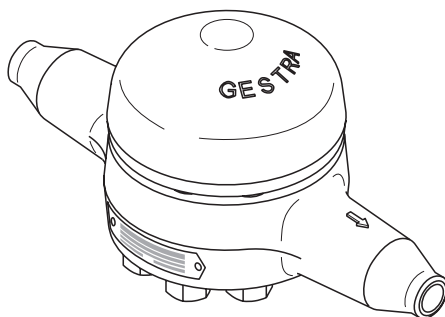


BK 212..



BK 212-ASME

## Duo Steam Trap

### **BK 212, BK 212-S, BK 212-F91, BK 212-F91-SD, BK 212-F92-SD, BK 212-ASME** DN 15, 20, 25

#### Description

Thermostatic/thermodynamic steam trap with corrosion resistant Thermovit®- regulator (S. S. bimetallic plates) able to withstand waterhammer. With internal strainer and integral non-return valve action. Asbestos-free body gasket (graphite/CrNi). Installation in any position.

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

#### Function

During start-up of the plant the bimetallic (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 bimetallic 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 steam trap provides automatic air-venting at start-up and during operation of the plant. BK 212 can also be used for thermal air-venting in steam systems.

#### Pressure & temperature ratings

<b>BK 212, body/cover: 1.7383, screws: 1.7709</b>							
PMA (max. allowable pressure)	[bar]g	630	630	543	447	306	261
TMA (max. allowable temperature)	[°C]	20	300	480	500	530	540
Maximum differential pressure $\Delta$ PMX	[bar]	275					

Calculated in accordance with DIN EN 12516-2

<b>BK 212-S, body/cover: 1.7383, screws: 1.4923</b>							
PMA (max. allowable pressure)	[bar]g	630	630	333	289	252	163
TMA (max. allowable temperature)	[°C]	20	450	530	540	550	580
Maximum differential pressure $\Delta$ PMX	[bar]	275					

Calculated in accordance with DIN EN 12516-2

<b>BK 212-F91, body/cover: 1.4903/F91, screws: 1.4923</b>							
PMA (max. allowable pressure)	[bar]g	775	775	741	607	381	205
TMA (max. allowable temperature)	[°C]	20	425	450	500	540	580
Maximum differential pressure $\Delta$ PMX	[bar]	275					

Calculated in accordance with DIN EN 12516-2

<b>BK 212-F91-SD, body/cover: 1.4903/F91, screws: 2.4952</b>							
PMA (max. allowable pressure)	[bar]g	775	775	615	473	348	255
TMA (max. allowable temperature)	[°C]	20	525	550	575	600	625
Maximum differential pressure $\Delta$ PMX	[bar]	275					

Calculated in accordance with DIN EN 12516-2

<b>BK 212-F92-SD, body/cover: 1.4901, screws: 2.4952</b>							
PMA (max. allowable pressure)	[bar]g	800	800	693	418	300	207
TMA (max. allowable temperature)	[°C]	20	500	550	600	625	650
Maximum differential pressure $\Delta$ PMX	[bar]	275					

Calculated in accordance with DIN EN 12516-2

<b>BK 212-ASME, body/cover: ASTM A182 F22, screws: A193 B16 (standard)</b>							
PMA (max. allowable pressure)	[bar]g	430	304	235	170	130	81
TMA (max. allowable temperature)	[°C]	20	400	500	530	550	580
PMA (max. allowable pressure)	[psi]g	6250	4430	3220	2230	1455	915
TMA (max. allowable temperature)	[°F]	100	750	950	1000	1050	1100
$\Delta$ PMX (admissible differential pressure)	[bar]	275					
	[psi]	3625					

