Trampa de Vapor Bimetalica BK37 1/2” A 1”

GESTRA Steam Systems

Product Range A1

Steam Traps

BK 37 / BK 37-ASME, PN 63/CL 400, DN 15, 20, 25
BK 28 / BK 28-ASME, PN 100/CL 600, DN 15, 20, 25
BK 29 / BK 29-ASME, PN 160/CL 900, DN 15, 20, 25

BK 37 / BK 37-ASME
BK 28 / BK 28-ASME
BK 29 / BK 29-ASME

Description

Thermostatic/thermodynamic steam trap with corrosion-resistant Thermovit Duo s.s. regulator unaffected by water-hammer. The trap features:

Integral strainer, non-return valve action, asbestos-free cover gasket (graphite/CrNi). Installation in any position.

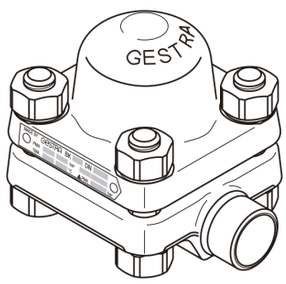
The factory setting enables the steam trap to discharge condensate with virtually no banking-up.

Function

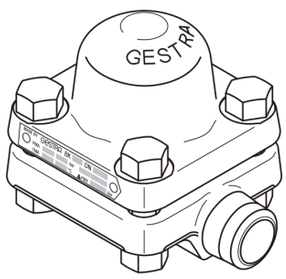
During start-up of the plant the Duo stainless steel plates are flat. The service pressure acts in the opening direction, the valve is completely open. As the condensate temperature rises, the plates deflect, drawing the stage nozzle towards the closed position. As the condensate temperature sinks, the deflection of the Duo stainless steel plates decreases and the steam trap opens at the adjusted opening temperature.

The thermostatic and spring characteristics of the stack of plates are balanced such that condensate is always discharged at a given undercooling temperature.

The trap provides automatic air-venting at start-up and during operation. BK 37..., BK 28... and BK 29... can also be used for thermal air-venting in steam systems.



BK 37, BK 28, BK 29



BK 37-ASME, BK 28-ASME, BK 29-ASME

Pressure/Temperature Ratings & End Connections

BK 37, Flanges PN 63 / 100 to EN 1092-1							
PMA (admissible service pressure)	[bar]g	100	100	85	71	63	50
TMA (admissible service temperature)	[°C]	20	150	265	350	415	500
Δ PMX (admissible differential pressure)	[bar]	45					

Calculated according to DIN EN 12516-2

BK 37, Butt-weld ends to DIN 3239-1, Socket-weld ends to DIN EN 12760							
PMA (admissible service pressure)	[bar]g	100	100	100	85	61	30
TMA (admissible service temperature)	[°C]	20	400	450	470	500	530
Δ PMX (admissible differential pressure)	[bar]	45					

Calculated according to DIN EN 12516-2

BK 28, Flanges PN 100 to EN 1092-1							
PMA (admissible service pressure)	[bar]g	100	100	85	71	63	50
TMA (admissible service temperature)	[°C]	20	150	265	350	415	500
Δ PMX (admissible differential pressure)	[bar]	85					

Calculated according to DIN EN 12516-2

BK 28, Butt-weld ends to DIN 3239-1, Socket-weld ends to DIN EN 12760							
PMA (admissible service pressure)	[bar]g	100	100	100	85	61	30
TMA (admissible service temperature)	[°C]	20	400	450	470	500	530
Δ PMX (admissible differential pressure)	[bar]	85					

Calculated according to DIN EN 12516-2

BK 29, Flanges PN 160 to DIN 2638							
PMA (admissible service pressure)	[bar]g	160	128	121	110	97	55
TMA (admissible service temperature)	[°C]	20	400	450	485	500	530
Δ PMX (admissible differential pressure)	[bar]	110					

