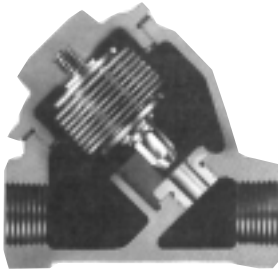


ACHIEVER "A" SERIES THERMOSTATIC STEAM TRAPS

**Pressures To 200 PSIG (13.8 barg)
Temperatures to 400°F (204°C)**



Shown in AHV Configuration

Applications

- Unit Heaters
- Sterilizers
- Air Vents
- Autoclaves
- Dry Kilns
- Dryers
- Flash Tanks
- Small Heat Exchangers
- Plating Tanks
- Cookers
- Kettles
- Other Process Equipment

Options *See page 8*

- ST - Sterilizer Trim
- SLR - SLR Orifice
- HC - High capacity orifice

Actuator Construction — Internal guide rod and tube for vibration resistance and positive valve to seat alignment.

Improved Energy Savings — Maximum elimination of air and non-condensibles—trap closes at saturated steam temperature.

Compact — Requires minimum space and provides condensate capacities equal to larger mechanical traps.

Freeze Proof — Type A with horizontal inlet and vertical outlet. Type AHV when installed vertically (outlet down) or horizontally on side (cover perpendicular to ground).

Renewable In-line — With factory packaged, precision matched internal parts kits.

Superior Performance — Fast response to changing pressure and condensate loads. Maximum air handling capability.

Air Vent — Efficient steam service air vent when equipped with ISO filled actuator and installed in air vent location.

Guaranteed — Guaranteed against defects in materials or workmanship for 3 Years.

Models

- **A33**—1/2" right angle trap
- **A43**—3/4" right angle trap
- **A53**—1" right angle trap
- **AHV33**—1/2" straight thru trap
- **AHV43**—3/4" straight thru trap
- **AHV53**—1" straight thru trap

*Add "HC" to all the above for high capacity.

Canadian Registration # 0E0591.9

Operating Principle

Thermal actuator is filled at its free length with a liquid having a lower boiling point than water. On start-up, valve is normally open. When steam enters trap, thermal actuator fill vaporizes to a pressure higher than line pressure. This forces valve into seat orifice to prevent any further flow. As condensate collects,

it takes heat from thermal actuator, lowering internal pressure. Line pressure will then compress thermal actuator to open valve and discharge condensate. Valve opening automatically adjusts to load conditions from minimum on very light loads to full lift at maximum load.

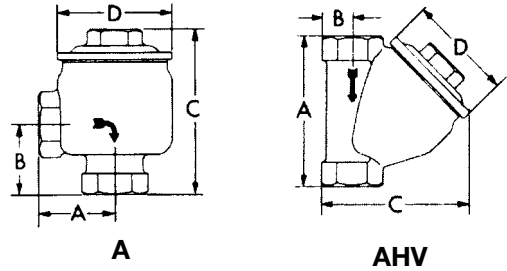
ACHIEVER "A" SERIES THERMOSTATIC STEAM TRAPS

Typical Specifications

Steam trap shall be of balanced pressure design with stainless steel welded actuator capable of discharging condensate within 10°F of saturated temperature. Where greater sensitivity is required, SLR orifice and Sterilizer trim will be available to allow condensate evacuation at or near saturated temperatures. Thermostatic actuator shall employ a conical valve lapped in matched sets with the seat ring assuring tight shut off. A minimum of two orifice sizes shall be available allowing for custom capacity sizing. Trap shall be bronze bodied suitable for pressures through 200 psig and available in 1/2" through 1" NPT connections.

Maximum Operating Conditions

PMO: Max. Operating Pressure 200 psig (13.8 barg)
 TMO: Max. Operating Temperature 400°F (204°C)
 PMA: Max. Allowable Pressure 200 psig (13.8 barg)
 TMA: Max. Allowable Temperature 400°F (204°C)



Connections: 1/2" - 1" NPT

Materials of Construction

Body & Cover: ASTM B283 C37700
 Actuator: Welded SS
 Cover Gasket: Copper Jacketed
 Valve & Seat: Hardened 416 Stainless Steel

Dimensions						
Welded Stainless Bellows	Pipe Size inches	Inch (mm)				Weight lb (kg)
		A	B	C	D	
A33	1/2	2 (41)	1 1/8 (106)	4 5/16 (76)	3 (1.5)	3.3 (1.5)
A43	3/4	2 (47)	1 1/8 (113)	4 5/16 (76)	3 (1.5)	3.3 (1.5)
A53	1	2 1/16 (56)	2 5/16 (125)	4 5/16 (76)	3 (2.2)	4.8 (2.1)
AHV33	1/2	4 (19)	3/4 (98)	3 3/8 (76)	3 (1.4)	3.1 (1.4)
AHV43	3/4	4 1/4 (22)	7/8 (108)	4 1/4 (76)	3 (1.6)	3.6 (1.6)
AHV53	1	5 3/8 (25)	1 (116)	4 5/16 (76)	3 (2.4)	5.3 (2.4)

Maximum Capacity—lbs/hr 10°F Below Saturation (Kg/hr 5°C Below Saturation)																
Trap	Orifice inch (mm)	Differential PSIG (barg)														
		1 (0.07)	2 (0.14)	5 (0.34)	10 (0.69)	15 (1.03)	20 (1.4)	40 (2.8)	50 (3.4)	60 (4.1)	80 (5.5)	100 (6.9)	125 (8.6)	150 (10.3)	175 (12.1)	200 (13.8)
1/2" A33, AHV33	5/16	785	1050	1650	2325	2575	2825	3295	3815	4200	4675	5035	5535	5720	6085	6210
3/4" A43, AHV43	(8)	(357)	(477)	(750)	(1057)	(1170)	(1284)	(1498)	(1734)	(1909)	(2125)	(2289)	(2516)	(2600)	(2766)	(2823)
1" A53, AHV53	3/8 (10)	985 (448)	1390 (632)	2180 (991)	3070 (1395)	3255 (1480)	3735 (1698)	4225 (1920)	5040 (2291)	5480 (2491)	5990 (2723)	6645 (3020)	7315 (3325)	7560 (3436)	8045 (3657)	8200 (3727)
1/2"- 1" All High Capacity "HC"	1/2 (13)	1140 (518)	1610 (732)	2545 (1157)	3600 (1636)	4405 (2002)	5090 (2314)	7195 (3270)	8045 (3657)	8810 (4005)	9800 (4455)	10560 (4800)	11375 (5170)	12090 (5495)	12725 (5784)	13305 (6048)