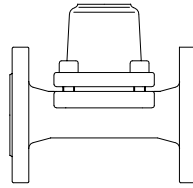


## Bimetallic steam trap PN16

- with flanges (BR 600....1)
- union with butt weld ends (BR 600....5)

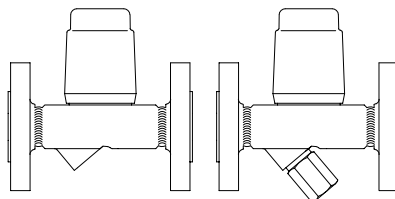


Cast iron  
BR 600

Page 2

## Bimetallic steam trap PN40

- with flanges (BR 600/601....1)
- with screwed sockets (BR 600/601....2)
- with socket weld ends (BR 600/601....3)
- with butt weld ends (BR 600/601....4)



Forged steel  
High temperature steel  
Stainless steel  
BR 600 / 601 (Y)

Page 4

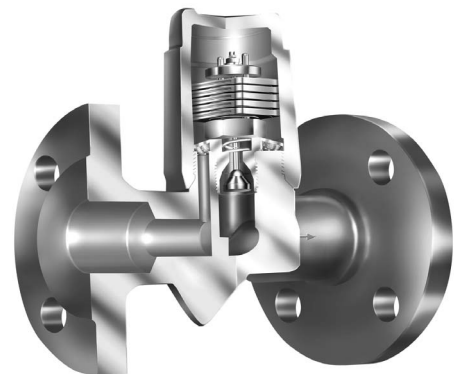
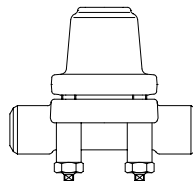


Fig. 600...1

## High pressure - Bimetallic steam trap PN63 / PN100

- with flanges (BR 600....1)
- with socket weld ends (BR 600....3)
- with butt weld ends (BR 600....4)

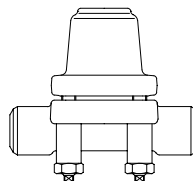


High temperature steel  
BR 600

DN 15-25 Page 8  
DN 32-50 Page 10

## High pressure - Bimetallic steam trap PN160 / PN250

- with flanges (BR 600....1)
- with socket weld ends (BR 600....3)
- with butt weld ends (BR 600....4)

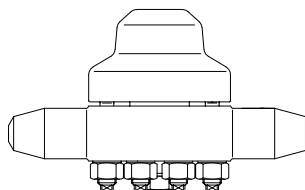


High temperature steel  
BR 600

Page 12

## High pressure - Bimetallic steam trap PN630

- with flanges (up to PN400) (BR 600....1)
- with socket weld ends (BR 600....3)
- with butt weld ends (BR 600....4)



High temperature steel  
BR 600

Page 14

### Features:

- For the discharge of condensate sub-cooled up to 30K
- Automatic ventilation during start up and operation of the plant
- Robust and insensitive to waterhammer
- Integrated non-return protection
- Design:
  - with inside strainer - BR 600
  - with outside strainer - BR 601 (Y)
- Optimized design for quick installation (PN40, DN15-25)
- Gasketless sealing of the screw cap (PN40, DN15-25)
- Installation in any position (except cover / Screw cap downwards)
- Subcooling of condensate is continuously adjustable (observe the operation instructions)
- The exchange of the controller is possible without disturbing the pipe connections

### Bimetallic steam trap made of cast iron

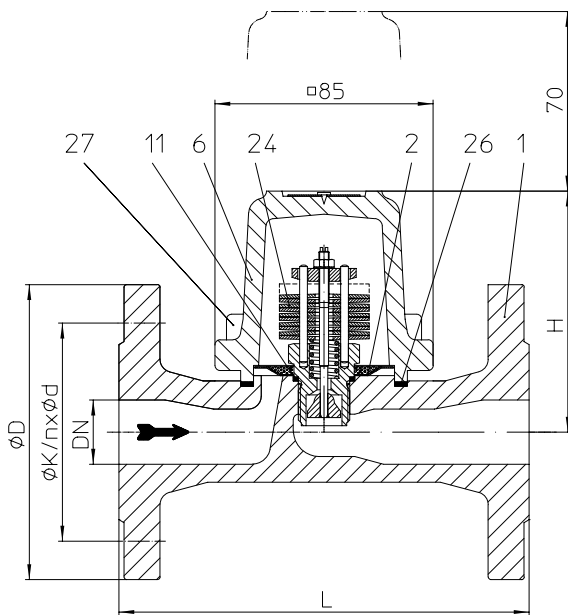
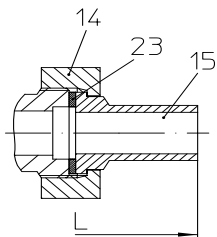


Fig. 600...1 with flanges


 Fig. 600...5  
 Union with butt weld ends

- Thermostatic steam trap with corrosion resistant and water hammer proof bimetallic controller
- Automatic ventilation during start up and operation of the plant
- Integrated non-return protection
- Inside strainer
- Installation in any position, except cover downwards
- Subcooling of condensate is continuously adjustable (observe the operation instructions)

Fig. 12.600 PN16 - EN-JL1040	Operating limits	
Operating pressure PS (bar-g)	12,8	9,6
Operating temperature TS (°C)	200	300
allowable differential pressure $\Delta PMX$ (bar):	13	

Types of connection	
Flanges ...1	DIN PN16
Union with butt weld ends ...5	
Other types of connection on request.	

Dimensions and weights		Types of connection						
		Flanges				Union with butt weld ends		
Nominal diameters	mm inch	15 1/2	20 3/4	25 1	50 2	15 1/2	20 3/4	25 1
Dimensions (mm)	L*	--	--	160 / 180 *	230 / 236 *	190	190	--
	H	--	--	100	124	100	100	--
Weight approximate (kg)		--	--	4,6	10	2,6	2,3	--

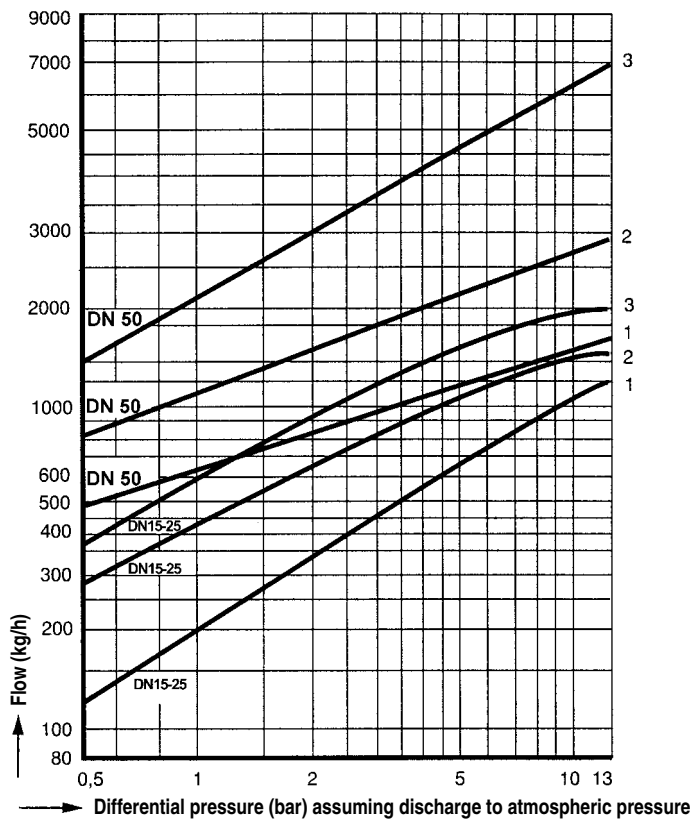
\* other face-to-face dimensions on request

Standard-flange dimensions refer to page 17

**Parts**

Pos.	Description	Material (Material-No.)
		DIN
1	Body	EN-JL1040, EN-GJL-250
2	Strainer *	X5CrNi18-10, 1.4301
6	Cover	EN-JL1040, EN-GJL-250
11	Sealing ring Body / Seat *	R-Cu99 or X6CrNiTi18-10, 1.4541
14	Union nut	X14CrMoS17+QT, 1.4104+QT
15	Welding end	C 15, 1.0401
23	Sealing ring Body / Welding end *	CrNi laminated both sides with pure graphite
24	Controller *	corrosion resistant bimetal TB 102/85
26	Sealing ring Body / Cover *	CrNi laminated both sides with pure graphite
27	Cheese head screws	A2-70

\* Spare parts

**Capacity chart**

**Capacity chart**

The capacity chart shows the maximum flow at factory setting. (Other factory-settings for the sub-cooling on request.)

