

# FMTD65

# Forbes Marshall Thermodynamic Trap

## **Description**

The Forbes Marshall Thermodynamic Trap, FMTD65, 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. Typical applications include main distribution headers, tube line inlets etc.

# Size and Pipe Connections

DN 15 and DN 20

Screwed BSPT/NPT/BSP and socket weld ends Available with Class 150,300 and 600 weld on flanges on request.

Available with IBR certificate.

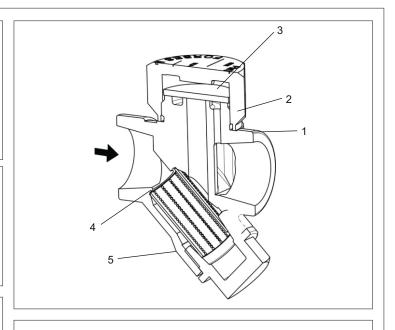


PMO: Max. operating pressure in bar g TMO: Max operating temperature in °C

| Parameter      | Screwed end | Socket Weld end |  |
|----------------|-------------|-----------------|--|
| PMA            | 31.5        | 55.0            |  |
| TMA            | 400         | 400             |  |
| Hydraulic test | 63.0        | 110.0           |  |

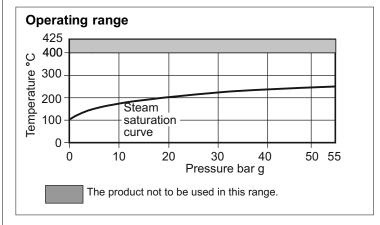
PMOB-Max. Operating back pressure on outlet should not exceed 80% of inlet pressure.

Min. Operating pressure for satisfactory operation: 0.25 bar g



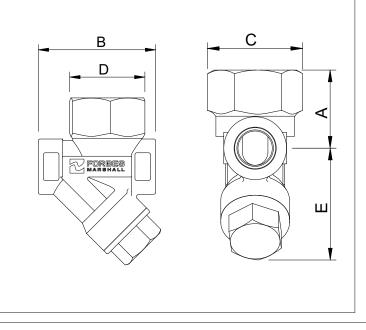
## Material

| Sr No | Part         | Material        | Standard             |  |
|-------|--------------|-----------------|----------------------|--|
| 1     | Body         | Stainless Steel | ASTM A 743 Gr. CA 40 |  |
| 2     | Сар          | Stainless Steel | BS3146 ANC 2         |  |
| 3     | Disc         | Stainless Steel | ASTM A 240 SS 420    |  |
| 4     | Screen       | Stainless Steel | ASTM A 240 Type 304  |  |
| 5     | Strainer Cap | Stainless Steel | BS3146 ANC 2         |  |



# Dimensions (approx.in mm)

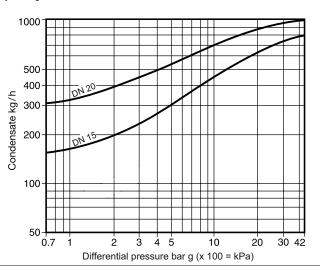
| Size  | Α  | В  | С  | D  | Е  | Weight |
|-------|----|----|----|----|----|--------|
| DN 15 |    |    |    |    |    |        |
| DN 20 | 42 | 68 | 50 | 44 | 57 | 0.8 kg |



#### **Salient Features**

- 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.
- 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.
- Three port design ensures proper lifting and seating of the disc and results in uniform wear, enhancing life of the steam trap.

# **Capacity Chart**



#### Installation

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

### **How To Order**

Example: 1 No. DN 15 Forbes Marshall Thermodynamic Trap FMTD65 with screwed BSPT connections.

| Disc and screen kit | A+B |
|---------------------|-----|
| Isotub              | С   |

# **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.

#### Available Spares

The parts shown in heavy outline are available as spares. Parts drawn in broken line are not supplied as spares.

# **Recommended Tightning Torques**

| Item | Part  | ( <u>(a)</u> | Or ## | Nm      |
|------|-------|--------------|-------|---------|
| 2    | Spool | 42           | M35   | 180-200 |
| 5    | Stud  | 32           | M28   | 170-190 |

### **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 DN 15 Forbes Marshall Thermodynamic Trap FMTD65.

#### **How to Service**

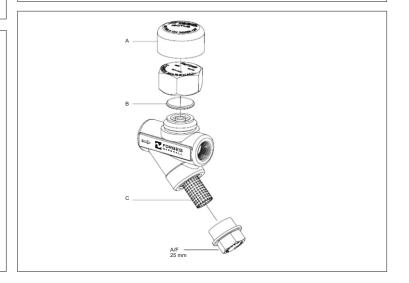
Remove isotub if fitted and unscrew cap using spanner. Do not use Stillsons or any similar type of wrench which may cause distortion of the cap. If the disc and the body seating faces are only slightly worn they can be refaced by lapping individually on a flat surface plate. A figure of eight motion 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 replaces by a new one. The total amount of metal removed in this way should not exceed 0.25 micron. 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 be applied to the threads.

## How to clean or replace strainer

To clean or replace the strainer, unscrew the strainer cap using a spanner. Withdraw the screen and clean or replace with a new one if damaged. To reassemble, insert the screen in cap, then screw cap in place. No gasket is required but a fine smear of Molybdenum Disulphide grease should be applied to the threads.





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