

FMTD65-B, FMTD65-A

Forbes Marshall Thermodynamic Trap with Blowdown Valve and/or Anti-Airbinding Disc

Description

The Forbes Marshall Thermodynamic Trap with Blowdown Valve, FMTD65-B, is a mainline thermodynamic trap with in-built strainer screen and unique three port design. The three port design ensures parallel lifting of the disc and no wear and tear due to uneven seating of the disc enhancing the life of the trap. The integral Blowdown Valve allows online cleaning of strainer screen. Typical applications include main distribution headers, tube line inlets etc.

During start up air is trapped in the control chamber of the trap. Being air, it cannot condense and hence the pressure will not drop. This causes the trap to fail in closed condition. FMTD65-A is specially designed to overcome this air binding problem. It is a trap with a 0.8 mm perforation stainless steel screen and a special anti-air binding disc.

Sizes and Connections

1/2" and 3/4"

Screwed NPT and socket weld ends with Blowdown Valve. Available with Class 150, 300 and 600 weld on flanges on request.

Limiting Conditions

PMO: Max. Operating Pressure in psig

TMO: Max Operating Temperature in °F

Parameter	Screwed end	Socket Weld end
PMO	457	798
TMO FMTD65-B (°F)	752	752
TMO FMTD65-A (°F)	491	491
Hydraulic test (psig)	914	1596

PMOB-Max. Operating back pressure on outlet should not exceed 80% of inlet pressure.

FMTD65-B

Minimum inlet pressure for satisfactory operation: 3.6 psig

FMTD65-A

Minimum inlet pressure for satisfactory operation: 11.5 psig

Minimum Operating Temperature: 32 °F

Operating range

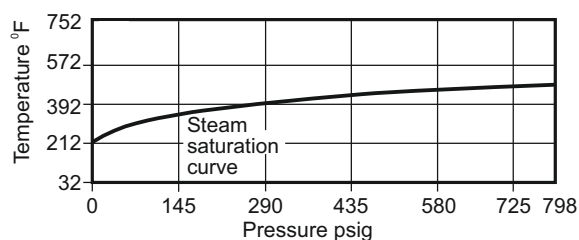
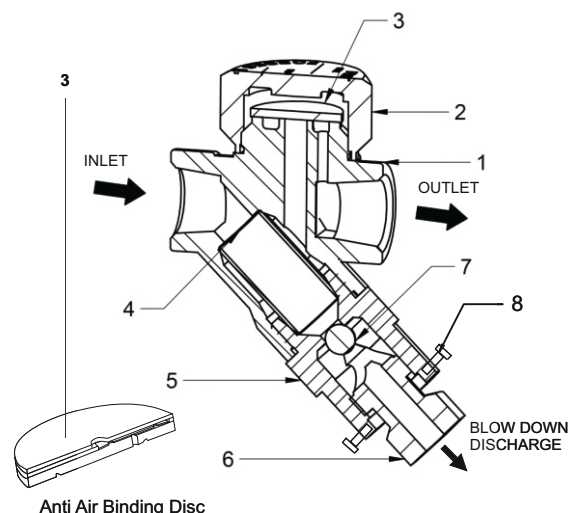


Fig 1

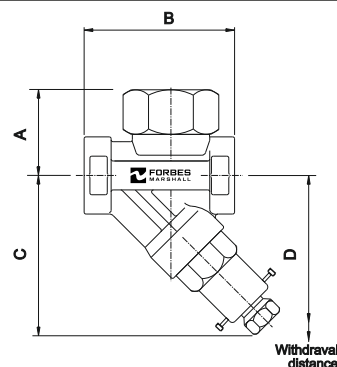


Material

Sr No	Part	Material	Standard
1	Body	Stainless Steel	ASTM A 743 Gr. CA 40
2	Cap	Stainless Steel	Bs3146 ANC2 (UNS S43100)
3	Disc	Stainless Steel	ASTM A 240 SS 420
4	Screen	Stainless Steel	ASTM A 240 Type 304
5	Blowdown Cap	Stainless Steel	ASTM A276 SS 420
6	Blowdown Screw	Stainless Steel	ASTM A276 SS 304
7	Ball	Stainless Steel	AISI 440B
8	Screw	Stainless Steel	SS304

Note: Material specification mentioned in bracket are for reference only.

