



Designed for high pressure applications, such as steam power generation by electric utilities and industry.

Features

- Ruggedly designed to withstand water hammer
- Energy efficient
- Self-draining
- No steam loss
- Quiet operation and little pressure surge in condensate return systems
- Resistant to freeze damage
- Integral full size strainer included
- Capable of temperature adjustment
- Can be mounted in any position
- Primary fail mode is open

HP Series steam traps are designed for high pressure applications, such as steam power generation by electric utilities and industry.

These traps are highly energy efficient, because they operate at subcooled temperatures (like all bimetallic traps). Steam never reaches the valve because condensate actually seals off the valve seat area where steam loss could occur.

The bimetallically actuated valve can be adjusted externally, to provide more or less subcooling, without closing off the steam supply, and the traps are repairable in-line by the use of factory set (but subsequently adjustable) replacement internals. The traps include a full size screen.

The flow is heavy when subcooling is great. Low flows occur with low degrees of subcooling.



Applicable Codes and Standards

Performance testing per ANSI/ASME PTC-39.1. End connections per ANSI B1.20.1 for threaded ends and per ANSI B16.11 for socketwelding ends.

Specifications

How They Work

The bimetallic traps operate on the basis of opposing forces. In the HP-45 trap, differential pressure across the valve and seat produces an opening force which promotes increased flow.

In the HP-80, -100 and -150 traps, the differential pressure produces a closing force which is resisted by a spring.

Temperature change acting on the bimetallic elements causes them to deflect and generate a force. In the HP-45 trap, this force opposes the differential pressure. In the HP-80, -100, and -150 traps, the force opposes the spring and acts in the same direction as the differential pressure force. The bimetallic forces promote valve closing and decreased flow.

Installation

Install below the drain point. Can be installed in any position except upside down and vertical discharge up.

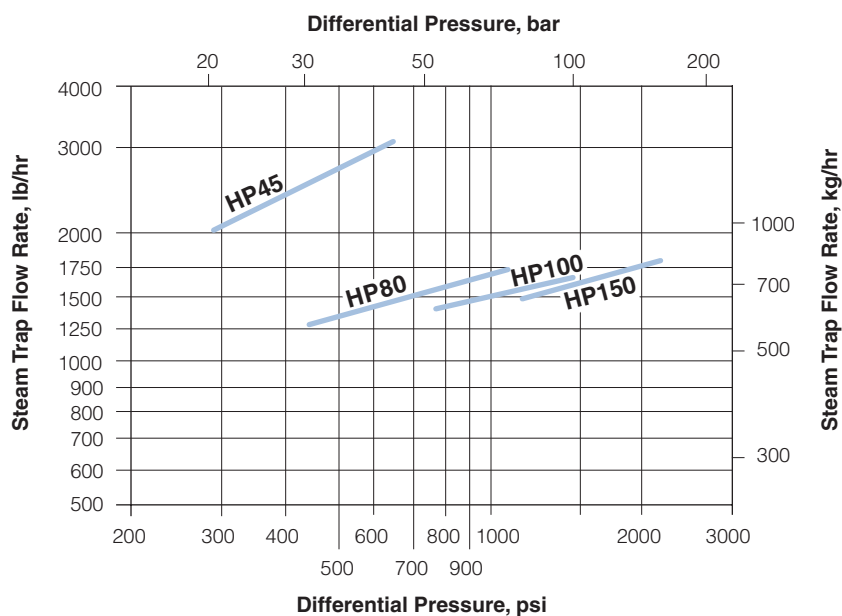
How to Specify

The trap shall be bimetallic thermostatically operated, with integral screen and external adjustment for checking and cleaning.

