

FMCST

Forbes Marshall Clean Steam Trap

Description

The Forbes Marshall Clean Steam Trap, FMCST, is a thermostatic balanced pressure steam trap designed to remove condensate from hygienic and sanitary steam systems with minimal backing up. Applications include sterile steam barriers, block and bleed systems, drainage of steam distribution lines, process vessels and CIP/SIP systems. Manufactured in 316L stainless steel with a crevice free body, it is self draining and operates close to steam temperature. Traps are individually packaged with protective end caps and sealed in a polythene bag.

Surface Finish

All internal wetted surfaces have a finish of 0.4um (16 micro-inch Ra) achieved by electropolishing.

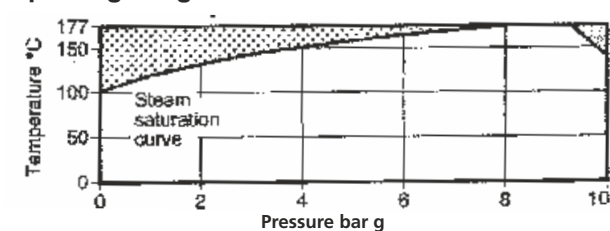
Standards


The FMCST is available with end connections as per ISO2852 or ASME BPE standards. All wetted parts of this trap are constructed from FDA/3-A approved materials


Sizes and Pipe Connections

- A) DN 15, 20, 25 sanitary clamp compatible connections as per following end connections standard
 - ISO 2852
 - ASME BPE
- B) DN 15, 20, 25 sanitary tube end connections as per ASME BPE

Operating Range



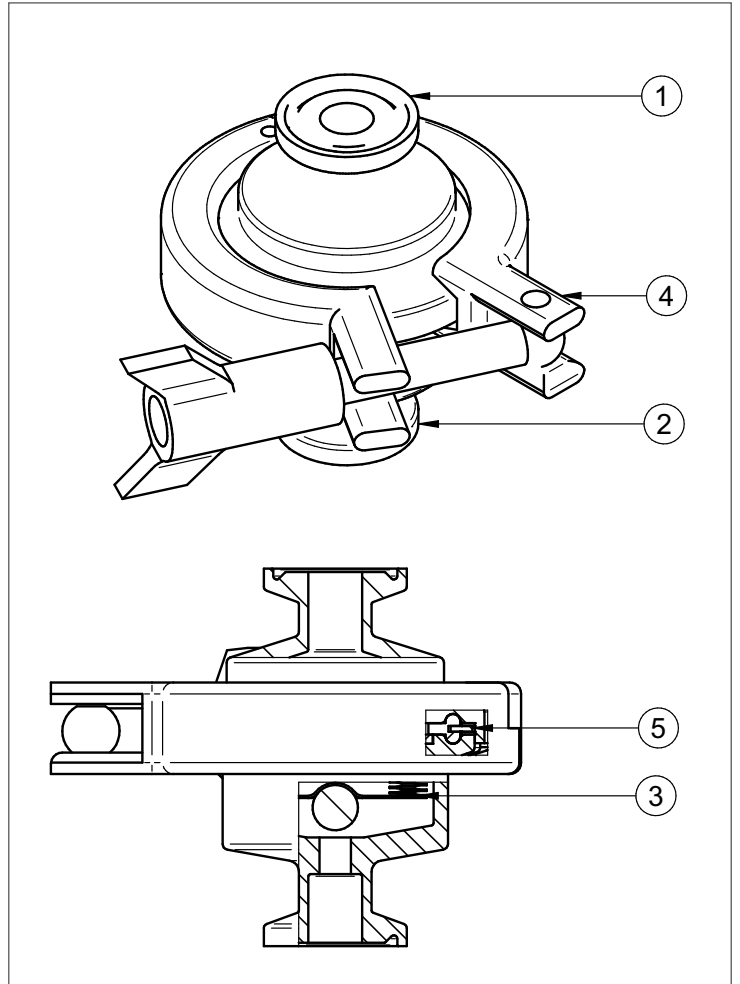
 The product must not be used in this region.

 The product should not be used in this region as damage to the internals may occur.

Note : For hygienic/sanitary clamp ends the maximum pressure / temperature may be restricted by the gasket or sanitary clamp used. Please consult Forbes Marshall.

Limiting conditions

Body design conditions	PN10
PMA Maximum allowable pressure @140°C	10 bar g
TMA Maximum allowable temperature @ 9.2 bar g	177 °C
Minimum allowable temperature	-254 °C
Maximum operating pressure for saturated steam service	
TMO Maximum operating temperature @ 6 bar g	165°C
Minimum operating temperature	0°C
PMO Maximum operating pressure	6 bar g
Maximum cold hydraulic test pressure	15 bar g



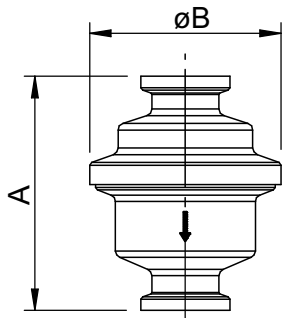
Material

No.	Part	Material	
1.	Body	Stainless steel	ASTM A 276-87 Gr. 316L
2.	Seat end connection	Stainless steel	ASTM A 276-87 Gr. 316L
3.	Element	Stainless steel	AISI 316L
4.	Clamp	Stainless steel	AISI 304
5.	Seal	PTFE jacketed viton	

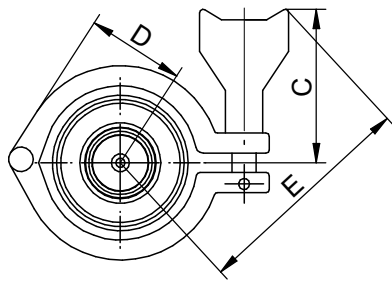
Element Filling for FMCST

As a standard, the trap is supplied with element which will operate approximately 6 °C below steam saturation temperature.

