

Forbes Marshall Thermodynamic Trap

FMTD54M

Description

The Forbes Marshall Thermodynamic Trap FMTD54M, with inbuilt Strainer and full Forged carbon steel construction, is best suited for header and mainline drains. Also available with Flanges .

Sizes

DN 15, DN 20 and DN25
Screwed BSPT/BSP/NPT & Socket / Butt Weld Ends

Notes

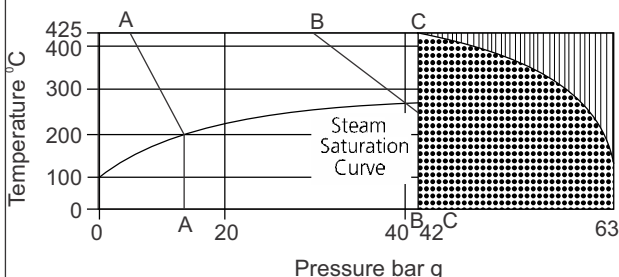
1. Available with end connections Class #150, #300 and #600 (weld on flanges) on request.
2. Available with IBR certificate



Limiting Conditions of FMTD54M

Body design conditions	PN 63
PMA Maximum allowable pressure	63 bar g @ 100°C
TMA Maximum allowable temperature	425°C @ 42 bar g
Minimum allowable temperature	0°C
PMO Maximum operating pressure	42 bar g
TMO Maximum operating temperature	425°C @ 42 bar g
Minimum operating temperature	0°C
Minimum operating differential pressure for satisfactory operations	0.25 bar g
Designed for maximum cold hydraulic test pressure of	95 bar g

Note: For lower operating temperatures consult Forbes Marshall PMOB : Maximum back pressure should not exceed 80% of the inlet pressure under any conditions of operation otherwise the trap may not shut-off.

Operating Range For FMTD54M



-  The Product must not be used in this region.
-  The product should not be used in this region or beyond its operating range as damage may occur to the internal.

Limiting Conditions of FMTD54M Flanged Flange to Flange Dimensions as per ASME B16.5.

For ANSI #150

PMO Maximum operating pressure = 14.0 bar g @ 197 Deg.C
TMO Maximum operating temperature = 425 Deg C @ 5.5 bar g
Cold hydraulic test pressure = 30.0 bar g

For ANSI #300

PMO Maximum operating pressure = 42.0 bar g @ 250 Deg.C
TMO Maximum operating temperature = 425 Deg C @ 28.8 bar g
Cold hydraulic test pressure = 63.0 bar g

For ANSI #600

PMO Maximum operating pressure = 42.0 bar g @ 425 Deg. C
TMO Maximum operating temperature = 425 Deg C @ 42.0 bar g
Cold hydraulic test pressure = 63.0 bar g

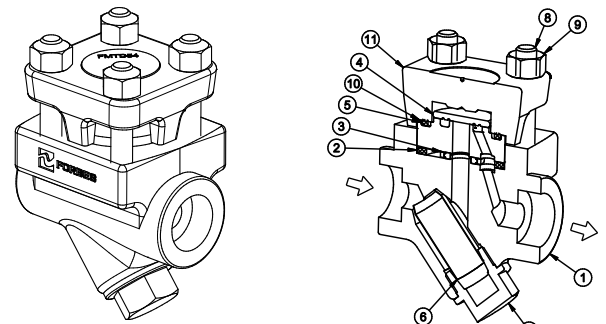


Figure 1: Forbes Marshall Thermodynamic Trap

Material

No	Part	Material
1.	Body	ASTM A105 N
2.	Outer Seat Gasket	SS304+Graphite
3.	Inner seat gasket	SS304+Graphite
4.	Disc	Tool Steel AISI D2
5.	Top Cover Gasket	SS304+Graphite
6*	Screen	SS304
7.	Strainer Cap	ASTM A105 N
8.	Stud	ASTM A193 B7
9.	Nut	ASTM A194 2H
10.	Seat	Tool Steel D2
11.	Top Cover	ASTM A105 N
12*	Nameplate	SS304
13*	Rivet	SS304
14	Isotub	SS304

* Marked not shown in fig.1.

