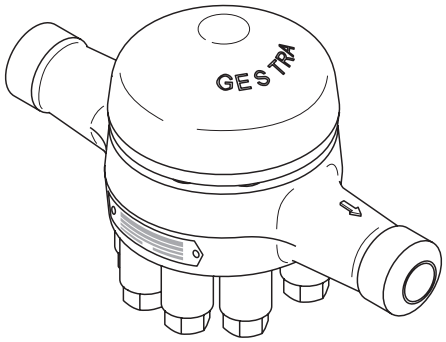
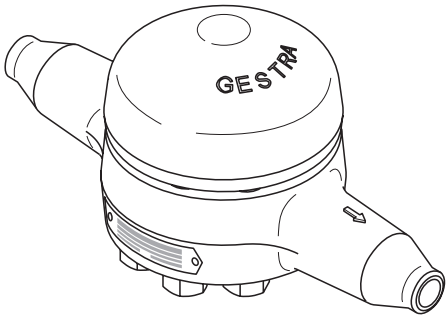


BK 212 ..



BK 212-ASME

Duo Steam Trap
BK 212, BK 212-S, BK 212-F91, BK 212-F91-S, BK 212-1.4901, 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

BK 212, body/cover: 1,7383, screws: 1.7709							
PMA (max. allowable pressure)	[bar]g	630	630	543	447	306	261
TMA (max. allowable temperature)	[°C]	20	300	480	500	530	540
Maxiumum differential pressure Δ PMX	[bar]	275					

Calculated in accordance with DIN EN 12516-2

BK 212-S, body/cover: 1,7383, screws: 1.4923							
PMA (max. allowable pressure)	[bar]g	630	630	333	289	252	163
TMA (max. allowable temperature)	[°C]	20	450	530	540	550	580
Maxiumum differential pressure Δ PMX	[bar]	275					

Calculated in accordance with DIN EN 12516-2

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

Calculated in accordance with DIN EN 12516-2

BK 212-F91-S, body/cover: 1.4903/F91, screws: 1.4980							
PMA (max. allowable pressure)	[bar]g	775	775	615	473	348	255
TMA (max. allowable temperature)	[°C]	20	525	550	575	600	625
Maxiumum differential pressure Δ PMX	[bar]	275					

Calculated in accordance with DIN EN 12516-2

BK 212-1.4901, body/cover: 1.4901, screws: 1.4980							
PMA (max. allowable pressure)	[bar]g	800	800	693	418	300	207
TMA (max. allowable temperature)	[°C]	20	500	550	600	625	650
Maxiumum differential pressure Δ PMX	[bar]	275					

Calculated in accordance with DIN EN 12516-2

BK 212-ASME, body/cover: ASTM A182 F22, screws: A193 B16 (standard)							
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
Δ 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

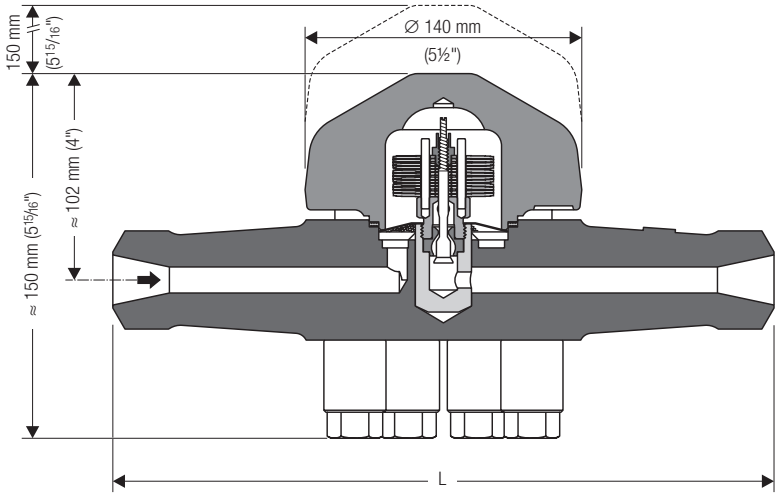
Type	BK 212	BK 212-S
Designation	**DIN / EN**	**DIN / EN**
Body and cover	1.7383	
Expansion bolt and cap nut	1.7709	1.4923
Thermovit® regulator	Corrosion resistant Duo S. S.	
Nozzle stem and seat	Wear-resistant titanium alloy	
Other internals	High grade steels	

Type	BK 212-F91	BK 212-F91-S
Designation	**DIN / EN**	**DIN / EN**
Body and cover	1.4903	
Expansion bolt and cap nut	1.4923	1.4980
Thermovit® regulator	Corrosion resistant Duo S. S.	
Nozzle stem and seat	Wear-resistant titanium alloy	
Other internals	High grade steels	

