

Bimetallic steam trap for low temperature application

Bimetallic steam trap

PN40

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

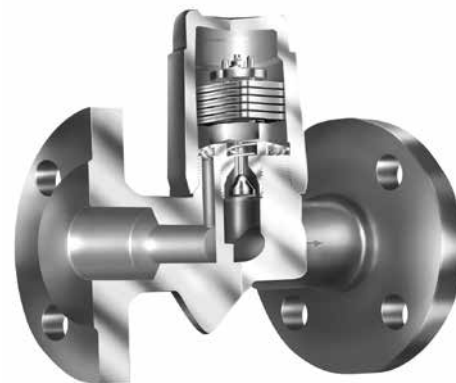
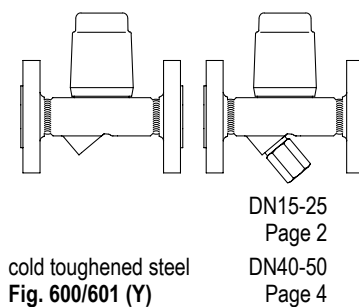


Fig. 600....1 (PN40)

Features:

- For discharging of slight to highly sub-cooled condensate
- Automatic air-venting during start up and operation of the plant
- Robust and resistant to water-hammer
- Integrated Check valve
- Design with internal strainer - Fig. 600
Design with outside strainer (Y) - Fig. 601 (Y)
- Optimized design for quick installation
- Gasket-free sealing of the screwed cap (PN40 with Cap, DN15-25)
- Installation in any position (except cover/screwed cap downwards)
- Subcooling of condensate is continuously adjustable (observe the operation instructions)
- The controller maybe changed without disturbing the pipe work

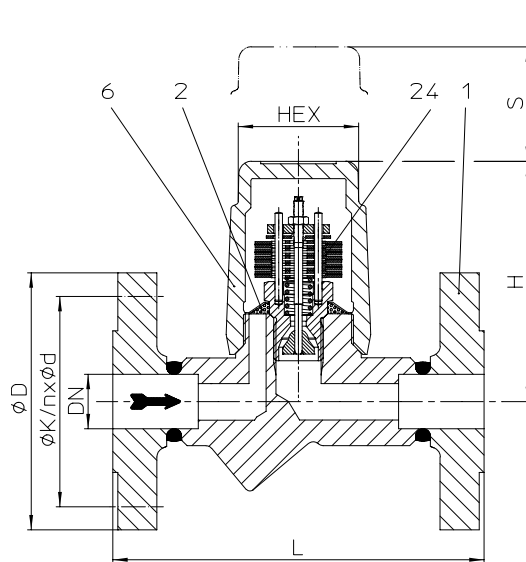
Bimetallic steam trap for low temperature application (cold toughened steel)


Fig. 600....1 with inside strainer

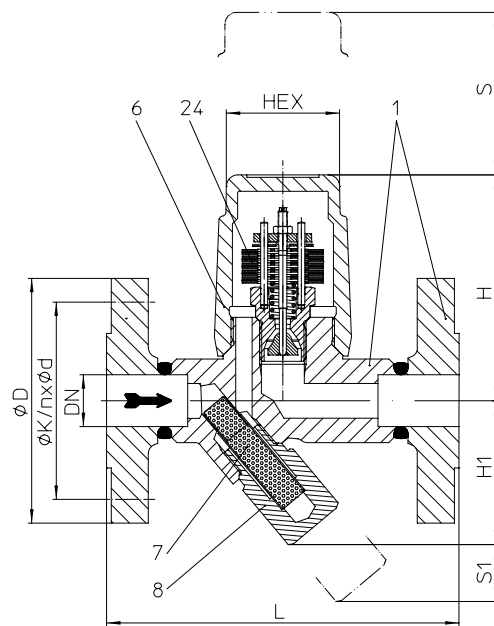


Fig. 601....1 with outside strainer (Y)

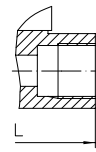


Fig. 600/601....2
with screwed sockets

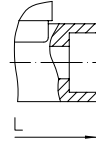


Fig. 600/601....3
with socket weld ends

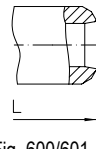


Fig. 600/601....4
with butt weld ends

Figure	Nominal pressure	Material	Nominal diameter / NPS	Operating pressure PS	Inlet temperature TS	allowable differential pressure ΔPMX	for controller
85.600	PN40	1.0571	DN15 - 25 / 1/2" - 1"	32 barg	365 °C	13 bar	R13
85.601 (Y)				28 barg	400 °C	22 bar 32 bar	R22 R32

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

Design pressure PMA						
Figure		Temperature (°C)				
		-50 ¹⁾ to 250	300	350	400	
85.600	(barg)	40	37,3	33,7	28	
85.601 (Y)						

¹⁾ Notch impact test below -50°C on request.

