**FM TD64-S (Patented)**
Forbes Marshall Thermodynamic Trap with Sandwich Ends

**Description**
The Forbes Marshall Thermodynamic Trap with Sandwich Ends, FMTD64-S (Patented), is flange compatible with in-built strainer and full stainless steel construction and is best suited for header and mainline drains and drip legs. FMTD64-S has been specifically designed keeping in mind flanged installations of steam traps on mainline and header drain traps in the most compact manner with least number of welded joints, avoiding space constraints and possibility of leakage.

**Sizes and End Connections**
DN 15, 20
Note:
ASA -150 and 300 compatible
Available with IBR certificate.

**Optional Extras**
Isotub - An insulating cover (part no 6—see overleaf) to prevent the trap being unduly influenced by excessive heat loss such as when subjected to low outside temperature, wind, rain etc.

**Limiting Conditions**
- PMO: Max. operating pressure 42 bar g
- TMO: Max operating temperature 400°C
- Hydraulic test pressure 84 bar g
- PMOB: Max operating back pressure on outlet should not exceed 80% of inlet pressure.
- Minimum inlet pressure for satisfactory operation 0.25 bar g

**Operating Range**
The product must 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 internals.

**How to Order**
Example: 1 no. DN15 Forbes Marshall Thermodynamic Trap with sandwich ends, FMTD64-S, IBR.

**Material**

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Part</th>
<th>Material</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>Stainless Steel</td>
<td>ASTM A743 Gr-CA 40</td>
</tr>
<tr>
<td>2</td>
<td>Cap</td>
<td>Stainless Steel</td>
<td>BS 3146 ANC2</td>
</tr>
<tr>
<td>3</td>
<td>Disc</td>
<td>Stainless Steel</td>
<td>ASTM A240 SS 420</td>
</tr>
<tr>
<td>4</td>
<td>Strainer Screen</td>
<td>Stainless Steel</td>
<td>ASTM A240 Type 304</td>
</tr>
<tr>
<td>5</td>
<td>Strainer Cap</td>
<td>Stainless Steel</td>
<td>BS 3146 ANC2</td>
</tr>
<tr>
<td>6</td>
<td>Isotub</td>
<td>Stainless Steel</td>
<td>ASTM A240 type 304</td>
</tr>
</tbody>
</table>

**Capacity**

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Energy Conservation | Environment | Process Efficiency

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Pressure
Before attempting any maintenance of trap, consider what is or may have been in the pipeline. Ensure that any pressure is isolated upstream of the trap and safety vented to atmospheric pressure before attempting to maintain the trap. Do not assume that the system is depressurized even when a pressure gauge indicates zero.

Temperature
Allow time for temperature to normalize after isolation to avoid the danger of burns and consider whether protective clothing (including safety glasses) is required.

Installation
Preferably on horizontal pipe but can be fitted in other positions if unavoidable.

Salient Features
1. Complete stainless steel construction ensures better mechanical and corrosion resistant properties
2. The disc and seat are hardened by induction hardening process to enable withstand continuous water hammering condition.
3. Seat is integral part of the body, thus eliminates leakage prone joints and gaskets
4. Condensate entry below the disc concentric to disc and seat, ensures clean and parallel lift to disc with reference to seat, eliminating any localised wear and tear.
5. An inbuilt strainer screen of adequate large area ensures long and trouble free operation.

Spares
The spare parts available are shown in heavy outline in the figure alongside. Parts drawn in broken line are not supplied as spares.

<table>
<thead>
<tr>
<th>Item</th>
<th>Part</th>
<th>Or mm</th>
<th>Nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Spool</td>
<td>42</td>
<td>M35</td>
</tr>
<tr>
<td>5</td>
<td>Stud</td>
<td>32</td>
<td>M28</td>
</tr>
</tbody>
</table>

Available Spares

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strainer Screen and Disc (Pkt of 3)</td>
<td>4+3</td>
</tr>
<tr>
<td>Isotub</td>
<td>6</td>
</tr>
</tbody>
</table>

How to Order Spares
Always order spares by using the description given in the column headed “Available Spares” and stating the size and type of trap.

Example
1no. Strainer Screen for DN 15 Forbes Marshall Thermodynamic Trap with Sandwich ends, FMTD64-S

How to Service

How to Service:
Remove isotub if fitted and unscrew cap using spanner. Do not use Stillson wrench or similar type 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 such as a surface plate. A figure of eight motions and a 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 0.25 mm or 0.010”. 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.

To clean or replace strainers: Unscrew the strainer cap using spanner, withdraw screen and clean, or if damaged replace with new one.

To reassemble, insert screen in cap, then screw cap into place. No gasket is required, but a suitable high temperature anti-seize should be applied to the threads.