material for the studs and hexagon nuts for the connecting flange to the pipe flange (Pos. 40)	
	Studs	Hexagon nuts
65	M16 x 55 DIN 939 - 1.7709	NF M16 x 55 DIN 2510 - 1.7709
80	M16 x 55 DIN 939 - 1.7709	NF M16 x 55 DIN 2510 - 1.7709
100	M20 x 55 DIN 939 - 1.7709	NF M20 x 55 DIN 2510 - 1.7709

Ball float steam trap made of cast iron, nodular iron, cast steel / forged steel , stainless steel

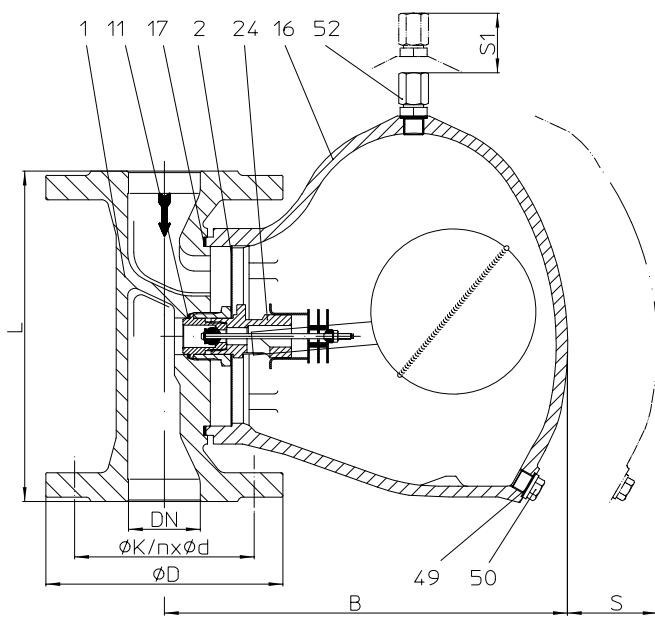


Fig. 630....1 with flanges - **vertical installation**

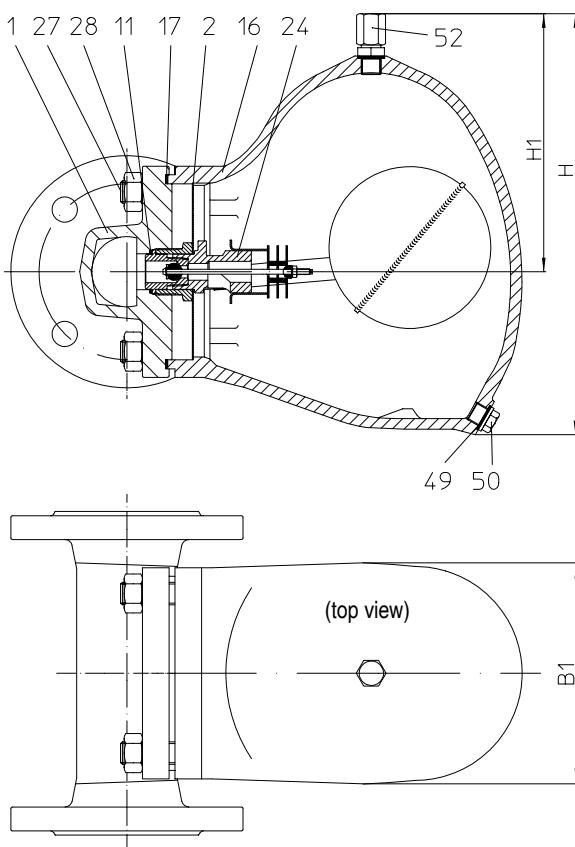


Fig. 630....1 with flanges - **horizontal installation**

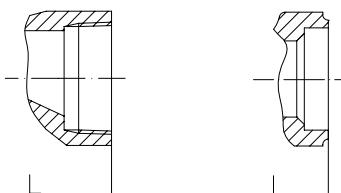


Fig. 630....2
with screwed sockets

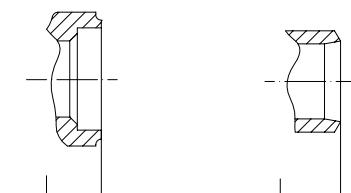


Fig. 630....3
with socket weld ends

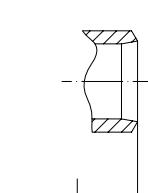


Fig. 630....4
with butt weld ends

- Ball float steam trap with level control for the condensate-discharge from compressed air and gas systems (acc. to PED 97/23/EC fluid group 2, other fluid groups on request)

- Standard installation position: - vertical

- Special installation position: - horizontal with inlet from right or left (please indicate when ordering)
Pressure compensation line required (refer to p. 18, installation example)

Refer to supplement page:
„Information about the different installation positions“.