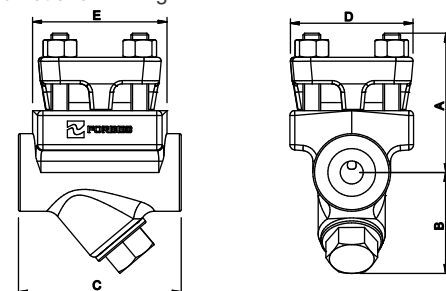


Figure 2: Dimensional Drawing of FMTD54M

Dimensions of Model FMTD54M (Flanged Version)

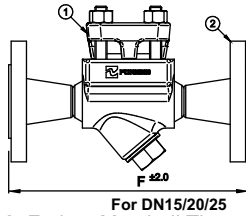


Figure 3: Forbes Marshall Thermodynamic Trap

Dimensions (approx. in mm)

Size	A	B	C	D	E	F			Weight in kg			
						#150	#300	#600	*	#150	#300	#600
DN 15	79	57	116	68	70	217	227	239	2.9	3.9	4.5	4.7
DN 20	79	57	116	68	70	227	237	249	2.9	4.3	5.5	5.9
DN 25	81	60	116	68	70	233	245	259	3.0	5.0	6.0	6.6

Note: * Weight mentioned is of bare FMTD54M Trap.

Sr.	Description	Material
1	Thermodynamic Trap FMTD54M, SWE	ASTM A105 N
2	Flanges SWE type ANSI #150, ASME B16.5	ASTM A105
2	Flanges SWE type ANSI #300, ASME B16.5	ASTM A105
2	Flanges SWE type ANSI #600 ASME B16.5	ASTM A105

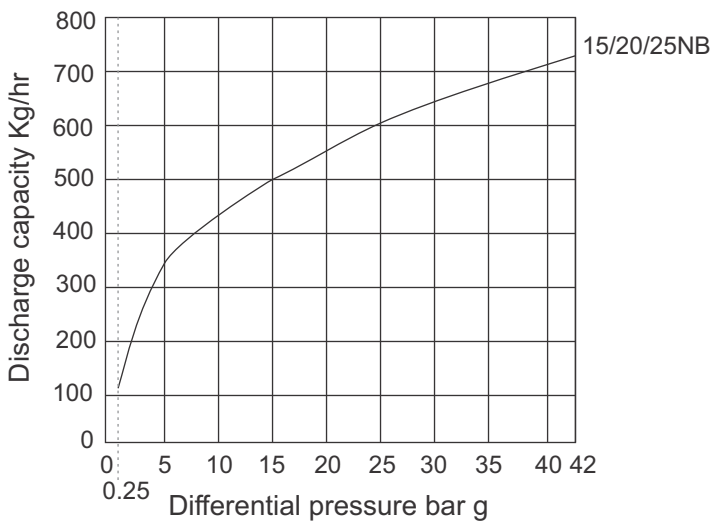
Optional extras

ISOTUB- An insulating cover which prevents the trap from being unduly influenced by excessive heat loss such as when subjected to low outside temperature, wind, rain etc.

Salient Features

1. Forged Carbon steel construction ensures better mechanical properties.
2. The disc and seat, hardened by induction hardening process to about 56 RC can withstand continuous water hammering conditions.
3. Condensate entry below the disc concentric to disc/seat ensures clean and parallel lift to disc with reference to seat, eliminating any localized wear and tear.
4. An inbuilt strainer screen of adequately large area ensures long and trouble free operation.

Capacity



How to Order Spares

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

Example: 1No. Disc for DN15 Forbes Marshall

Thermodynamic Trap FMTD54M

Installation

Ensure the following for the FMTD54M to operate correctly and remove condensate effectively.

1. The FMTD54M is installed with flow in the direction of the arrow. Flow to be horizontal.
2. Ensure that there is sufficient access to the strainer to allow it to be cleaned periodically.
3. Ensure all the valves are either full opened or tightly shut, and never kept partially open / crack open.

After 24 hours in service the cover nuts should be checked for tightness. Separate user manual which comes along with the product gives full details.

Maintenance

To clean or replace strainer screen

Access to the strainer screen can be obtained by removing strainer cap. Remove strainer screen, fit new or cleaned strainer screen into recess of the cap. A new gasket should be fitted and the cap screwed into the body. The use of a thread lubricant is recommended.

To replace the cover studs

After removing old cover studs, fit new cover studs. The use of a thread lock (high temperature grade) is recommended.

To replace the disc and seat

Remove the isotub if fitted. If the disc and body seating faces are only slightly worn they can be refaced by lapping individually on a flat surface such as a surface plate. If the wear is too great to be rectified by simple lapping, then the disc and seat must be replaced by a new one.