Calculated according to DIN EN 12516-2

BK 29, Butt-weld ends to DIN 3239-1, Socket-weld ends to DIN EN 12760							
PMA (admissible service pressure)	[bar]g	160	138	110	100	57	44
TMA (admissible service temperature)	[°C]	20	400	491	500	530	540
Δ PMX (admissible differential pressure)	[bar]	110					

Calculated according to DIN EN 12516-2

P. T. O.

Pressure / Temperature Ratings & End Connections – continued –

BK 37-ASME, Flanges B16.5 Class 400/600, Butt-weld ends B16.25 Sched. 80, Socket-weld ends B16.11 Class 3000							
PMA (admissible service pressure)	[bar]g	103	103	85	73	67	42
TMA (admissible service temperature)	[°C]	20	100	300	400	450	500
PMA (admissible service pressure)	[psi]g	1500	1400	1210	1065	975	745
TMA (admissible service temperature)	[°F]	100	300	600	750	850	900
Δ PMX (admissible differential pressure)	[bar]	45					
	[psi]	652					

Calculated according to ASME B16.34

BK 28-ASME, Flanges B16.5 Class 600, Butt-weld ends B16.25 Sched. 80, Socket-weld ends B16.11 Class 3000							
PMA (admissible service pressure)	[bar]g	103	103	85	73	67	42
TMA (admissible service temperature)	[°C]	20	100	300	400	450	500
PMA (admissible service pressure)	[psi]g	1500	1400	1210	1065	975	745
TMA (admissible service temperature)	[°F]	100	300	600	750	850	900
Δ PMX (admissible differential pressure)	[bar]	85					
	[psi]	1232					

Calculated according to ASME B16.34

BK 29-ASME, Flanges B16.5 Class 900/1500, Butt-weld ends B16.25 Sched. 160, Socket-weld ends B16.11 Class 6000							
PMA (admissible service pressure)	[bar]g	155	128	109	64	45	26
TMA (admissible service temperature)	[°C]	20	300	450	500	530	540
PMA (admissible service pressure)	[psi]g	2250	1815	1460	1120	825	595
TMA (admissible service temperature)	[°F]	100	600	850	900	950	1000
Δ PMX (admissible differential pressure)	[bar]	110					
	[psi]	1595					

Calculated according to ASME B16.34

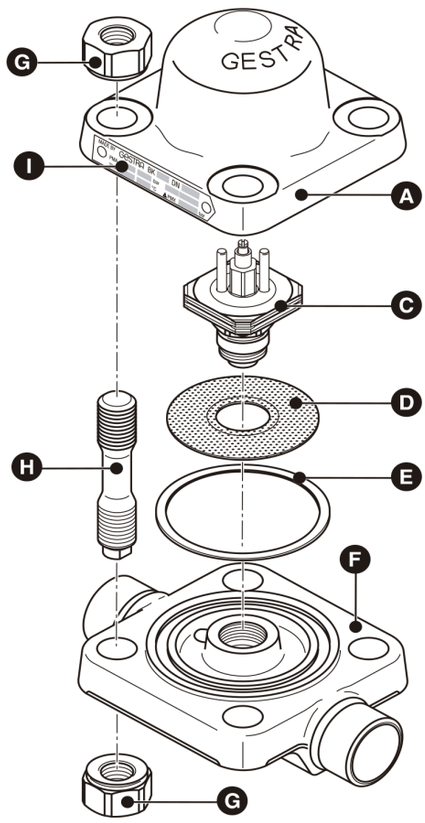
Materials

Type	BK 37	BK 37-ASME
Designation	**DIN / EN**	**ASTM**
Body and cover	1.5415	A182 F12
Expansion bolt	17709	A193 B7
Hexagon nut	1.7709	A194 Gr.4
Gasket	Graphite/CrNi	
Temperature feeler	Corrosion-resistant Duo S.S.	
Nozzle stem and seat	Wear-resistant titanium alloy	
Other internals	Stainless steels	