Types of connection	Other types of connection on request.
- Flanges1 _____ acc. to DIN EN 1092-1 - 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 _____ Weld preparation acc. to EN ISO 9692 identification No. 1.3 and 1.5 (Note restriction on operating pressure / inlet temperature depending to design!)	
Features	
- Thermostatic steam trap with non-corrosive and robust water hammer proof bimetallic controller - Automatic air-venting during start up and operation of the plant - Check valve - With inside strainer - Fig. 600 / With outside strainer - Fig. 601 (Y) - Installation in any position, except cover downwards - Subcooling of condensate is continuously adjustable (observe the operation instructions)	
Controller	(chooseable for operating range)
- Controller R13 _____ up to inlet pressure: 13 bar - Controller R22 _____ up to inlet pressure: 22 bar - Controller R32 _____ up to inlet pressure: 32 bar	
Options	(Design refer to page 3)
- Outside strainer with blow down valve (Pos. 46) - Ball valve for blow down (pos. 56) with internal strainer (Observe operating and installation instructions!)	

Types of connection	Flanges			Screw sockets Socket weld ends			Butt weld ends		
DN	15	20	25	15	20	25	15	20	25
NPS	1/2"	3/4"	1"	1/2"	3/4"	1"	1/2"	3/4"	1"

Face-to-face acc. to data sheet resp. customer request										
L	(mm)	150	150	160	95	95	95	250	250	250

Dimensions		Standard-flange dimensions refer to page 7 / Larger nominal diameters refer to page 4.								
H	(mm)	98	98	98	98	98	103	98	98	98
H1	(mm)	62	62	62	62	62	55	62	62	62
S	(mm)	70	70	70	70	70	70	70	70	70
S1	(mm)	30	30	30	30	30	30	30	30	30
HEX	(mm)	50	50	50	50	50	50	50	50	50

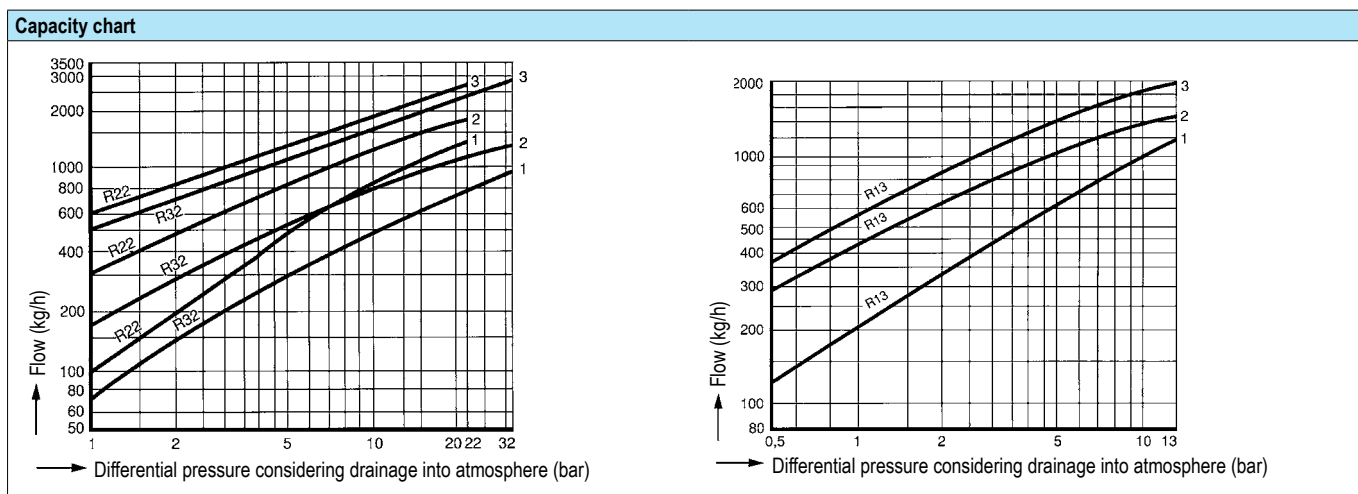
Weights											
Fig. 600 / 601	(approx.)	(kg)	3.2	3.7	4.2	1.7	1.6	2.1	2.2	2.3	2.4

