



TK-1



TK-1A

## BIMETALLIC STEAM TRAP

### GENERAL FEATURES

TK-1 Bimetallic Traps is operated by metal strips made of alloys with different coefficients of expansion that are bonded together.

At start-up, the trap is cold and the bimetallic element is relaxed. The valve is wide open. When steam enters the trap, it surrounds and heats the strips, which begin to expand at different rates. The element pulls directly on the valve stem, closing the valve against the pressure differential. As heat radiates from the trap, the strips begin to cool. When the element has cooled sufficiently, it relaxes and opens the valve.

TK-1 Bimetallic Traps, specially manufactured for **SUPER HEATED STEAM** applications. Appropriate isolation valves must be installed to ensure that maintenance and drainage are safe.

#### Installation

TK-1 can be installed both vertically and horizontally to the pipeline.

#### Applications

Trace Line  
Driers  
Press Units  
Steam Jacketed Pipes  
Convactor Heaters  
Heaters  
Steam Collectors  
Condensate Pockets  
Main Steam Line Ends  
Super Heated Steam

#### WORKING CONDITIONS

Max. Pressure	40 bar
Max. Temperature	400 °C
Max. Differential Pressure	32 bar

#### DIMENSIONS

Flanged - Threaded	Socket
DN15-DN50	DN15-DN25

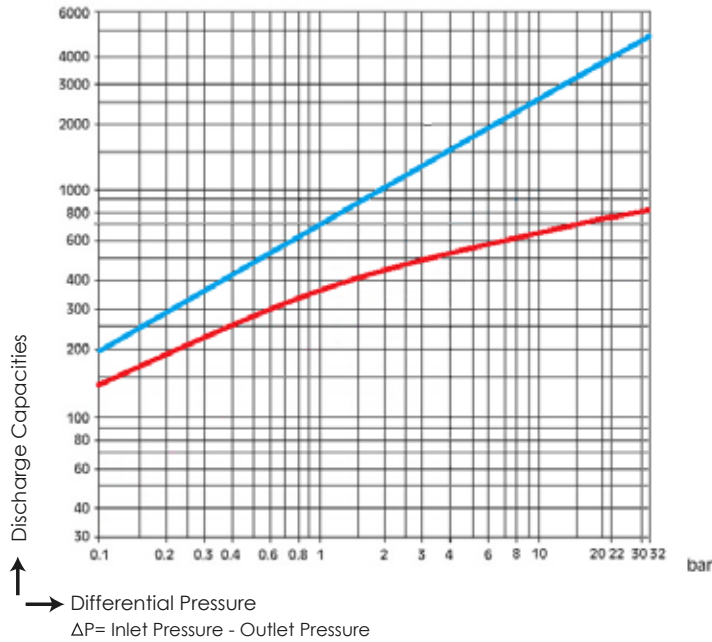
#### CONNECTION TYPE

Threaded	NPT acc. to ANSI B1 20.1 BSP acc. to BS 21
Socket	ANSI B 16.11
Flanged	DIN 2635 (PN 40)

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## THREADED CONNECTION

Discharge Capacities  
(1/2"-1")

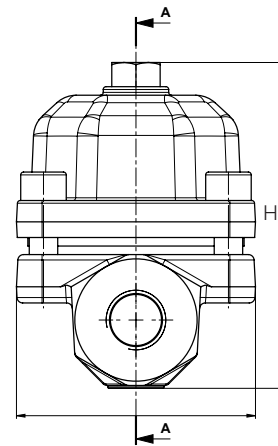
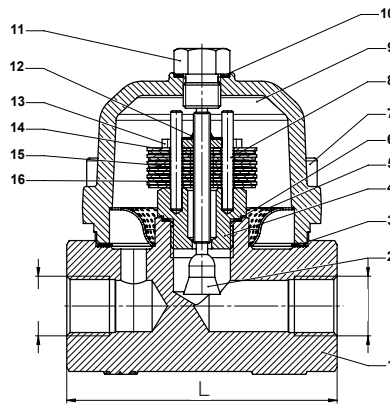
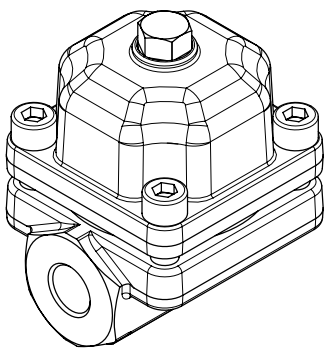


### Red Chart

$\Delta p$  = Condensate Discharge at the temperature which is max 10°C lower than steam saturation temperature.

