



Shown with optional blowdown valve

APPLICATIONS

- Steam Tracing
- Drips
- Heating

OPTIONS

- B - Blowdown Valve
- SW - Socketweld Connections

Canadian Registration # 0E0591.9

S650 SERIES THERMO-ACTIVE STEAM TRAP

Pressures To 600 PSIG (41.3 barg)
Temperatures to 800°F (427°C)

Space Saving — Design incorporates a built-in strainer and optional blowdown valve. Eliminates four connections and four fittings.

Improved Energy Savings — Lowers steam waste due to steam jacketing. Trap cycling is unaffected by ambient temperatures.

Non-violent Discharge — Soft discharge which is unique in a steam trap of this type.

Easily Maintained — Completely renewable without disturbing piping connections by removing cover, unscrewing and replacing Celtron® cartridge. Celtron® replacement cartridges are packaged individually with cover and gaskets in a protective bag. Optional blowdown valve permits easy strainer cleaning while in service.

Freeze Proof — When mounted vertically or on its side horizontally.

Low in Cost — Purchase and maintenance costs are low.

Models

- **S650**—Y pattern body with screen and blowdown port tapped and plugged
- **S650L**—Low capacity on S650

Celtron®

plastic-packed
replaceable cartridge
for fast and simple
replacement



OPERATION

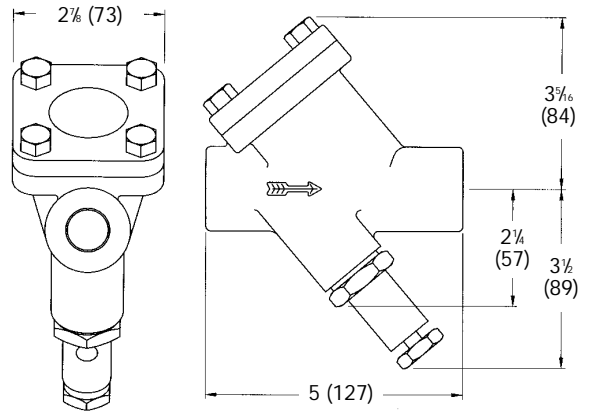
Incoming air and condensate flow through the trap body and into the Celtron® cartridge. Line pressure raises the disc off the seat allowing complete discharge. When flashing condensate enters the cartridge, flow velocity increases, creating low pressure underneath the disc. Flashing condensate at high 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 steam in the jacket prevents exposure of the Celtron® cartridge to ambient temperatures. Pressure inside the cap is not lowered until the trapped flash vapor condenses. Condensing steam lowers the pressure above the disc. Disc is then lifted and the cycle repeated.

S650 SERIES THERMO-ACTIVE STEAM TRAP

SPECIFICATION

Steam trap shall be of thermodynamic cartridge design. Body shall be of forged carbon steel construction housing stainless steel Celtron cartridge. Celtron cartridge shall contain all working components. Cartridge shall be hardened throughout. Seat shall be stress relieved to eliminate warpage. Trap shall contain integral Y pattern strainer with available blowdown valve. Cover shall seal to body utilizing spiral wound graphite gasket. Trap shall be suitable for pressures through 600 psi and available in 1/2"-3/4" NPT.



**DIMENSIONS IN INCHES (MM)
SHOWN WITH OPTIONAL BLOWDOWN VALVE
WEIGHT: 5 LBS. (2.3 KG)**

Connections:
1/2" or 3/4" NPT or socketweld

MAXIMUM OPERATING CONDITIONS

PMO: Max. Operating Pressure 600 psig (41.3 barg)
 TMO: Max. Operating Temperature 800°F (426°C)
 PMA: Max. Allowable Pressure 650 psig (44.8 barg)
 TMA: Max. Allowable Temperature 800°F (426°C)

MATERIALS OF CONSTRUCTION

Body & CoverASTM A105 Forged Steel
 Celtron® Cartridge416 SS w/Hardened Disc & Seat
 Cover Gasket304 SS Spiral Wound w/Graphite Fill
 Strainer033 perf. 304 Stainless Steel
 Blowdown Valve416 Stainless Steel

| Maximum Capacity—lbs/hr 10°F Below Saturation (Kg/hr 5°C Below Saturation) | | | | | | | | | | |
|---|---------------------------------|---------------------|---------------------|---------------------|---------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Trap | Differential PSIG (barg) | | | | | | | | | |
| | 5 (0.34) | 10 (0.7) | 25 (1.7) | 50 (3.5) | 75 (5.2) | 100 (6.9) | 200 (13.8) | 300 (20.7) | 400 (27.6) | 600 (41.3) |
| S650L | 105 | 150 | 235 | 330 | 395 | 435 | 550 | 630 | 690 | 790 |
| S650 | 240 | 265 | 420 | 590 | 700 | 770 | 980 | 1120 | 1240 | 1400 |

For Kg/Hr Multiply by .454