**Curve 1**

Maximum flow of hot condensate at  $\Delta T$  approx. 10K below boiling temperature.

**Curve 2**

Maximum flow at condensate sub-cooling at  $\Delta T$  approx. 30K

**Curve 3**

Maximum flow at cold condensate at about 20°C (during start-up of a cold installation).

The condensate-temperature determines the aperture of the controller. The capacity is increasing with the sub-cooling temperature of the condensate.

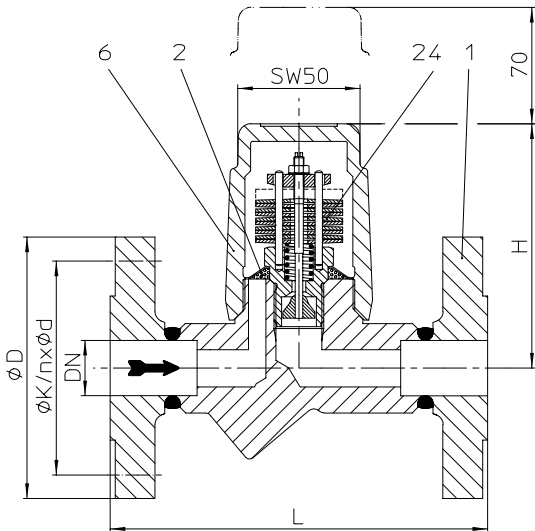
**Bimetallic steam trap made of forged steel, high temperature steel, stainless steel**


Fig. 600....1 with flanges

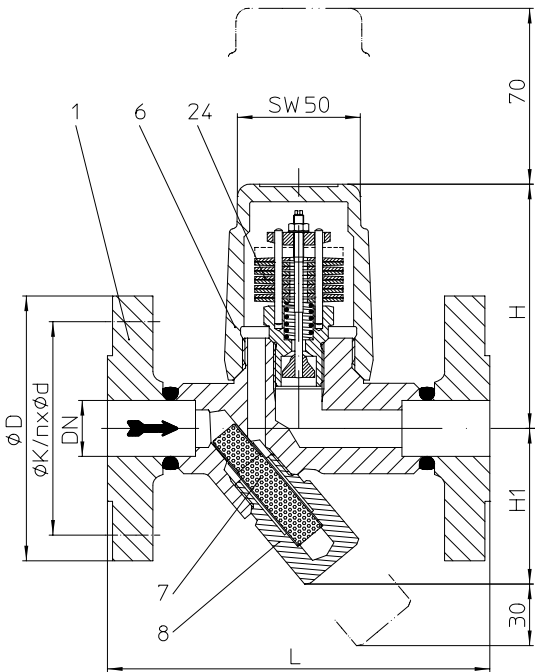


Fig. 601....1 with flanges

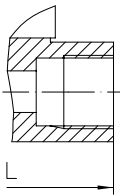


Fig. 600 / 601....2 with screwed sockets

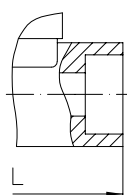


Fig. 600 / 601....3 with socket weld ends

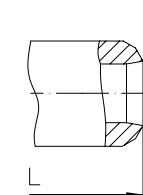


Fig. 600 / 601....4 with butt weld ends

- Thermostatic steam trap with corrosion resistant and water hammer proof bimetallic controller
- Automatic ventilation during start up and operation of the plant
- Integrated non-return protection
- with Inside strainer - BR 600  
with outside strainer - BR 601 (Y)
- Optimized design for quick installation
- Installation in any position, except screw cap downwards
- Subcooling of condensate is continuously adjustable (observe the operation instructions)
- Service advantage thanks to screw cap without sealing
- Controller available for operating range:
  - Controller R13 - up to 13 bar inlet pressure
  - Controller R22 - up to 22 bar inlet pressure
  - Controller R32 - up to 32 bar inlet pressure
- Option:
  - Outside strainer with blow down valve (pos. 46)
  - Ball valve with adapter for blow down (pos. 56) with integrated strainer
 (Observe operating and installation instructions!)

Fig. 45.600 / 45.601 PN40 - 1.0460	Operating limits		
Operating pressure PS (bar-g)	32	22	14,5
Operating temperature TS (°C)	250	385	450
allow. diff. pressure ΔPMX (bar): for controller:	32 R32	22 R22	13 R13

Fig. 85.600 / 85.601 PN40 - 16Mo3	Operating limits		
Operating pressure PS (bar-g)	35	32	28
Operating temperature TS (°C)	300	335	450
allow. diff. pressure ΔPMX (bar): for controller:	32 R32	22 R22	13 R13

Fig. 55.600 / 55.601 PN40 - 1.4541	Operating limits		
Operating pressure PS (bar-g)	32	22	
Operating temperature TS (°C)	350	400	
allow. diff. pressure ΔPMX (bar): for controller:	32 R32	22 R22	13 R13

Types of connection	
Flanges ....1	DIN PN40 ANSI 150 RF und 300 RF
Screwed sockets ....2	Rp- 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 Socket weld ends			Butt weld ends		
Nominal diameters	mm inch	15 1/2	20 3/4	25 1	15 1/2	20 3/4	25 1	15 1/2	20 3/4	25 1
Dimensions (mm)	L *	150	150	160	95	95	95	250	250	250
	H	98	98	98	98	98	103	98	98	98
	H1	62	62	62	62	62	55	62	62	62
Weight approximate (kg)		3,2	3,7	4,2	1,7	1,6	2,1	2,2	2,3	2,4

\* other face-to-face dimensions on request

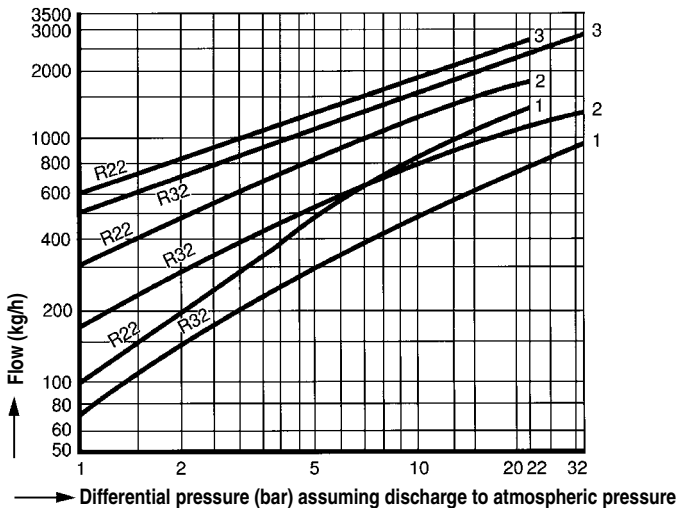
Standard-flange dimensions refer to page 17

larger nominal diameters refer to page 6

**Parts**

Pos.	Description	Material (Material-No.)					
		DIN	comparable with ASTM / AISI	DIN	comparable with ASTM / AISI	DIN	comparable with ASTM / AISI
1	Body	P250GH, 1.0460	SA 105	16Mo3, 1.5415	SA 182 F1	X6CrNiTi18-10, 1.4541	SA 182 F321
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
6	Screw cap	P250GH, 1.0460	SA 105	16Mo3, 1.5415	SA 182 F1	X6CrNiTi18-10, 1.4541	SA 182 F321
7 (Y)	Strainer screen *	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301	SA 240 Gr.304
8 (Y)	Strainer plug *	X8CrNiS18-9, 1.4305	SA 182 F321	X8CrNiS18-9, 1.4305	SA 182 F321	X8CrNiS18-9, 1.4305	SA 182 F321
24	Controller *	corrosion resist. bimetal TB 102 / 85		corrosion resist. bimetal TB 102 / 85		corrosion resist. bimetal TB 102 / 85	
46	Blow down valve cpl.	X8CrNiS18-9, 1.4305	AISI 303	X8CrNiS18-9, 1.4305	AISI 303	X8CrNiS18-9, 1.4305	AISI 303
56	Ball valve (G3/8")	GX5CrNiMo19-11-2, 1.4408	SA351CF8M	GX5CrNiMo19-11-2, 1.4408	SA351CF8M	GX5CrNiMo19-11-2, 1.4408	SA351CF8M

\* Spare parts 1) with metric screw-thread

**Capacity chart**

**Capacity chart**

The capacity chart shows for controller R13, R22 and R32 the maximum flow at factory setting

**Curve 1**

Maximum flow quantity of hot condensate at approx. 10 K below boiling temperature.

