# **TRAP STATION**

# MODEL V1P/V2P

### HIGH PERFORMANCE FORGED PISTON VALVE TRAP STATION RATED TO 725 PMO

### **Benefits**

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

- 1. Rugged, compact and versatile design minimizes installation area and easily adapts to plant PMA requirements.
- 2. Employs a high performance piston valve comprised of upper and lower valve rings made of alternating layers of stainless steel and graphite that provide exceptional tight-sealing.
- 3. The CLASS 800 design piston valves provide for long service reliability.
- 4. QuickTrap two-bolt universal connection permits trap unit replacement in minutes without disturbing piping.
- 5. Built-in screen with large surface area ensures trouble-free operation.
- 6. Includes built-in BD2 blowdown and/or test valves on some models for station blowdown and trap testing.



### **Specifications**

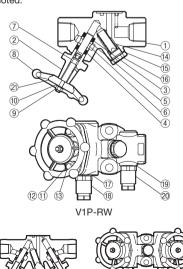
| V1P     | -RL  | V1F             | -RB                               | V1P  | -LB   | V1P  | -RW  | V1P   | -LW   | V1P  | P-RV   | V1P  | -LV  | V2P  | -RL   | V2P   | -RB   | V2F   | P-LB  |
|---------|--|-----------------|-----------------------------------|--|---|--|--|---|---|--|--|--|--|--|---|---|---|---|---|
|         | Carbon Steel (A105) or Stainless Steel (A182 F30 |                 |                                   |  |   |  |  |   | 04)   |  |  |  |  |  |   |   |   |   |   |
| S       | SW   | S               | SW                                | S  | SW  | S  | SW   | S   | SW  | S  | SW   | S  | SW   | S  | SW  | S   | SW  | S   | SW  |
| 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  | 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   | 1/2,3/4   | 1/2,3/4   | 1/2,3/4   | 1/2,3/4   |
|         |  |                 |                                   |  | One   | valve a  | at trap  | inlet   |   |  |  |  |  | One  | valve e   | ach at  | trap i  | nlet & d  | outlet  |
|         |  |                 |                                   |  |   |  |  |   | 72  | 25*  |  |  |  |  |   |   |   |   |   |
|         |  |                 |                                   |  |   |  |  |   | 80  | )0*  |  |  |  |  |   |   |   |   | -   |
|         |  |                 |                                   |  |   |  |  |   | 72  | 25*  |  |  |  |  |   |   |   |   |   |
|         |  |                 |                                   |  |   |  |  |   | 80  | )0*  |  |  |  |  |   |   |   |   |   |
|         |  |                 |                                   |  |   |  | 0 bu   | bbles/  | 15 se   | conds  | @ 87   | psig   |  |  |   |   |   |   | -   |
|         | S<br>1⁄2,3⁄4                                     | 1/2,3/4 1/2,3/4 | S SW S<br>1/2,3/4 1/2,3/4 1/2,3/4 | <u>S</u> <u>SW</u> <u>S</u> <u>SW</u><br>1/2,3/4 1/2,3/4 1/2,3/4 1/2,3/4 | S         SW         S         SW         S           1/2,3/4         1/2,3/4         1/2,3/4         1/2,3/4         1/2,3/4         1/2,3/4 | S         SW         S         SW         S         SW           1/2,3/4 | S         SW         S         SW         S         SW         S           1/2,3/4 | S         SW         I/2,3/4         1/2,3/4 <th1 2,3="" 4<="" th="">         1/2,3/4         1</th1> | S         SW         S         SW | S         SW         SW         S         SW         S         SW         S         SW         < | Carbon Steel (A105) or Stainle           S         SW         S         SW | Carbon Steel (A105) or Stainless Steel           S         SW         SW         S         SW         S         SW         S         SW         SW | Carbon Steel (A105) or Stainless Steel (A1           S         SW         S         SW | Carbon Steel (A105) or Stainless Steel (A182 F3           S         SW         SW         S         SW         S         SW         S         SW         SW         S         SW         SW         S         SW         SW         SW         S         SW         SW <td>Carbon Steel (A105) or Stainless Steel (A182 F304)           S         SW         S</td> <td>Carbon Steel (A105) or Stainless Steel (A182 F304)           S         SW         SW         S         SW         S         SW         S         SW         SW<td>Carbon Steel (A105) or Stainless Steel (A182 F304)           S         SW         S</td><td>Carbon Steel (A105) or Stainless Steel (A182 F304)           S         SW         S</td><td>Carbon Steel (A105) or Stainless Steel (A182 F304)           S         SW         S</td></td> | Carbon Steel (A105) or Stainless Steel (A182 F304)           S         SW         S | Carbon Steel (A105) or Stainless Steel (A182 F304)           S         SW         SW         S         SW         S         SW         S         SW         SW <td>Carbon Steel (A105) or Stainless Steel (A182 F304)           S         SW         S</td> <td>Carbon Steel (A105) or Stainless Steel (A182 F304)           S         SW         S</td> <td>Carbon Steel (A105) or Stainless Steel (A182 F304)           S         SW         S</td> | Carbon Steel (A105) or Stainless Steel (A182 F304)           S         SW         S | Carbon Steel (A105) or Stainless Steel (A182 F304)           S         SW         S | Carbon Steel (A105) or Stainless Steel (A182 F304)           S         SW         S |