- Integrated strainer

- Body with flanged hood

- Integrated non return protection

- Union (Pos. 52) for pressure compensation line

- The exchange of the controller is possible without disturbing the pipe connections

- 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

Fig. 12.630 - PN16
Body / Hood: GG-25

Operating limits

Operating pressure PS (bar-g)	13
-------------------------------	----

Operating temperature TS (°C)	300
-------------------------------	-----

allowable diff. press. ΔPMX (bar): for controller:	13 R13	8 R8	4 R4	2 R2
---	-----------	---------	---------	---------

Fig. 25.630 - PN40
Body / Hood: GGG-40.3

Operating limits

Operating pressure PS (bar-g)	32 / 22
-------------------------------	---------

Operating temperature TS (°C)	250 / 350
-------------------------------	-----------

allowable diff. press. ΔPMX (bar): for controller:	2 R2	4 R4	8 R8	13 R13	22 R22	32 R32
---	---------	---------	---------	-----------	-----------	-----------

Fig. 45.630 - PN40
Body: C22.8 /
Hood: 1.0619+N

Operating limits

Operating pressure PS (bar-g)	32 / 21
-------------------------------	---------

Operating temperature TS (°C)	250 / 400
-------------------------------	-----------

allowable diff. press. ΔPMX (bar): for controller:	2 R2	4 R4	8 R8	13 R13	22 R22	32 R32
---	---------	---------	---------	-----------	-----------	-----------

Fig. 55.630 - PN40
Body: 1.4541 /
Hood: 1.4308

Operating limits

Operating pressure PS (bar-g)	32 / 28
-------------------------------	---------

Operating temperature TS (°C)	250 / 300
-------------------------------	-----------

allowable diff. press. ΔPMX (bar): for controller:	2 R2	4 R4	8 R8	13 R13	22 R22	32 R32
---	---------	---------	---------	-----------	-----------	-----------

Types of connection

Flanges ....1	DIN PN16	DIN PN40 ANSI 150 and 300 RF
Screwed sockets ....2	R- and NPT-thread	
Socket weld ends ....3		
Butt weld ends ....4		
Other types of connection on request.		

Dimensions and weights			Types of connection														
			Flanges					Screwed sockets ¹⁾ Socket weld ends ²⁾					Butt weld ends ²⁾				
Nominal diameters		mm inch	15 1/2	20 3/4	25 1	40 1 1/2	50 2	15 1/2	20 3/4	25 1	40 1 1/2	50 ¹⁾ 2 ¹⁾	15 1/2	20 3/4	25 1	40 1 1/2	50 2
Dimensions (mm)	L*		150	150	160	230	230	150	150	160	210 ³⁾	230	150	150	160	250	250
	H		188	188	213	296	296	188	188	213	296	296	188	188	213	296	296
	H1		111	111	128	177	177	111	111	128	177	177	111	111	128	177	177
	B	GGG-40.3	214	214	255	280	280	214	214	255	280	--	--	--	--	--	--
	Stahl							167	167	196	285	285	167	167	196	285	285
Withdrawal distance (mm)	S		180	180	200	300	300	180	180	200	300	300	180	180	200	300	300
	S1		150	150	180	200	200	150	150	180	200	200	150	150	180	200	200
Weight approximate (kg)			7,9	8,1	10,9	24,7	25,3	7,3	7,3	8,5	20,0	20,5	6,9	7,9	9,0	21,0	22,0

* other face-to-face dim. on request ¹⁾ DN50 (2") not for GG/GGG ²⁾ not for GG/GGG ³⁾ at GGG: L = 230 mm Stand.-flange dim. ref. to page 25

