

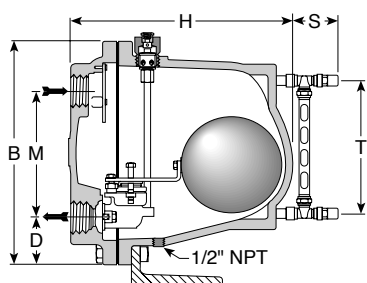


L & M Series Ultra-Capacity Float & Thermostatic Steam Trap

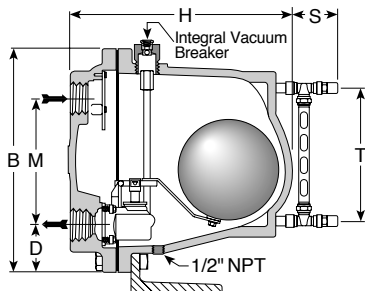
Cast Iron for Horizontal Installation, With Thermostatic Air Vent

For Pressures to 250 psig (17 bar)...Capacities to 208,000 lb/hr (94,348 kg/hr)

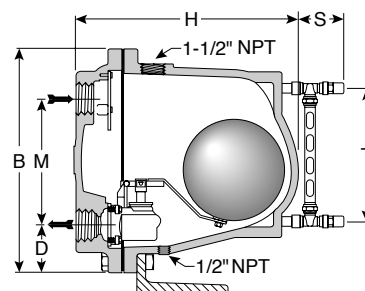
Steam Trapping and Steam Tracing Equipment



Series L, F&T shown



Series M, CC shown



Series M, LD shown

Description

The simple yet rugged cast iron construction of the L & M Series Ultra-Capacity F&T steam traps offers long, trouble-free service. All floats, valves and seats, and lever mechanisms are constructed of stainless steel.

The integral thermostatic air vent is a balanced-pressure phosphor bronze bellows caged in stainless steel. It is designed especially for heavy-duty industrial applications where highly efficient, uninterrupted service is essential. This balanced pressure type air vent will respond to the pressure-temperature curve of steam at any pressure from zero to 250 psig (17 bar). Thus—up to 250 psig (17 bar)—air is vented at slightly below steam temperature.

Maximum Operating Conditions

Maximum allowable pressure (vessel design):

Model L:	250 psig @ 450°F (17 bar @ 232°C)
Model M:	250 psig @ 450°F (17 bar @ 232°C)

Maximum operating pressure:

Model 30-L:	30 psig (2 bar) saturated steam
Model 100-L:	100 psig (7 bar) saturated steam
Model 150-L:	150 psig (10 bar) saturated steam
Model 250-L:	250 psig (17 bar) saturated steam
Model 250-M:	250 psig (17 bar) saturated steam

Maximum operating temperature bellows: 422°F (217°C)

Connections

Screwed NPT and BSPT
Flanged (screw on)

Materials

Body and cap:	ASTM A48 Class 30
Internals:	All stainless steel—304
Valve(s) and seat(s):	Stainless steel
Drain plug:	Carbon steel
Thermostatic air vent:	Stainless steel and bronze with phosphor bronze bellows, caged in stainless steel

Options

- Integral vacuum breaker 150 psig (10 bar) maximum. Add suffix VB to model number
- No internal thermostatic air vent for liquid drainer service. Add suffix LD to model number
- Integral flash release for syphon drainage service. Add suffix CC to model number
- Armored gauge glass 250 psig @ 424°F (17 bar @ 218°C)
- L and M Series available with floor mounting bracket. Consult factory.

Specification

Float & thermostatic steam trap, type ... in cast iron, with thermostatic air vent.

For a fully detailed certified drawing, refer to CD #1010.

How to Order

Pressure	Model	Connection Size	Options
250	M	12	GG
30 100 150 250	L	8 = 2" 10 = 2-1/2"	VB = Vacuum Breaker LD = Liquid Drainer CC = Condensate Controller G/G = Gauge Glass FLG = Specify type and class of flange
250	M	12 = 3"	

Special Configurations

Condensate controller with flash release for syphon drainage and/or cascade service. The condensate controller (CC) configuration was developed especially to meet very large capacity needs in applications where condensate must be lifted from the drain point to the trap. Under such conditions—often referred to as syphon drainage—the reduction in pressure that occurs when condensate is elevated causes a portion of the condensate to flash into steam. Ordinary traps, unable to differentiate between flash steam and live steam, close and impede drainage.

The L & M Series condensate controllers (CC) are equipped with a fixed, restricted orifice near the top of the body to bleed off the flash steam (and all air present). This permits the trap to function properly on condensate.

