

CMTD42M-S

Compact Module - Thermodynamic Trap Standard Version

Description

The Forbes Marshall Compact Module Thermodynamic Trap, CMTD42M-S, is a compact thermodynamic trap module designed with an in built upstream isolation piston valve and bypass valve for steam application up to 42 bar g. Replaceable trap internals and inbuilt strainer eases online maintenance. It comes with diffuser which gives smooth discharge and Isotub eliminates effects on performance irrespective of climatic conditions.

Sizes and Pipe Connections

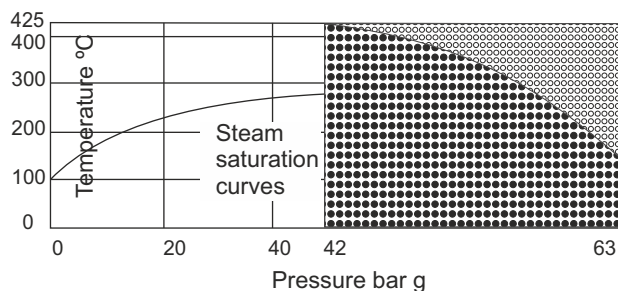
DN 15, 20 Socket weldable, Screwed end connection. (Available with class 150, 300, 600 weld on flanges on request)



Note: Available with IBR certificate on request.

Limiting Conditions

PMA Max. allowable pressure	63 bar g at 100°C
TMA Max. allowable temperature	425°C at 42 bar g
PMO Max. operating pressure	42 bar g
TMO Max. operating temperature	425°C at 42 bar g
Minimum operating temperature	0°C
Max. operating back pressure	80% of upstream pressure
Cold hydraulic test pressure	63 bar g (IBR Requirement)

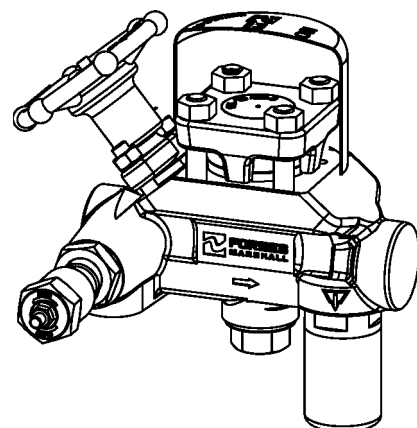
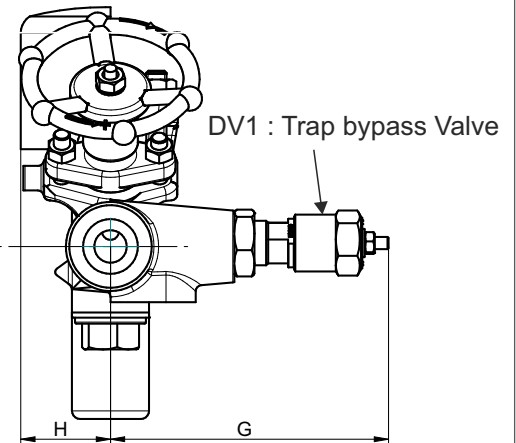
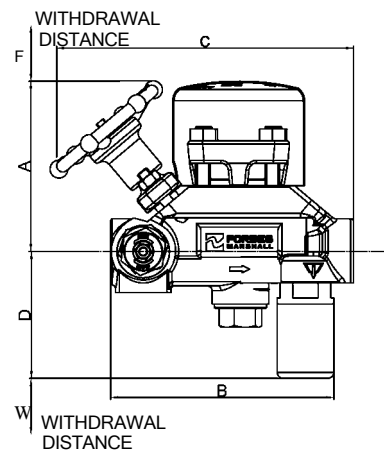
Operating Range