Type	BK 212-1.4901	
Designation	**DIN / EN**	
Body and cover	1.4901	
Expansion bolt and cap nut	1.4980	
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	

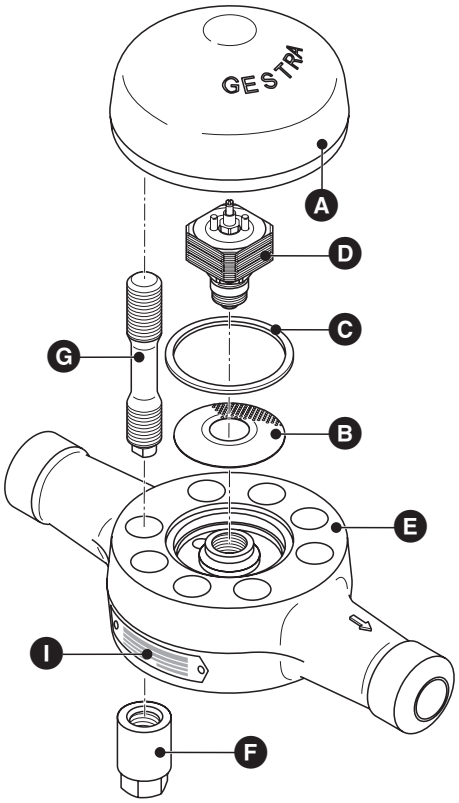
Dimensions



BK 212 with butt-weld ends

– continued on page 3 –

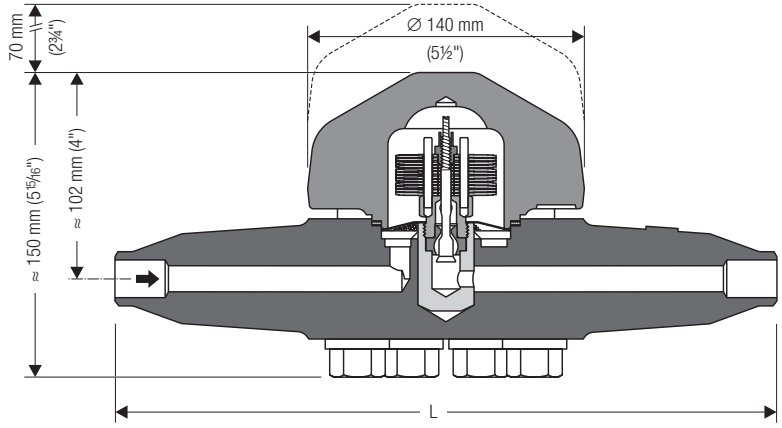
Design BK 212, BK 212-F91



- **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 –



BK 212-ASME with butt-weld ends

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		
BK 212../BK 212-ASME	DN	15	20	25	15	20	25
		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/h]	16.0	16.0	16.0	16.0	16.0	16.0

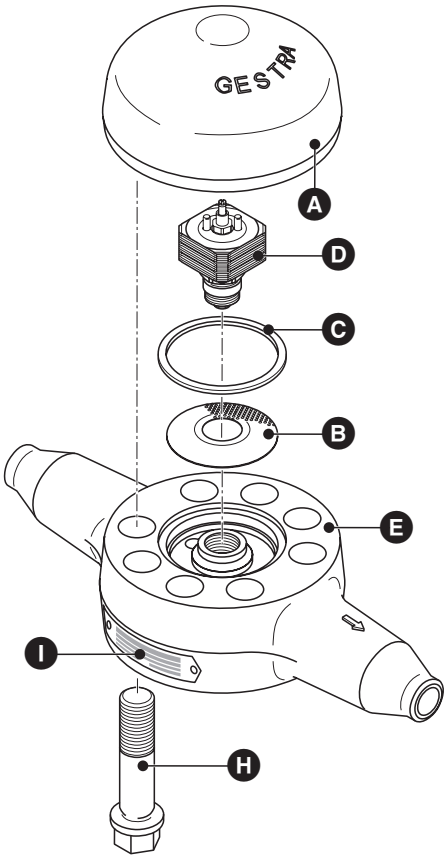
Butt-weld ends for other pipe sizes available on request.

Weights and dimensions for traps with socket-weld ends

Type / Socket-weld ends		EN 12760 ASME B 16.11		
BK 212../BK 212-ASME Class 9000	DN	15	20	25
		1/2	3/4	1"
	L [mm]	330.0	330.0	330.0
	[kg/h]	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-S, BK 212-1.4901, BK 212-ASME DN 15, 20, 25

Capacity Chart

The chart shows the capacities for hot and cold condensate.

