



# BALANCED PRESSURE THERMOSTATIC STEAM TRAP

## MODELS L21S/L32S

### BALANCED PRESSURE THERMOSTATIC TRAP WITH "FALL-OPEN" DESIGN

#### Features

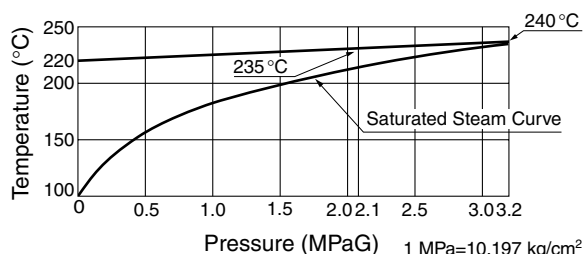
**Forged steel thermostatic trap suitable for a wide range of applications, including steam mains, tracing, dryers and heaters.**

1. "Fail open" feature will not hold back condensate in the steam space.
2. Rugged, yet light construction, with-stands superheat and water hammer.
3. Cyclic operation with fixed subcooling throughout the whole pressure range.
4. Outstanding air venting capability.
5. Compact, yet with high capacity.
6. Easy to clean and maintain.
7. Hardened stainless steel valve seat.
8. Built-in screen with large surface area.
9. Models L21SC/L32SC with built-in check valve are available upon request.



#### Specifications

| Model                            | L21S                             | L32S |
|----------------------------------|----------------------------------|------|
| Connection                       | Screwed, Socket, Welded, Flanged |      |
| Size (mm)                        | 15, 20, 25                       |      |
| Max. Operating Press. (MPaG) PMO | 2.1                              | 3.2  |
| Min. Operating Press. (MPaG)     | 0.01                             |      |
| Maximum Back Pressure            | 90% of Inlet Pressure            |      |
| Max. Operating Temp. (°C) TMO    | see graph at right               |      |
| Subcooling of Capsule Fill (°C)  | up to 6                          |      |
| Type of X-element                | B                                |      |



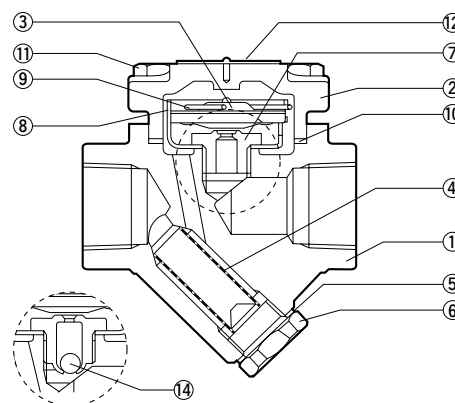
**PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS):**  
 Maximum Allowable Pressure (MPaG) PMA: 3.2  
 Maximum Allowable Temperature (°C) TMA: 300



To avoid abnormal operation, accidents or serious injury, do not use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

| No.             | Description          | Material                | JIS        | ASTM/AISI*        |
|-----------------|----------------------|-------------------------|------------|-------------------|
| ①               | Body                 | Carbon Steel            | —          | A105              |
| ②               | Cover                | Carbon Steel            | —          | A105              |
| ③ <sup>R</sup>  | X-element            | Stainless Steel         | —          | —                 |
| ④ <sup>R</sup>  | Screen inner/outer   | Stainless Steel         | SUS304/430 | AISI304/430       |
| ⑤ <sup>MR</sup> | Screen Holder Gasket | Soft Iron               | SUYP       | AISI1010          |
| ⑥               | Screen Holder        | Carbon Steel            | —          | A105              |
| ⑦ <sup>R</sup>  | Valve Seat           | Stainless Steel         | SUS420F    | AISI420F          |
| ⑧ <sup>R</sup>  | X-element Guide      | Stainless Steel         | SUS304     | AISI304           |
| ⑨ <sup>R</sup>  | Spring Clip          | Stainless Steel         | SUS304     | AISI304           |
| ⑩ <sup>MR</sup> | Cover Gasket         | Stainl. Steel./Graphite | SUS316L    | AISI316L          |
| ⑪               | Cover Bolt           | Carbon Steel            | S45C       | AISI1045          |
| ⑫               | Nameplate            | Stainless Steel         | SUS304     | AISI304           |
| ⑬               | Flange**             | Carbon/Cast Steel       | —          | A105/A216 Gr. WCB |
| ⑭ <sup>R</sup>  | Check Valve Ball     | Stainless Steel         | SUS440C    | AISI440C          |

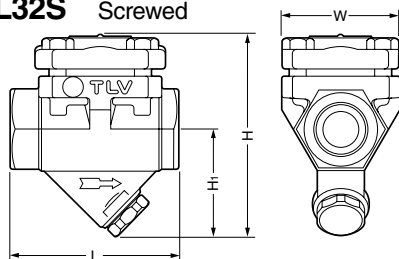
\* Equivalent \*\* Shown overleaf, shape and material depend on flange specifications  
 Replacement kits available: (M) maintenance parts, (R) repair parts