As an optional alternative, the trap can be supplied with CTS(Close to steam) option which will operate approximately 3°C below steam saturation temperature.

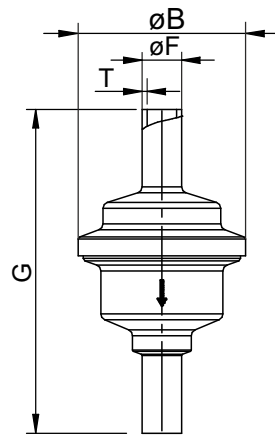


**Sanitary Ends
(ISO 2852, ASME)**



**FMCST sanitary
clamp end**

Size	A	B	C	D	E	~ Weight
DN 15	65	54	53	35	75	0.85 kg
DN 20	65	54	53	35	75	0.85 kg
DN 25	65	54	53	35	75	0.85 kg

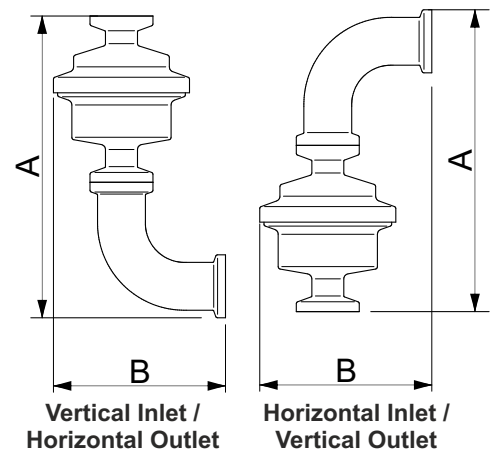


Tube Ends

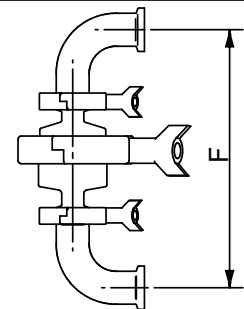
Tube End Dimensions

Size	Standard	F	T
DN 15	ASME BPE TUBE	Ø 12.7	1.65
DN 20	ASME BPE TUBE	Ø 19.05	1.65
DN 25	ASME BPE TUBE	Ø 25.4	1.65

Size	G	B	C	D	E	~ Weight
DN 15	98	54	53	35	75	0.75 kg
DN 20	98	54	53	35	75	0.75 kg
DN 25	98	54	53	35	75	0.75 kg



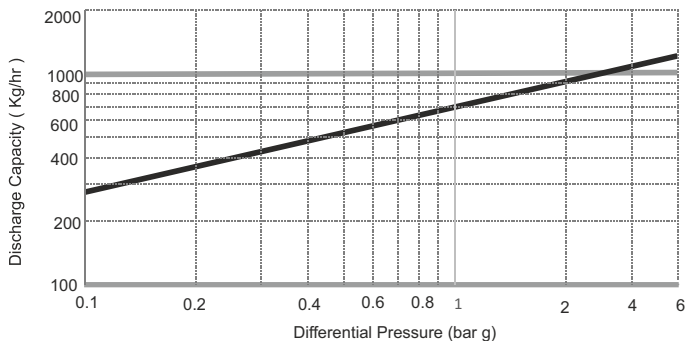
**Vertical Inlet /
Horizontal Outlet Horizontal Inlet /
Vertical Outlet**



Horizontal In & Out

Size	A	B	C	D	E	F	~ Weight
DN 15	108	68	53	35	75	148.5	1.0 kg
DN 20	108	68	53	35	75	148.5	1.0 kg
DN 25	117	78	53	35	75	167.5	1.0 kg

Capacity



Installation Note

Check flow arrow for correct orientation. Fittings, clamps and gaskets for pipe end connections are not supplied. Do not expose the element to superheat conditions.

Note : The body and element must be handled carefully to ensure that the machined surfaces are not damaged.

Available Spares (Refer figure on page 1)

Element assembly	3
Seal	5
Tri-clamps	4

How to Order Spares

Always order spares by using the description given in the column headed "Available Spares" and state the size and type of trap.

Example : 1 No. Element assembly for DN 15 Forbes Marshall Clean Steam Trap, FMCST.

How to Order Product

Example : 1 No. Clean Steam Trap 015FMCST-I
(For ISO2852 end connections)

015 - Size	
FMCST - Product Name	
End Connections	A : ASME BPE
	I : ISO 2852
	X : ASME BPE TUBE



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CIN No: U28996PN1985PTC037806