### Blue Chart

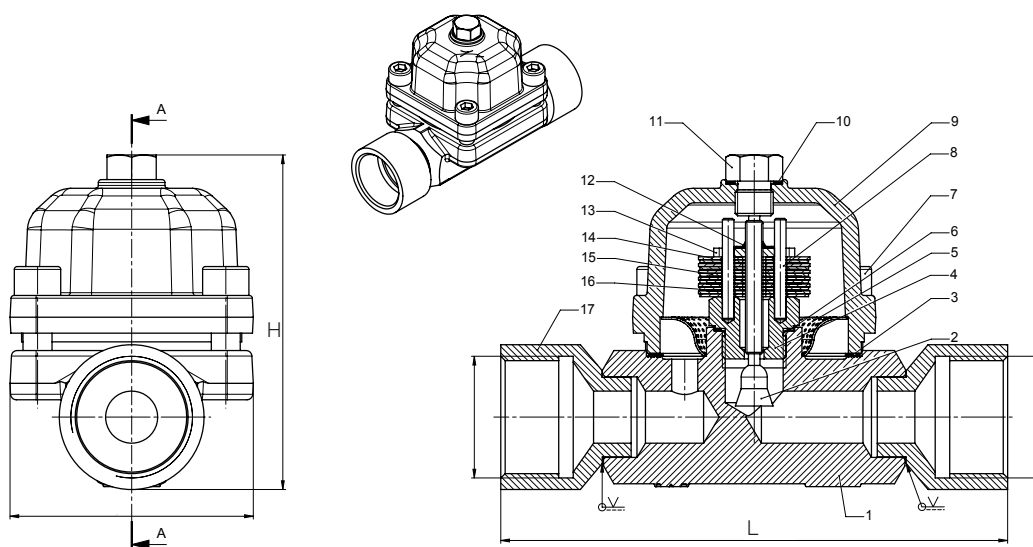
$\Delta p$  = Cold Condensate Discharge at the temperature which is max 20°C lower than steam saturation temperature.



DN(mm)	H	L
15	114,5	95
20	114,5	95
25	114,5	95

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## THREADED CONNECTION

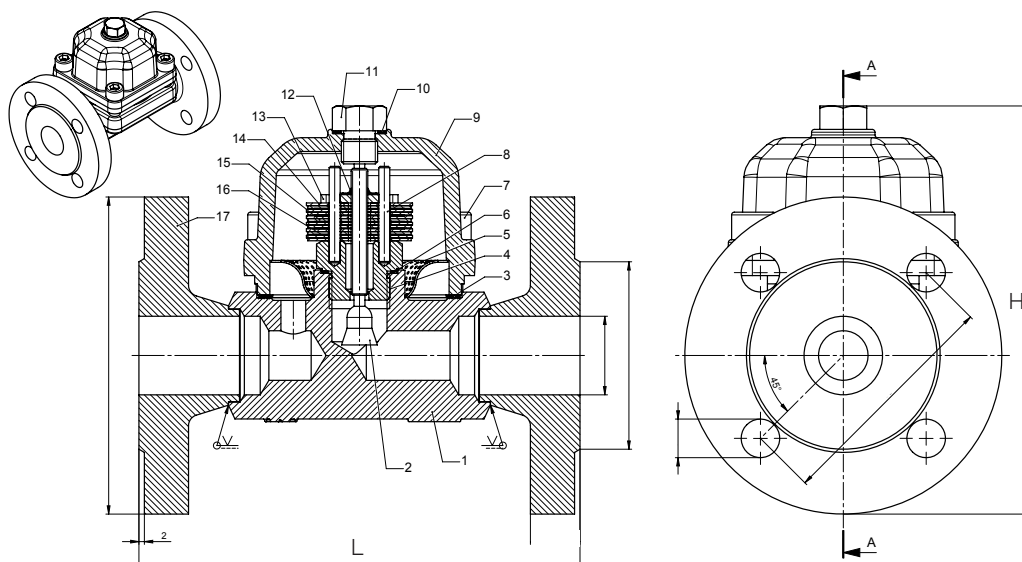


DN(mm)	H	L
32	115,5	175
40	121	185
50	125,5	195,5

PART LIST		
No	Part Name	Material
1	Body	C 22,8
2	Control Unit Seat	AISI 304
3	Gasket	Klingerit
4	Seat	AISI 304
5	Filter	AISI 304
6	Seat Gasket	AISI 304
7	Bolt	8,8
8	Bimetallic Plate Stem	AISI 304
9	Cover	C 22,8
10	Cover Set Gasket	AISI 304
11	Cover Set Stopper	9 SMn 36
12	Gasket Rove	AISI 304
13	Set Bolt Cushion	AISI 304
14	Bimetallic Plate	AISI 304
15	Bimetallic Plate	AISI 304
16	Bimetallic Plate Part	AISI 304
17	Threaded Reduction	9 SMn 36

