NOVA NFT650 SERIES
VARIABLE ORIFICE
STEAM TRAPS

Pressures To 650 PSIG (44.8 barg)
Temperatures to 750°F (400°C)

All Stainless Steel Internal Components — Hardened valves and seats. Extra long life and dependable service. Resists water hammer. Protects against erosion and corrosion.

Erosion Proof — Discharge passage is protected with a stainless steel liner.

Integral Strainer — Stainless Steel screen prevents dirt problems. Blow-down connection provided.

Thermostatic Air Vent — Provided with balanced pressure element for immediate and complete air venting.

Variable Orifice — Condensate is discharged continuously through the seat ring which is modulated by the float. This provides a smooth, even flow without high velocity or steam entrainment.

SLR Orifice — Optional continuous bleed prevents flash steam lockup when it is impossible to install trap at low point in system.

Guarantee — Traps are guaranteed against defects in materials or workmanship for 3 years.

MODELS

- NFT651—Low capacity
- NFT652—Medium capacity
- NFT653—High capacity

APPLICATIONS

- Steam Lines
- Process Equipment
- Steam Cookers
- Steam Heated Vats
- Pressing Machinery
- Unit Heaters
- Oil Preheaters
- Converters
- Coils
- Rotating Drum

OPTIONS

- SLR - SLR Orifice
- B - Blowdown Valve
- Continuous Bleed Air Vent
- 300# or 600# Flanged Connection*

*Available on NFT652 and NFT653 only.

Canadian Registration # OE0591.9C

OPERATION

On startup, the thermostatic air vent (caged stainless welded bellows) is open, allowing air to flow freely through the vent valve orifice. When condensate flows into the trap, the float rises, allowing condensate to be discharged. Once air and non-condensables have been evacuated, hot condensate will cause the thermostatic vent to close. Condensate will continue to be discharged as long as condensation occurs.

During normal operation, an increase in the load causes the liquid level in the trap to rise. The float then rises and rolls off the seat ring, allowing more condensate to flow out. The float sinks as the condensate load decreases, moving nearer to the seat ring, decreasing the effective size of the orifice and allowing less condensate to discharge. This provides smooth, continuous operation that reacts instantly to load variation while maintaining a water seal over the seat ring to prevent live steam loss.
Steam trap shall be of float and thermostatic design. Float shall be free of levers, linkages, or other mechanical connections. Float shall be weighted to maintain orientation and shall act as the valve being free to modulate condensate through the seat ring. Air vent shall be of balanced pressure design with stainless steel welded encapsulated bellows capable of discharging air and noncondensable gases continuously within 15°F of saturated temperature. Trap shall contain integral strainer and stainless steel exhaust port sleeve. Trap shall be cast steel bodied suitable for pressures to 650 psi and available in 1/2" through 2" NPT, Socket Weld, or flanged.

**Maximum Operating Conditions**

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<thead>
<tr>
<th>ORIFICE</th>
<th>PMO</th>
<th>NPT</th>
<th>600#</th>
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</thead>
<tbody>
<tr>
<td>1/2, 3/4 &amp; 1</td>
<td>11</td>
<td>3/16 (78)</td>
<td>211/4 (184)</td>
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<tr>
<td>1 1/2 &amp; 2</td>
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<td>3/16 (78)</td>
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<td>1 1/2</td>
<td>13/32 (426)</td>
<td>11/8 (84)</td>
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<td>2</td>
<td>13/32 (424)</td>
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**MATERIALS OF CONSTRUCTION**

- Body & Cover: ASTM A216 Grade WCB
- Cover Gasket: Spiral Wound 304 Stainless w/graphite filler
- All Internal: Stainless Steel
- Air Vent: Balanced Pressure, Stainless Steel

**Maximum Capacity - lbs/hr (10 degrees Below Saturation)**

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<tr>
<th>Trap</th>
<th>Orifice Size</th>
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<th>5</th>
<th>10</th>
<th>20</th>
<th>50</th>
<th>100</th>
<th>150</th>
<th>200</th>
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<th>300</th>
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<td>590</td>
<td>2100</td>
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For Kg/HR Multiply by .454

- NFT651
- NFT652
- NFT653

- Connections: ½-2" NPT or 1½-2" Flanged