

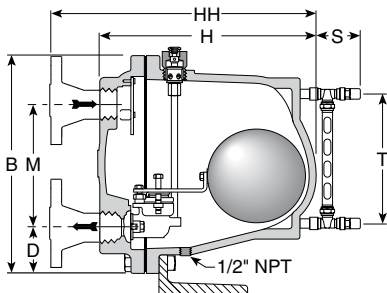


# L & M Series Ultra-Capacity Float & Thermostatic Steam Traps

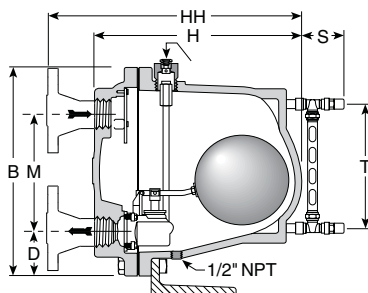
Cast Iron for Horizontal Installation, with Thermostatic Air Vent

For Pressures to 17 bar...Capacities to 94 350 kg/h

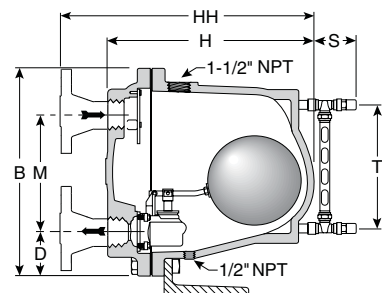
Steam Trapping and Steam Tracing Equipment



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 17 bar. Thus – up to 17 bar – air is vented at slightly below steam temperature.

## Maximum Operating Conditions

Maximum allowable pressure (vessel design)†:

- Model L: 17 bar @ 232°C
- Model M: 17 bar @ 232°C

Maximum operating pressure:

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

Maximum back pressure: 99% of inlet pressure  
Maximum operating temperature bellows: 217°C

**Note:** Cast iron traps should not be used in systems where freezing, excessive hydraulic or thermal shock are present.

## Connections

Screwed BSPT and NPT  
Flanged DIN or ANSI (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 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 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.  
Maximum allowable back pressure 99% of inlet pressure.

## How to Order

Pressure	Model	Connection Size	Option
250	M	12	GG
30 = 2 bar 100 = 7 bar 150 = 10,5 bar 250 = 17 bar	L	8 = DN50 10 = DN65	VB = Vacuum Breaker LD = Liquid Drainer CC = Condensate Controller G/G = Gage Glass
250 = 17 bar	M	12 = DN80	

## 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-453 and LD-476 or consult your Armstrong Representative.

Table ST-134-1. L and M Series Side Inlet, Side Outlet Trap

Model No.	L		M
Pipe Connections	50	65	80
"B" Height	514		514
"C" Width (not shown on drawing)	375		375
"D" Bottom to $\varnothing$	106		106
"H" Face-to-Face (screwed)	502		502
"HH" Face-to-Face (flanged PN40*)	574	580	583
"M" $\varnothing$ to $\varnothing$	287		287
"S" Gauge Glass Width	95,2		95,2
"T" Gauge Glass Height	305		305
Weight in kg (screwed)	88,9		88,9
Weight in kg (flanged PN40*)	97	99	101

Dimensions in mm

\* Other flange sizes, ratings and face-to-face dimensions are available on request.

All models comply with Article 4.3 of the PED (2014/68/UE), but PMA is 11 bar.

† May be derated depending on flange rating and type.

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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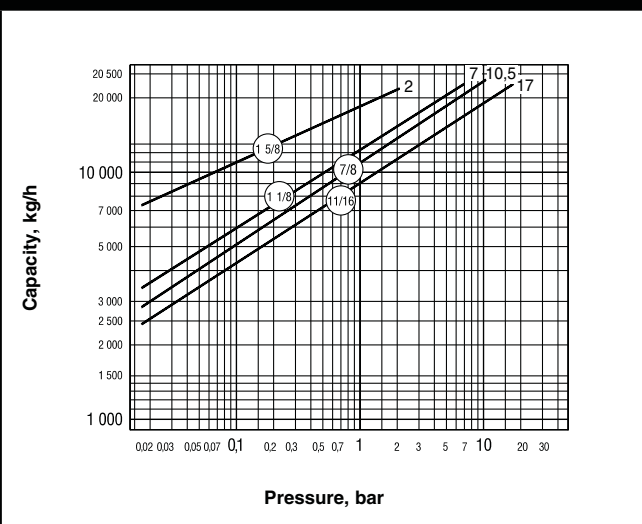
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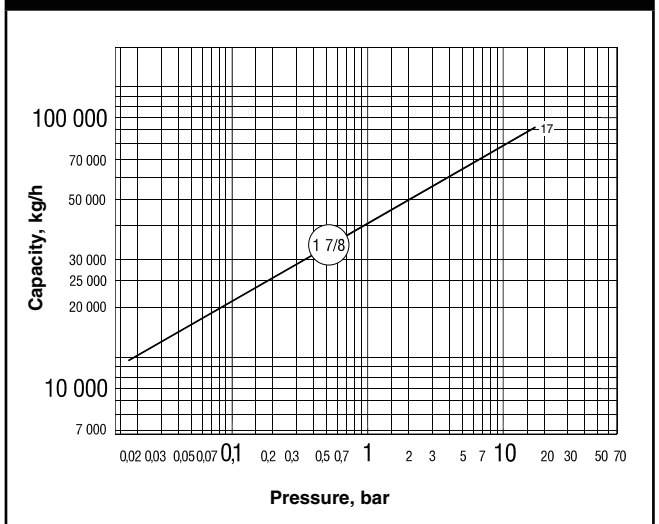


Steam Trapping and Steam Tracing Equipment

**Table ST-135-1. L Series Capacity**



**Table ST-135-2. 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 2 bar, use an anchoring bracket or other supportive measures to minimize stress on piping.

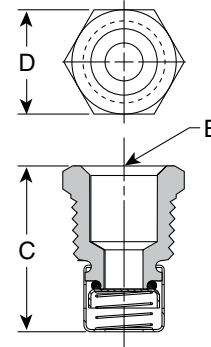
Ultra-Capacity L and M Series units **MUST BE WARMED UP** in the proper sequence and gradually. Recommended warm-up rate – not to exceed 55°C/8 minutes.

See your Armstrong Representative.

### Vacuum Breaker – 3/8" and 1/2" 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.



**Table ST-135-3. Vacuum Breaker (dimensions in mm)**

Size	1/2" NPT	3/8" NPT
"B" Pipe Connections	3/8"	1/4"
"C" Height	30	28
"D" Width	22 Hex	17 Hex

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