



# 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	<b>Screwed</b>	Socket Weld	<b>Screwed</b>	Socket Weld	<b>Screwed</b>	Socket Weld	<b>Screwed</b>	Socket Weld
Size (in)	<b>1/2, 3/4</b>	1/2, 3/4	<b>1/2, 3/4</b>	1/2, 3/4	<b>1/2, 3/4</b>	1/2, 3/4	<b>1/2, 3/4</b>	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**



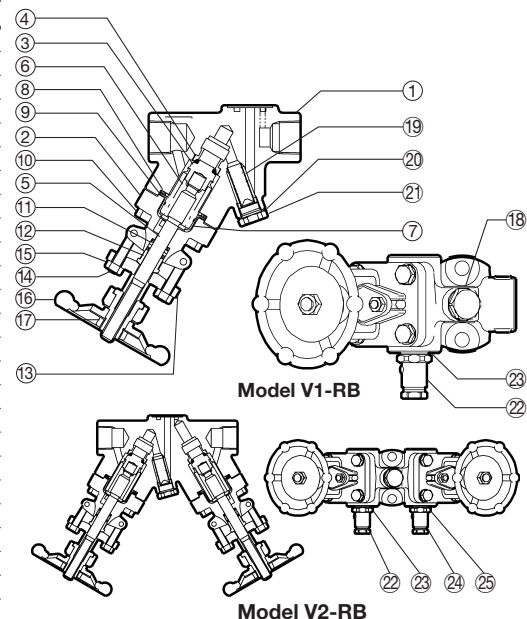
**CAUTION**

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 <sup>1)</sup>	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 <sup>3)</sup> 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 <sup>2)</sup>	Stainless Steel	AISI430	SUS430
⑳	Screen Holder Gasket <sup>3)</sup>	Stainless Steel	AISI316L	SUS316L
㉑	Screen Holder Plug	Stainless Steel	AISI303	SUS303
㉒	Blowdown Valve (BD2) <sup>2)</sup>	Cast Stainless Steel	A351 Gr.CF8	—
㉓	Blowdown Valve Gasket <sup>2),3)</sup>	Stainless Steel	AISI316L	SUS316L
㉔	Test Valve (BD2) <sup>2)</sup>	Cast Stainless Steel	A351 Gr.CF8	—
㉕	Test Valve Gasket <sup>2),3)</sup>	Stainless Steel	AISI316L	SUS316L

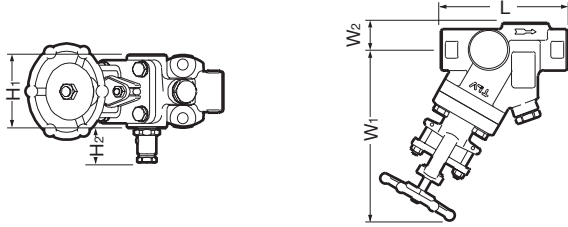
<sup>1)</sup> Equivalent <sup>2)</sup> See next page for available models

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



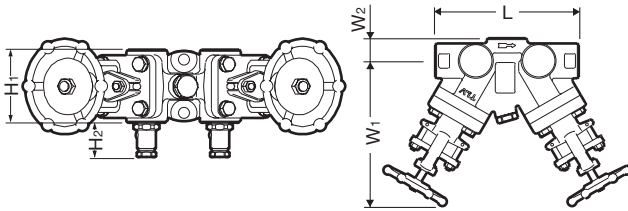
**Dimensions**

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



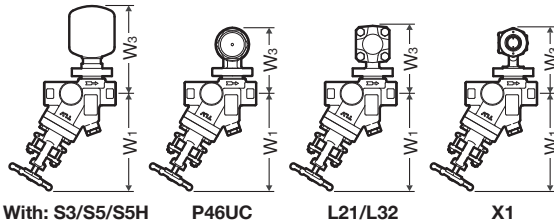
V1-RB shown; V1-LB is inverted (opposite flow direction)

● **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 <sub>1</sub>	H <sub>2</sub>	W <sub>1</sub> *	W <sub>2</sub>	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 <sub>1</sub>	H <sub>2</sub>	W <sub>1</sub> *	W <sub>2</sub>	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 <sub>1</sub> (in)	W <sub>3</sub> (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\***

<b>Free Float Steam Trap</b> <b>S3 / S5 / S5H</b> PMO: 300 / 450 / 650 psig TMO: 752 / 752 / 800 °F Max. Discharge Capacity** 475 / 1510 / 530 lb/h	
<b>Thermodynamic Steam Trap</b> <b>P46UC</b> PMO: 650 psig TMO: 750 °F Max. Discharge Capacity** 1630 lb/h	
<b>Thermostatic Steam Trap</b> <b>L21 / L32 / X1</b> 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.

**TLV CORPORATION**

13901 South Lakes Drive, Charlotte, NC 28273-6790

Tel: 704-597-9070 Fax: 704-583-1610

E-mail: [tlv@tlvengineering.com](mailto:tlv@tlvengineering.com) <https://www.tlv.com>

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