Liquid drainer with back vent for exceptionally high capacity drainage of liquid from gas under pressure. The liquid drainer (LD) configuration was developed to meet very large capacity needs in draining water and other liquids from air or other gases under pressure. To prevent air or gas binding, the access port in the top of the body serves as a back vent connection to the equipment being drained. For capacity data, see pages LD-30 and LD-49 or consult your Armstrong Representative.

L and M Series Traps				
Trap Series	L	M	L	M
	in		mm	
Pipe Connection	2, 2-1/2	3	50, 65	80
"B" (Height)	20-1/4		514	
"C" (Width)	14-3/4		375	
"D" (Bottom to ϕ)	4-3/16		106	
"H" (Length)	19-3/4		502	
"M" (ϕ to ϕ)	11-5/16		287	
"S" (Gauge Glass Width)	3-3/4		95.2	
"T" (Gauge Glass Height)	12		305	
Weight lb (kg)			196 (88.9)	

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.

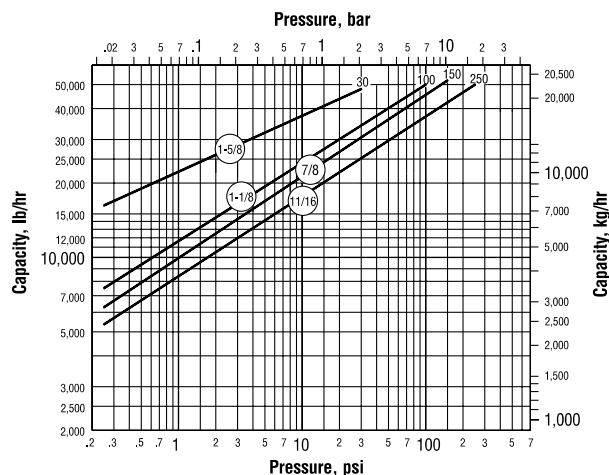
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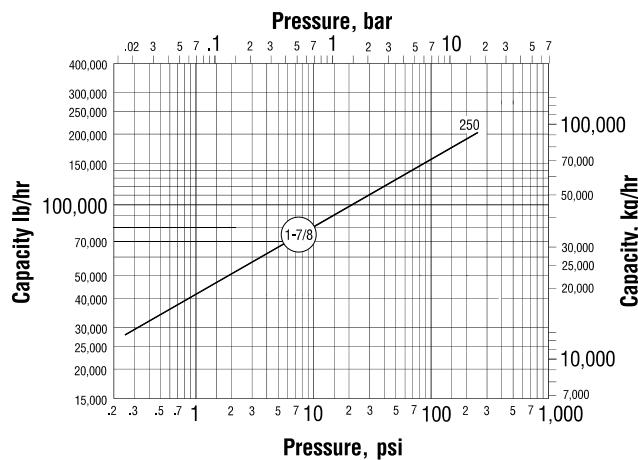
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Model L Series Capacity



Model M Series Capacity



Installation Notes

Under conditions where the load may approach the maximum capacity of the trap, it is recommended that the size of the discharge line be increased one size as close to the trap cap as is practical. When L and M Series units are used in severe service conditions or at pressures exceeding 30 psig, use an anchoring bracket or other supportive measures to minimize stress on piping.

Ultra-Capacity L and M Series units **MUST BE WARMED UP** in the proper sequence and gradually. Recommended warm-up rate—not to exceed 100°F/8 minutes.

See your Armstrong Representative.

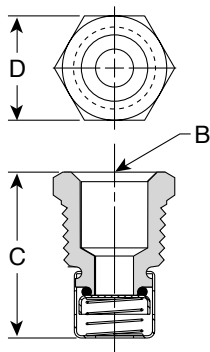
Vacuum Breaker—3/8" (10 mm) and 1/2" (15 mm) NPT

Many times, condensate will be retained ahead of steam traps because of the presence of a vacuum. To break a vacuum, air must be introduced into the system by means of a vacuum breaker.

For maximum protection against freezing and water hammer in heating coils under modulated control, for example, vacuum breakers are recommended in conjunction with freeze protection devices.

Vacuum Breaker

Size	in	mm	in	mm
	1/2 NPT	15	3/8 NPT	10
"B" Pipe Connections	3/8 NPT	10	1/4 NPT	6
"C" Height	1-1/4	30	1-3/32	28
"D" Width	7/8 Hex	22 Hex	11/16 Hex	17 Hex



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