



# PowerDyne® STEAM TRAP

MODEL P46SRN/P46SRM/P46SRW/P65SRN

## THERMODYNAMIC DISC TRAP WITH THERMOSTATIC AIR VENTING

### Benefits

**Inline repairable trap for steam mains, tracers and coils, with wide capacity range to match various conditions. Available in carbon steel or stainless steel.**

1. Inline replaceable valve module to lower repair costs.
2. Air-jacketing reduces no-load cycling and extends service life.
3. Quick thermostatic air venting with bimetal ring for fast start-up.
4. Lapped disc provides steam-tight seal without air binding for long service life.
5. Built-in screen for extended trouble-free service.
6. Hardened stainless steel working surfaces for long service life.



### Specifications

| Model                          | P46SRN                  |                    |                    |                    | P46SRM             |                    |                    |                    | P46SRW             | P65SRN        |                    |                    |                    |                    |
|--------------------------------|-------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|
| Body Material                  | A105                    |                    | A182 F304          |                    | A105               |                    | A182 F304          |                    | A216 Gr.WCB        | A105          |                    | A182 F304          |                    |                    |
| Connection                     | <b>S</b>                | <b>SW</b>          | <b>S</b>           | <b>SW</b>          | <b>S</b>           | <b>SW</b>          | <b>F</b>           | <b>S</b>           | <b>SW</b>          | <b>S, SW</b>  | <b>S</b>           | <b>SW</b>          | <b>S</b>           | <b>SW</b>          |
| Size (in)                      | <b>3/8, 1/2, 3/4, 1</b> | <b>1/2, 3/4, 1</b> | <b>1/2, 3/4, 1</b> | <b>1/2, 3/4, 1</b> | <b>1/2, 3/4, 1</b> | <b>1/2, 3/4, 1</b> | <b>1/2, 3/4, 1</b> | <b>1/2, 3/4, 1</b> | <b>1/2, 3/4, 1</b> | <b>1</b>      | <b>1/2, 3/4, 1</b> | <b>1/2, 3/4, 1</b> | <b>1/2, 3/4, 1</b> | <b>1/2, 3/4, 1</b> |
| Max. Oper. Press. (psig) PMO   | 650                     |                    |                    |                    | 650                |                    |                    |                    | 650                | 925           |                    |                    |                    |                    |
| Min. Oper. Press. (psig)       | 5                       |                    |                    |                    |                    |                    |                    |                    |                    |               |                    |                    |                    |                    |
| Max. Oper. Temp. (°F) TMO      | 800                     |                    |                    |                    |                    |                    |                    |                    |                    |               |                    |                    |                    |                    |
| Max. Allow. Press. (psig) PMA* | 1192 @ 100°F            |                    | 1294 @ 100°F       |                    | 1192 @ 100°F       |                    | 1294 @ 100°F       |                    | 1097@100°F         | 1550 @ 100°F  |                    | 1683 @ 100°F       |                    |                    |
| Max. Allow. Temp. (°F) TMA*    | 800 @ 710psig           |                    | 1022 @ 664psig     |                    | 800 @ 710psig      |                    | 1022 @ 664psig     |                    | 800@667psig        | 800 @ 943psig |                    | 1022 @ 863psig     |                    |                    |
| Maximum Back Pressure          | 80% of inlet pressure   |                    |                    |                    |                    |                    |                    |                    |                    |               |                    |                    |                    |                    |

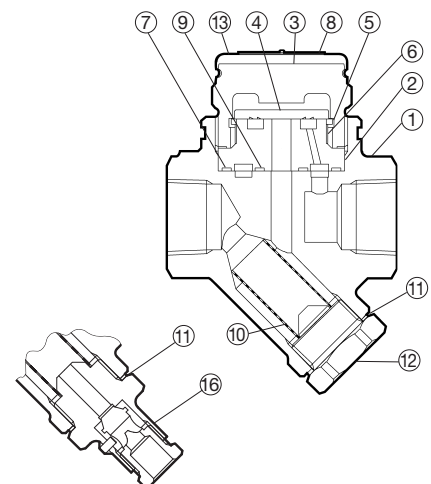
\* Refer to Pressure Temperature Rating section on reverse side for details. Standard TLV coating is applied to stainless steel models as well.