\* For trap station only: further restricted by mounted trap unit.

Body material, connections and sizes in bold are standard

S = Screwed, SW = Socked Weld To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. CAUTION Local regulations may restrict the use of this product to below the conditions quoted.

| No.      | Description                   | -                 | Material                   | ASTM/AISI              | JIS     |  |
|----------|-------------------------------|-------------------|----------------------------|------------------------|---------|--|
| (1)      | Body                          |                   | See Specifications table a |                        |         |  |
| 2        | Valve Bonnet                  |                   | Carbon Steel               | A105                   |         |  |
| 3        | Lower Valve Ring              |                   | Graphite/Stainless Steel   | A105                   |         |  |
| 4        | Upper Valve Ring              |                   | Graphite/Stainless Steel   |                        |         |  |
| 5        | Lantern Bushing               |                   | Stainless Steel            | <br>A182 F316          |         |  |
| 6        | Piston                        |                   | Stainless Steel            | A182 F316              |         |  |
| (7)      | Spindle                       |                   | Stainless Steel            | A479 410               |         |  |
| 8        | Handwheel                     |                   | Carbon Steel               | A105                   |         |  |
| 9        | Handwheel Nut                 |                   | Carbon Steel               | A105                   | _       |  |
| (10)     | Washer                        |                   | Carbon Steel               |                        |         |  |
| ~        | Bonnet Nut                    |                   | Carbon Steel               |                        |         |  |
| 11       | Washer                        |                   | Carbon Steel               | _                      |         |  |
| (12)     |                               |                   |                            |                        |         |  |
| (13)     | Bonnet Bolt                   |                   | Alloy Steel                | A193 Gr.B7             |         |  |
| (14)     | Screen 3)                     | 0 1 01 10 1       | Stainless Steel            | AISI430 1)             | SUS430  |  |
| (15)     | Screen Holder                 | Carbon Steel Body | Soft Iron                  | AISI1010 1)            | SUYP    |  |
|          | Gasket <sup>3)</sup>          | Stain. Steel Body | Stainless Steel            | AISI316L <sup>1)</sup> | SUS316L |  |
| (16)     | Screen Holder                 | Carbon Steel Body | Carbon Steel               | A105                   |         |  |
| 0        |                               | Stain. Steel Body | Stainless Steel            | AISI303 1)             | SUS303  |  |
| (17)     | Blowdown Valve                | Carbon Steel Body | Soft Iron                  | AISI1010 1)            | SUYP    |  |
| <u> </u> | Gasket 2),3)                  | Stain. Steel Body | Stainless Steel            | AISI316L <sup>1)</sup> | SUS316L |  |
| (18)     | Blowdown Valve                | (BD2) 2)          | Cast Stainless Steel       | A351 Gr.CF8            | —       |  |
| (19)     | Test Valve                    | Carbon Steel Body | Soft Iron                  | AISI1010 1)            | SUYP    |  |
| Ŭ        | Gasket 2),3)                  | Stain. Steel Body | Stainless Steel            | AISI316L <sup>1)</sup> | SUS316L |  |
| 20       | Test Valve (BD2) <sup>2</sup> | )                 | Cast Stainless Steel       | A351 Gr.CF8            | —       |  |
| 21       | Nameplate                     |                   | Aluminum                   | —                      | _       |  |