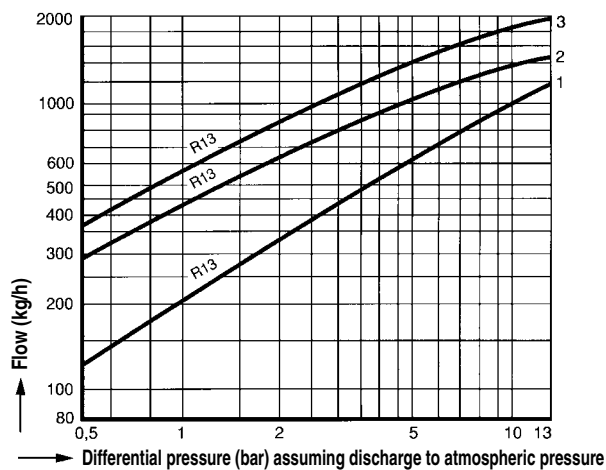
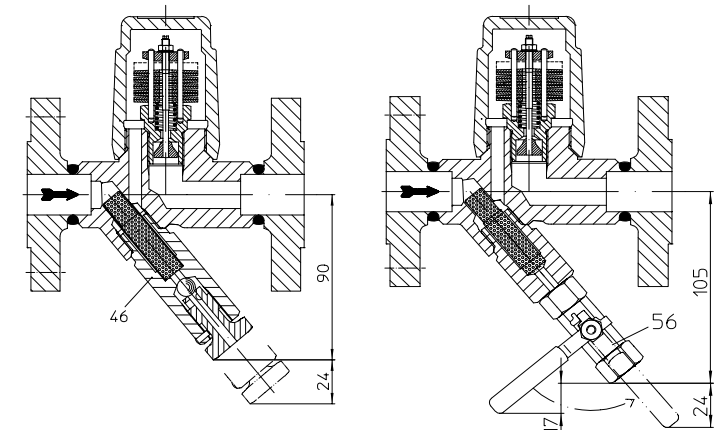
**Curve 2**

Maximum flow of sub-cooled condensate at approx. 30 K below boiling temperature (through back up of condensate).

**Curve 3**

Maximum flow quantity of cold condensate at about 20°C (during start-up of a cold installation).

The condensate-temperature determines the aperture of the controller. The capacity is increasing with the sub-cooling temperature of the condensate.


**Options**


Outside strainer with blow down valve

Ball valve with adapter for blow down with integrated strainer (restricted to 16 bar, 210°C)

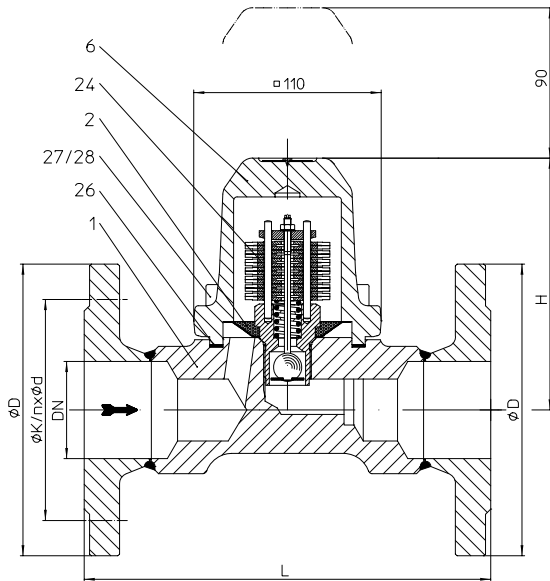
**Bimetallic steam trap made of forged steel, high temperature steel**


Fig. 600 ....1 with flanges

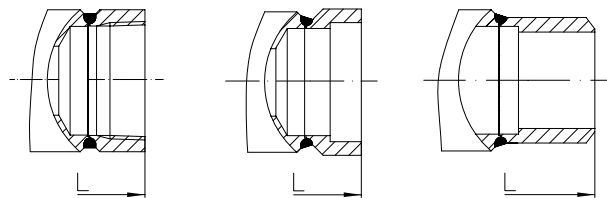


Fig. 600....2 with screwed sockets      Fig. 600....3 with socket weld ends      Fig. 600....4 with butt weld ends

- Thermostatic steam trap with corrosion resistant and water hammer proof bimetallic controller
- Automatic ventilation during start up and operation of the plant
- Integrated non-return protection
- with inside strainer - BR 600
- Installation in any position, except cover downwards
- Subcooling of condensate is continuously adjustable (observe the operation instructions)
- The exchange of the controller is possible without disturbing the pipe connections
- Controller available for operating range:
  - Controller R13 - up to 13 bar inlet pressure
  - Controller R 22 - up to 22 bar inlet pressure
  - Controller R 32 - up to 32 bar inlet pressure

Fig. 45.600 PN40 - 1.0460	Operating limits		
Operating pressure PS (bar-g)	32	22	14,5
Operating temperature TS (°C)	250	385	450
allow. diff. pressure ΔPMX (bar): for controller:	32 R32	22 R22	13 R13

Fig. 85.600 PN40 - 16Mo3	Operating limits		
Operating pressure PS (bar-g)	35	32	28
Operating temperature TS (°C)	300	335	450
allow. diff. pressure ΔPMX (bar): for controller:	32 R32	22 R22	13 R13

Fig. 55.600 PN40 - 1.4541	Operating limits		
Operating pressure PS (bar-g)	32	22	
Operating temperature TS (°C)	350	400	
allow. diff. pressure ΔPMX (bar): for controller:	32 R32	22 R22	13 R13

Types of connection	
Flanges ....1	DIN PN40 ANSI 150 RF and 300 RF
Screwed sockets ....2	Rp- 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 <sup>1)</sup> Socket weld ends		Butt weld ends	
Nominal diameters	mm	40	50	40	50	40	50
	inch	1 1/2	2	1 1/2	2	1 1/2	2
Dimensions (mm)	L *	230	230	130 / 160 <sup>1)</sup>	210	250	250
	H	144	144	144	144	144	144
	H1	68	68	68	68	68	68
Weight approximate (kg)		11,3	12,1	8,0	8,0	8,9	9,8