Fig 2



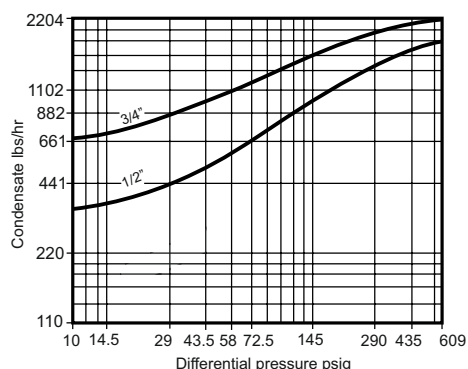
Dimensions (approx. in Inches)

SIZE	A	B	C	D	Wt. (lbs)
1/2 & 3/4	1.7	2.7	3.1	4.9	2.6

Salient Features

1. Complete stainless steel construction ensures better mechanical and corrosion resistant properties.
2. The seat is hardened by induction hardening process to about 50 Rc to enable withstand continuous water hammering.
3. The seat is an integral part of the body, and eliminates leakage prone joints and gaskets.
4. Condensate entry below the disc concentric to disc and seat, ensures clean and parallel lift of disc with reference to seat, eliminating any localized uneven wear and tear.
5. An inbuilt strainer screen of adequate large area ensures long and trouble free operation.
6. Three port design ensures proper lifting and seating of the disc and results in uniform wear, enhancing life of the steam trap.
7. Integral blowdown valve facilitates on line cleaning of strainer screen.

Capacity Chart



Installation

Preferably on horizontal pipe line, can be fitted in other position if unavoidable.

Operation of Blowdown Valve

Warning: Note the blow down discharge as shown in Fig. 1 & ensure adequate safety precautions are taken when opening the blow down valve to atmosphere. Hand protection is a must.

The blowdown valve has a screw (6) which can be unscrewed with a 19 mm A/F spanner to discharge the contents of the strainer screen. Two screws prevent disengagement of the blowdown screw from the blowdown cap.

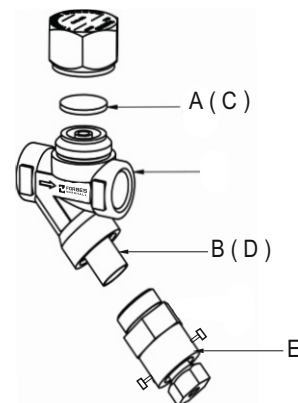
How To Order

Example: 1/2" Forbes Marshall Thermodynamic Trap with Blowdown Valve FMTD65-B with NPT.

Optional extras

Isotub: An insulating cover on the cap prevents the trap being unduly influenced by excessive heat loss, such as when subjected to low outside temperature, wind, rain, etc.

Fig 3



Available Spares

The parts shown in Fig.3 are available as spares.

Disc and screen kit for FMTD65-B	A+B
Disc and screen kit for FMTD65-A (with Screen and anti-air-binding disc)	C+D
Blow down valve	E

How to Order Spares:

Always order spares by using the description given under 'Available Spares' and state the size and type of trap.

Example: Disc and strainer screen kit for 1/2" Forbes Marshall Thermodynamic Trap with blowdown valve FMTD65-B.

How to Service

Remove isotub if fitted and unscrew cap using spanner. Do not use pipe wrench or any similar type of wrench which may cause distortion of the cap. If the disc and the body seating faces are only slightly worn they can be refaced by lapping individually on a flat surface plate. A figure of eight motion and fine aluminum oxide lapping slurry gives the best results.

If the wear is beyond rectification by simple lapping, the seating faces on the body must be ground flat and then lapped and the disc replaced by a new one. The total amount of metal removed in this way should not exceed 0.010 inch. Alternatively, customers may prefer to take advantage of our reconditioned trap scheme which allows this work to be done to original production standards.

When re-assembling, place the disc with the grooved side in contact with body seating face and screw on cap. No gasket is required but a suitable high temperature anti-seize grease should

How to Clean or Replace Strainer

Periodical blow down will remove debris within strainer screen. However removal and cleaning /replacing of strainer screen is necessary on occasions. Unscrew blowdown valve assembly, withdraw screen and clean, or if damaged replace with new one. Put the screen into the cap and tighten the blowdown valve with suitable torque.

No gasket is required but a suitable high temperature anti-seize grease should be applied to the threads.



Forbes Marshall
Krohne Marshall
Forbes Marshall Arca
Codel International
Forbes Solar
Forbes Vyncke
Forbes Marshall Steam Systems

Forbes Marshall USA (FM USA Inc.)
480 South California Avenue, Unit 102
Palo Alto, CA 94306
P: 650-327-4227
F: 650-327-4127

Email : fm.northamerica@forbesmarshall.com

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Forbes Marshall Canada Inc.
2425 Matheson Blvd East, 8th Floor
Mississauga, ON L4W 5K4
P: 905-361-2880
F: 905-361-6401

Forbes Marshall Pvt. Ltd.
B-85, Phase II, Chakan Indl.
Area, Sawardari,
Chakan, Tal. Khed.
Dist. Pune - 410 501, India
Tel. 91(0)2135-393400
www.forbesmarshall.com