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## FLANGED CONNECTION

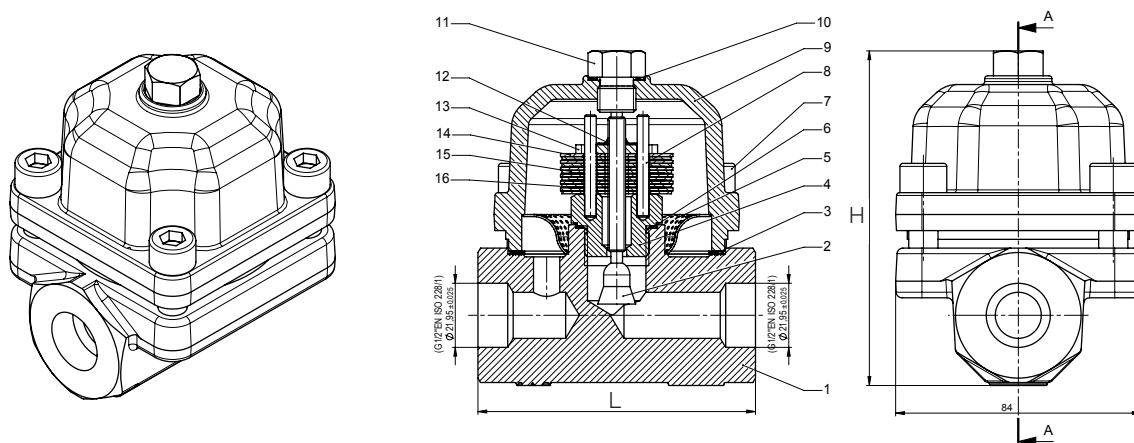


DN (mm)	H	L
15	114,5	138
20	114,5	143
25	114,5	148
32	115,5	160,5
40	121	165,5
50	125,5	173

PART LIST		
No	Part Name	Material
1	Body	C 22,8
2	Control Unit Seat	AISI 304
3	Gasket	Klingerit
4	Seat	AISI 304
5	Filter	AISI 304
6	Seat Gasket	AISI 304
7	Bolt	8,8
8	Bimetallic Plate Stem	AISI 304
9	Cover	C 22,8
10	Cover Set Gasket	AISI 304
11	Cover Set Stopper	9 SMn 36
12	Gasket Rove	AISI 304
13	Set Bolt Cushion	AISI 304
14	Bimetallic Plate	AISI 304
15	Bimetallic Plate	AISI 304
16	Bimetallic Plate Part	AISI 304
17	Flange	C 22,8
18	Adapter	C 1030