Pressure/Temperature Ratings

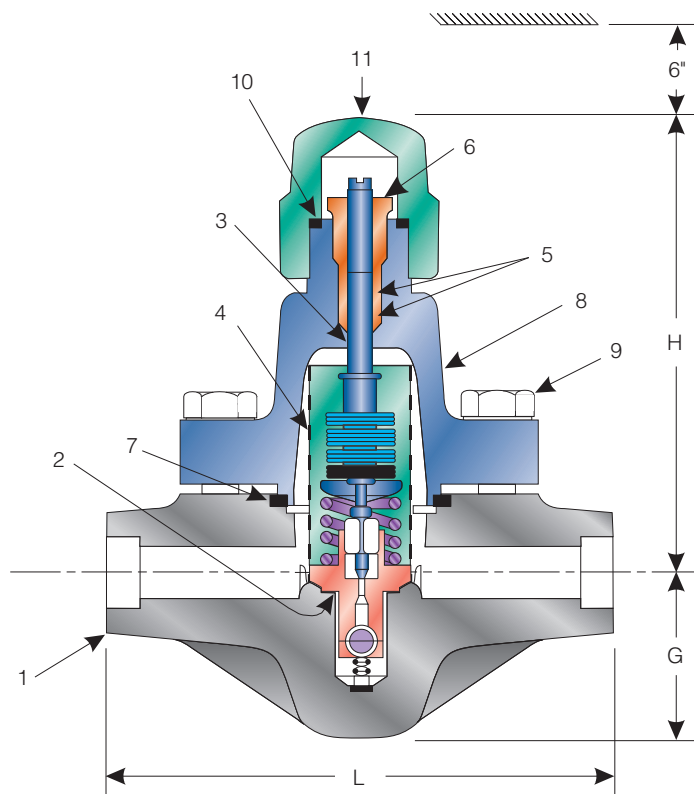
Trap Series	Max. Pressure psi [bar]	Working Pressure psi [bar]	Max. Temperature °F [°C]
HP-45	660 [45]	220 to 660 [15 to 45]	842°F [450°C]
HP-80	1175 [80]	290 to 1175 [20 to 80]	930°F [500°C]
HP-100	1470 [100]	362 to 1470 [25 to 100]	1060°F [570°C]
HP-150	2200 [150]	362 to 2200 [25 to 150]	1060°F [570°C]

Condensate Capacity (For steam trap sizing)



Yarway HP Series

High Pressure Bimetallic Steam Traps



Weights

Series	Weight, lb. (kg)
HP45	14 (6.5)
HP80	21 (9.5)
HP100	23 (10.5)
HP150	26 (11.7)

Parts and Materials

No.	Description	HP45	HP-80	HP100/-150
1	Body	A-105	A-182 Gr. F-11	A-182 Gr. F-22
2	Seat Gasket	AISI 304	AISI 304	AISI 304
3	Bimetallic Device (Adjusting Screw)	Stainless Steel	Stainless Steel	Stainless Steel
4	Strainer	AISI 304 L	AISI 304 L	AISI 304 L
5	Packing	N/A	Graphite	Graphite
6	Packing Gland	N/A	AISI 303	AISI 303
7	Cover Gasket	SS/Graphite	SS/Graphite	SS/Graphite
8	Cover	A-105	A-182 Gr. F-11	A-182 Gr. F-22
9	Cover Screw	10.9 (B7)	B7	B16
10	Blind Nut Gasket	SS/Graphite	SS/Graphite	SS/Graphite
11	Blind Nut	A105	AISI 4130	AISI 4130

Dimensions, in. [mm]

Trap Size ¹ in. [DN]	HP45 ²			HP-80/-100			HP-150		
	L	G	H	L	G	H	L	G	H
1/2 [15] 3/4 [20] 1 [25]	6 ⁵ / ₁₆ [160]	2 ¹ / ₄ [58]	4 ⁷ / ₈ [124]	6 ¹ / ₄ [160]	2 ¹ / ₄ [58]	4 ⁷ / ₈ [124]	8 ¹ / ₄ [210]	2 ¹ / ₄ [58]	4 ⁷ / ₈ [124]

Notes:

1. Socketwelding ends standard.
2. NPT end optional.

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