

SERIES H SUPER CAPACITY FLOAT & THERMOSTATIC STEAM TRAPS

Pressures To 450 PSIG (31 barg)
Temperatures to 500°F (260°C)



Features

- "H" series offer rugged cast iron body and cover
- "HS" series offer cast steel body and cover
- Stainless steel float and lever mechanism
- Heat treated chrome steel valve and seat
- "12" & "13" series—single seat condensate orifice
- "14" & "23" series—double seat condensate orifice
- Integral thermostatic air vent encased by stainless steel cage for pressures up to 250 psig (114 barg)
- When pressures exceed 250 all "13HS" and "14HS" models are not furnished with air vents. Venting can be accomplished by addition of thermostatic bellows trap to external piping.

Models

- **12H**—Cast iron, standard super capacity, single seat
 - **13H**—Cast iron, high super capacity, single seat
 - **23H**—Cast iron, standard super capacity, double seat
 - **14H**—Cast iron, high super capacity, double seat
- * Add "S" for steel construction on 13H through 23H

Options

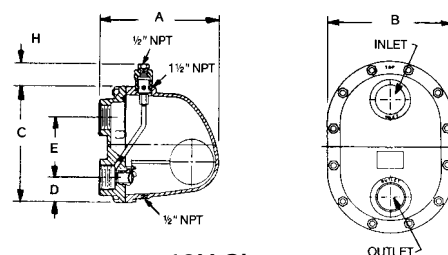
- Floor mounting brackets for "13" and "14" series traps (recommended for pressures above 30 psig)
- Integral vacuum breaker for pressures to 150 psig
- Armored gage glass for 13H, 13HS, 14H and 14HS series for pressures to 250 psig (114 barg) @ 425°F (218°C).

Operation

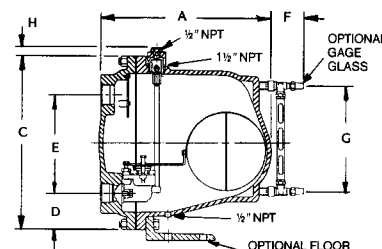
During startup, air and non-condensable gases enter the trap and are automatically vented through an accurate balanced pressure internal thermostatic air vent. As condensate enters the trap, the float and lever mechanism is raised, lifting the valve off the

seat, discharging the condensate. Condensate will continue to be discharged at the same rate at which it is entering. Any air or non-condensable gas that may accumulate will be continually and efficiently passed by the thermostatic air vent.

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12H Shown
23H Similar



13H/HS Shown
14H/HS Similar

Connections: 2" or 2 1/2" NPT

Typical Specification

Steam trap shall be of float and thermostatic design. Float shall actuate the valve via a hinged lever and linkage. 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 be cast iron or cast steel bodied suitable for pressures to 450 psi and available in 2" and 2-1/2" NPT.

Maximum Operating Conditions

PMO: Max. Operating Pressure see orifice selection
TMO: Max. Operating Temperature saturated at pressure
PMA: Max. Allowable Pressure CI 250 psig (17.2 barg)
CS 450 psig (31.0 barg)
TMA: Max. Allowable Temperature CI 450°F (232°C)
CS 500°F (260°C)

Materials of Construction

Body & Cover: "H" Series Cast Iron
"HS" Series Cast Steel
Body & Cover Gasket: Non-asbestos
Valve & Seat: Heat Treated Chrome Steel
Thermostatic Air Vent: Phosphor-bronze Bellows,
Encased w/SS Cage

| Model | Inches (mm) | | | | | | | | Weight lbs (kg) |
|-----------|------------------|-----------------|------------------|----------------|------------------|---------------|-------------|-----------------|--------------------|
| | A | B | C | D | E | F | G | H | |
| 12H | 13 1/16 (348) | 9 1/16 (264) | 13 1/16 (332) | 2 1/16 (75) | 6 3/8 (168) | — | — | 1 1/16 (460) | 80 (36.4) |
| 13 & 14H | 19 3/4 (502) | 14 3/4 (375) | 20 1/4 (514) | 4 3/8 (106) | 11 1/16 (287) | 3 3/4 (95) | 12 (305) | 5/8 (16) | 196 (89) |
| 13 & 14HS | 20 (508) | 15 1/4 (387) | 20 (508) | 4 3/8 (106) | 11 1/16 (287) | 3 3/4 (95) | 12 (305) | 5/8 (16) | 290 (132) |
| 23H | 14 1/16 (373) | 9 1/16 (246) | 13 1/16 (332) | 2 1/16 (75) | 6 3/8 (168) | — | — | 1 1/16 (460) | 87 (39.5) |