**Connections and sizes in bold are standard**  
S=Screwed, SW=Socket Weld, F=Flanged

| No.             | Description                      | Material                                         | ASTM/AISI <sup>1)</sup>       | JIS         |           |
|-----------------|----------------------------------|--------------------------------------------------|-------------------------------|-------------|-----------|
| ①               | Body                             | See Specifications table for available materials |                               |             |           |
| ② <sup>R</sup>  | Module                           | P46SRN/M/W                                       | Stainless Steel               | AISI420F    | SUS420F   |
|                 | Valve Seat                       | P65SRN                                           | Stainless Steel               | AISI440C    | SUS440C   |
| ③ <sup>R</sup>  | Cover                            |                                                  | Stainless Steel               | —           | A182 F304 |
| ④ <sup>R</sup>  | Disc                             | P46SRN/M/W                                       | Stainless Steel               | AISI420     | SUS420J2  |
|                 |                                  | P65SRN                                           | Stainless Steel               | AISI440C    | SUS440C   |
| ⑤ <sup>R</sup>  | Disc Holder Ring                 | P46SRN/M/W                                       | Stainless Steel               | AISI420     | SUS420J2  |
|                 |                                  | P65SRN                                           | Stainless Steel               | AISI630     | SUS630    |
| ⑥ <sup>R</sup>  | Air Vent Ring                    |                                                  | Bimetal                       | —           | —         |
| ⑦ <sup>MR</sup> | Outer Module Gasket              |                                                  | Graphite/Stainless Steel      | -/AISI316L  | -/SUS316L |
| ⑧ <sup>R</sup>  | Nameplate                        |                                                  | Stainless Steel               | AISI304     | SUS304    |
| ⑨ <sup>MR</sup> | Inner Module Gasket              |                                                  | Graphite/Stainless Steel      | -/AISI316L  | -/SUS316L |
| ⑩ <sup>R</sup>  | Screen                           |                                                  | Stainless Steel               | AISI430     | SUS430    |
| ⑪ <sup>MR</sup> | Screen Holder Gasket             |                                                  | Soft Iron                     | AISI1010    | SUYP      |
|                 |                                  |                                                  | Stainless Steel <sup>2)</sup> | AISI316L    | SUS316L   |
| ⑫               | Screen Holder                    |                                                  | Cast Stainless Steel          | A351 Gr.CF8 | —         |
| ⑬               | Cap                              |                                                  | Stainless Steel               | AISI304     | SUS304    |
| ⑭               | Socket <sup>3)</sup>             |                                                  | Carbon Steel                  | A105        | —         |
|                 | P65SRN 1" SW                     |                                                  | Stainless Steel <sup>2)</sup> | AISI304     | SUS304    |
| ⑮               | Flange <sup>3)</sup>             |                                                  | Carbon Steel                  | A105        | —         |
| ⑯               | BD2 Blowdown Valve <sup>4)</sup> |                                                  | Cast Stainless Steel          | A351 Gr.CF8 | —         |

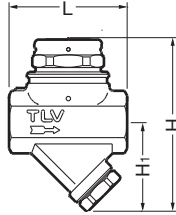
<sup>1)</sup> Equivalent <sup>2)</sup> For models with stainless steel body <sup>3)</sup> Shown on reverse <sup>4)</sup> Option  
Replacement kits available: (M) maintenance parts, (R) repair parts

**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.

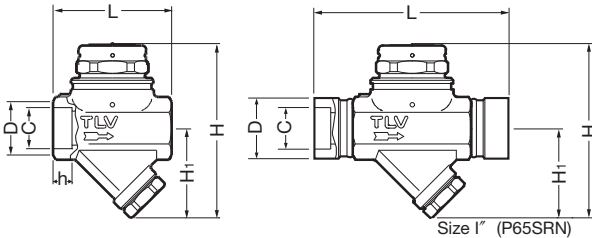


**Dimensions**

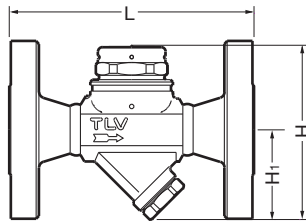
● **P46SRN/P46SRM/P46SRW/P65SRN**  
Screwed



● **P46SRN/P46SRM/P46SRW/P65SRN**  
Socket Weld



● **P46SRM**  
Flanged



**P46SRN/P46SRM/P46SRW/P65SRN** Screwed\* (in)

| Model  | Size   | L      | H***    | H1***  | Weight (lb) |
|--------|--------|--------|---------|--------|-------------|
| P46SRN | 3/8*** | 3 1/8  | 4 3/4   | 2 7/16 | 2.6         |
| P46SRM | 1/2    |        |         |        | 2.5         |
| P65SRN | 3/4    |        |         |        | 3.1         |
| P46SRW | 1      | 3 7/16 | 4 15/16 | 2 7/16 | 3.5         |