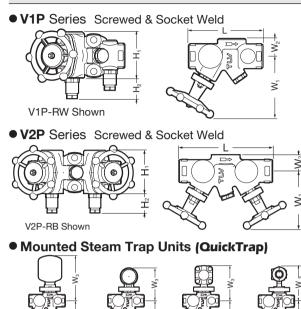


V2P-RB

<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. Furthermore, the material for the gasket varies depending on the body material of the product. Include the body material of your product when ordering a replacement gasket.

## TL\

### Dimensions



P46UC

L21/L32

X1

|  |                   |                            |                                  |                                     | Veld                                       |                                       |  | (in)  |
|--|-------------------|----------------------------|----------------------------------|-------------------------------------|--|---------------------------------------|--|---|
| Size   | L                 | H1                         | H <sub>2</sub>                   | W1                                  | * W  | 2                                     | Weigl                                    | nt** (lb)   |
| 1/2<br>3/4                                     | 43⁄4              | 2 <sup>15</sup> ⁄16        | <b>1</b> <sup>15</sup> ⁄16       | 4¾                                  | 11/  | ,<br>8                                | 5  | 5.3   |
| Screwed con<br>* At full-open<br><b>V2P Se</b> | position '        | * With blow                | down and                         | test valv                           | es   |                                       |  | (in)  |
| Size   | L                 | H1                         | H <sub>2</sub>                   | W1                                  |  | 2                                     | Weigł                                    | nt** (lb)   |
| 1/2<br>3/4                                     | 65/16             | <b>2</b> <sup>15</sup> ⁄16 | <b>1</b> <sup>5</sup> /16        | 43/4                                | 11/  | 8                                     | 8.4                                      |   |
| Socket   | Weld              | Conn                       | ection                           | S                                   |  |                                       |  | (in   |
| Socket   |                   |                            | ection                           | S                                   |  |                                       |  | (in   |
|  |                   |                            |                                  | ize                                 | φD   | 1                                     | 0C<br>355                                | (in)<br>h   |
|  | →  h              |                            |                                  | ize                                 | φD<br>17⁄16                                | 0.8                                   |  |   |
|  | → h<br>↓<br>↓     |                            |                                  | ize<br>/2<br>/4                     |  | 0.8                                   | 355<br>)65                               | h<br>1⁄2  |
|  | →h<br>↑<br>↓<br>↓ |                            | Si<br>1<br>3<br>(<br>* AS<br>ava | ize<br>/2<br>/4<br>ME B1<br>ailable | 1 <sup>7</sup> / <sub>16</sub><br>6.11-200 | 0.8<br>1.0<br>05, oth<br>Weigh        | 355<br>)65<br>ier sta                    | h<br>1/2<br>Indards<br>(in)                               |
|  | →h<br>↑<br>↓<br>↓ |                            |                                  | ize<br>/2<br>/4<br>ME B1<br>ailable | <b>1</b> 7⁄16                              | 0.8<br>1.0<br>05, oth<br>Weigh        | 355<br>)65<br>ier sta                    | h<br>½<br>Indards<br>(in                                  |
|  | →h<br>↑<br>↓<br>↓ |                            | × AS<br>ava<br>0 × AS            | ize<br>/2<br>/4<br>ME B1<br>ailable | 1 <sup>7</sup> / <sub>16</sub><br>6.11-200 | 0.8<br>1.0<br>05, oth<br>Weigh<br>/1P | 355<br>)65<br>ier sta<br>nt** (lb)<br>Wi | h<br>1/2<br>Indards<br>(in)                               |
| ↑<br>□<br>↓<br>Model<br>S3<br>S5               | →h<br>↑<br>↓<br>↓ |                            | × AS<br>ava<br>56/<br>7          | ize<br>/2<br>/4<br>ME B1<br>ailable | 17/16<br>6.11-200<br>With V<br>7.5<br>8.4  | 0.8<br>1.0<br>05, oth<br>Weigh<br>/1P | 855<br>)65<br>her sta<br>ht** (lb)<br>Wi | h<br>1½<br>indards<br>(in<br>)<br>ith V2P<br>10.6<br>11.5 |
| ↑<br>□<br>↓<br>Model<br>S3                     |                   |                            | × AS<br>ava<br>0 × AS            | ize<br>/2<br>/4<br>ME B1<br>ailable | 17/16<br>6.11-200<br>With V<br>7.5         | 0.8<br>1.0<br>05, oth<br>Weigh<br>/1P | 855<br>065<br>ner sta<br>nt** (Ib)<br>Wi | h<br>1½<br>indards<br>(in)<br>ith V2P<br>10.6             |