How to Order

Example:

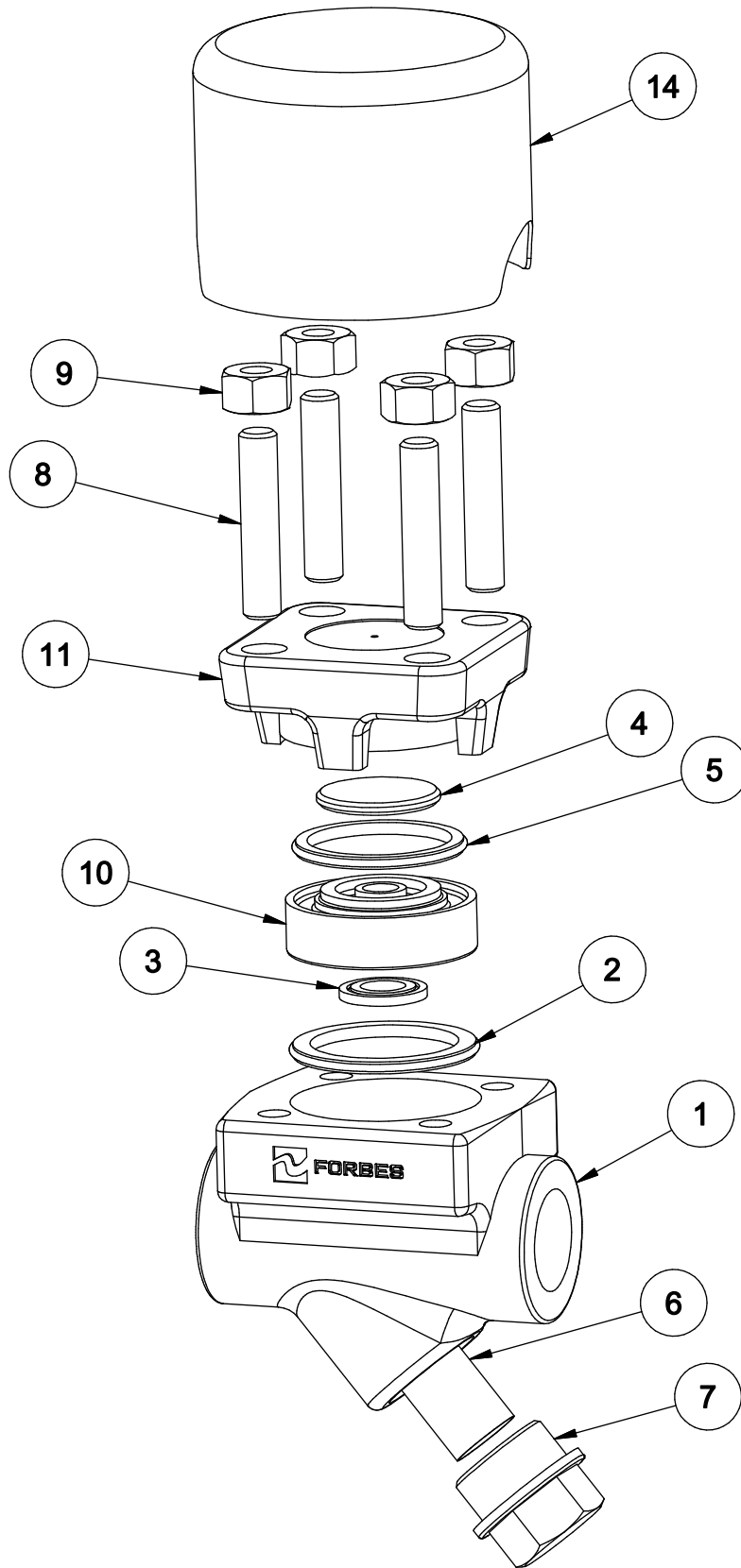
- 1) 1No. DN15 Forbes Marshall Thermodynamic Trap FMTD54M Screwed BSPT, IBR
- 2) 1No. DN15 Forbes Marshall Thermodynamic Trap FMTD54M Flanged to ASA 150, IBR

Spares List

S.no.	Description	Part No.
1.	FMTD54M Top Cover Stud and Nut Set	8,9
2.	15NB FMTD54M Seat, Disc	10,4
3.	20/25NB FMTD54M Seat, Disc	10,4
4.	FMTD54M Strainer Screen	6
5.	FMTD54M Top Cover and Seat gasket	5,2,3
6.	Isotub	14

Recommended Tightening Torques

S.no.	Description	Part No.	Torque Nm
1.	26mm A/F	7	110-130
2.	M10x1.5 Studs	8	20-25
3.	17mm A/F Nuts	9	45-50



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