Type	BK 28	BK 28-ASME
Designation	**DIN / EN**	**ASTM**
Body and cover	1.5415	A182 F12
Expansion bolt	1.7709	A193 B7
Hexagon nut	1.7709	A194 Gr.4
Gasket	Graphite/CrNi	
Temperature feeler	Corrosion-resistant Duo S.S.	
Nozzle stem and seat	Wear-resistant titanium alloy	
Other internals	Stainless steels	

Type	BK 29	BK 29-ASME
Designation	**DIN / EN**	**ASTM**
Body and cover	1.7335	A182 F12
Expansion bolt	1.7709	A193 B7
Hexagon nut	1.7709	A194 Gr.4
Gasket	Graphite/CrNi	
Temperature feeler	Corrosion-resistant Duo S.S.	
Nozzle stem and seat	Wear-resistant titanium alloy	
Other internals	Stainless steels	

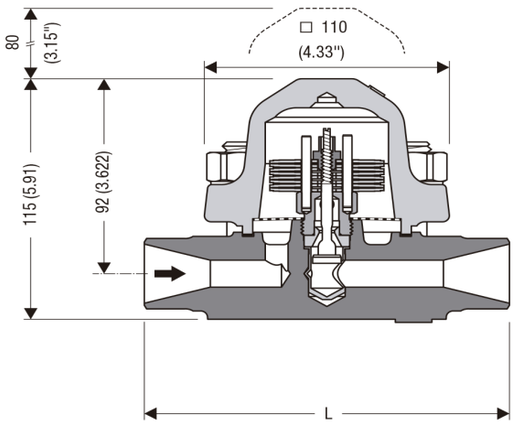
Design BK 37



- A Cover
- C Thermovit regulator BK 37, BK 37-ASME
- D Strainer
- E Gasket
- F Body
- G Hexagon nut (DIN 2520)
- H Expansion bolts (DIN 2520)
- I Name plate

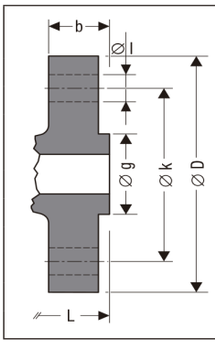
Spare parts list see page 4

Dimensions

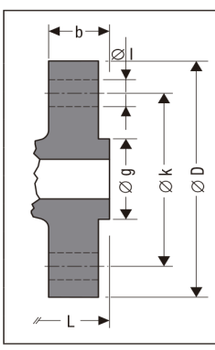


BK 28

End dimensions of flanges (extract)



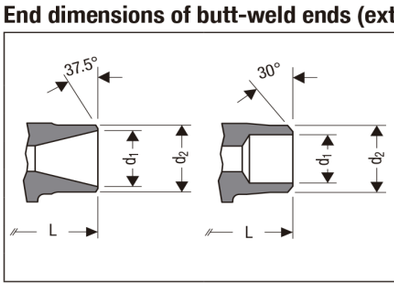
DN	EN 1092-1 PN 63			EN 1092-1 PN 100			DIN 2638 PN 160		
[inch]	1/2	3/4	1	1/2	3/4	1	1/2	3/4	1
[mm]	15	20	25	15	20	25	15	20	25
D	105	130	140	105	130	140	105		140
b	20	22	24	20	22	24	20		24
k	75	90	100	75	90	100	75		100
g	45	55	68	45	55	68	45		68
l	14	18	18	14	18	18	14		18
n	4	4	4	4	4	4	4		4
L	210	230	230	210	230	230	230		230
[kg]	8	9	10	8	9	10	8		10



DN	ASME B 16.5 Class 400/600			ASME B 16.5 Class 600			ASME B 16.5 Class 900/1500		
[inch]	1/2	3/4	1	1/2	3/4	1	1/2	3/4	1
[mm]	15	20	25	15	20	25	15	20	25
D	95	115	125	95	115	125	120	130	150
b	14.3	15.9	17.5	14.3	15.9	17.5	22.3	25.4	28.6
k	66.7	82.6	88.9	66.7	82.6	88.9	82.6	88.9	101.6
g	34.9	42.9	50.8	34.9	42.9	50.8	34.9	42.9	50.8
l	15.9	19.0	19.0	15.9	19.0	19.0	22.2	22.2	25.4
n	4	4	4	4	4	4	4	4	4
L	230	230	230	230	230	230	230	230	230
[kg]	7	9	9	7	9	9	10	11	14

