NTD600 SERIES
THERMO-ACTIVE TRAP

Installation Tip:
Always install STV Test & Block Valve as part of trap station
SEE PAGE 354

Installation Tip:
Add Uniflex Pipe Coupling for ease of maintenance
SEE PAGE 374

Incoming air and condensate flow through the trap body and into the control chamber. Line pressure raises the disc off the seat allowing complete discharge. When flashing condensate enters the cartridge, flow velocity increases, creating low pressure underneath the disc. Flashing condensate at high velocity strikes the inside wall of the disc chamber and is deflected to the top of the disc causing a pressure buildup. The disc is forced down onto the seat by this pressure imbalance. The trap remains closed as flashed vapor in the control chamber keeps the disc seated. Pressure inside the cap is not lowered until the trapped flash vapor condenses due to body radiation. Condensing steam lowers the pressure above the disc. Disc is then lifted and the cycle repeated.

APPLICATIONS

● Steam Tracing
● Drips
● Heating

NTD600 Model Only:
Canadian Registration # OE0591.9C

OPERATION

Pressures To 600 PSIG (41.3 barg)
Temperatures to 800°F (426°C)

Compact Design — Hardened stainless steel disc is the only moving part.
Inexpensive — Low initial cost is less expensive than repairable technologies.
Simplifies Installation — Works in any position.
Rugged — Handles water hammer and superheat.
Reliable, Efficient Operation — Blast discharge helps to eliminate dirt buildup and provides tight shutoff
Freeze resistant — Self draining design prevents freezing.
All Stainless Steel Construction — Resists both internal and external corrosion.
Easy to Monitor — Audible discharge cycle makes checking operation simple.

MODELS

● NTD600—Thermodynamic Disc Trap
● NTD600S—NTD600 with integral strainer
● NTD600B—NTD600S with blowdown valve

SPENCE
**NTD600 SERIES**
**THERMODYNAMIC STEAM TRAPS**

**SPECIFICATION**
Steam trap shall be of thermodynamic design. Body shall be of all stainless construction and hardened throughout. Seat shall be integral to body. Cover shall seal to body without gaskets or seals. Trap shall be suitable for pressures through 600 psi and available in 3/8” through 1”.

**MAXIMUM OPERATING CONDITIONS**
- **PMO:** Max. Operating Pressure 600 psig (41.3 barg)
- **TMO:** Max. Operating Temperature 800°F (426°C)
- **PMA:** Max. Allowable Pressure 600 psig (41.3 barg)
- **TMA:** Max. Allowable Temperature 800°F (426°F)

**MATERIALS OF CONSTRUCTION**
- Body: 420F SS ASTM A743 CA40F
- Cap & Disc: 416 SS ASTM A582
- Blow Down Valve: 304/316SS
- Screen: Stainless Steel

**NTD600 SERIES THERMO-ACTIVE TRAP**

**MAXIMUM CAPACITY—lbs/hr 10°F Below Saturation**

<table>
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<th>NPT Connection</th>
<th>3.5 (0.24)</th>
<th>5 (0.34)</th>
<th>10 (0.7)</th>
<th>20 (1.4)</th>
<th>30 (2.1)</th>
<th>50 (3.4)</th>
<th>75 (5.2)</th>
<th>100 (6.9)</th>
<th>150 (10.3)</th>
<th>200 (13.8)</th>
<th>300 (20.7)</th>
<th>400 (27.6)</th>
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<td>185</td>
<td>190</td>
<td>200</td>
<td>215</td>
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<td>305</td>
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<td>610</td>
<td>790</td>
<td>960</td>
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<td>1/2”</td>
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<td>310</td>
<td>345</td>
<td>410</td>
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<td>470</td>
<td>560</td>
<td>640</td>
<td>810</td>
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<td>2100</td>
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For Kg/Hr Multiply by .454

**NOTE:** The NTD600 Series works efficiently at all line pressures between 5+600 psi and back pressures up to 80% of line pressures.