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## SOCKET CONNECTION

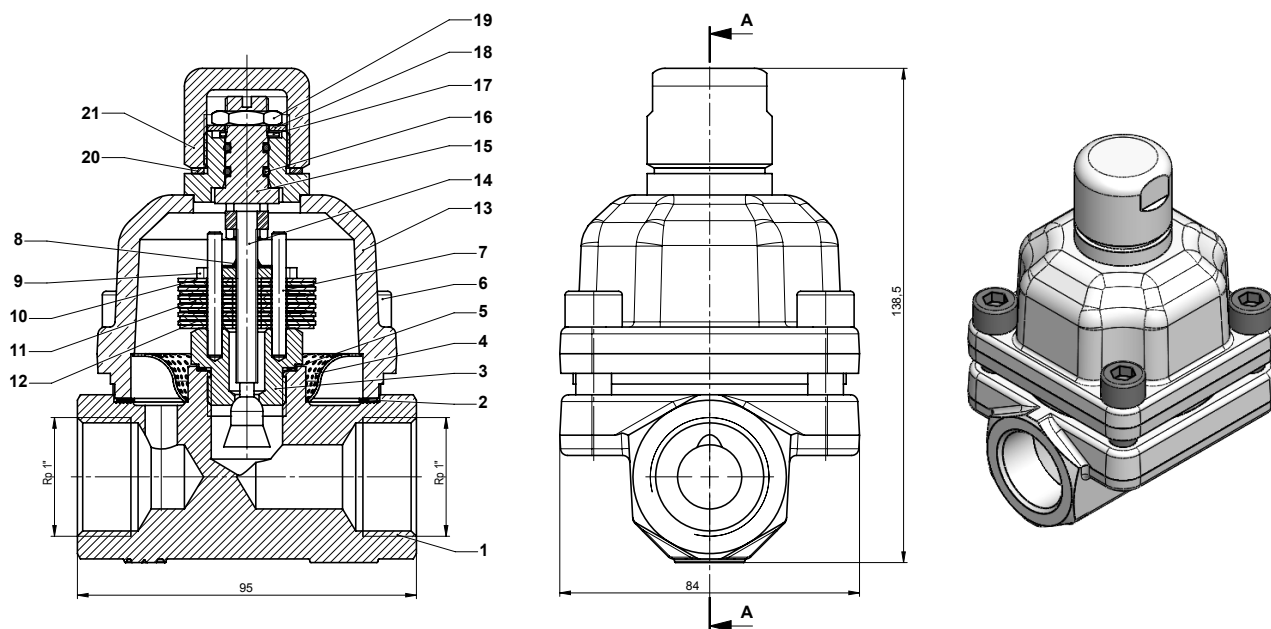


DN(mm)	H	L
15	114,5	95
20	114,5	95
25	114,5	95

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16	Bimetallic Plate Part	AISI 304

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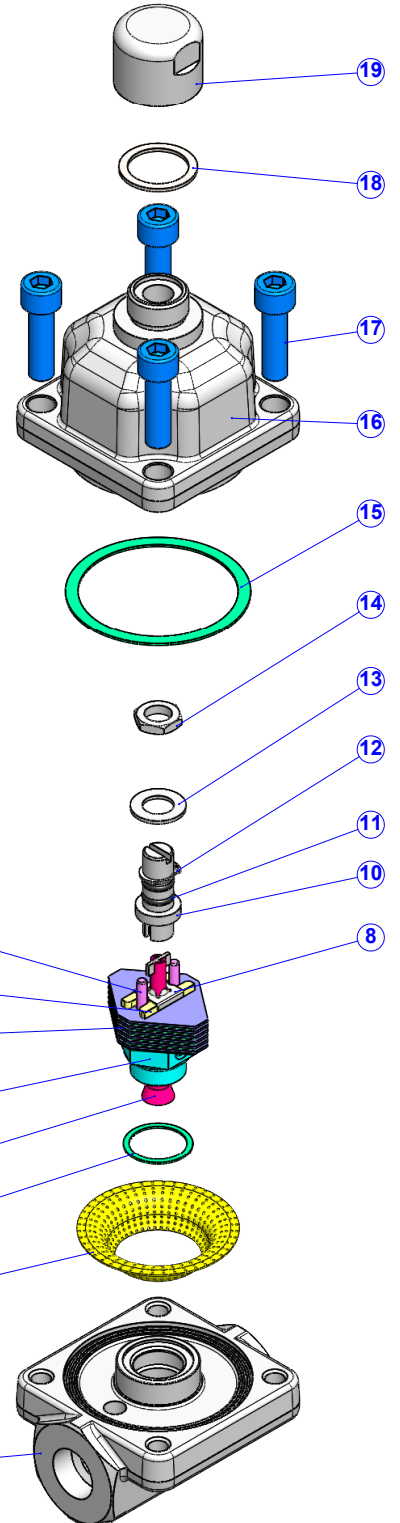
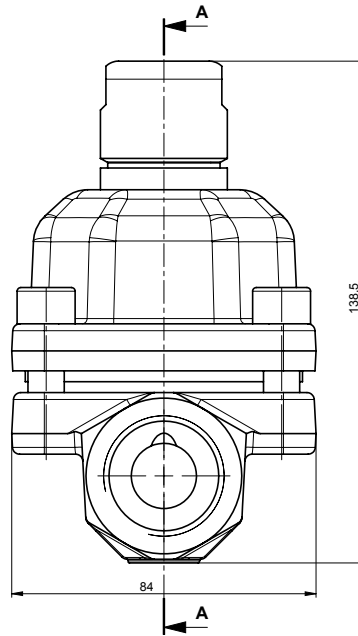
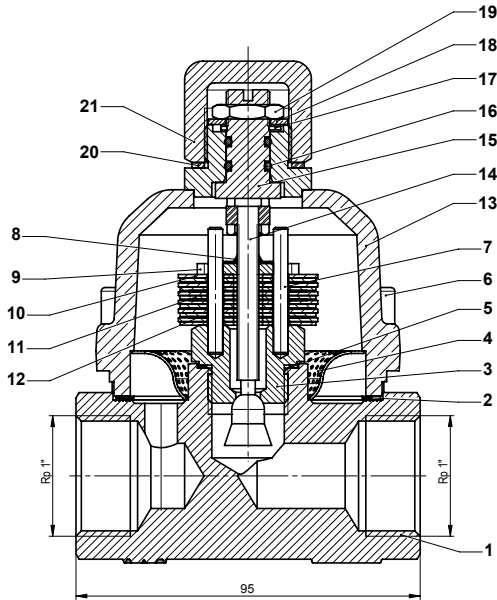
## SOCKET CONNECTION