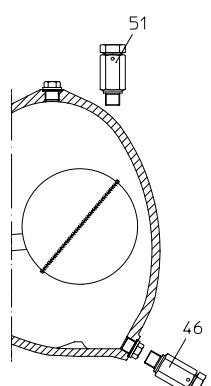
Parts

Pos.	Description	Material (Material-No.)											
		DIN	comp. with ASTM / AISI	DIN	comp. with ASTM / AISI	DIN	comp. with ASTM / AISI	DIN	comp. with ASTM / AISI	DIN	comp. with ASTM / AISI	DIN	comp. with ASTM / AISI
1	Body	GG-25 , 0.6025	SA 278 Class No.40	GGG-40.3 (0.7043)	SA 395	C22.8, 1.0460	SA 105, 1.0432	X6CrNiTi18- 10, 1.4541	SA 182 F 321				
2	Strainer	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301	SA 240 Gr.304				
11	Gasket (body/seat) *	CrNi laminated both sides with pure graphite		CrNi laminated both sides with pure graphite		CrNi laminated both sides with pure graphite		CrNi laminated both sides with pure graphite		CrNi laminated both sides with pure graphite		CrNi laminated both sides with pure graphite	
16	Hood	GG-25 , 0.6025	SA 278 Class No.40	GGG-40.3 , 0.7043	SA 395	1.0619+N, 1.0619.01	SA 216 WCB	1.0619+N, 1.0619.01	SA 216 WCB	1.0619+N, 1.0619.01	SA 216 WCB	1.0619+N, 1.0619.01	SA 351 CF-8
17	Gasket (body/hood) *	CrNi laminated both sides with pure graphite		CrNi laminated both sides with pure graphite		CrNi laminated both sides with pure graphite		CrNi laminated both sides with pure graphite		CrNi laminated both sides with pure graphite		CrNi laminated both sides with pure graphite	
24	Controller *	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301	SA 240 Gr.304
27	Cheese head screws	X6CrNiTi18-10, 1.4541 / 8.8	SA 182 F 321/ 1035/1038 ⁴⁾	--	--	--	--	--	--	--	--	--	--
27	Studs	--	--	21CrMoV5-7, 1.7709	SA 193 Gr. B16 ⁴⁾	21CrMoV5-7, 1.7709	SA 182 F 321 ⁴⁾						
28	Hexagon nuts	--	--	21CrMoV5-7, 1.7709	SA 193 Gr. B16 ^{4)}	21CrMoV5-7, 1.7709	SA 193 Gr. B16 ^{4)}	21CrMoV5-7, 1.7709	SA 193 Gr. B16 ^{4)}	21CrMoV5-7, 1.7709	SA 193 Gr. B16 ⁴⁾	21CrMoV5-7, 1.7709	SA 182 F 321 ⁴⁾
46	Blow down valve *	X8CrNiS18-9, 1.4305	AISI 303	X8CrNiS18-9, 1.4305	AISI 303	X8CrNiS18-9, 1.4305	AISI 303	X8CrNiS18-9, 1.4305	AISI 303	X8CrNiS18-9, 1.4305	AISI 303	X8CrNiS18-9, 1.4305	AISI 303
49	Sealing ring for plug *	R-Cu99			R-Cu99			R-Cu99			R-Cu99		
50	Plug *	C35E, 1.1181	1035 / 1038 ⁴⁾	21CrMoV5-7, 1.7709	SA 193 Gr. B16 ⁴⁾	21CrMoV5-7, 1.7709	SA 193 Gr. B16 ⁴⁾	21CrMoV5-7, 1.7709	SA 193 Gr. B16 ⁴⁾	21CrMoV5-7, 1.7709	SA 193 Gr. B16 ⁴⁾	21CrMoV5-7, 1.7709	SA 182 F 321 ⁴⁾
51	Manual air vent valve *	X8CrNiS18-9, 1.4305	AISI 303 ⁴⁾	X8CrNiS18-9, 1.4305	AISI 303 ⁴⁾	X14CrMoS17+ QT, 1.4104+QT	AISI 430 F ⁴⁾	X14CrMoS17+ QT, 1.4104+QT	AISI 430 F ⁴⁾	X14CrMoS17+ QT, 1.4104+QT	AISI 430 F ⁴⁾	X14CrMoS17+ QT, 1.4104+QT	AISI 430 F ⁴⁾
52	Union f. pressure compensation line *	X8CrNiS18-9, 1.4305	AISI 303 ⁴⁾	X8CrNiS18-9, 1.4305	AISI 303 ⁴⁾	X14CrMoS17+ QT, 1.4104+QT	AISI 430 F ⁴⁾	X14CrMoS17+ QT, 1.4104+QT	AISI 430 F ⁴⁾	X14CrMoS17+ QT, 1.4104+QT	AISI 430 F ⁴⁾	X14CrMoS17+ QT, 1.4104+QT	AISI 430 F ⁴⁾