Parts			
Pos.	Sp.p.	Description	Fig. 85.600 / 85.601
1		Body	P355QH1, 1.0571
2	x	Strainer	X5CrNi18-10, 1.4301
6		Cap	P355QH1, 1.0571
7	x	Strainer	X5CrNi18-10, 1.4301
8	x	Strainer plug	X6CrNiTi18-10, 1.4541
24	x	Controller, cpl.	TB 102 / 85 (corrosion resistant bimetal)
46	x	Blow down valve, cpl.	X6CrNiTi18-10, 1.4541
56	x	Ball valve for blow down (G 3/8")	GX5CrNiMo19-11-2, 1.4408
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.



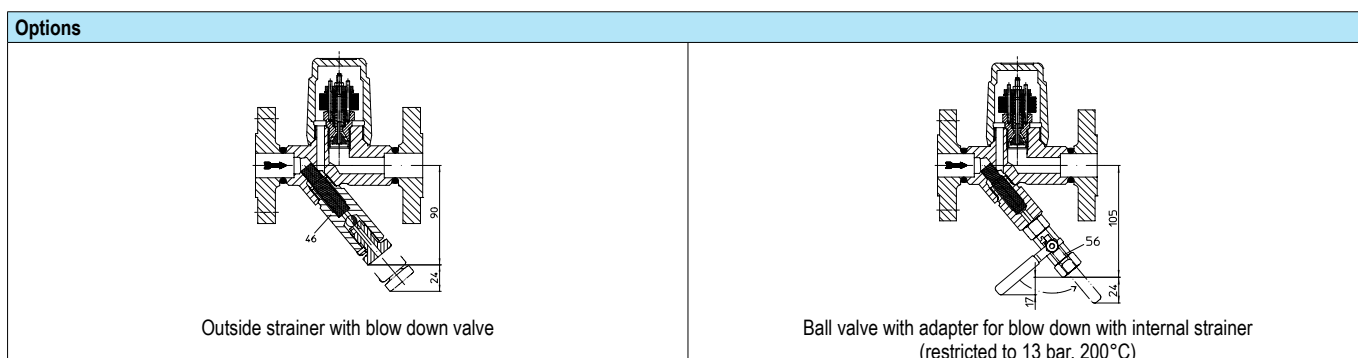
The capacity chart shows the maximum capacity at factory setting.
(Other factory-settings for the sub-cooling on request.)

Curve 1: Maximum flow of hot condensate at approx. 10 K below saturation temperature.

Curve 2: Maximum flow of sub-cooled condensate at approx. 30 K below saturation temperature (with 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 opening of the controller. Capacity is increased with the sub-cooling temperature of the condensate.



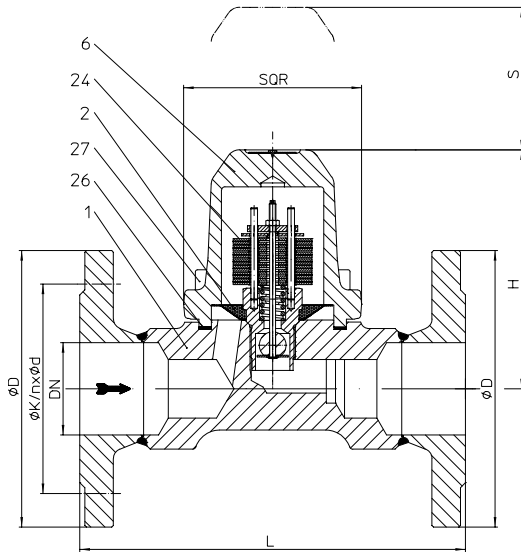
Bimetallic steam trap for low temperature application (cold toughened steel)


Fig. 600....1 with inside strainer

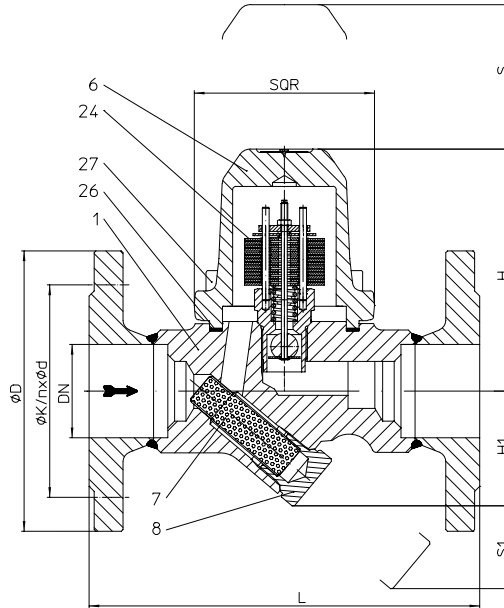


Fig. 601....1 with outside strainer (Y)

