



TRAP STATION

MODEL V1/V2

FORGED TRAP STATION EQUIPPED WITH BUILT-IN BELLOWS-SEALED VALVES

Benefits

Compact valve and steam trap station for use with condensate manifolds or applications with limited installation space.

1. All wetted components are stainless steel.
2. Rugged, compact and versatile design minimizes installation area and easily adapts to plant requirements.
3. Built-in bellows-sealed valves have durable stainless steel bellows to eliminate gland leakage.
4. Good seal with stellite hardened surfaces on valve plug and valve seat.
5. QuickTrap two-bolt universal connection permits trap unit replacement in minutes without disturbing piping.
6. Built-in screen with large surface area ensures trouble-free operation.
7. Includes built-in BD2 blowdown valves for station blowdown and trap testing.



Specifications

| Model | V1-RB | | V1-LB | | V2-RB | | V2-LB | |
|--|-------------------------|-------------|-----------------|-------------|---|-------------|-----------------|-------------|
| Connection | Screwed | Socket Weld | Screwed | Socket Weld | Screwed | Socket Weld | Screwed | Socket Weld |
| Size (in) | 1/2, 3/4 | 1/2, 3/4 | 1/2, 3/4 | 1/2, 3/4 | 1/2, 3/4 | 1/2, 3/4 | 1/2, 3/4 | 1/2, 3/4 |
| Built-in Valve Location | One valve at trap inlet | | | | One valve at trap inlet, one valve at trap outlet | | | |
| Maximum Operating Pressure (psig) PMO | | | | | 650* | | | |
| Maximum Operating Temperature (°F) TMO | | | | | 752* | | | |
| Maximum Allowable Pressure (psig) PMA | | | | | 650* | | | |
| Maximum Allowable Temperature (°F) TMA | | | | | 752* | | | |
| Seat Leakage (Gas test in accordance with API 598) | | | | | 0 bubbles/15 seconds @ 87 psig | | | |

*If PMA/TMA and/or PMO/TMO values differ from those of the trap unit, the actual specifications for the assembled product are restricted to the lower values.