\* other face-to-face dimensions on request

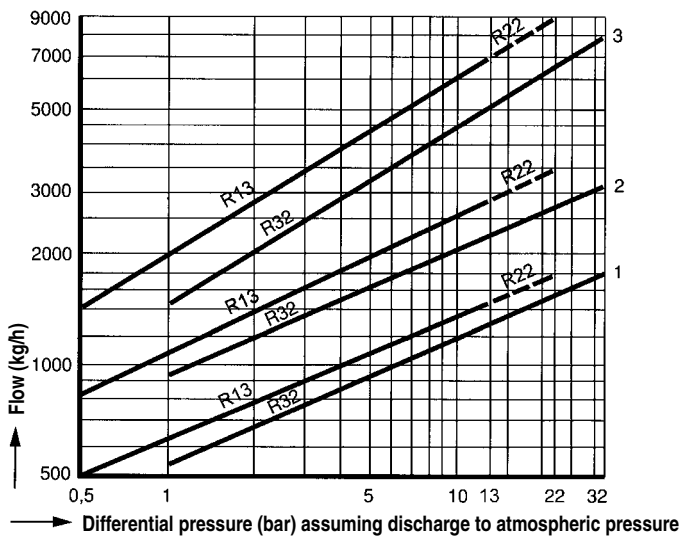
Standard-flange dimensions refer to page 17

smaller nominal diameters refer to page 4

**Parts**

Pos.	Description	Material (Material-No.)					
		DIN	comparable with ASTM / AISI	DIN	comparable with ASTM / AISI	DIN	comparable with ASTM / AISI
1	Body	P250GH, 1.0460	SA 105	16Mo3, 1.5415	SA 182 F1	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
6	Cover	P250GH, 1.0460	SA 105	16Mo3, 1.5415	SA 182 F1	X6CrNiTi18-10, 1.4541	SA 182 F 321
24	Controller *	corrosion resistant bimetal TB 102 / 85		corrosion resistant bimetal TB 102 / 85		corrosion resistant bimetal TB 102 / 85	
26	Gasket (body/cover) *	CrNi laminated both sides with pure graphite		CrNi laminated both sides ' with pure graphite		CrNi laminated both sides with pure graphite	
27	Cheese head screws	21CrMoV5-7, 1.7709	SA 193 Gr. B16 <sup>1)</sup>	21CrMoV5-7, 1.7709	SA 193 Gr. B16 <sup>1)</sup>	21CrMoV5-7, 1.7709	SA 193 Gr. B16 <sup>1)</sup>
28	Hexagonal nuts	21CrMoV5-7, 1.7709	SA 194 Gr. 4 <sup>1)</sup>	21CrMoV5-7, 1.7709	SA 194 Gr. 4 <sup>1)</sup>	21CrMoV5-7, 1.7709	SA 194 Gr. 4 <sup>1)</sup>

\* Spare parts <sup>1)</sup> with metric screw-thread

**Capacity chart**

**Capacity chart**

The capacity chart shows for controller R13, R22 and R32 the maximum flow at factory setting.  
(Other factory-settings for the condensate sub-cooling on request.)

**Curve 1**

Maximum flow quantity of hot condensate at approx. 15 K below boiling temperature.

**Curve 2**

Maximum flow quantity of sub-cooled condensate at approx. 30 K below boiling temperature (back up of condensate).

**Curve 3**

Maximum flow quantity of cold condensate at about 20°C (during start-up of a cold installation).

The condensate-temperature determines the aperture of the controller. The capacity is increasing with the sub-cooling temperature of the condensate.

## High pressure - Bimetallic steam trap made of high temperature steel

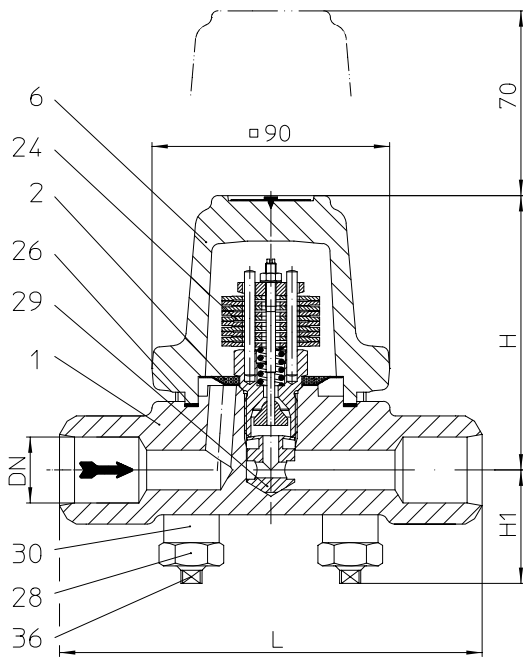


Fig. 600...4 with butt weld ends

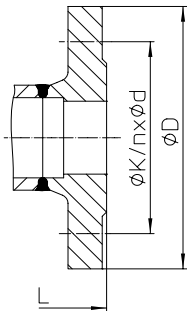


Fig. 600...1 with flanges

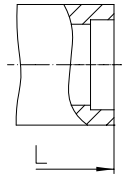


Fig. 600...3 with socket weld ends

- Thermostatic steam trap with corrosion resistant and water hammer proof bimetallic controller
- For steam specially at high pressure ranges
- Automatic ventilation during start up and operation of the plant
- Integrated non-return protection
- inside strainer
- Installation in any position, except cover downwards
- Subcooling of condensate is continuously adjustable (observe the operation instructions)
- The exchange of the controller is possible without disturbing the pipe connections
- Controller at PN100 available for operating range:
  - Controller R60 - up to 60 bar inlet pressure
  - Controller R90 - up to 90 bar inlet pressure

Fig. 86.600 PN63 - 16Mo3	Operating limits		
Operating pressure PS (bar-g)	56	47	45
Operating temperature TS (°C)	300	400	450
allow. diff. pressure ΔPMX (bar): for controller:	46 R46		

Fig. 87.600 PN100 - 16Mo3	Operating limits		
Operating pressure PS (bar-g)	90	59	27
Operating temperature TS (°C)	450	495	530
allow. diff. pressure ΔPMX (bar): for controller:	60 R60	90 R90	

Types of connection		
Flanges ....1	DIN PN63 ANSI 400/600 RF	DIN PN100 ANSI 600 RF
Socket weld ends ....3		
Butt weld ends ....4		
Other types of connection on request.		

Dimensions and weights		Types of connection							
		Flanges		Socket weld ends			Butt weld ends		
Nominal diameters	mm inch	15 1/2	25 1	15 1/2	20 3/4	25 1	15 1/2	20 3/4	25 1
Dimensions (mm)	L *	210	230	160	160	160	160	160	160
	H	104	104	104	104	104	104	104	104
	H1	42	42	42	42	42	42	42	42
Weight approximate (kg)		6,2	9,3	4,6	4,5	4,4	4,6	4,5	4,4

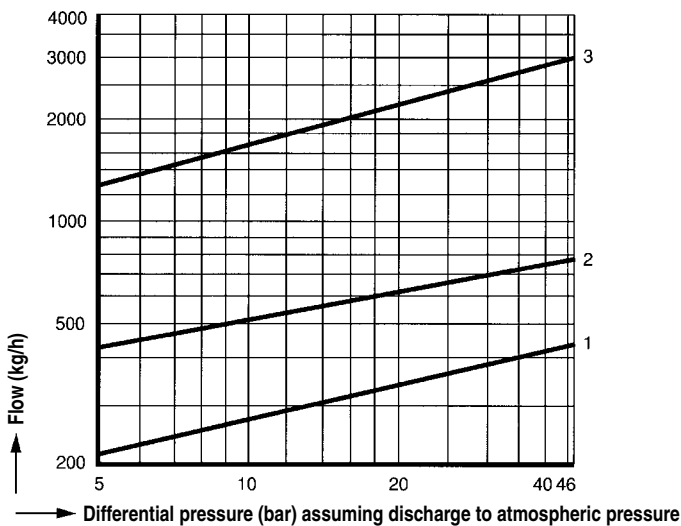
\* other face-to-face dimensions on request      Standard-flange dimensions refer to page 17      larger nominal diameters (PN63) refer to page 10



**Parts**

Pos.	Description	Material (Material-No.)	
		DIN	comparable with ASTM / AISI
1	Body	16Mo3, 1.5415	SA 182 F1
2	Strainer *	X5CrNi18-10, 1.4301	SA 240 Gr.304
6	Cover	16Mo3, 1.5415	SA 182 F1
24	Controller *	corrosion resistant bimetal TB 102 / 85	
26	Body-gasket *	CrNi laminated both sides with pure graphite	
28	Hexagonal nuts	21CrMoV5-7, 1.7709	SA 193 Gr. 4 <sup>1)</sup>
29	Erosion deflector *	X17CrNi16-2, 1.4057	AISI 431
30	Extension sleeve	21CrMoV5-7, 1.7709	SA 193 Gr. B16
36	Studs	21CrMoV5-7, 1.7709	SA 193 Gr. B16 <sup>1)</sup>

\* Spare parts <sup>1)</sup> with metric screw-thread

**Capacity chart PN63**

**Capacity chart**

The capacity chart shows the maximum flow at factory setting. (For operating pressures below 5bar, a correction of the factory setting acc. to the indication of the manufacturer is recommended.)