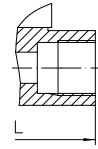


Fig. 600/601....2
with screwed sockets

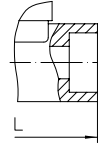


Fig. 600/601....3
with socket weld ends

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

Figure	Nominal pressure	Material	Nominal diameter / NPS	Operating pressure PS	Inlet temperature TS	allowable differential pressure ΔPMX	for controller
85.600	PN40	1.0571	DN40-50 / 1 1/2" - 2"	32 barg	365 °C	13 bar	R13
85.601 (Y)				28 barg	400 °C	22 bar 32 bar	R22 R32

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

Design pressure PMA						
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85.601 (Y)						

¹⁾ Notch impact test below -50°C on request.

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Features	
- Thermostatic steam trap with non-corrosive and robust water hammer proof bimetallic controller - Automatic air-venting during start up and operation of the plant - Check valve - With inside strainer - Fig. 600 / with outside strainer - Fig. 601 (Y) - Installation in any position, except screw cap downwards - Subcooling of condensate is continuously adjustable (observe the operation instructions)	
Controller	(chooseable for operating range)
- Controller R13 _____ up to inlet pressure: 13 bar - Controller R22 _____ up to inlet pressure: 22 bar - Controller R32 _____ up to inlet pressure: 32 bar	
Options	(Design refer to page 5)
- Outside strainer with blow down valve (Pos. 46) - Ball valve for blow down (pos. 56) with internal strainer (Observe operating and installation instructions!)	

Types of connection	Flanges		Screwed sockets Socket weld ends		Butt weld ends	
DN	40	50	40	50	40	50
NPS	1 1/2"	2"	1 1/2"	2"	1 1/2"	2"

Face-to-face acc. to data sheet resp. customer request							
L	(mm)	230	230	130 / 160 ¹⁾	230	250	250

¹⁾ Design with screwed sockets

Dimensions		Standard-flange dimensions refer to page 7					
H	(mm)	144	144	144	144	144	144
H1	(mm)	68	68	68	68	68	68
S	(mm)	90	90	90	90	90	90
S1	(mm)	50	50	50	50	50	50
SQR	(mm)	110	110	110	110	110	110