Connections and sizes in bold are standard



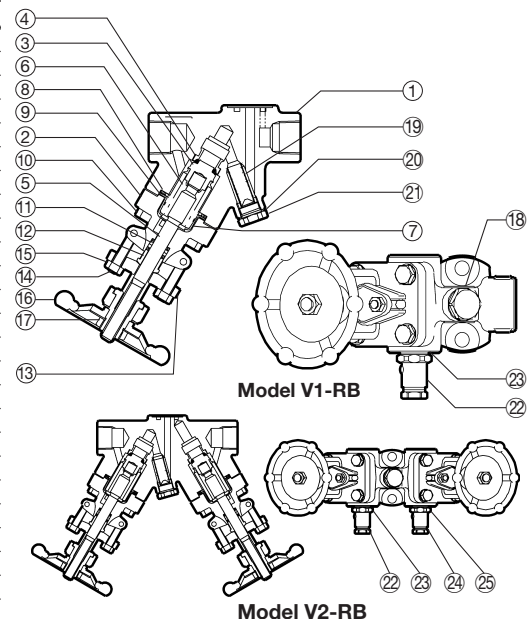
CAUTION

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 | ASTM/AISI ¹⁾ | JIS |
|-----|--|--|-------------------------|-----------|
| ① | Body | Stainless Steel | AISI304 | SUS304 |
| ② | Valve Bonnet | Carbon Steel | A105 | — |
| ③ | Valve Plug | Stainless Steel + Stellite | A276-304 | — |
| ④ | Valve Seat | Stainless Steel + Stellite | A276-410 | — |
| ⑤ | Valve Stem | Stainless Steel | A276-410 | — |
| ⑥ | Bellows | Stainless Steel | AISI316L | SUS316L |
| ⑦ | Bellows Flange | Stainless Steel | A276-316L | — |
| ⑧ | Bellows Gasket | Lower ³⁾ Graphite/Stainless Steel | - /AISI316 | - /SUS316 |
| ⑨ | Bellows Gasket | Upper Graphite/Stainless Steel | - /AISI304 | - /SUS304 |
| ⑩ | Bonnet Bolt | Alloy Steel | A193 Gr.B7 | — |
| ⑪ | Gland Packing | Graphite | — | — |
| ⑫ | Gland Bushing | Stainless Steel | A276-410 | — |
| ⑬ | Gland Flange | Carbon Steel | A105 | — |
| ⑭ | Gland Eye Bolt | Alloy Steel | A193 Gr.B7 | — |
| ⑮ | Gland Nut | Carbon Steel | A94 Gr.2H | — |
| ⑯ | Handwheel | Ductile Cast Iron | A536 | FCD450 |
| ⑰ | Handwheel Nut | Carbon Steel | AISI1025 | S25C |
| ⑱ | Nameplate | Stainless Steel | AISI304 | SUS304 |
| ⑲ | Screen ²⁾ | Stainless Steel | AISI430 | SUS430 |
| ⑳ | Screen Holder Gasket ³⁾ | Stainless Steel | AISI316L | SUS316L |
| ㉑ | Screen Holder Plug | Stainless Steel | AISI303 | SUS303 |
| ㉒ | Blowdown Valve (BD2) ²⁾ | Cast Stainless Steel | A351 Gr.CF8 | — |
| ㉓ | Blowdown Valve Gasket ^{2),3)} | Stainless Steel | AISI316L | SUS316L |
| ㉔ | Test Valve (BD2) ²⁾ | Cast Stainless Steel | A351 Gr.CF8 | — |
| ㉕ | Test Valve Gasket ^{2),3)} | Stainless Steel | AISI316L | SUS316L |

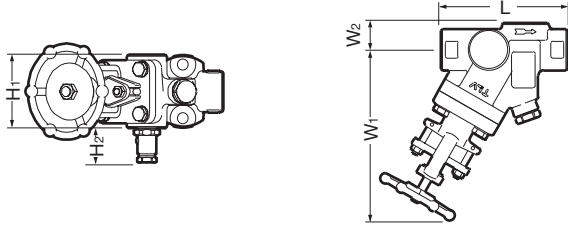
¹⁾ Equivalent ²⁾ See next page for available models

³⁾ Aside from these indicated, replacement parts are not normally supplied. Consult TLV if other parts are needed.



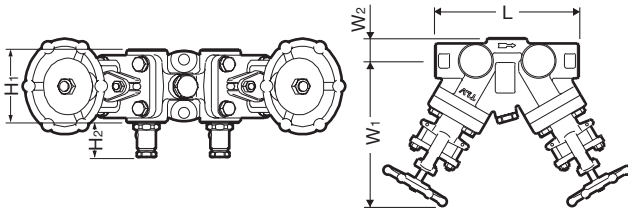
Dimensions

● **V1-RB/V1-LB** Screwed & Socket Weld



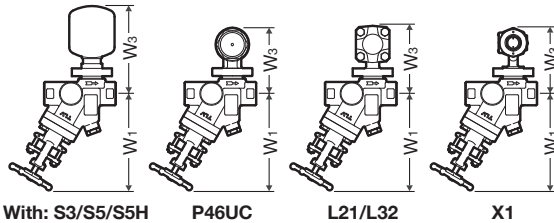
V1-RB shown; V1-LB is inverted (opposite flow direction)

● **V2-RB/V2-LB** Screwed & Socket Weld



V2-RB shown; V2-LB is inverted (opposite flow direction)

● **Mounted Steam Trap Units (QuickTrap)**



With: S3/S5/S5H P46UC L21/L32 X1

V1-RB/V1-LB Screwed & Socket Weld (in)

| Size | L | H ₁ | H ₂ | W ₁ * | W ₂ | Weight (lb) |
|------|-------|----------------|----------------|------------------|----------------|-------------|
| 1/2 | 4 3/4 | 2 3/4 | 1 5/16 | 7 1/16 | 1 | 7.5 |
| 3/4 | | | | | | |