**Curve 1**

Maximum flow of hot condensate at factories setting about  $\Delta T$  ca. 15K below boiling temperature.

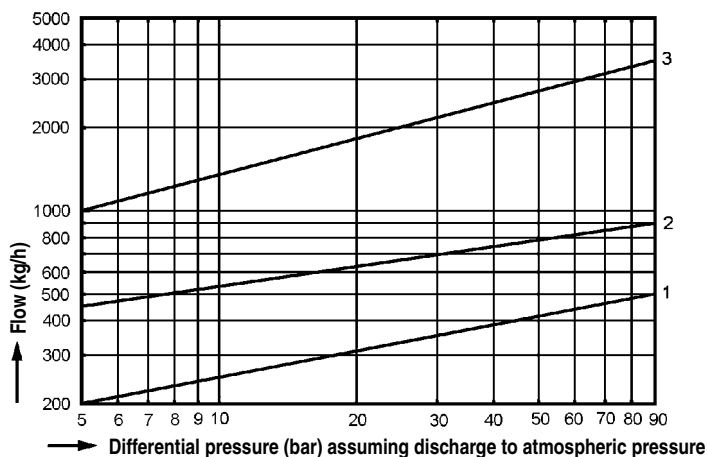
**Curve 2**

Maximum flow at condensate sub-cooling at  $\Delta T$  approx. 30K (back up of condensate).

**Curve 3**

Maximum flow at cold condensate at about 20°C (during start-up of a cold installation).

The condensate-temperature determines the aperture of the controller. The capacity is increasing with the sub-cooling temperature of the condensate.

**Capacity chart PN100**


## High pressure - Bimetallic steam trap made of high temperature steel

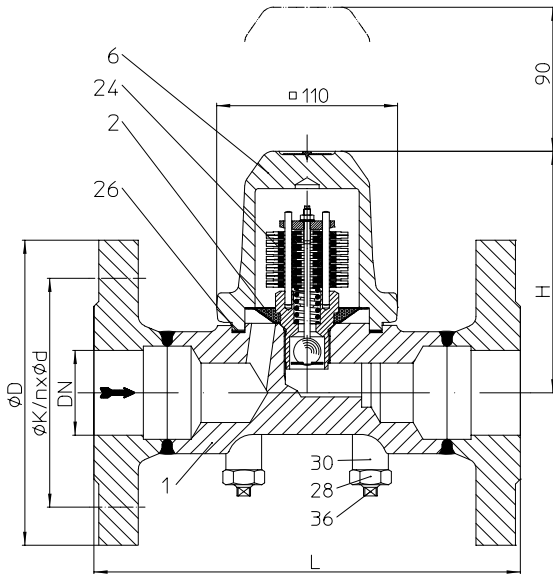


Fig. 600....1 with flanges

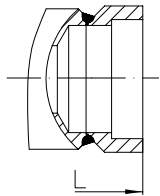


Fig. 600....3  
with socket weld ends

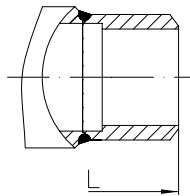


Fig. 600....4  
with butt weld ends

- Thermostatic steam trap with corrosion resistant and water hammer proof bimetallic controller
- Automatic ventilation during start up and operation of the plant
- Integrated non-return protection
- inside strainer
- Installation in any position, except cover downwards
- Subcooling of condensate is continuously adjustable (observe the operation instructions)
- The exchange of the controller is possible without disturbing the pipe connections
- Controller available for operating range:
  - Controller R56 - up to 56 bar inlet pressure
  - Controller R32 - up to 32 bar inlet pressure

Fig. 86.600 PN63 - 16Mo3	Operating limits		
Operating pressure PS (bar-g)	56	50	45
Operating temperature TS (°C)	300	350	450
allow. diff. pressure $\Delta$ PMX (bar): for controller:	56 R56	32 R32	

Types of connection	
Flanges ....1	DIN PN63 ANSI 400/600 RF
Socket weld ends ....3	
Butt weld ends ....4	
Other types of connection on request.	

Dimensions and weights		Types of connection					
		Flanges		Socket weld ends		Butt weld ends	
Nominal diameters	mm inch	40 1 1/2	50 2	40 1 1/2	50 2	40 1 1/2	50 2
Dimensions (mm)	L *	260	300	130	210	250	250
	H	144	144	144	144	144	144
Weight approximate (kg)		13,3	14,1	8,0	8,0	8,9	9,8

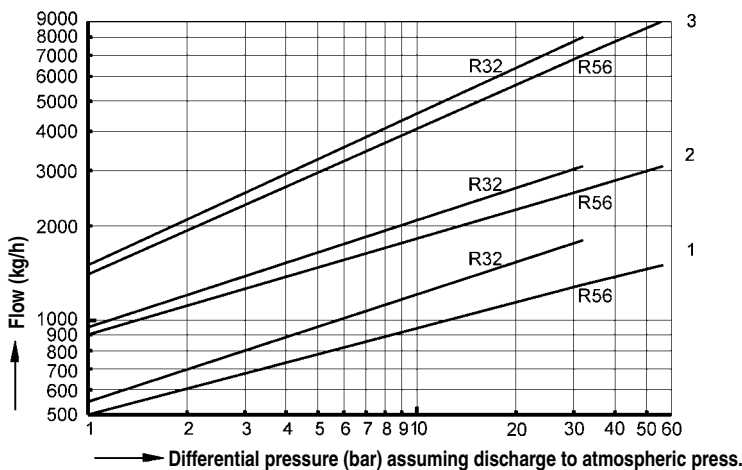
\* other face-to-face dimensions on request

Standard-flange dimensions refer to page 17

smaller nominal diameters refer to page 8

**Parts**

Pos.	Description	Material (Material-No.)	
		DIN	comparable with ASTM / AISI
1	Body	16Mo3, 1.5415	SA 182 F1
2	Strainer *	X5CrNi18-10, 1.4301	SA 240 Gr.304
6	Cover	16Mo3, 1.5415	SA 182 F1
24	Controller *	corrosion resistant bimetal TB 102 / 85	
26	Gasket (body/cover) *	CrNi laminated both sides with pure graphite	
28	Hexagonal nuts TF M12	21CrMoV5-7, 1.7709	SA 194 Gr. 4 <sup>1)</sup>
30	Extension sleeves	21CrMoV5-7, 1.7709	SA 193 Gr. B16
36	Screw pins L M12	21CrMoV5-7, 1.7709	SA 193 Gr. B16 <sup>1)</sup>
* Spare parts		other materials on request	<sup>1)</sup> with metric screw-thread

**Capacity chart**

**Capacity chart**

The capacity chart shows for controller R56 and R32 the maximum flow at factory setting.  
(Other factory-settings for the sub-cooling on request.)

**Curve 1**

Maximum flow of hot condensate at factories setting at about 15K below boiling temperature.

**Curve 2**

Maximum flow quantity of sub-cooled condensate at approx. 30 K below boiling temperature (back up of condensate).

**Curve 3**

Maximum flow at cold condensate at about 20°C (during start-up of a cold installation).

The condensate-temperature determines the aperture of the controller. The capacity is increasing with the sub-cooling temperature of the condensate.

