

CMTD42M-F

Compact Module - Thermodynamic Trap Full Version (with 3 valves)

Description

The Forbes Marshall Compact Module Thermodynamic Trap, CMTD42M-F, is a compact thermodynamic trap module designed with an in built bypass valve, a trap vent valve and a trap test valve for steam applications upto 609 Psig. Replaceable trap internals and built in strainer eases inline maintenance. The CMTD42M-F has an integral upstream and downstream piston valve, which isolates the upstream piping of the steam trap.

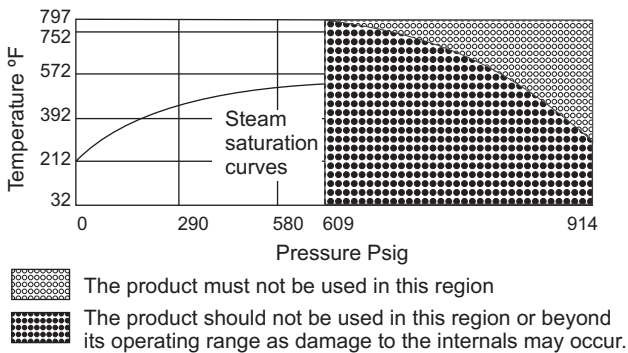
Sizes and Pipe Connections

1/2", 3/4" Socket weldable end connection.
(Available with # 150, 300, 600 # weld on flanges on request)

Limiting Conditions

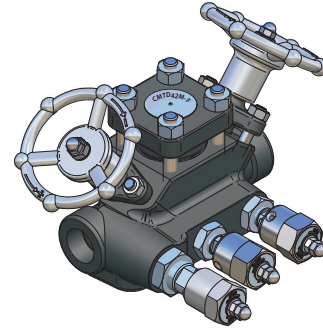
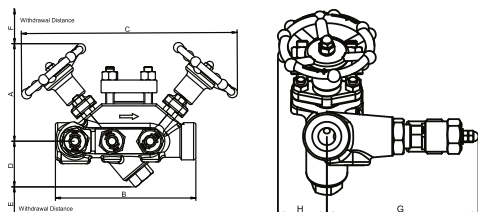
PMA Max. operating pressure	914 Psig at 212°F
TMA Max. operating temperature	797°F at 609 Psig
PMO Max. operating pressure	609 Psig
TMO Max. operating temperature	797°F at 609 Psig
Minimum operating temperature	32°F
Max. operating back pressure	80% of upstream pressure
Cold hydraulic test pressure	1218 Psig

Operating Range



Dimensions / Weight (approx.) in inches and Lbs (Valves in closed condition)

Size	A	B	C	C	E	F	G	H	Wt. (Lbs)
1/2	4.6	6.5	10	2.1	0.8	2	5.5	1.8	14.3
3/4	4.6	6.5	10	2.1	0.8	2	5.5	1.8	14.3