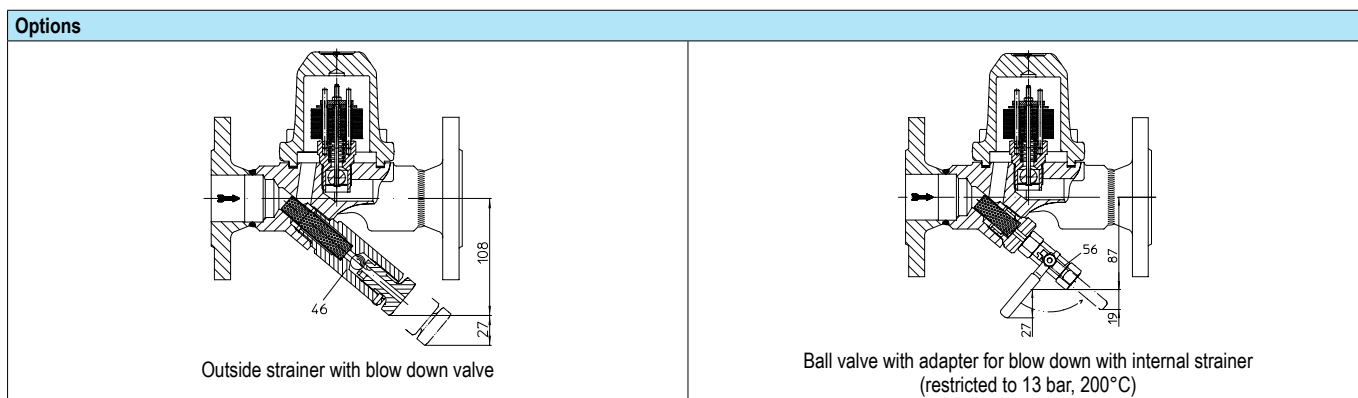
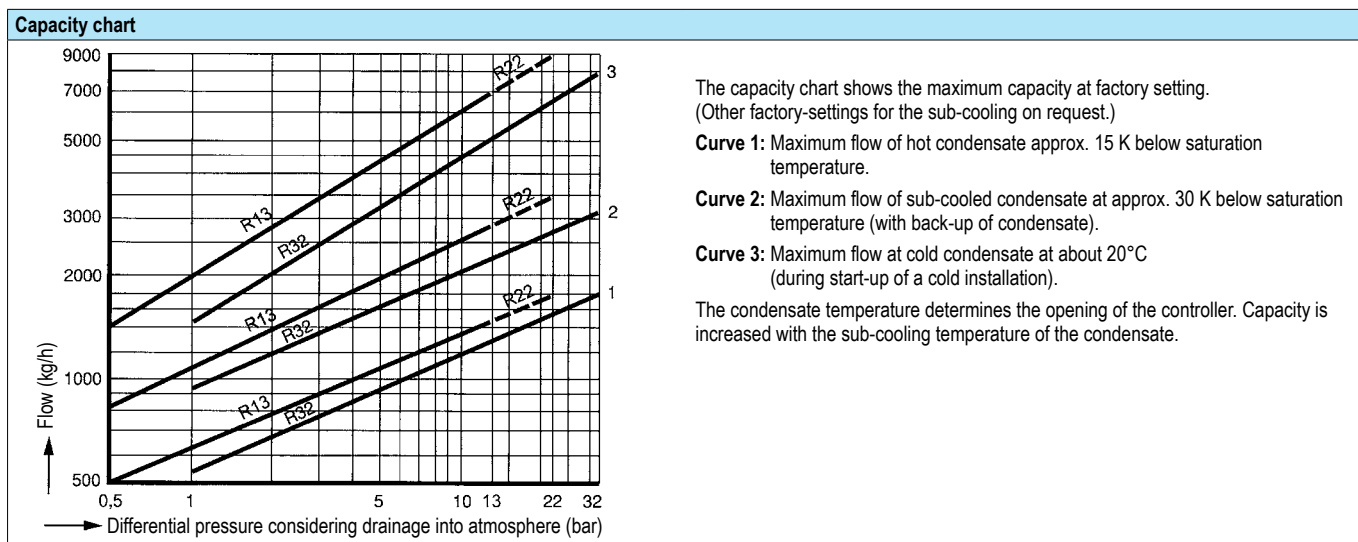
Weights								
Fig. 600 / 601	(approx.)	(kg)	11.3	12.1	8	8	8.9	9.8

Parts			
Pos.	Sp.p.	Description	Fig. 85.600 / 85.601
1		Body	P355QH1, 1.0571
2	x	Strainer	X5CrNi18-10, 1.4301
6		Cap	P355QH1, 1.0571
7	x	Strainer	X5CrNi18-10, 1.4301
8	x	Strainer plug	X6CrNiTi18-10, 1.4541
24	x	Controller, cpl.	TB 102 / 85 (corrosion resistant bimetal)
26	x	Gasket	Graphite (CrNi laminated with graphite)
27		Cheese head screw	25CrMo4, 1.7218
46	x	Blow down valve, cpl.	X6CrNiTi18-10, 1.4541
56	x	Ball valve for blow down (G 3/8")	GX5CrNiMo19-11-2, 1.4408
L Spare parts			

Information / restriction of technical rules need to be observed!

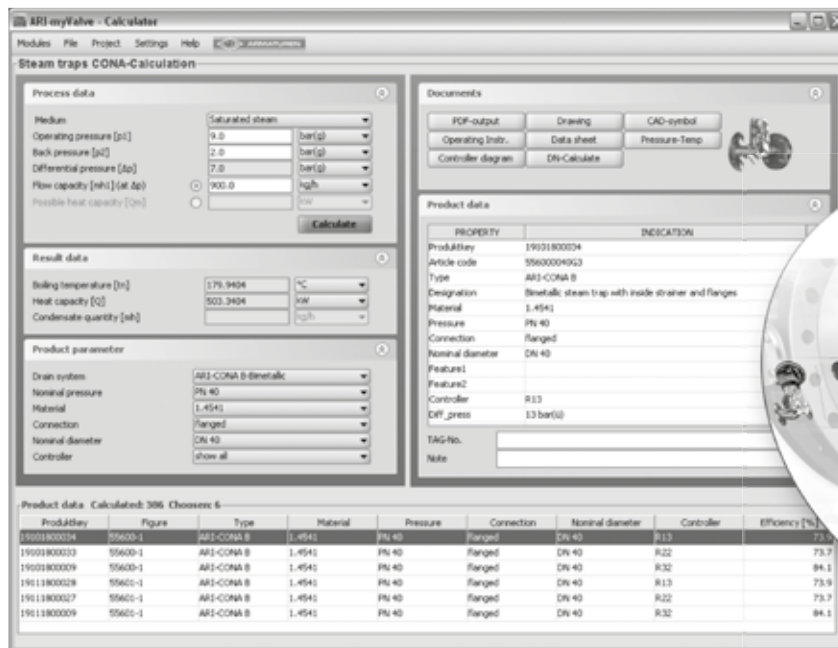
Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).

