

Ball float steam trap

Ball float steam trap PN16 / PN40

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

(Fig. 631....1)

(Fig. 631....2)

(Fig. 631....3)

(Fig. 631....4)

Grey cast iron

SG iron

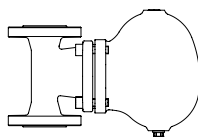
Forged steel/
Cast steel

Stainless steel

Low temperature steel

Fig. 631

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Ball float steam trap PN63 / PN100

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

(Fig. 631....1)

(Fig. 631....3)

(Fig. 631....4)

High
temperature steel

Fig. 631

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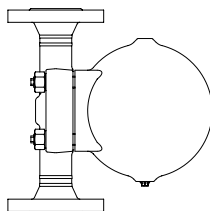


Fig. 631....1
vertical installation

Ball float steam trap PN160

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

(Fig. 631....1)

(Fig. 631....3)

(Fig. 631....4)

Angle pattern design:

- with flanges

(Fig. 632....1)

- with butt weld ends

(Fig. 632....4)

High
temperature steel

Fig. 631 / Fig. 632

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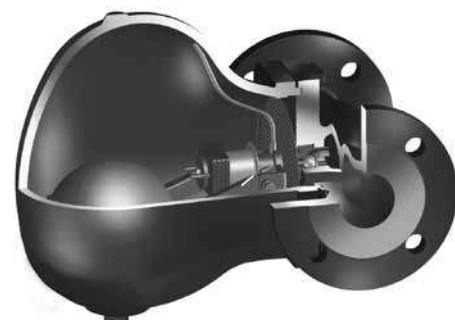
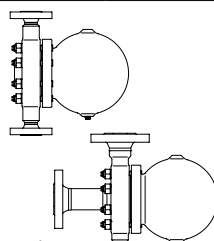


Fig. 631....1
horizontal installation

Ball float steam trap PN16 / PN40

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

(BR 633....1)

(BR 633....3)

(BR 633....4)

Forged steel/
Grey cast iron

Forged steel//Cast
steel

Stainless steel

Low temperature steel

(BR 633....1)

- with flanges R4-P

(BR 639....1)

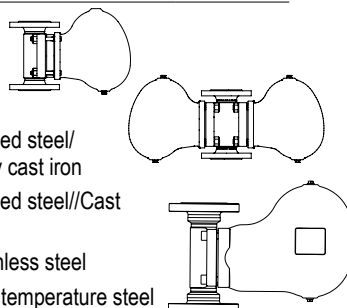
- with flanges

BR 633
BR 633 R4-P
BR 639

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Ball float steam trap PN16 / PN40

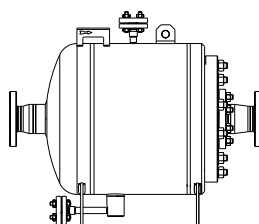
- with flanges

(Fig. 637....1)

Steel

Fig. 637

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

PN16 / PN40

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

(Fig. 630....1)

(Fig. 630....2)

(Fig. 630....3)

(Fig. 630....4)

Grey cast iron

SG iron

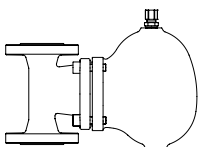
Forged steel/
Cast steel

Stainless steel

Low temperature steel

Fig. 630

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Description
Float-controlled steam trap are used to drain condensate and other liquids from steam and other gases. Discharge is continuous. The volume is adjusted immediately via the liquid level in the valve and a robust float. Steam traps can be supplied in EN materials and alternatively in ASME materials.
Features
• Backflow-free discharge even with extreme pressure and volume fluctuations • integrated thermal control unit for automatic venting (except BR630) • Integrated non return protection (except BR633 and BR637) • Inside Strainer (except BR633 and BR637) • Union for recovery pipe and bypass possible on customer request • Flow direction can easily be changed on site (except BR633 R4-P and BR637) • The controller can be replaced without removing the trap body from the pipework (except BR637) • Drain plug
Options
• Blow down valve • Manual venting valve
Types of connection (depends on material and nominal pressure)
• Flanges with flange facing and drilling acc. to DIN EN 1092-1 • Screwed sockets Rp acc. to DIN EN 10226-1 • Socket weld ends acc. to DIN EN 12760 • Butt weld ends with joint preparation type 1.3 acc. to EN ISO 9692-1 • Other connection types on request