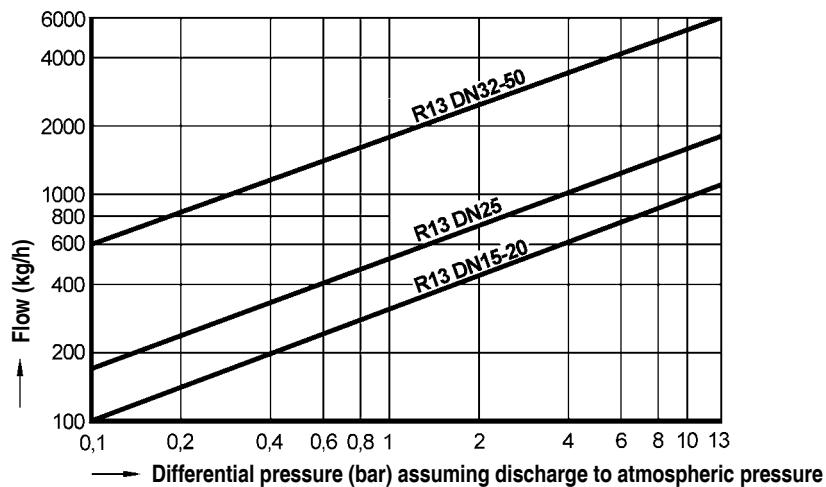
* Spare parts

⁴⁾ with metric screw-thread

Options

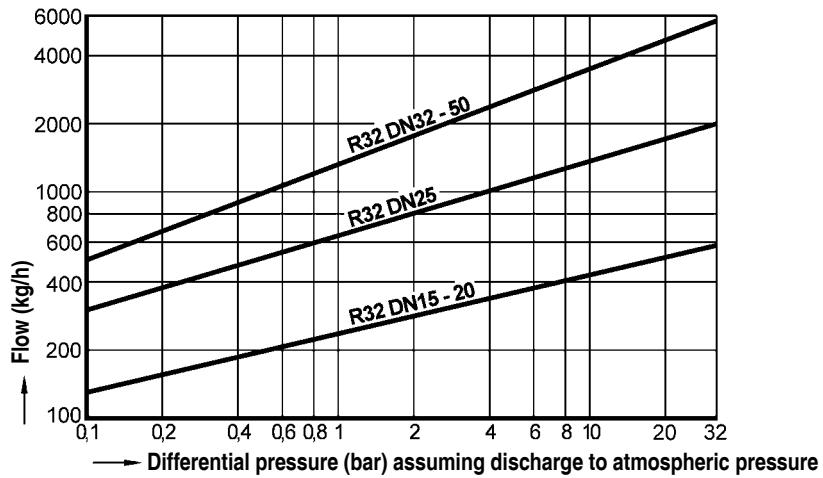


PN16
Standard R13



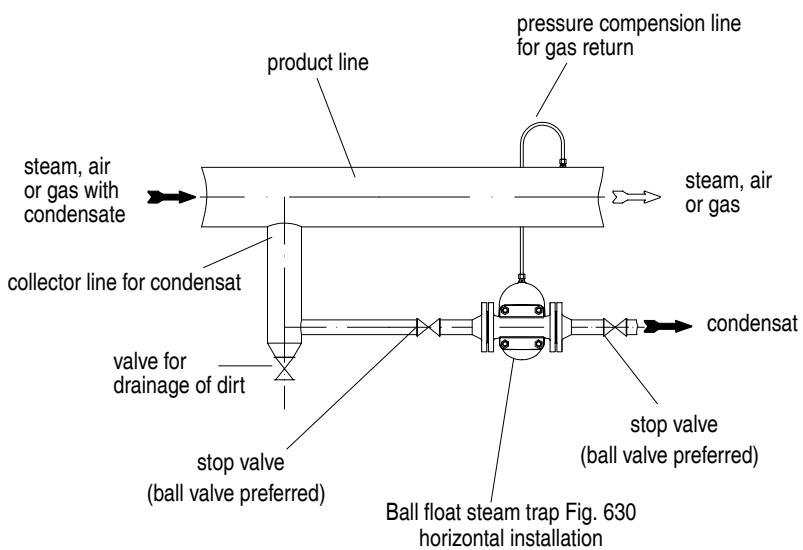
To determine the drainage quantity of cold water at about 20°C from compressed air and gas systems.

PN40
Standard R32