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1	Body	C 22,8
2	Gasket	Klingerit
3	Seat	AISI 304
4	Filter	AISI 304
5	Seat Gasket	AISI 304
6	Imbus Bolt	8,8
7	Bimetallic Plate Stem	AISI 304
8	Bolt Ring	AISI 304
9	Adjustment Nut Bearing	AISI 304
10	Bimetallic Plate	AISI 304
11	Bimetallic Plate	AISI 304
12	Bimetallic Plate	AISI 304
13	Cover & Seat Welding Connection	
14	Stem & Flap Welding Connection	AISI 304
15	Adjustment Bolt	AISI 304
16	O-ring	Viton
17	Bolt Ring	
18	Ring	1.0482
19	Nut	
20	Gasket	AISI 304
21	Adjustment Handle	1.0482

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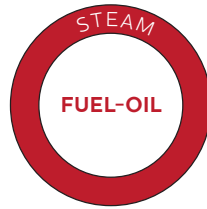
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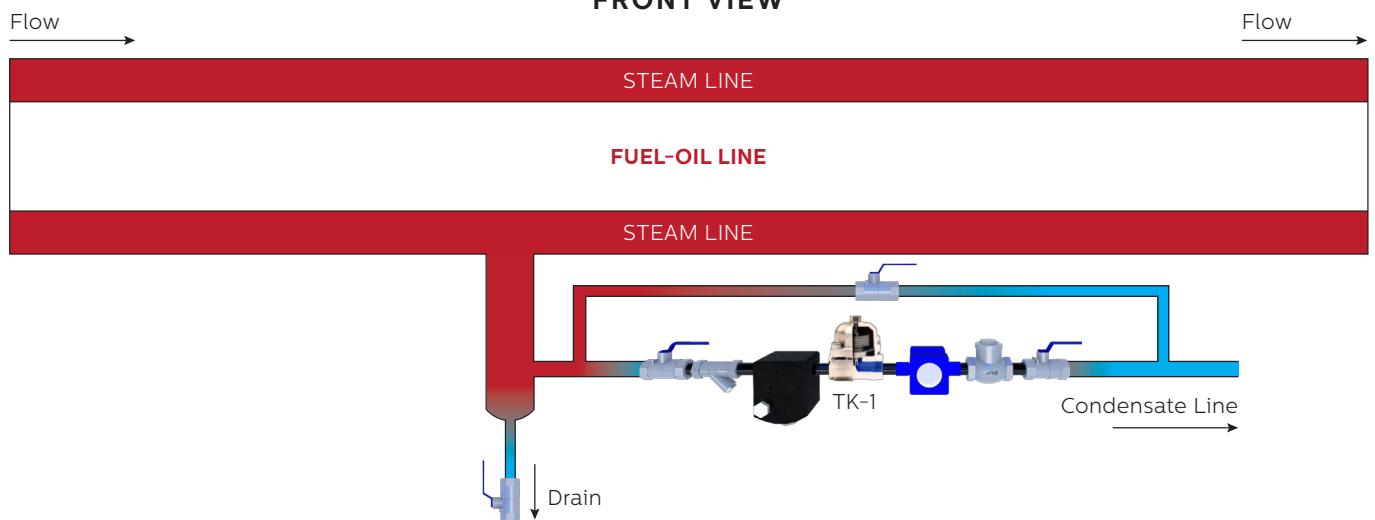
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20	Gasket	AISI 304
21	Adjustment Handle	1.0482

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**SIDE VIEW**



**FRONT VIEW**



The thermal energy of the steam line is utilized to prevent heat loss in the fuel-oil line. Thus, heat loss in the fuel-oil line is prevented. Bimetallic steam trap is used in these lines due to the working principle. To benefit from the energy of the steam, bimetallic plates should be used to open at the lowest point of the saturated steam temperature.





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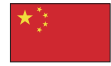
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