Calculated in accordance with ASME B16.34

**Attention:** The selected end connections may reduce the pressure/temperature ratings.

## Materials

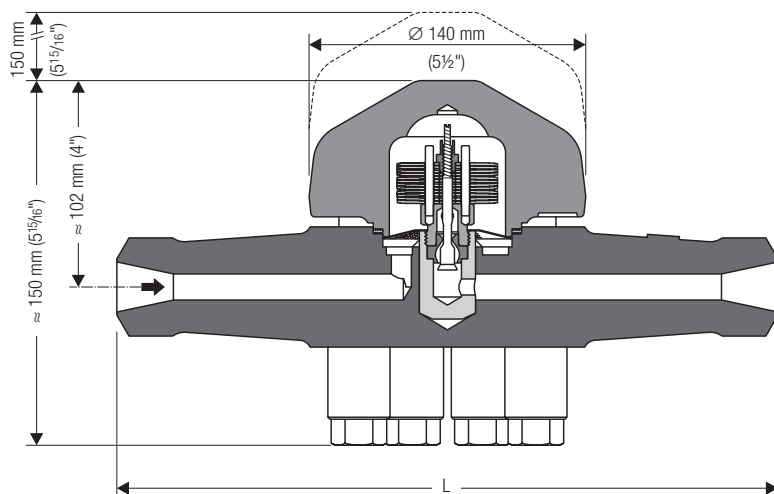
Type	BK 212	BK 212-S
Designation	DIN / EN	DIN / EN
Body and cover	1.7383	
Expansion bolt and cap nut	1.7709	1.4923
Thermovit® regulator	Corrosion resistant Duo S. S.	
Nozzle stem and seat	Wear-resistant titanium alloy	
Other internals	High grade steels	

Type	BK 212-F91	BK 212-F91-SD
Designation	DIN / EN	DIN / EN
Body and cover	1.4903	
Expansion bolt and cap nut	1.4923	2.4952
Thermovit® regulator	Corrosion resistant Duo S. S.	
Nozzle stem and seat	Wear-resistant titanium alloy	
Other internals	High grade steels	

Type	BK 212-F92-SD	
Designation	DIN / EN	
Body and cover	1.4901	
Expansion bolt and cap nut	2.4952	
Thermovit® regulator	Corrosion resistant Duo S. S.	
Nozzle stem and seat	Wear-resistant titanium alloy	
Other internals	High grade steels	

Type	BK 212-ASME	
Designation	ASTM	
Body and cover	ASTM A182 F22	
Set screw with collar	A193 B16	
Thermovit® regulator	Corrosion resistant Duo S. S.	
Nozzle stem and seat	Wear-resistant titanium alloy	
Other internals	High grade steels	

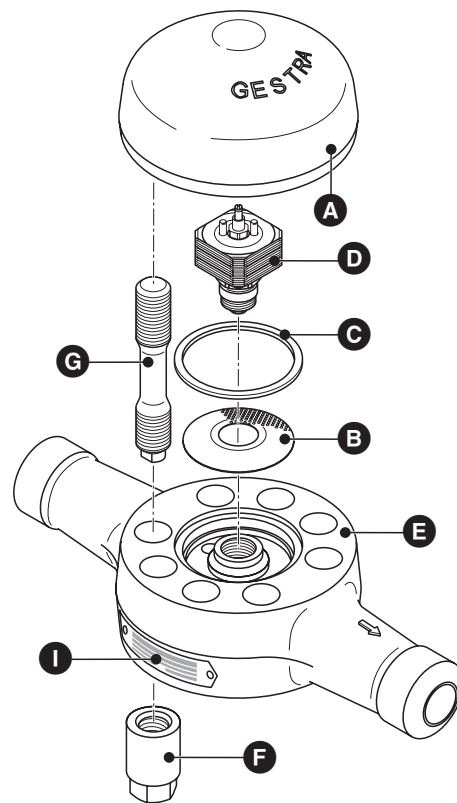
## Dimensions



BK 212 with butt-weld ends

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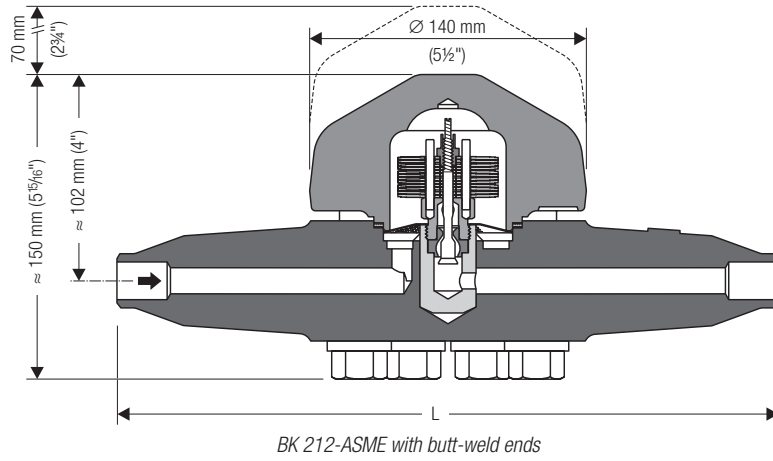
## Design BK 212, BK 212-F91