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

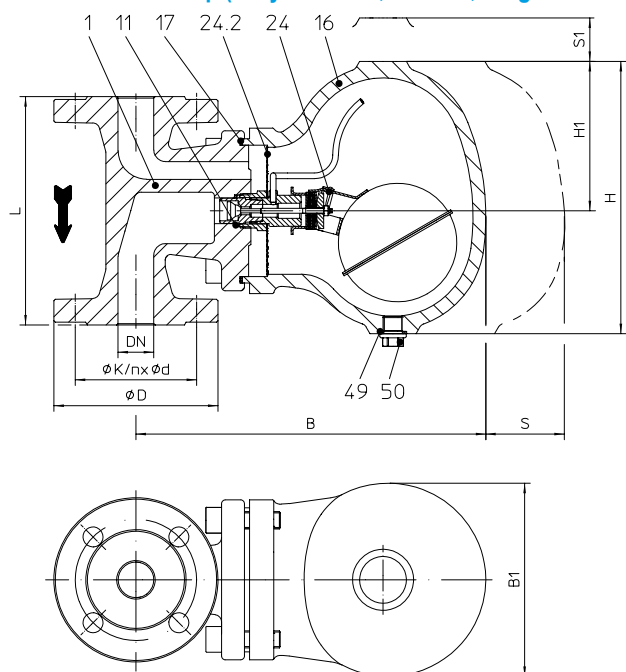
Ball float steam trap (Grey cast iron, SG iron, Forged steel/Cast steel, Stainless steel, Low temperature steel)


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

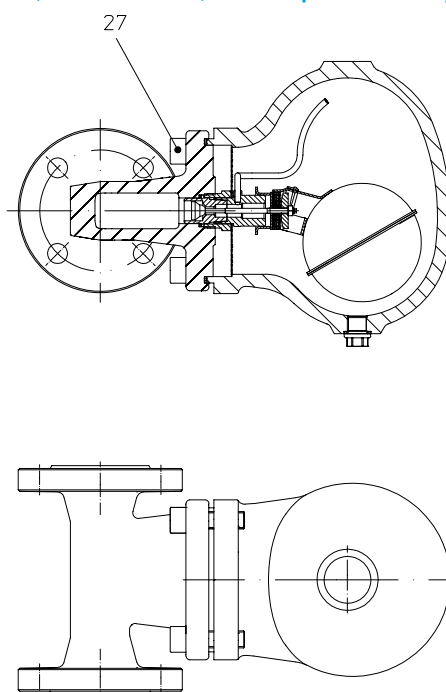


Fig. 631....1 with flanges - horizontal installation

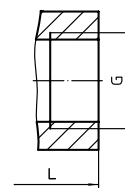
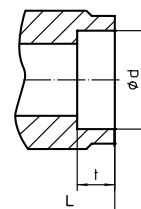
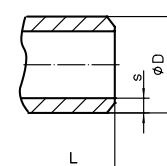

Fig. 631....2
with screwed sockets

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 ¹⁾ R4 / R4S ¹⁾ R8 / R8 S ¹⁾ R13 / R13 S ¹⁾
25.631	PN40	EN-JS1049	15 - 50 / 1/2" - 2"	40 bar	-10°C	350°C	2 bar 4 bar	R2 / R2 S ¹⁾ R4 / R4 S ¹⁾
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 ¹⁾
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 ¹⁾
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

¹⁾ 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.

- Flanges1 _____ acc. to DIN EN 1092-2 (EN-JL1040) and DIN EN 1092-1 (1.0460, 1.4541, 1.0571)
- Screwed sockets2 _____ Rp thread acc. to DIN EN 10226-1 or NPT thread acc. to ANSI B1.20.1
- Socket weld ends3 _____ acc. to DIN EN 12760
- Butt weld ends4 _____ with joint preparation type acc. to EN ISO 9692 No. 1.3 and 1.5
(Note restriction on operating pressure / inlet temperature depending to design!)

Features

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

Mounting position

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

Options

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

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

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

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

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

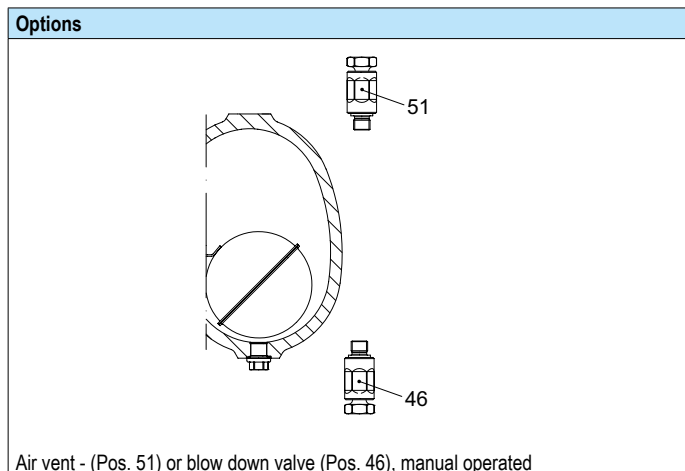
Connection dimensions standard socket weld end																			
ød	(mm)	--	--	--	--	--	--	--	--	22	27,3	34	48,9	61,3	--	--	--	--	--
t	(mm)	--	--	--	--	--	--	--	--	10	13	13	13	16	--	--	--	--	--