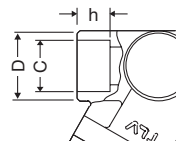
Screwed connections are NPT; other standards available
* At full-open position

V2-RB/V2-LB Screwed & Socket Weld (in)

| Size | L | H ₁ | H ₂ | W ₁ * | W ₂ | Weight (lb) |
|------|--------|----------------|----------------|------------------|----------------|-------------|
| 1/2 | 6 5/16 | 2 3/4 | 1 5/16 | 7 1/16 | 1 | 13 |
| 3/4 | | | | | | |

Screwed connections are NPT; other standards available
* At full-open position

● **Socket Weld Connections** (in)



| Size | φD | φC | h |
|------|--------|-------|-----|
| 1/2 | 1 7/16 | 0.855 | 1/2 |
| 3/4 | | | |

* ASME B16.11-2005, other standards available

| Model | W ₁ (in) | W ₃ (in) | Weight (lb) | |
|---------|---------------------|---------------------|-------------|----------|
| | | | With V1* | With V2* |
| S3 | 7 1/16 | 5 5/8 | 9.7 | 15 |
| S5 | | 6 7/8 | 11 | 16 |
| S5H | | 7 | | |
| P46UC | | 4 3/8 | 9.7 | 15 |
| L21/L32 | | | 9.9 | |
| X1 | | | | |

* Combined weight of trap station with mounted trap unit

Valve Series

| Model | V1-RB | V1-LB | V2-RB | V2-LB |
|-----------------------|---------------|----------------|-------|-------|
| Station Picture | | | | |
| Flow Diagram | | | | |
| Flow Direction | Right | Left | Right | Left |
| Inlet Valve | ✓ | ✓ | ✓ | ✓ |
| Outlet Valve | — | — | ✓ | ✓ |
| Blowdown Valve | ✓ | ✓ | ✓ | ✓ |
| Test Valve | — | — | ✓ | ✓ |
| Available Trap Units* | Free Float | S3 / S5 / S5H | | |
| | Thermodynamic | P46UC | | |
| | Thermostatic | L21 / L32 / X1 | | |

● **Steam Trap Unit Specifications***

| | |
|--|--|
| Free Float Steam Trap S3 / S5 / S5H PMO: 300 / 450 / 650 psig TMO: 752 / 752 / 800 °F Max. Discharge Capacity** 475 / 1510 / 530 lb/h | |
| Thermodynamic Steam Trap P46UC PMO: 650 psig TMO: 750 °F Max. Discharge Capacity** 1630 lb/h | |
| Thermostatic Steam Trap L21 / L32 / X1 PMO: 300 / 450 / 300 psig TMO: 455 / 464 / 662 °F Max. Discharge Capacity** 1050 / 930 / 650 lb/h | |

* For more information, see the QuickTrap specifications data sheet for the steam trap employing the desired trap unit (trap unit - QuickTrap data sheet); S3 - FS3/FS5; S5 - FS3/FS5; S5H - FS5H; P46UC - FP46UC; L21 - FL21/FL32; L32 - FL21/FL32; X1 - FX1

** Capacities shown here will vary depending on orifice numbers, type of X-element and/or pressure differential.



DO NOT DISASSEMBLE OR REMOVE THIS PRODUCT WHILE IT IS UNDER PRESSURE.
Allow internal pressure of this product to equal atmospheric pressure and its surface to cool to room temperature before disassembling or removing. Failure to do so could cause burns or other injury. READ INSTRUCTION MANUAL CAREFULLY.

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For Technical Service 1-800 "TLV TRAP"



Manufacturer

TLV CO., LTD.

Kakogawa, Japan

is approved by LRQA Ltd. to ISO 9001/14001

ISO 9001
ISO 14001