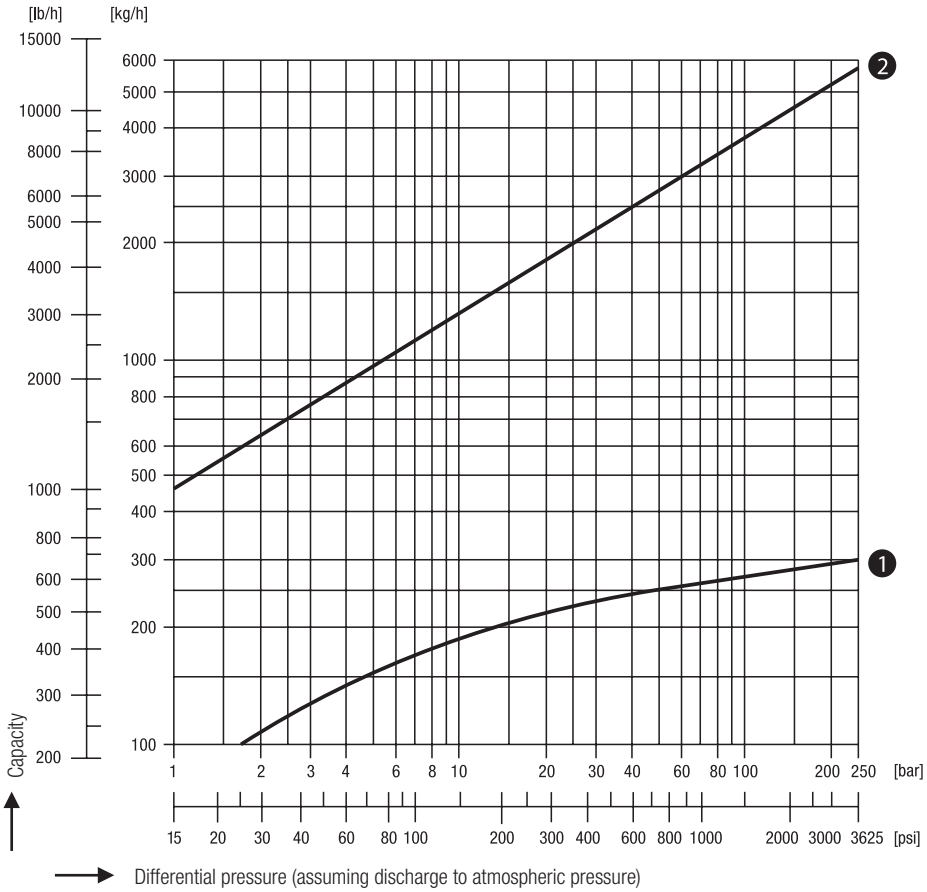
Curve ❶

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

Curve ❷

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.

PED (Pressure Equipment Directive)

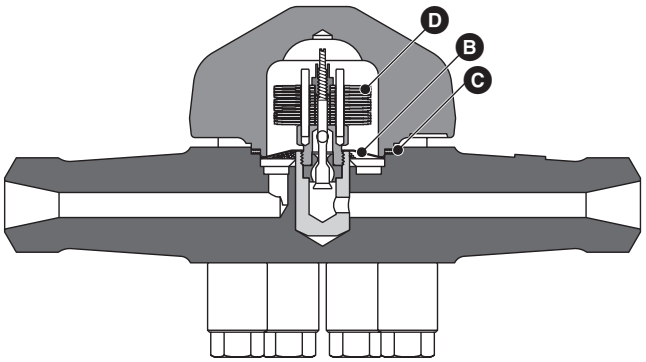
The equipment fulfills the requirements of the Pressure Equipment Directive PED 97/23/EC. For use with fluids of group 2. The equipment is excluded from the scope of the PED according to Article 3.3 and must not bear a CE marking.

ATEX (Atmosphère Explosible)

The equipment does not have ist own potential source of ignition and is therefore not subject to the ATEX Directive 94/9/EC.
Applicable in Ex zones 0, 1, 2, 20, 21, 22 (1999/92/EC). The equipment does not bear an Ex marking.

Supply in accordance with our general terms of business.

Spare Parts



Item	Designation	Stock code #
❸ ❹	Thermovit® regulator, complete, including gasket	371862
❸	Gasket (graphite/CrNi)	374009
❷	Strainer	096345

GESTRA AG
Münchener Straße 77, 28215 Bremen, Germany
Telefon +49 421 3503-0, Telefax +49 421 3503-393
E-mail info@de.gestra.com, Web www.gestra.de

818532-02/08-2010cm (808750-02) · GESTRA AG · Bremen · Printed in Germany