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

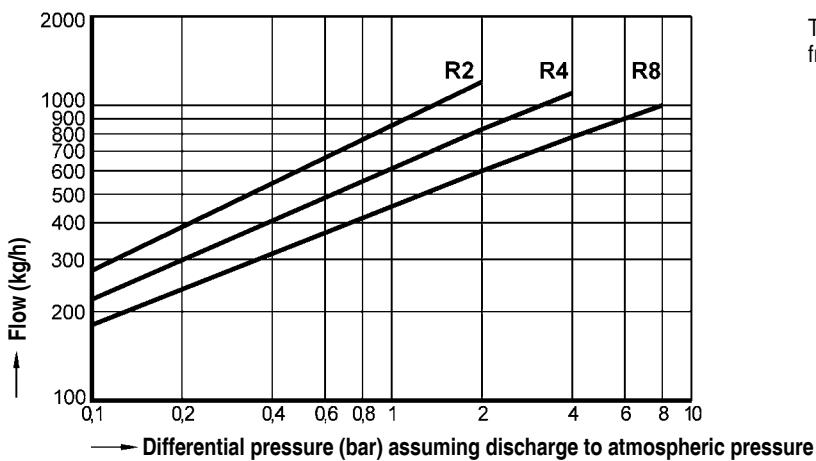
Installation with pressure compensation line



Important:

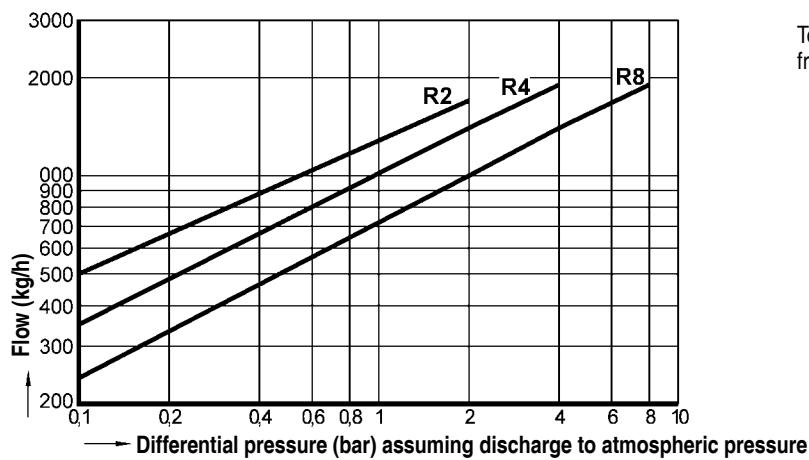
The installation of a pressure compensation line for gas return is always recommended; especially if the ball float steam trap is installed horizontally.