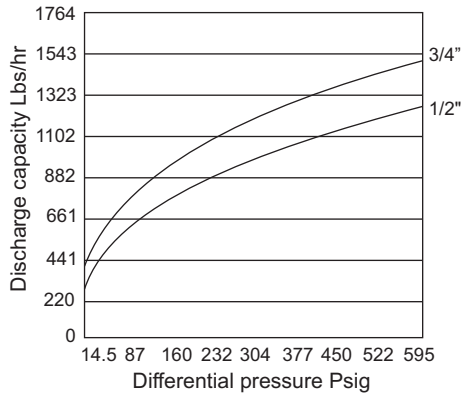


Material

Sr. No	Part	Material
1	Body	ASTM A105
2	Bonnet	ASTM A1052
3	DV1 Spacer	ASTM A276 Gr 410
4	DV1 Sealing Stack	SS 304 + graphite
5	Plain Washer	SS 304
6	Hex Lock Nut	SS 304
7	Hand Wheel	SG Iron 400/15A (ASTM A 536)
8	Hex Nut LH	SS304
9	Stem Piston	ASTM A276 Gr 316
10	5/16" Stud	ASTM A193 B7
11	Belleville Washer	Spring Steel
12	Hex Nut	ASTM A 194 2H
13*	DV1 Plain Washer	SS 304
14	DV1 Stem Piston	ASTM A276 Gr 316
15	DV1 Lock Nut	ASTM A276 Gr 410
16	DV1 Bonnet	ASTM A276 Gr 410
17	DV1 Hex Knob	SG Iron 400/15A (ASTM A 536)
18	DV2 Spacer	ASTM A276 Gr 410
19	DV2 Stem Piston	ASTM A276 Gr 316
20	DV2 Plain Washer	SS 304
21	DV2 Lock Nut	ASTM A276 Gr 410
22	DV2 Sealing Stack	SS 304 + Graphite
23	DV2 Bonnet	ASTM A276 Gr410
24	DV2 Hex Knob	SG Iron 400/15 A (ASTM A 536)
25	Seat	Tool Steel AISI D2
26	Disc	Tool Steel AISI D2
27	Top Cover	ATM A105
28	Screen	SS 304
29	Strainer Cap	ASTM 743 GR CA 40
30	Stud	ASTM A193 B7
31	Nut	ASTM A 194 2H
32	Top Cover Gasket	SS304 + graphite
33	Inner Seat Gasket	SS304 + graphite
34	Outer Seat Gasket	SS304 + graphite
35	Nameplate	SS 304
36	DV1 Direction Plate	SS 304
37	DV2 Direction Plate	SS 304
38	DV3 Direction Plate	SS 304
39*	Rivet	SS 304
40	Ferrule	SS 304

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

Capacity Chart



How to Order

Example: 1/2" CMTD42M-F Compact Module - Thermodynamic Trap - Full Version (with 3 valves), socket weld able end connections.

Installation

Ensure the following for the CMTD42M-F to operate correctly and remove condensate effectively.

1. The CMTD42M-F is installed with flow in the direction of the arrow. Flow to be horizontal.
2. Ensure that there is sufficient access to the hand-wheel to allow proper operation of both upstream and downstream isolation valves.
3. Ensure that there is sufficient access to the strainer to allow strainer to be cleaned periodically.
4. Allow sufficient access for the bypass valve, trap vent and trap test valve to operate.
5. Ensure all the valves are either full opened or tightly shut, and never kept partially open.

After 24 hours in service the cover nuts should be checked for tightness. A 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:

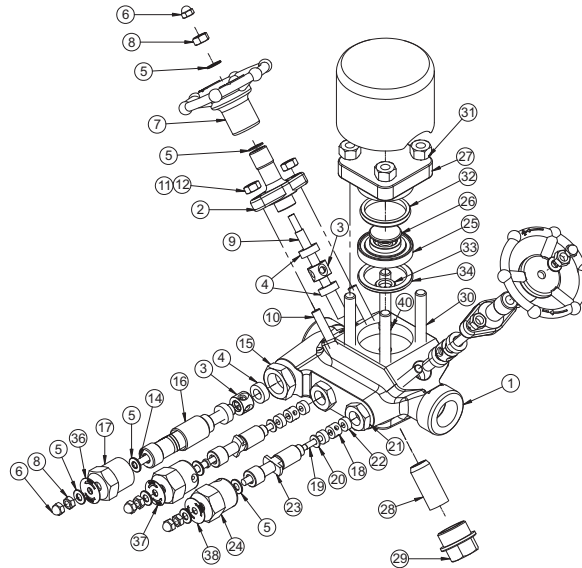
After removing old cover studs, fit new cover studs. The use of a thread lock (high temperature grade) is recommended.

Bypass valve, trap vent valve and trap test valve Maintenance:

Lubricate valve frequently with Molykote M30 oil or equivalent. Lubricate the stem piston and bonnet threading of drain valves DV1. Operate the valves after lubrication.

Recommended Tightening Torques

Description	Torque (Ft. Lbsf)
5/16" Nuts (12)	7.4
1/4" LH (8)	0.07
1/4" A/F (29)	105-117
3/8"x1/16" Studs (30)	15-18
11/16" A/F Nuts (19)	33-37



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