## High pressure - Bimetallic steam trap made of high temperature steel

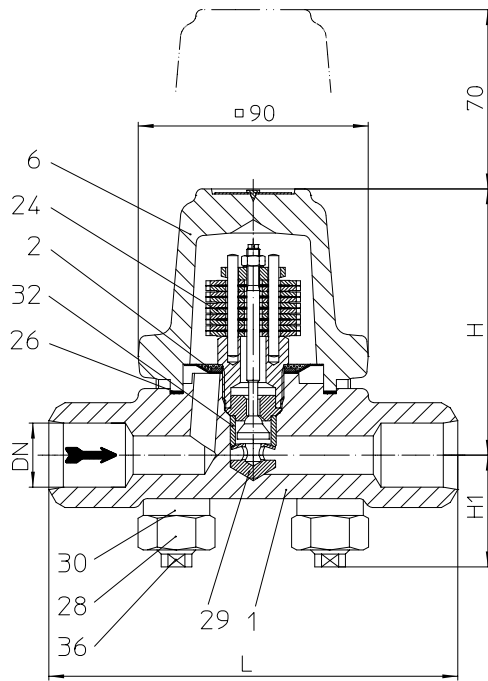


Fig. 600...4 with butt weld ends

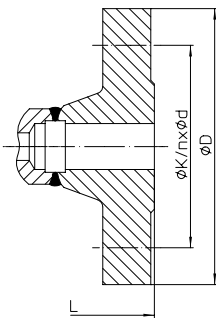


Fig. 600...1 with flanges

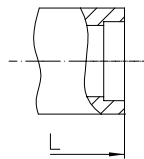


Fig. 600...3 with socket weld ends

- Thermostatic steam trap with corrosion resistant and water hammer proof bimetallic controller
- For steam specially at high pressure ranges
- Automatic ventilation during start up and operation of the plant
- Integrated non-return protection
- inside strainer
- Installation in any position, except cover downwards
- Subcooling of condensate is continuously adjustable (observe the operation instructions)
- The exchange of the controller is possible without disturbing the pipe connections

Fig. 88.600 PN160 - 13CrMo4-5	Operating limits			
Operating pressure PS (bar-g)	153	100	62	35
Operating temperature TS (°C)	350	510	530	550
allow. diff. pressure $\Delta PMX$ (bar):	110			

Fig. 89.600 PN250 - 10 CrMo 9-10	Operating limits			
Operating pressure PS (bar-g)	184	154	108	81
Operating temperature TS (°C)	500	510	530	550
allow. diff. pressure $\Delta PMX$ (bar):	154			

Types of connection		
Flanges ....1	DIN PN160 ANSI 900 RF	DIN PN250 ANSI 1500 RF
Socket weld ends ....3		
Butt weld ends ....4		
Other types of connection on request.		

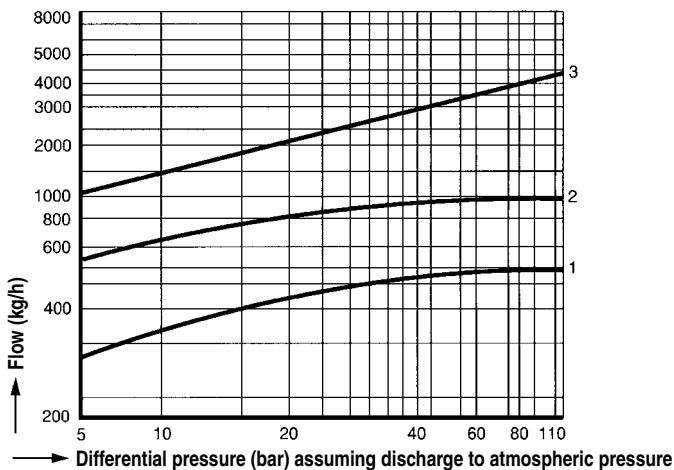
Dimensions and weights		Types of connection							
		Flanges		Socket weld ends			Butt weld ends		
Nominal diameters	mm inch	15 1/2	25 1	15 1/2	20 3/4	25 1	15 1/2	20 3/4	25 1
Dimensions (mm)	L *	210	230	160	160	160	160	160	160
	H	104	104	104	104	104	104	104	104
	H1	42	42	42	42	42	42	42	42
Weight approximate (kg)		6,4	9,6	4,8	4,7	4,6	4,8	4,7	4,6

\* other face-to-face dimensions on request

Standard-flange dimensions refer to page 17

**Parts**

Pos.	Description	Material (Material-No.)			
		DIN (PN160)	comparable with ASTM / AISI	DIN (PN250)	comparable with ASTM / AISI
1	Body	13CrMo4-5, 1.7335	SA 182 F12	10 CrMo 9-10, 1.7380	SA 182 F22
2	Strainer *	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301	SA 240 Gr.304
6	Cover	13CrMo4-5, 1.7335	SA 182 F12	10 CrMo 9-10, 1.7380	SA 182 F22
24	Controller *	corrosion resistant bimetal TB 102 / 85		corrosion resistant bimetal TB 102 / 85	
26	Gasket (body/cover) *	CrNi laminated both sides with pure graphite		CrNi laminated both sides with pure graphite	
28	Hexagonal nuts	X22CrMoV12-1, 1.4923	SA 453 Gr. 660 b <sup>1)</sup>	X22CrMoV12-1, 1.4923	SA 453 Gr. 660 b <sup>1)</sup>
29	Erosion deflector *	X17CrNi16-2, 1.4057	AISI 431	X17CrNi16-2, 1.4057	AISI 431
30	Extension sleeves	X22CrMoV12-1, 1.4923	SA 453 Gr. 660 b	X22CrMoV12-1, 1.4923	SA 453 Gr. 660 b
32	Clamping sleeve *	X17CrNi16-2, 1.4057	AISI 431	X17CrNi16-2, 1.4057	AISI 431
36	Studs	X22CrMoV12-1, 1.4923	SA 453 Gr. 660 b <sup>1)</sup>	X22CrMoV12-1, 1.4923	SA 453 Gr. 660 b <sup>1)</sup>
* Spare parts					<sup>1)</sup> with metric screw-thread

**Capacity chart PN160**

**Capacity chart**

The capacity chart shows the maximum flow of hot and cold condensate at factory setting.  
(For operating pressures below 5bar, a correction of the factory setting acc. to the indication of the manufacturer is recommended.)

**Curve 1**

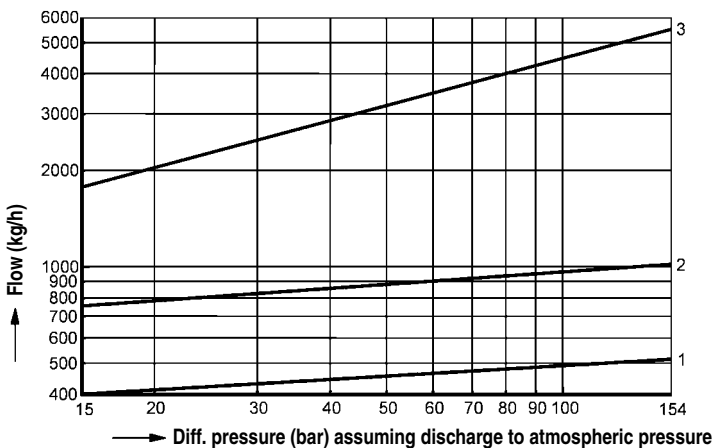
Maximum flow quantity of hot condensate at approx. 10 K below boiling temperature.

**Curve 2**

Maximum flow quantity of hot condensate at approx. 30 K below boiling temperature.

**Curve 3**

Maximum flow at cold condensate at about 20°C (during start-up of a cold installation).