With optional Check Valve

## Dimensions

### ● L21S/L32S Screwed

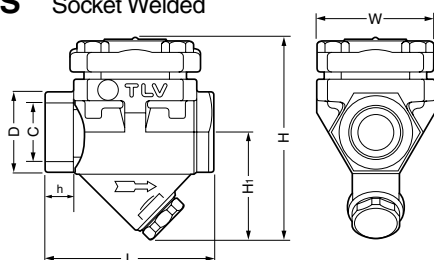


### L21S/L32S Screwed\* (mm)

| Size | L  | H   | H <sub>1</sub> | W  | Weight (kg) |
|------|----|-----|----------------|----|-------------|
| 15   | 80 | 97  | 52             | 56 | 1.3         |
| 20   |    |     |                |    | 1.8         |
| 25   | 88 | 104 | 55             |    |             |

\* Rc(PT), other standards available

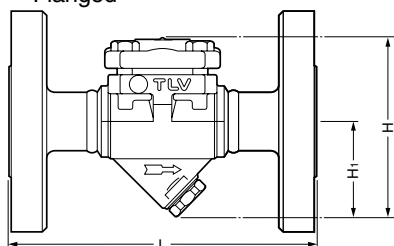
### ● L21S Socket Welded



### L21S Socket Welded (mm)

| Size | L  | H   | H <sub>1</sub> | W  | D  | C    | h  | Weight (kg) |
|------|----|-----|----------------|----|----|------|----|-------------|
| 15   | 80 | 97  | 52             | 56 | 30 | 22.2 | 12 | 1.3         |
| 20   |    |     |                |    | 36 | 27.7 | 14 | 1.8         |
| 25   | 88 | 104 | 55             |    | 44 | 34.5 |    |             |

### ● L21S/L32S Flanged



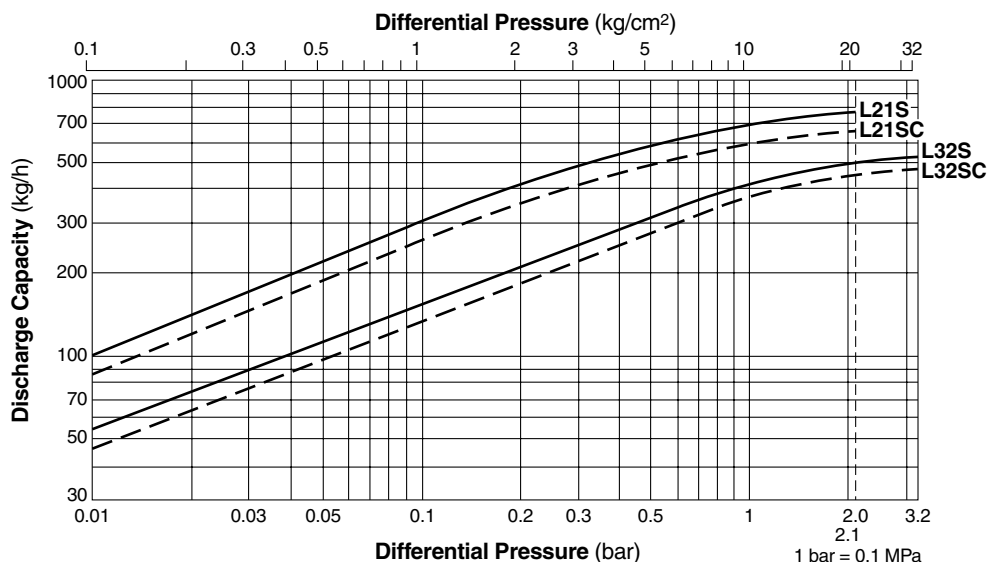
### L21S/L32S Flanged\* (mm)

| Size | L          |       |       | H   | H <sub>1</sub> | Weight*<br>(kg) |
|------|------------|-------|-------|-----|----------------|-----------------|
|      | ASME Class |       |       |     |                |                 |
|      | 150RF      | 300RF | 600RF |     |                |                 |
| 15   | 140        | 140   | 140   | 97  | 52             | 2.9             |
| 20   | 165        | 165   | 165   |     |                | 3.9             |
| 25   | 210        | 210   | 210   | 104 | 55             | 4.7             |

Other standards available, but length and weight may vary

\* Weight is for class 300 RF

## Discharge Capacity



1. Differential pressure is the difference between the inlet and outlet pressure of the trap.
2. Recommended safety factor: at least 2.

Manufacturer

ISO 9001/ISO 14001

**TLV** CO., LTD.  
Kakogawa, Japan  
is approved by LRQA Ltd. to ISO 9001/14001