\*At full-open position \*\* Combined weight of trap station with mounted trap unit

4 3/8

7.7

10.8

### Valve Series

With: S3/S5/S5H

| Model           |               | V1P-RL*       | V1P-RB        | V1P-LB                | V1P-RW                | V1P-LW | V1P-RV | V1P-LV | V2P-RL*           | V2P-RB       | V2P-LB |  |  |  |
|-----------------|---------------|---------------|---------------|-----------------------|-----------------------|--------|--------|--------|-------------------|--------------|--------|--|--|--|
| Station Picture |               |               | ()<br>De      |                       | (O) C                 |        | ÔP     |        |                   | Ó.           | Ótó    |  |  |  |
| Flow Diagram    |               | -₩~~or-•\$~₩- |               |                       |                       |        |        |        | -远谷-远- or -远- 必远- |              |        |  |  |  |
| Flow Direction  |               | Right or Left | Right         | Left                  | Right                 | Left   | Right  | Left   | Right or Left     | Right        | Left   |  |  |  |
| Inlet Valve     |               | ✓             | ~             | <ul> <li>✓</li> </ul> | <ul> <li>✓</li> </ul> | ~      | ~      | ~      | $\checkmark$      | $\checkmark$ | V      |  |  |  |
| Outlet V        | /alve         | —             | —             | —                     | _                     | _      | —      | _      | $\checkmark$      | V            | V      |  |  |  |
| Blowdo          | wn Valve      | —             | ~             | ~                     | ~                     | ~      | —      | _      | _                 | ~            | ~      |  |  |  |
| Test Valve      |               | —             | —             | —                     | ~                     | ~      | ~      | ~      | _                 | V            | ~      |  |  |  |
| Available       | Free Float    |               | S3 / S5 / S5H |                       |                       |        |        |        |                   |              |        |  |  |  |
| Trap            | Thermodynamic |               |               |                       |                       | P4     | 6UC    |        |                   |              |        |  |  |  |
| Units**         | Thermostatic  | L21/L32/X1    |               |                       |                       |        |        |        |                   |              |        |  |  |  |

L21/L32

X1

#### Steam Trap Units Specifications\*\*

| Free Float Steam<br>S3 / S5 / S5H                   |           | Thermodynamic Ste<br>P46UC              | am Trap | Thermostatic Steam Trap<br>L21 / L32 / X1           |         |    |  |
|---|-----------|---|---------|---|---------|----|--|
| PMO: 300 / 450 / 650 psig                           | The       | PMO: 650 psig                           | -       | PMO: 300 / 450 / 300 psig                           | Pa      |    |  |
| TMO: 752 / 752 / 800 °F                             |           | TMO: 750 °F                             | At = 2  | TMO: 455 / 464 / 662 °F                             | ES !    | A  |  |
| Max. Discharge Capacity***<br>475 / 1510 / 530 lb/h | S3/S5/S5H | Max. Discharge Capacity***<br>1630 lb/h | P46UC   | Max. Discharge Capacity***<br>1050 / 930 / 680 lb/h | L21/L32 | X1 |  |

\*Can be used for flow in either direction

Start De deserver in the uncertain of the uncertain of the start of 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: CORPORATIC

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Manufacturer , CO., LTD.



Kakogawa, Japan is approved by LRQA Ltd. to ISO 9001/14001 ISO 9001

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