**Capacity chart PN250**


## High pressure - Bimetallic steam trap made of high temperature steel

- Thermostatic steam trap with corrosion resistant and water hammer proof bimetallic controller
- For steam specially at high pressure ranges
- Automatic ventilation during start up and operation of the plant
- Integrated non-return protection
- Discharge valve also works as checkvalve
- Inside strainer
- Installation in any position, except cover downwards
- Subcooling of condensate is continuously adjustable (observe the operation instructions)
- The exchange of the controller is possible without disturbing the pipe connections

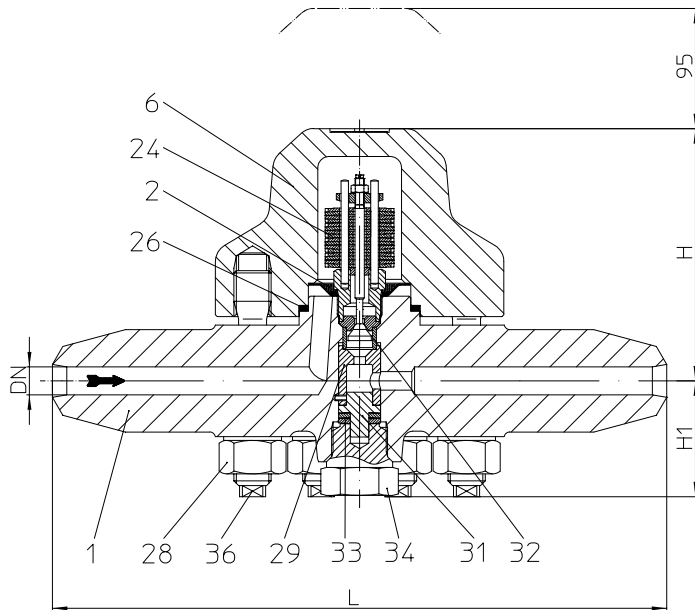


Fig. 600....4 with butt weld ends

Fig. 8b.600 / 8c.600 PN630 - 10 CrMo 9-10	Operating limits		
Operating pressure PS (bar-g)	300	250	162
Operating temperature TS (°C)	537	550	580
allow. diff. pressure ΔPMX (bar):	270		

Fig. 8b.600 / 8c.600 PN630 - X 10 CrMoVNb 9-1	Operating limits		
Operating pressure PS (bar-g)	300	298	130
Operating temperature TS (°C)	545	550	600
allow. diff. pressure ΔPMX (bar):	270		

Fig. 8b.600 / 8c.600 PN630 - X 11 CrMoWVNb 9-1-1	Operating limits		
Operating pressure PS (bar-g)	300	250	180
Operating temperature TS (°C)	580	600	630
allow. diff. pressure ΔPMX (bar):	270		

Types of connection	
Flanges ....1	DIN PN400 ANSI 2500 RF
Socket weld ends ....3	DIN EN 12670, ANSI B16.11
Butt weld ends ....4	DIN EN 12627, ANSI B16.25
Other types of connection on request.	

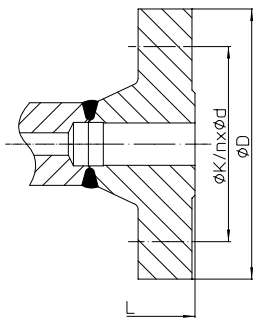


Fig. 600....1 (PN400)  
with flanges

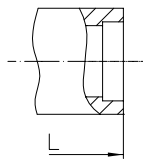


Fig. 600....3  
with socket weld ends

Dimensions and weights		Types of connection					
		Flanges		Socket weld ends		Butt weld ends	
Nominal diameters	mm inch	15 1/2	25 1	15 1/2	25 1	15 1/2	25 1
Dimensions (mm)	L *	435	470	330	330	330	330
	H	135	135	135	135	135	135
	H1	63	63	63	63	63	63
Weight approximate (kg)		27,0	33,0	20,0	19,0	20,0	19,0

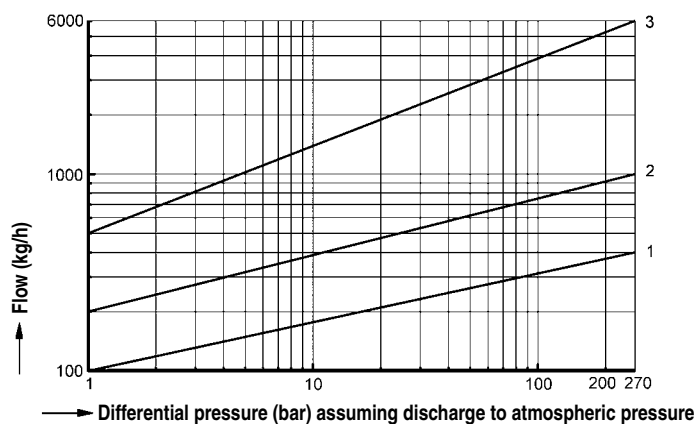
\* other face-to-face dimensions on request

Standard-flange dimensions refer to page 17

**Parts**

Pos.	Description	Material (Material-No.)				
		DIN	comparable with ASTM / AISI	DIN	comparable with ASTM / AISI	DIN
1	Body	10 CrMo 9-10, 1.7380	SA 182 F22	X 10 CrMoVNb 91, 1.4903	SA 182 F91	X 11 CrMoWVNb 9-1-1, 1.4905
2	Strainer *	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301
6	Cover	10 CrMo 9-10, 1.7380	SA 182 F22	X 10 CrMoVNb 91, 1.4903	SA 182 F91	X 11 CrMoWVNb 9-1-1, 1.4905
24	Controller *	corrosion resistant bimetal TB 102 / 85		corrosion resistant bimetal TB 102 / 85		corrosion resistant bimetal TB 102 / 85
26	Gasket (body/cover) *	graphit / 1.4541 (spiral-wound gasket)		graphit / 1.4541 (spiral-wound gasket)		graphit / 1.4541 (spiral-w. gasket)
28	Hexagonal nuts	X22CrMoV12-1, 1.4923	SA 453 Gr. 660 b <sup>1)</sup>	X22CrMoV12-1, 1.4923	SA 453 Gr. 660 b <sup>1)</sup>	X22CrMoV12-1, 1.4923
29	Erosion deflector *	X39CrMo17- 1+QT, 1.4122+QT	AISI 440	X39CrMo17- 1+QT, 1.4122+QT	AISI 440	X39CrMo17- 1+QT, 1.4122+QT
31	Baffle straightener	X39CrMo17- 1+QT, 1.4122+QT	AISI 440	X39CrMo17- 1+QT, 1.4122+QT	AISI 440	X39CrMo17- 1+QT, 1.4122+QT
32	Clamping sleeve *	X17CrNi16-2, 1.4057	AISI 431	X17CrNi16-2, 1.4057	AISI 431	X17CrNi16-2, 1.4057
33	Lock washer	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301	SA 240 Gr.304	X5CrNi18-10, 1.4301
34	Service screw	10CrMo9-10 V, 1.7380	SA 182 F22 Cl.3	10CrMo9-10 V, 1.7380	SA 182 F22 Cl.3	10CrMo9-10, 1.7380
36	Studs	X22CrMoV12-1, 1.4923	SA 453 Gr. 660 b <sup>1)</sup>	X22CrMoV12-1, 1.4923	SA 453 Gr. 660 b <sup>1)</sup>	X22CrMoV12-1, 1.4923

\* Spare parts <sup>1)</sup> with metric screw-thread

**Capacity chart PN630**

**Capacity chart**

The capacity chart shows the maximum flow at factory setting. (For operating pressures below 5bar, a correction of the factory setting acc. to the indication of the manufacturer is recommended.)

**Curve 1**

Maximum flow quantity of hot condensate at approx. 10 K below boiling temperature.

**Curve 2**

Maximum flow quantity of hot condensate at approx. 30 K below boiling temperature.

**Curve 3**

Maximum flow at cold condensate at about 20°C (during start-up of a cold installation).