Operating and installation instructions can be downloaded at www.ari-armaturen.com.



myValve® - Your Valve Sizing-Program.

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



myValve - Valve Sizing-Program

Contents:

Module ARI-Steam trap CONA-Calculation

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

Media:

- Steam (saturated and superheated)
- Compressed air

Special Features

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

System Requirements:

Windows operating systems, Linux, etc.

Informations about pipe welding
Welding groove acc. to DIN 2559

The material used for ARI valves with butt weld ends are: 1.0571 P355QH1 acc. to DIN N 10222-4

Note:

Note restriction on operating pressure / inlet temperature depending to design!

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!

Standard-flange dimensions acc. to DIN EN 1092-1

DN			15	20	25	32	40	50
NPS			1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
PN40	ØD	(mm)	95	105	115	140	150	165
	ØK	(mm)	65	75	85	100	110	125
	n x Ød	(mm)	4 x 14	4 x 14	4 x 14	4 x 18	4 x 18	4 x 18

Selection criteria:

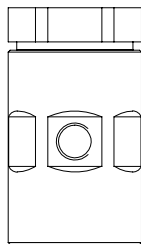
- Steam pressure
- Back pressure
- Quantity of condensate
- Nominal diameter / pressure
- Pipe-connection
- Controller
- Material
- Place of service or kind of steam consumer

Example for order data:

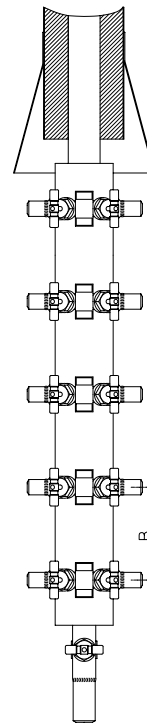
**Bimetallic steam trap CONA® B,
Fig. 600, PN40, DN15, 1.0460, Controller R22, with flanges,
Face-to-face dimension 150 mm**



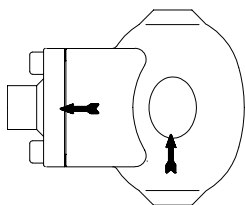
Multifunction tester
Sonaphone



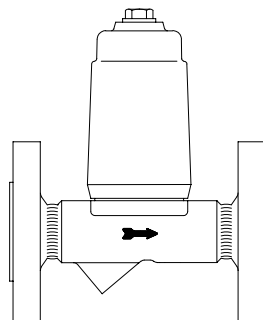
Vacuum breaker
Fig. 655



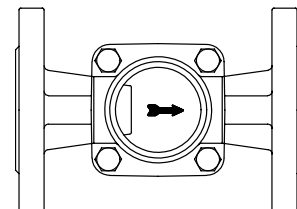
Condensate collection (B = 160), steam distribution (B = 120)
CODI®S with gland packing Fig. 671/672;
CODI®B with bellows seal, maintenance-free Fig. 675/676



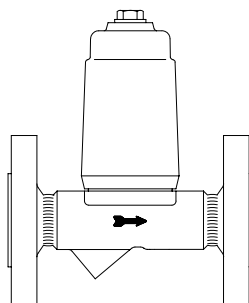
Automatic air vent for liquid systems
Fig. 656



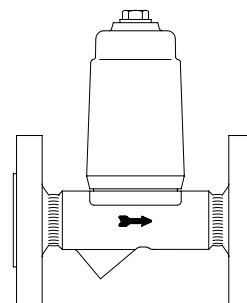
Condensate discharge temperature limiter
Fig. 645/647



Flow indicator
Fig. 660/661



Return temperature limiter
Fig. 650



Liquid drainer
Fig. 665

(Nähere Informationen zum Zubehör: siehe entsprechendes Datenblatt.)