PN16 - PN40
Special design R2, R4, R8
DN 15 - 20



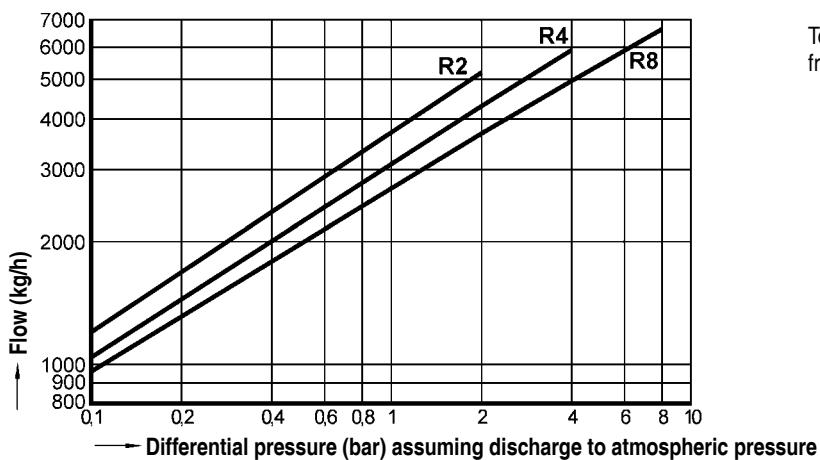
To determine the drainage quantity of cold water at about 20°C from compressed air and gas systems.

PN16 - PN40
Special design R2, R4, R8
DN 25



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

PN16 - PN40
Special design R2, R4, R8
DN 40 - 50



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

Flanges according to DIN 2501

Screw socket according to data sheet resp. customer request

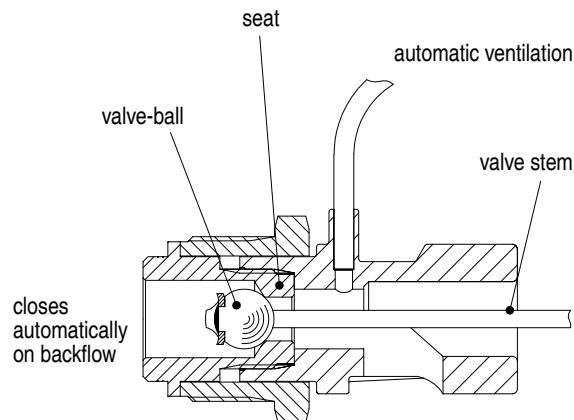
Socket weld ends according to DIN EN 12760 (previous DIN 3239 T2) resp. customer request

Butt weld ends according to DIN EN 12627 (previous DIN 3239 T1)

Union butt weld ends according to data sheet resp. customer request

Face-to-face acc. to data sheet resp. customer request

Integrated non return protection



The integrated non return protection acts as a check valve.

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.

Informations about pipe welding of steam traps

Welding groove acc. to DIN 2559

The body materials of our steam traps which are for welding into the pipe are as following:

1.0619.01	1.0619+N acc. to DIN EN 10213-1-2 / SA 216 WCB
1.0460	C 22.8 acc. to DIN 17243 / SA 105
1.5415	15 Mo 3 acc. to DIN EN 10028, DIN 17155 / SA 182 F321
1.4541	X 6 CrNiTi 18-10 acc. to DIN EN 10088, DIN 17155 / SA 182 F321
1.7335	13 CrMo 44 acc. to DIN EN 10028, DIN 17155 / SA 182 F12

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

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

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

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

Allocation of types

BR	former designation of types
631....	<i>different types of connection</i>
632....	....1 Flanges
633....	....2 Screwed sockets
639	....3 Socket weld ends
637	....4 Butt weld ends
638	
630....	
	....NU (ANU, BNU, CNU)
	....NU11 (BNU11, CNU11)
	....NUP (ANUP, BNUP, CNUP)
	--
	--
	--
	....N (AN, BN, CN)

Information / restriction of technical rules to be observed!

Operating instructions can be ordered on request by phone (+49 52 07) 994-0 or fax (+49 52 07) 994-158 or 159.

Selection criteria:

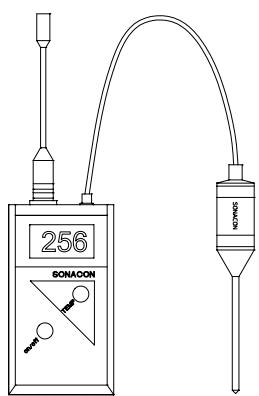
- Steam pressure
- Nominal diameter / pressure
- Back pressure
- Type of connection
- quantity of condensate
- Material
- Flow media
- Place of service or kind of steam consumer

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

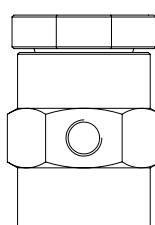
Example for order data:

=> Ball float steam trap,
BR 630, PN40, DN50, C22.8/1.0619+N, R22, flange connection, face-to-face dimension 230 mm

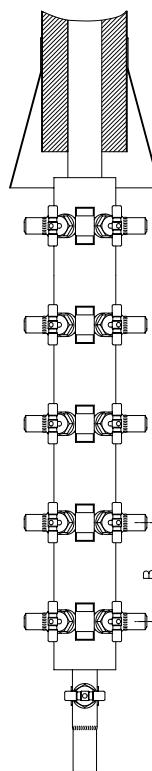
Dimensions in mm resp. inch
Weights in kg
1 bar \triangleq 10 ⁵ Pa \triangleq 0,1 MPa
Kvs in m ³ /h
1 bar \triangleq 14,5 PSI
1 inch \triangleq 25,4 mm



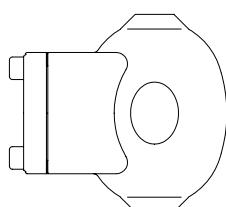
Testing device Sonacon



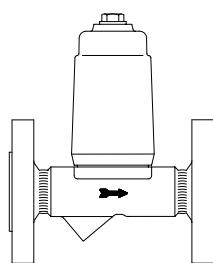
Vacuum breaker BR655



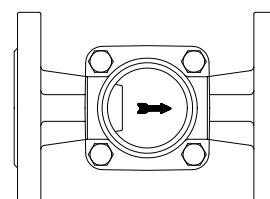
Prefabricated manifolds for
condensate collection (B = 160), steam distribution (B = 120)
CODI®S with stuffing box BR671/672;
CODI®B with bellows seal, maintenance-free BR675/676



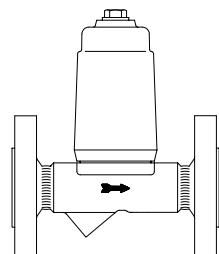
Automatic air vent for liquid systems
BR 656



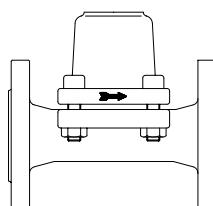
Condensate discharge temperature limiter
BR645/647



Double window sight glasses
BR660/661



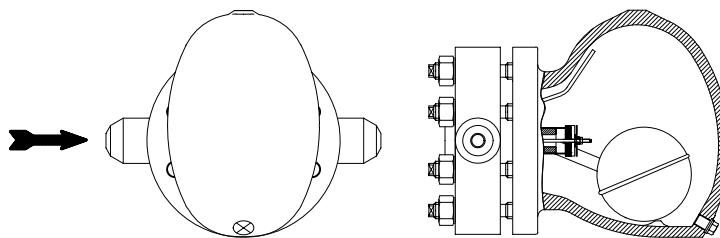
Return temperature limiter BR650



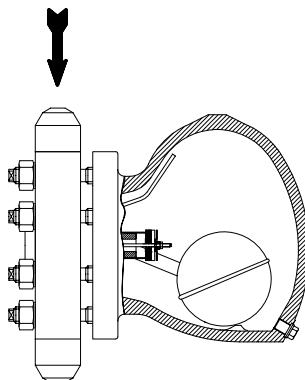
Liquid drainer BR665

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

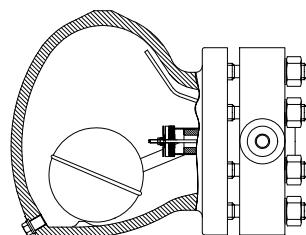
Information about the different installation positions (shown at BR631)



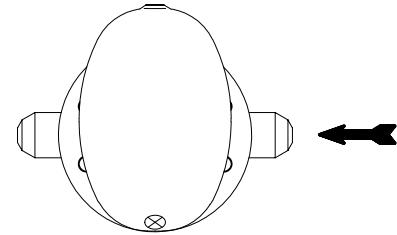
Horizontal installation - inlet from the left side (ZL)



Vertical installation (standard)



Horizontal installation – inlet from the right side (ZR)



Installation (see picture)

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

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

The steam trap must be fitted with the direction of flow as indicated by the arrow on the body. A clearance of 300 mm 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.