\* NPT, other standards available  
 \*\* Only available for P46SRN  
 \*\*\* With optional BD2, add approx. 9/16" to H and H1

**P46SRN/P46SRM/P46SRW/P65SRN** Socket Weld\* (in)

| Model  | Size | L      | H**    | H1**   | φD     | φC    | h   | Weight (lb) |
|--------|------|--------|--------|--------|--------|-------|-----|-------------|
| P46SRN | 1/2  | 3 1/8  | 4 3/4  | 2 7/16 | 1 3/16 | 0.855 | 1/2 | 2.6         |
| P46SRM | 3/4  |        |        |        | 1 7/16 | 1.065 |     | 3.1         |
|        | 1    |        |        |        | 1 3/4  | 1.330 |     | 3.5         |
| P46SRW | 1    | 3 7/16 | 5 1/16 | 2 7/16 | 1 3/4  | 1.330 | 1/2 | 3.5         |
| P65SRN | 1/2  | 3 1/8  | 4 3/4  | 2 7/16 | 1 3/16 | 0.855 | 1/2 | 2.6         |
|        | 3/4  |        |        |        | 1 3/4  | 1.065 |     | 3.1         |
|        | 1    |        |        |        | 2      | 1.330 |     | 9/16        |

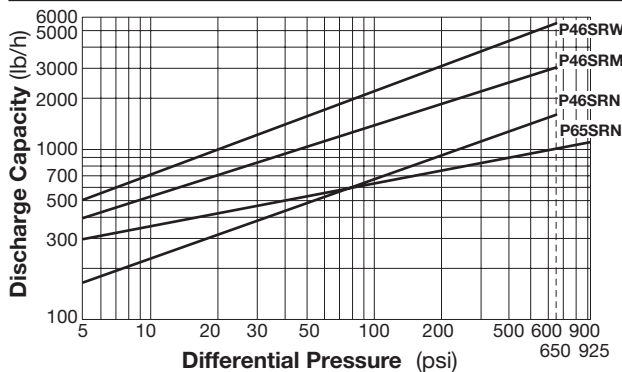
\* ASME B16.11-2005, other standards available  
 \*\* With optional BD2, add approx. 9/16" to H and H1

**P46SRM** Flanged (in)

| Model  | Size | L                      |       |       | H*    | H1*    | Weight** (lb) |
|--------|------|------------------------|-------|-------|-------|--------|---------------|
|        |      | Connects to ASME Class |       |       |       |        |               |
|        |      | 150RF                  | 300RF | 600RF |       |        |               |
| P46SRM | 1/2  | 5 1/2                  | 5 1/2 | 5 1/2 | 4 3/4 | 2 7/16 | 7.3           |
|        | 3/4  | 6 1/2                  | 6 1/2 | 6 1/2 |       |        | 10            |
|        | 1    | 8 1/4                  | 8 1/4 | 8 1/4 |       |        | 13            |

Other standards available, but length and weight may vary  
 \*With optional BD2, add approx. 9/16" to H and H1  
 \*\*Weight is for Class 600RF

**Discharge Capacity**

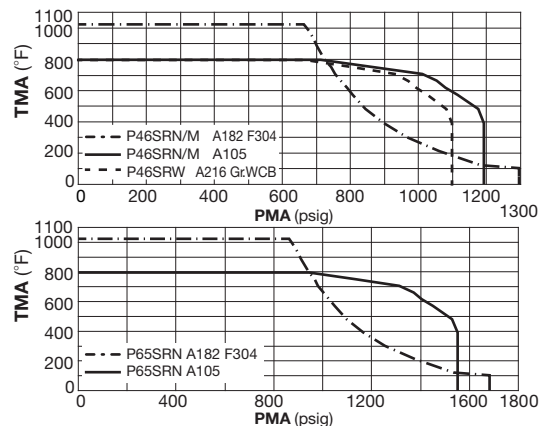


- Differential pressure is the difference between the inlet and outlet pressure of the trap.
- Recommended safety factor: at least 2.



**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.

**Pressure Temperature Rating\***



\*This Rating Graph is based on Allowable Stress Values of ASTM-Materials at each temperature.

**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