Maximum Capacity—lbs/hr (10°F Below Saturation)

| Trap | Pipe Size | Orifice | Differential – PSIG (barg) | | | | | | | | | | | | | | | | | | | |
|---------------------|-------------|---------|----------------------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | | ¼ (.017) | ½ (.034) | 1 (.069) | 2 (.138) | 5 (.345) | 10 (.690) | 15 (1.03) | 20 (1.38) | 30 (2.07) | 50 (3.45) | 75 (5.17) | 100 (6.90) | 125 (8.62) | 150 (10.3) | 175 (12.1) | 200 (13.8) | 250 (17.2) | 300 (20.7) | 400 (27.6) | 450 (31.0) |
| 12H-15 | 2 | 1 ⅝ | 5585 | 7900 | 10100 | 12500 | 17000 | 21600 | 25000 | | | | | | | | | | | | | |
| 12H-30 | 2 | ¾ | 2335 | 3900 | 5500 | 7000 | 10900 | 14100 | 16000 | 18400 | 20000 | | | | | | | | | | | |
| 13HS-30 13H-30 | 2 or 2 ½ | 1 ⅝ | 11670 | 16500 | 21000 | 26000 | 34000 | 40500 | 43200 | 46500 | 48000 | | | | | | | | | | | |
| 12H-75 | 2 | ⅝ | 2190 | 3100 | 3960 | 4900 | 5900 | 10000 | 11400 | 12000 | 13700 | 16500 | 19700 | | | | | | | | | |
| 13HS-100 13H-100 | 2 or 2 ½ | 1 ⅝ | 5975 | 8450 | 11400 | 14500 | 20500 | 25000 | 28300 | 31500 | 35000 | 40600 | 45100 | 50000 | | | | | | | | |
| 12H-125 | 2 | ½ | 2120 | 3000 | 3420 | 4100 | 4600 | 7100 | 9200 | 10500 | 11600 | 13100 | 15900 | 18300 | 19500 | | | | | | | |
| 13HS-150 13H-150 | 2 or 2 ½ | ¾ | 5160 | 7300 | 9800 | 12500 | 17000 | 20000 | 22800 | 24000 | 27500 | 33500 | 37700 | 44000 | 49000 | 52000 | | | | | | |
| 12H-175 | 2 | ⅞ | 1980 | 2800 | 330 | 3600 | 4200 | 6000 | 7100 | 7800 | 9500 | 10800 | 12000 | 14000 | 15500 | 17000 | 18000 | | | | | |
| 13HS-250 13H-250 | 2 or 2 ½ | 1⅞ | 4275 | 6050 | 8100 | 10500 | 14000 | 17500 | 18500 | 20000 | 21500 | 24000 | 27000 | 31500 | 34000 | 37000 | 40000 | 43500 | 50000 | | | |
| 13HS-450 | 2 or 2 ½ | ½ | 2760 | 3900 | 4500 | 5400 | 7200 | 9000 | 10200 | 12500 | 14000 | 16500 | 20000 | 23000 | 25500 | 27000 | 28500 | 30000 | 33000 | 35000 | 38500 | 40000 |
| 23H-50 | 2 ½ | 1 ⅝ | 21200 | 30000 | 35000 | 42000 | 55000 | 67000 | 75000 | 79000 | 89000 | 105000 | | | | | | | | | | |
| 14HS-250 14H-250 | 3 | 1 ⅝ | 24700 | 35000 | 44000 | 58000 | 71000 | 82000 | 91000 | 96000 | 10500 | 119000 | 131000 | 145000 | 157000 | 168000 | 179000 | 190000 | 208000 | | | |
| 14HS-450 | 3 | 1 1½ | 14850 | 21000 | 28000 | 35000 | 42000 | 50000 | 56500 | 65000 | 72000 | 87000 | 95000 | 110000 | 122000 | 135000 | 148000 | 160000 | 185000 | 210000 | 260000 | 280000 |

For Kg/Hr Multiply by .454

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