- A** Cover
- B** Strainer
- C** Gasket
- D** Thermovit® regulator
- E** Body
- F** Cap nut
- G** Expansion bolt with reduced shank to DIN 2510
- I** Name plate

Spare parts list see page 4

**Dimensions – continued –**



**Weights and dimensions for traps with butt-weld ends**

Type		Butt-weld ends			EN 12627 EN ISO 9692			ASME B 16.25 ASME B 36.10		
		DN	15	20	25	15	20	25		
BK 212../BK 212-ASME	DN	1/2	3/4	1"	1/2	3/4	1"			
	for pipe	33.7 x 8.0	26.9 x 5.0	48.3 x 12.5	21.3 x 7.5	26.7 x 7.8	33.4 x 9.1			
	L [mm]	330.0	330.0	330.0	330.0	330.0	330.0			
	[kg]	16.0	16.0	16.0	16.0	16.0	16.0			

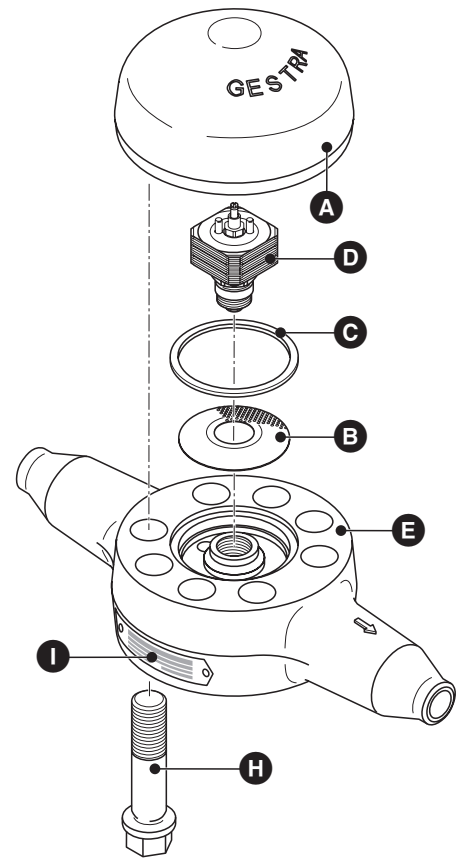
Butt-weld ends for other pipe sizes available on request.

**Weights and dimensions for traps with socket-weld ends**

Type		Socket-weld ends			EN 12760 ASME B 16.11		
		DN	15	20	25		
BK 212../BK 212-ASME Class 9000	DN	1/2	3/4	1"			
	L [mm]	330.0	330.0	330.0			
	[kg]	16.0	16.0	16.0			

Weights and dimensions for traps with flanged ends on request.

**Design BK 212-ASME**



- A** Cover
- B** Strainer
- C** Gasket
- D** Thermovit® regulator
- E** Body
- H** Set screws with collar
- I** Name plate

Spare parts list see page 4

## Duo Steam Trap

**BK 212, BK 212-S, BK 212-F91,  
BK 212-F91-SD, BK 212-F92-SD,  
BK 212-ASME  
DN 15, 20, 25**

### Capacity Chart

The chart shows the capacities for hot and cold condensate.

