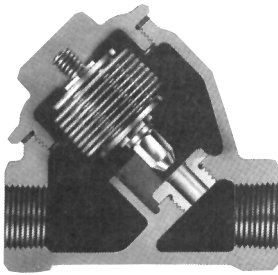


ACHIEVER "A" SERIES THERMOSTATIC STEAM TRAPS

**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
- Convolute Bronze or Welded SS Actuator
- HC - High capacity orifice

Canadian Registration # 0E0591.9

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. Traps with Welded Actuator—3 Years. Traps with Phosphor Bronze Actuator—1 Year

Models

- **A31**—1/2" right angle trap w/convoluted bronze actuator
- **A41**—3/4" right angle trap w/convoluted bronze actuator
- **A51**—1" right angle trap w/convoluted bronze actuator
- **A33**—Welded SS actuator on A31
- **A43**—Welded SS actuator on A41
- **A53**—Welded SS actuator on A51
- **AHV31**—1/2" straight thru trap w/convoluted bronze actuator
- **AHV41**—3/4" straight thru trap w/convoluted bronze actuator
- **AHV51**—1" straight thru trap w/convoluted bronze actuator
- **AHV33**—Welded SS actuator on AHV31
- **AHV43**—Welded SS actuator on AHV41
- **AHV53**—Welded SS actuator on AHV51

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

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.

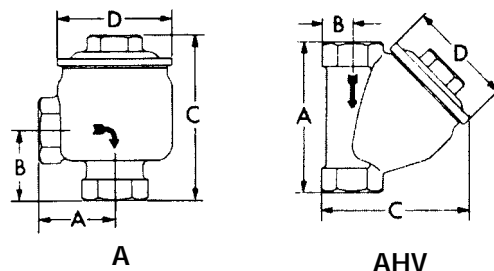
ACHIEVER "A" SERIES THERMOSTATIC STEAM TRAPS

Typical Specifications

Steam trap shall be of balanced pressure design with bronze convoluted actuator or 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 or Convoluted Monel

Cover Gasket: Copper Jacketed

Valve & Seat: Hardened 416 Stainless Steel

Dimensions

Convuluted Bronze	Welded Stainless	Pipe Size inches	Inch (mm)				Weight lb (kg)
			A	B	C	D	
A31	A33	1/2	2 (41)	1 5/8 (106)	4 3/8 (76)	3 (1.5)	3.3 (1.5)
A41	A43	3/4	2 (47)	1 5/8 (113)	4 3/8 (76)	3 (1.5)	3.3 (1.5)
A51	A53	1	2 3/8 (56)	2 3/8 (125)	4 3/8 (76)	3 (2.2)	4.8 (2.1)
AHV31	AHV33	1/2	4 (19)	3/4 (98)	3 3/8 (76)	3 (1.4)	3.1 (1.4)
AHV41	AHV43	3/4	4 1/4 (22)	7/8 (108)	4 1/4 (76)	3 (1.6)	3.6 (1.6)
AHV51	AHV53	1	5 1/8 (25)	1 (116)	4 3/8 (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" A31,A33,AHV31,AHV33 3/4" A41,A43,AHV41,AHV43	5/16 (8)	785 (357)	1050 (477)	1650 (750)	2325 (1057)	2575 (1170)	2825 (1284)	3295 (1498)	3815 (1734)	4200 (1909)	4675 (2125)	5035 (2289)	5535 (2516)	5720 (2600)	6085 (2766)	6210 (2823)
1" A51,A53,AHV51,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)