Other designs available on request

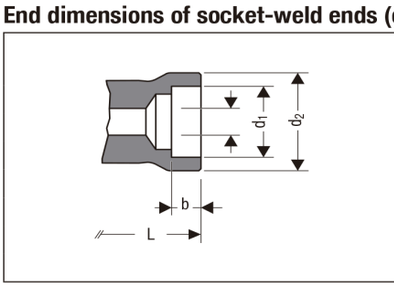
End dimensions of butt-weld ends (extract)



DN	DIN 3239-1 DIN 2559-2			ASME B 16.25 ASME B 36.10		
[inch]	1/2	3/4	1	1/2	3/4	1
[mm]	15	20	25	15	20	25
d_2	22	28	34	22	27	34
d_1	17	21.5	28.5	14	19	24.5
for pipe	21.3 x 2.0	26.9 x 2.6	33.7 x 2.6	21.3 x 3.73	26.7 x 3.91	33.4 x 3.38
L	160	160	160	160	160	160
[kg]	5.1	5.1	5.1	5.1	5.1	5.1

Other designs available on request

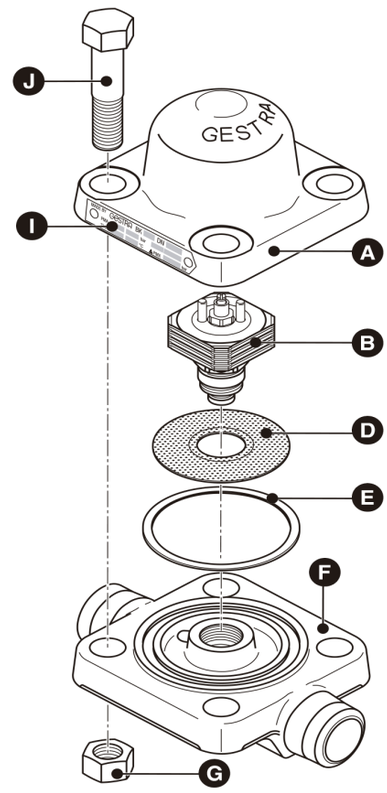
End dimensions of socket-weld ends (extract)



DN	DIN EN 12760, ASME B 16.11 Class 3000		
[inch]	1/2	3/4	1
[mm]	15	20	25
d_2	32	37.5	46
d_1	15	20.2	25.9
b	10	13	13
L	160	160	160
[kg]	5.1	5.1	5.1

Other designs available on request

Design BK 28-ASME, BK 29-ASME



- **A** Cover
- **B** Thermovit regulator
  BK 28, BK 28-ASME, BK 29, BK 29-ASME
- **D** Strainer
- **E** Gasket
- **F** Body
- **G** Hexagon nut
- **I** Name plate
- **J** Bolt

Spare parts list see page 4

Steam Traps

BK 37 / BK 37-ASME
BK 28 / BK 28-ASME
BK 29 / BK 29-ASME

Capacity Chart

The chart shows the maximum capacities for hot and cold condensate discharge at factory setting.

Curve ❶
The steam trap BK 37 discharges the amount of hot condensate with virtually no banking-up.

Curve ❷
The steam traps BK 28 and BK 29 discharge the amount of hot condensate with virtually no banking-up.

Curve ❸
Discharge capacity of cold condensate (20 °C) of steam traps BK 37, BK 28 and BK 29.

When ordering please state:

Material of trap, material of screws/bolts, steam pressure/temperature, back pressure, quantity of condensate to be discharged, size, design, end connection, position of the trap, and details of application.

The following test certificates can be issued on request, at extra cost:

In accordance with EN 10204-2.1, -2.2, - 3.1 and -3.2.

