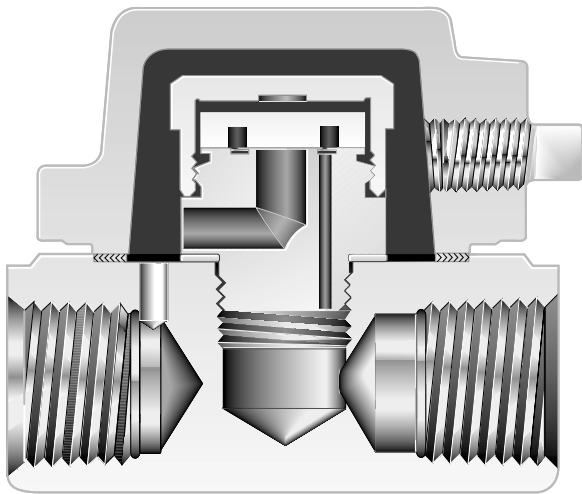


S610 SERIES THERMODYNAMIC STEAM TRAP

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



Shown with optional
tapped blowdown connection.

Applications

- Steam Tracing
- Drips
- Heating

Options

- SW - Socketweld Connections
- TB - Tapped Blowdown Connection*
- B - Blowdown Valve*

*Not available on S612

Canadian Registration # 0E0591.9

Celtron®

plastic-packed
replaceable cartridge
for fast and simple
replacement



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

Extended Trap Life — Integral strainer keeps disc and seat clean. Non-violent discharge reduces wear. Heavy disc prevents warpage and improves performance.

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.

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

Multi-functional — Integral check valve eliminates need for additional fittings.

Economical — First cost and maintenance cost are low.

Spiral-wound Cover Gasket — assures positive closure.

Models

- S610—3/8" & 1/2" standard capacity
- S610L—Low capacity on S610
- S611—3/4" standard capacity
- S611L—Low capacity on S611
- S612—1" standard capacity

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.

S610 SERIES THERMODYNAMIC STEAM TRAP

Typical Specification

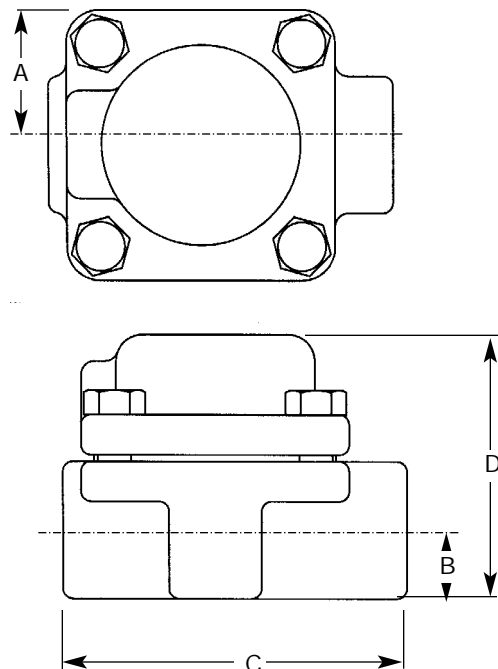
Steam trap shall be of thermodynamic capsule design. Body shall be of forged carbon steel construction housing stainless steel Celtron capsule. Celtron capsule shall contain all working components. Capsule shall be hardened throughout. Seat shall be stress relieved to eliminate warpage. Trap shall contain integral strainer with available blowdown port and valve. Cover shall seal to body utilizing spiral wound graphite gasket. 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 650 psig (44.8 barg)
TMA: Max. Allowable Temperature 800°F (426°C)

Materials of Construction

Body & Cover: ASTM A105 Forged Steel
Celtron® Cartridge: 416 Stainless Steel w/hardened disc & seat
Bolts: High temperature alloy
Cover Gasket: 347 Stainless Spiral-wound w/graphite filler
Integral Strainer: 304 Stainless Steel



Connections:
3/8"-1" NPT or Socketweld

Dimensions in inches (mm)					Weight in Lbs. (kg).
Size	A	B	C	D	
3/8" - 1/2"	1 ¹⁷ / ₆₄ (32)	2 ¹ / ₃₂ (17)	3 ¹ / ₄ (83)	2 ¹⁵ / ₃₂ (63)	2.3 lbs (1.05)
3/4"	1 ¹ / ₂ (38)	3 ³ / ₄ (19)	3 ³ / ₄ (95)	2 ²⁵ / ₃₂ (71)	3.4 lbs (1.5)
1"	1 ¹⁹ / ₃₂ (40)	7 ⁷ / ₈ (22)	4 ³ / ₁₆ (106)	3 ¹⁵ / ₁₆ (100)	5 lbs (2.3)

Maximum Capacity—lbs/hr 10°F Below Saturation											
NPT Threaded or Socketweld Connections	Trap	Differential - PSIG (barg)									
		5 (0.34)	10 (0.7)	25 (1.7)	50 (3.4)	75 (5.2)	100 (6.9)	200 (13.8)	300 (20.7)	400 (27.6)	600 (41.3)
3/8" - 1/2"	S610L	105	150	235	330	395	435	550	630	690	790
3/8" - 1/2"	S610	240	265	420	590	700	770	980	1120	1240	1400
3/4"	S611L	105	150	235	330	395	435	550	630	690	790
3/4"	S611	450	500	790	1130	1340	1460	1850	2100	2300	2630
1"	S612	1090	1200	1900	2700	3200	3550	4450	5100	5650	6400

For Kg/Hr Multiply by .454

The S610 Series trap works efficiently at all line pressures between 2 and 600 psi and back pressures to 80% of line pressure.