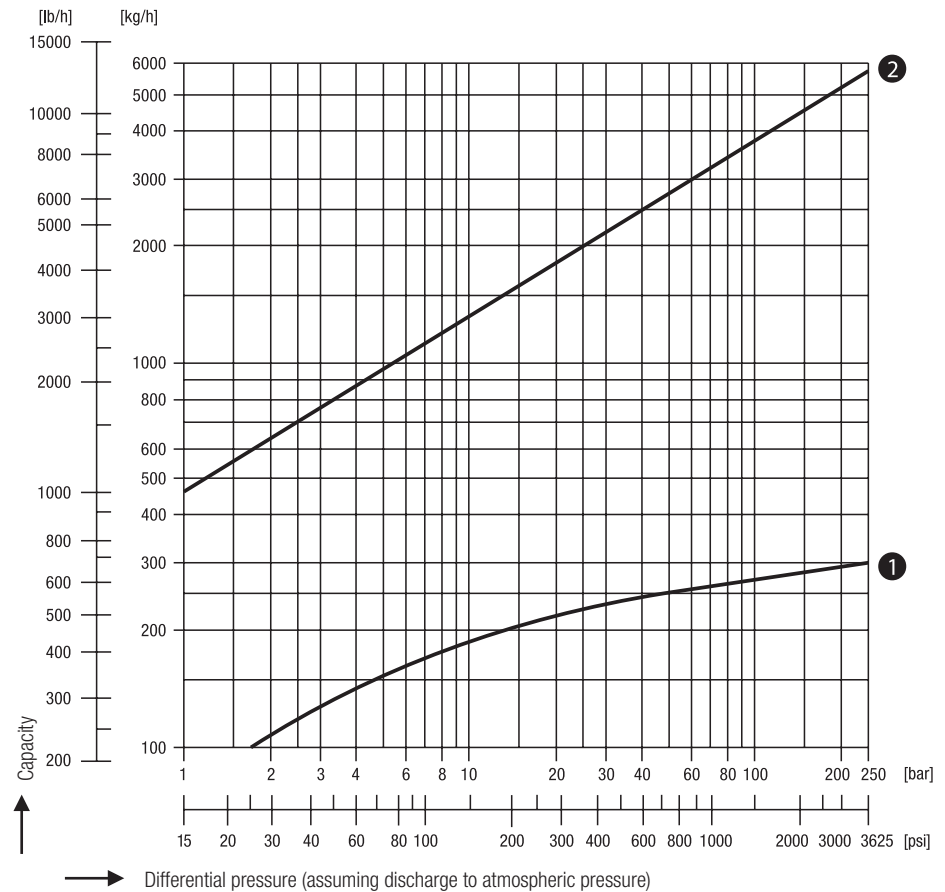
#### Curve ①

This curve indicates the max. capacity of hot condensate that the steam trap BK 212 can discharge with virtually no banking up.

#### Curve ②

Discharge capacity of the BK 212 for cold condensate (20 °C).

### Capacity Chart



### When ordering please state:

Sizing parameters (temperature, pressure), operating parameters (temperature, pressure), reference standard (DIN, EN, ASME etc.), materials, backpressure, condensate flowrate, design, end connection (e. g. pipe diameter), connection size, place of installation or type of steam consumer.

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. Charges and extent of the above mentioned certificates as well as the different tests confirmed therein are listed in our price list "Test and Inspection Charges for Standard Equipment". For other tests and inspections than those listed above, please consult us.

### Application of European Directives

#### Pressure Equipment Directive (PED)

The equipment conforms to this directive and can be used for the following media:

- Fluids of group 2

#### ATEX Directive

The equipment does not have its own potential ignition source and is not subject to this directive.

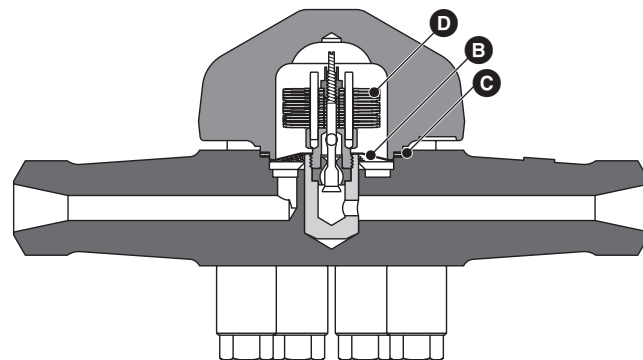
When installed, static electricity may arise between the equipment and the connected system.

When used in potentially explosive atmospheres, the plant manufacturer or plant operator is responsible for discharging or preventing possible static charge.

If it is possible for medium to escape, e.g. through actuating mechanisms or leaks in threaded joints, the plant manufacturer or plant operator must take this into consideration when dividing the area into zones.

Supply in accordance with our general terms of business.

### Spare Parts



Item	Designation	Stock code #	
		BK 212, BK 212-S, BK 212-F91, BK 212-ASME	BK 212-F91-SD, BK 212-F92-SD
① ②	Thermovit® regulator, complete, including gasket	371862	451327
③	Gasket (graphite/CrNi)	451404	451550
④ ⑤	Strainer	451428	451551

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