All inspection requirements have to be stated with the order. After supply of the equipment certification cannot be established. For tests and inspections charges please consult us.

PED (Pressure Equipment Directive)

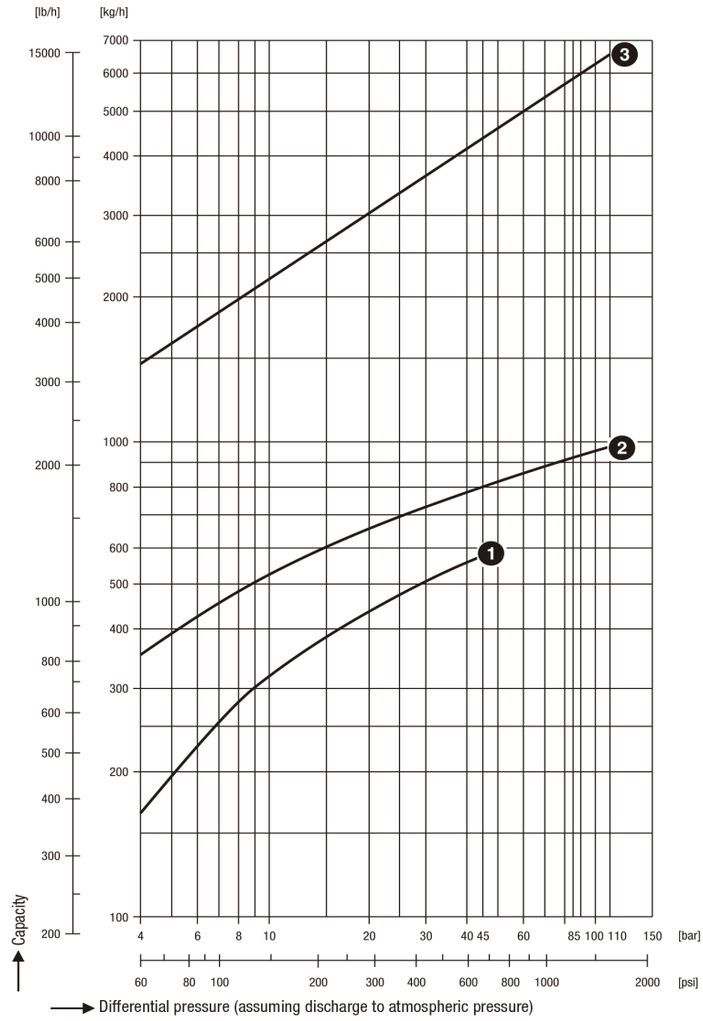
The equipment fulfills the requirements of the Pressure Equipment Directive PED 97/23/EC. For applications with fluids of group 2. Without CE marking (equipment according to section 3.3).

ATEX (Atmosphère Explosible)

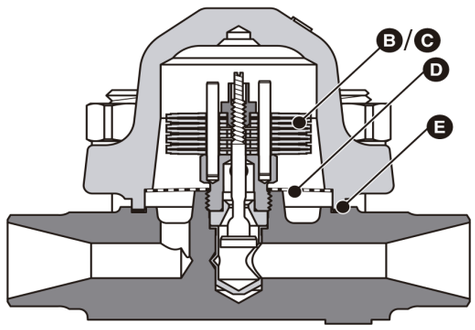
The equipment does not have its own potential source of ignition and is therefore not subject to the ATEX Directive 94/9/EC. The equipment can be used in potentially explosive areas 0, 1, 2, 20, 21, 22 (1999/92/EC). The equipment is not Ex marked.

Supply in accordance with our general terms of business.

Capacity Chart



Spare parts



Item	Designation	Stock code
❶	Thermovit regulator for BK 28..., BK 29..., cpl. including gasket ❺	370281
❷	Thermovit regulator for BK 37, cpl. including gasket ❺	377722
❸	Strainer	096701
❺	Gasket graphite/CrNi	372095