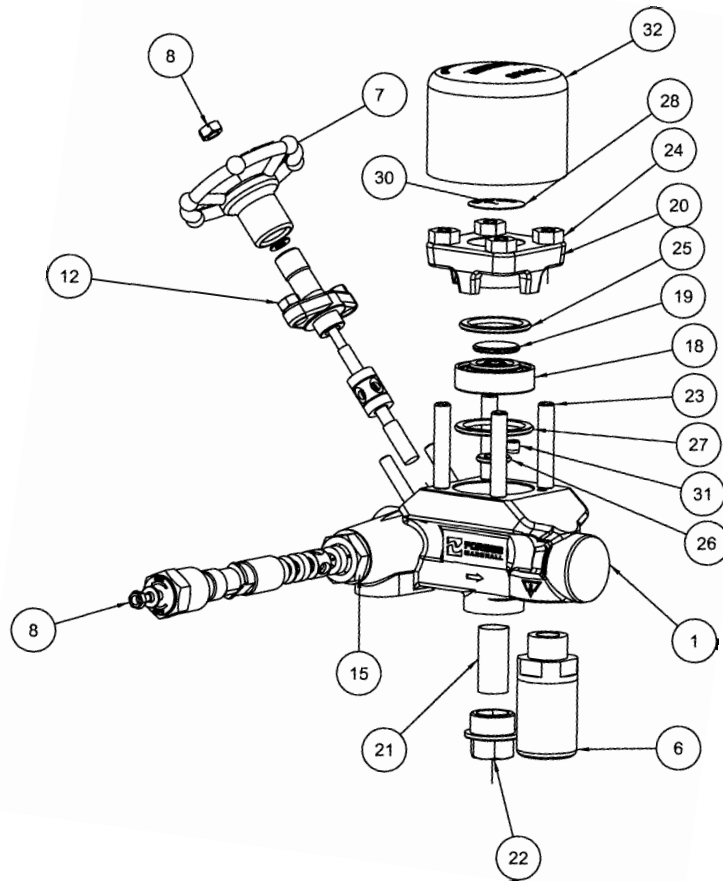


-  The product must not be used in this region
-  The product should not be used in this region or beyond its operating range as damage to the internals may occur.

Dimensions / Weight (approx.) in mm and kg (Valves in closed condition)

Size	A	B	C	D	E	F	G	H	Weight
15NB	115	151	191	84	20	51	140	45	4.9 Kg
20NB	115	151	191	84	20	51	140	45	4.9 Kg





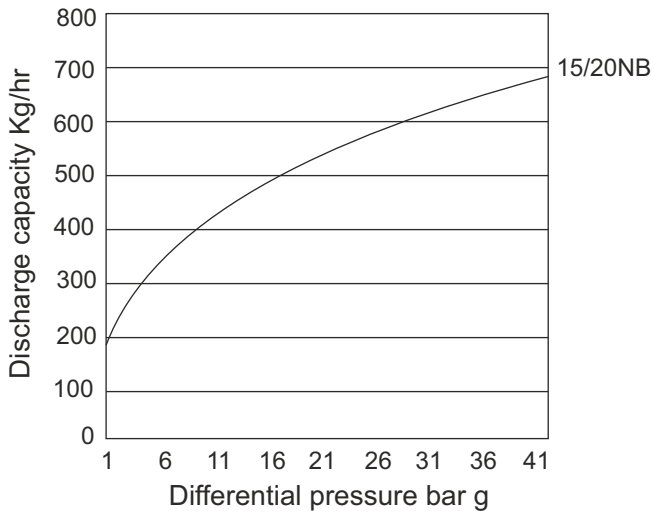
Material

Sr. No	Part	Material
1	Body	ASTM A105
2	Bonnet	ASTM A105
3	DV1 Spacer	ASTM A276 Gr 410
4	DV1 Sealing Stack	SS 304 + graphite
5	Plain Washer	SS 304
6	Diffuser	SS 304
7	Hand Wheel	SG Iron 400/15A (ASTM A536)
8	Cleeve Lock Nut LH	SS304
9	Stem Piston	ASTM A276 Gr 316
10	M8 Stud	ASTM A193 B7
11	Belleville Washer	Spring Steel
12	Hex Nut	ASTM 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

Sr. No	Part	Material
17	DV1 Hex Knob	SG Iron 400/15 A (ASTM A 536)
18	Seat	Tool Steel AISI D2
19	Disc	Tool Steel AISI D2
20	Top Cover	ASTM A105
21	Screen	SS 304
22	Strainer Cap	BS 3146 PART2 ANC2
23	Stud	ASTM A193 B7
24	Nut	ASTM 194 2H
25	Top Cover Gasket	SS304 + graphite
26	Inner Seat Gasket	SS304 + graphite
27	Outer Seat Gasket	SS304 + graphite
28	Nameplate	SS 304
29	DV1 Direction Plate	SS 304
30	Rivet	SS 304
31	Ferrule	SS 304
32	ISOTUB	SS 304

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

Capacity Chart



How to Order

Example: DN15 CMTD42M-S Compact Module - Thermodynamic Trap - Standard Version socket weld able end connections, IBR

Installation

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

1. The CMTD42M-S 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 upstream 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
5. 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. 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 maintenance

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

Recommended Tightening Torques

Item No.	Part	Torque(Nm)
22	Strainer cap	142-158
23	Cover studs	20-25
24	Cover nuts	45-50
12	M8 Nuts	10
8	Cleeve lock nut	0.1

Spares List

	Description	Part No.
1	Spare Isolation Valve Internals Set	3,4,9
2	Spare for trap isolation valve/ trap bypass valve (DV1) Extractor Tool and	Refer user manual
3	DV1 Spare Kit (Dome Nut, M6 Plain Washer, M6 Hex Nut, Sealing stack, Spacer, Stem-Piston)	3,4,5, 8,9
4	Spare Sealing Stack for isolation valve and trap bypass valve (DV1)	4
5	CMTD42M-S Top Cover Stud and Nut Set	23 , 24
6	15NB CMTD42M-S Seat, Disc	18 , 19
7	20NB CMTD42M-S Seat, Disc	18 , 19
8	CMTD42M-S Strainer Screen	21
9	CMTD42M-S Top Cover and Seat Gasket	25,26,27



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