**Flanges according to DIN 2501**

**Screw sockets according to DIN EN 10266-1 (previous DIN 2999) 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**

## 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+N	GP240GH+N acc. to DIN EN 10213-2 / SA 216 WCB
	1.0460	P250GH acc. to DIN EN 10222-2 / SA 105
	1.0401	C15 acc. to DIN 17210
	1.5415	16Mo3 acc. to DIN EN 10028 / SA 182 F1
	1.4541	X6CrNiTi18-10 acc. to DIN EN 10088 / SA 182 F321
	1.7335	13CrMo4-5 acc. to DIN EN 10028 / SA 182 F12
	1.7380	10CrMo 9-10 acc. to DIN EN 10028 / SA 182 F22
	1.4903	X 10 CrMoVNb 91 acc. to VdTÜV Data sheet 511/3 (06.99) / SA 182 F91
	1.4905	X 11 CrMo WVNb 9-1-1 acc. to VdTÜV Data sheet 522/3 (06.99)

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

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

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

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

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

## Allocation of types

BR		formerly designation of types
<i>different types of connection</i>		
600....	....1 Flanges	C....
601....	....2 Screwed sockets	A....
602....	....3 Socket weld ends	B....
603....	....4 Butt weld ends	B....
	....5 Union butt weld ends	B....
		....U (AU, BU, CU)
		....UY (AUY, BUY, CUY)
		....UX (AUX, BUX, CUX)
		....UYX (AUYX, BUYX, CUYX)

### 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
- Back pressure
- quantity of condensate
- Nominal diameter / pressure
- Type of connection
- Controller
- Material
- Place of service or kind of steam consumer

### Example for order data:

=> Bimetallic steam trap CONA® B,  
BR 600, PN40, DN15, 1.0460, Controller R22, with flange connection, Face-to-face dimension 150 mm

Dimensions in mm resp. inch  
Weights in kg  
1 bar  $\hat{=}$  10<sup>5</sup> Pa  $\hat{=}$  0,1 MPa  
Kvs in m<sup>3</sup>/h  
1 bar  $\hat{=}$  14,5 PSI  
1 inch  $\hat{=}$  25,4 mm



**Standard - flange dimensions (DIN)**

DN	PN 16			PN 40			PN 63			PN 100		
	∅ D	∅ K	n x ∅ d	∅ D	∅ K	n x ∅ d	∅ D	∅ K	n x ∅ d	∅ D	∅ K	n x ∅ d
15	--	--	--	95	65	4 x 14	105	75	4 x 14	105	75	4 x 14
20	--	--	--	105	75	4 x 14	--	--	--	--	--	--
25	115	85	4 x 14	115	85	4 x 14	140	100	4 x 18	140	100	4 x 18
32	--	--	--	140	100	4 x 18	--	--	--	--	--	--
40	--	--	--	150	110	4 x 18	170	125	4 x 22	--	--	--
50	165	125	4 x 18	165	125	4 x 18	180	135	4 x 22	--	--	--

DN	PN 160			PN 250			PN 400		
	∅ D	∅ K	n x ∅ d	∅ D	∅ K	n x ∅ d	∅ D	∅ K	n x ∅ d
15	130	75	4 x 14	130	90	4 x 18	145	100	4 x 22
20	--	--	--	--	--	--	--	--	--
25	150	100	4 x 18	150	105	4 x 22	180	130	4 x 26

**Standard - flange dimensions (ANSI)**

DN		ANSI 150						ANSI 300						ANSI 400					
		∅ D		∅ K		n x ∅ d		∅ D		∅ K		n x ∅ d		∅ D		∅ K		n x ∅ d	
mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
15	1/2	89	3,50	60	2,36	4x16	4x0,62	95	3,75	66,5	2,62	4x16	4x0,62	95	3,75	66,5	2,62	4x16	4x0,62
20	3/4	99	3,90	70	2,70	4x16	4x0,62	117	4,62	82,5	3,25	4x19	4x0,75	117	4,62	82,6	3,25	4x16	4x0,75
25	1	108	4,25	79	3,10	4x16	4x0,62	124	4,88	89	3,50	4x19	4x0,75	124	4,88	89	3,50	4x19	4x0,75
32	1 1/4	117	4,62	89	3,50	4x16	4x0,62	133	5,25	98,5	3,88	4x19	4x0,75	133	5,25	98,6	3,88	4x19	4x0,75
40	1 1/2	127	5,00	98	3,85	4x16	4x0,62	155	6,12	114	4,50	4x22,5	4x0,88	155	6,12	114	4,50	4x22,5	4x0,88
50	2	153	6,00	121	4,76	4x19	4x0,75	165	6,50	127	5,00	8x19	8x0,75	165	6,50	127	5,00	8x19	8x0,75

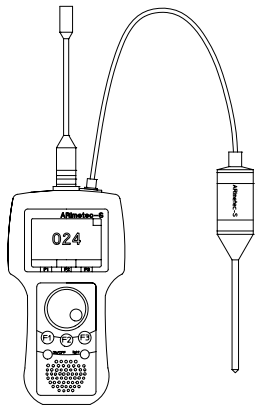
DN		ANSI 600						ANSI 900						ANSI 1500					
		∅ D		∅ K		n x ∅ d		∅ D		∅ K		n x ∅ d		∅ D		∅ K		n x ∅ d	
mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
15	1/2	95	3,75	66,5	2,62	4x16	4x0,62	121	4,75	82,5	3,25	4x22,5	4x0,88	121	4,75	82,5	3,25	4x22,5	4x0,88
20	3/4	117	4,62	82,6	3,25	4x19	4x0,75	130	5,12	89	3,50	4x22,5	4x0,88	130	5,12	89	3,50	4x22,5	4x0,88
25	1	124	4,88	89	3,50	4x19	4x0,75	149	5,88	102	4,00	4x25,5	4x1,0	149	5,88	102	4,00	4x25,5	4x1,0
32	1 1/4	133	5,25	98,6	3,88	4x19	4x0,75	--	--	--	--	--	--	--	--	--	--	--	--
40	1 1/2	155	6,12	114	4,50	4x22,5	4x0,88	--	--	--	--	--	--	--	--	--	--	--	--
50	2	165	6,50	127	5,00	8x19	8x0,75	--	--	--	--	--	--	--	--	--	--	--	--

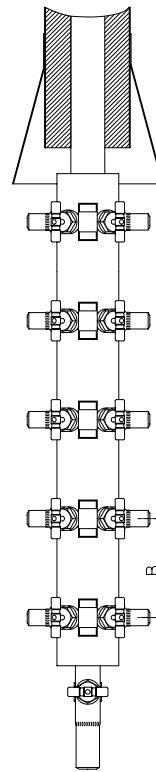
DN		ANSI 2500					
		∅ D		∅ K		n x ∅ d	
mm	inch	mm	inch	mm	inch	mm	inch
15	1/2	133	5,25	89	3,50	4x22,5	4x0,88
20	3/4	140	5,5	95	3,75	4x22,5	4x0,88
25	1	159	6,25	108	4,25	4x25,5	4x1,0

**Steam traps according to ASTM**

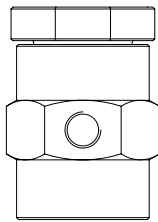
- Pressure bearing parts made of ASTM / AISI -materials
- Studs and nuts made of ASTM-materials, but metric screw-threads
- Face-to-face acc. to data sheet resp. customer request
- Flanges acc. to ANSI
- Pressure test acc. to API 598



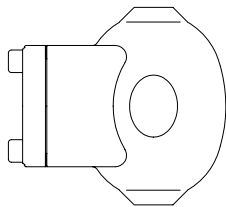
Testing device ARImetec®-S



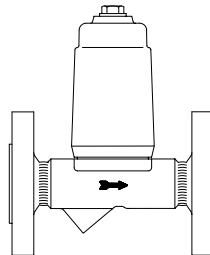
Prefabricated manifolds for condensate collection (B = 160), steam distribution (B = 120)  
**CODI®S** with stuffing box BR671/672;  
**CODI®B** with bellows seal, maintenance-free BR675/676



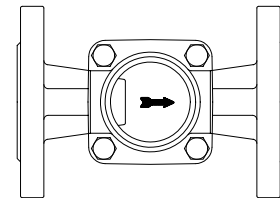
Vacuum breaker BR655



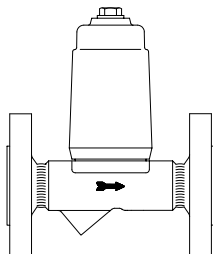
Automatic air vent for liquid systems  
 BR 656



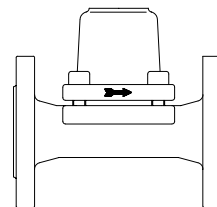
Condensate discharge temperature limiter  
 BR645/647



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.)