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

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

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

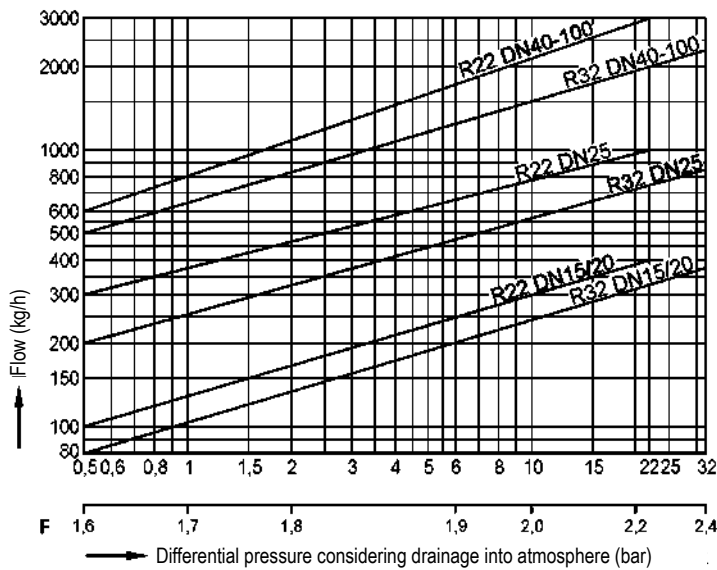
Information / restriction of technical rules need to be observed!
Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).
Operating and installation instructions can be downloaded at www.ari-armaturen.com.



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

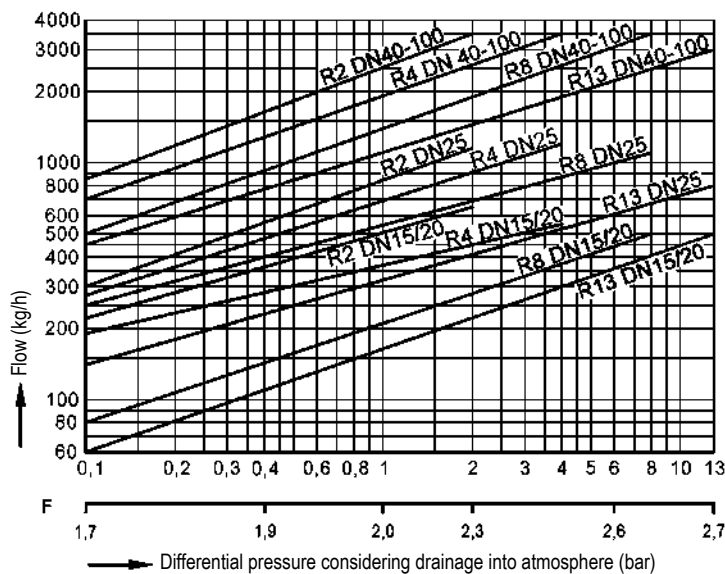
In common, the steam traps are fitted out with an controller as shown in the flow diagrams of this page acc. to the differential pressures and flow rates.

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

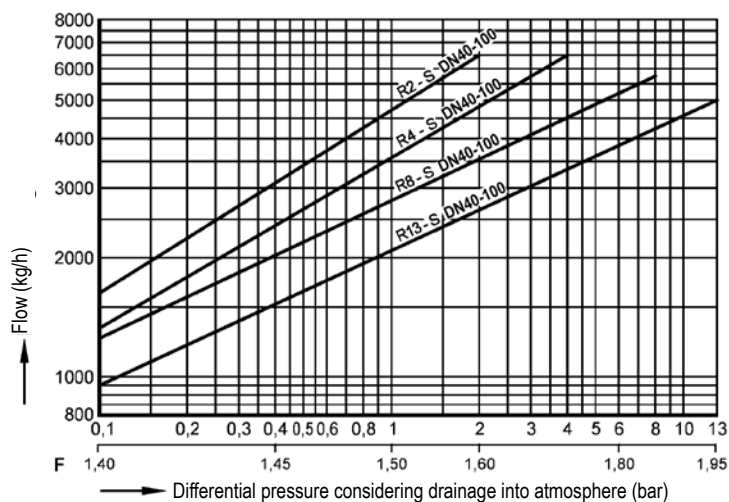
The maximum flow quantity of cold condensate at about 20°C can be determined by multiplication of the appropriate factor F (in the scale below the diagrams) with the hot condensate quantity determined by the capacity chart. (Factor F is related to the differential pressure)

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)