

# INSTRUCTION MANUAL

Keep this manual in a safe place for future reference

## PowerDyne TLV Steam Trap Module P46Y

Thank you for purchasing the TLV Steam Trap Module P46Y used to retrofit the series 711/721 made by Yarway Corp.

This product has been thoroughly inspected before being shipped from the factory. When the product is delivered, before doing anything else, check the specifications and external appearance to make sure nothing is out of the ordinary. Before beginning installation or maintenance, please read this manual to ensure correct usage of the product.

This instruction manual is needed not only for installation, but for subsequent troubleshooting. Please keep it in a safe place for future reference. The contents of this manual are subject to change without notice.



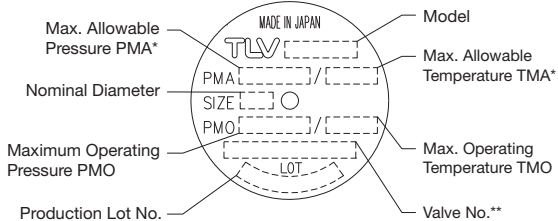
### 1. Safety Considerations

Installation, inspection, maintenance, repairs, disassembly, adjustment and valve opening/closing should be carried out only by trained maintenance personnel.

|  |   |
|--|---|
|  | <p><b>Install properly and DO NOT use this product outside the recommended operating pressure, temperature and other specification ranges.</b> Improper use may result in such hazards as damage to the product or malfunctions which may lead to serious accidents. Local regulations may restrict the use of this product to below the conditions quoted.</p> |
|  | <p><b>DO NOT subject the trap to condensate loads that exceed its discharge capacity.</b> Failure to observe this precaution may lead to condensate accumulation upstream of the trap, resulting in reduced equipment performance or damage to the equipment.</p>   |
|  | <p><b>Take measures to prevent people from coming into direct contact with product outlets.</b> Failure to do so may result in burns or other injury from the discharge of fluids.</p>  |
|  | <p><b>When disassembling or removing the product, wait until the internal pressure equals atmospheric pressure and the surface of the product has cooled to room temperature.</b> Disassembling or removing the product when it is hot or under pressure may lead to discharge of fluids, causing burns, other injuries or damage.</p>                          |

### 2. Specifications

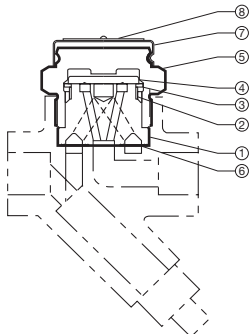
Refer to the product nameplate for detailed specifications.



\* Maximum allowable pressure (PMA) and maximum allowable temperature (TMA) are PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS)

\*\* Valve No. is displayed for products with options. This item is omitted from the nameplate when there are no options

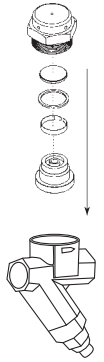
### 3. Configuration



| No. | Name              |
|-----|-------------------|
| 1   | Module Valve Seat |
| 2   | Air Vent Ring     |
| 3   | Disc Holder Ring  |
| 4   | Disc              |
| 5   | Cover             |
| 6   | Module Gasket     |
| 7   | Cap               |
| 8   | Nameplate         |

### 4. Proper Installation

- Before installation, be sure to remove all protective seals.
- Remove the module valve seat unit of the steam trap 711/721.
- After removal and disposal of the module clean out dirt and scale from the trap body. Check that the seat threads have not been eroded due to steam leakage. If they are damaged the trap cannot be used. A TLV steam trap P46SRN should replace it.
- To retrofit the existing steam trap install the P46Y parts as shown.
- Mount air vent ring, disc holder ring and disc on module valve seat (the module gasket is already attached).
- Insert the module into the body.
- Coat cover threads with anti-seize, put it on top and tighten to the proper torque.
- If there is a problem, see the "Troubleshooting" section.



### 5. Inspection and Maintenance

Operational Check: A visual inspection can be carried out to determine whether the steam trap is operating properly or has failed. Periodically (at least biannually) the operation should also be checked using diagnostic equipment such as TLV TrapMan or TLV Pocket TrapMan.

(When conducting a visual inspection, flash steam is sometimes mistaken for steam leakage. For this reason, the use of diagnostic equipment is highly recommended.)

| Procedure (P46Y only; follow Yarway's manual for the body) |  |
|--|--|
| Cover  | Check inside for damage, dirt, grease, oil film, rust, scale |
| Gaskets  | Check for warping or damage                                  |
| Valve Seat Surface:  | Check for scratches or wear                                  |
| Disc   | Check for damage or wear                                     |
| Disc Holder Ring   | Check for damage or wear                                     |
| Air Vent Ring  | Check for damage or wear                                     |

### 6. Disassembly / Reassembly

(P46Y only; follow Yarway's manual for the body)

Use the following procedures to remove components. Use the same procedures in reverse to reassemble.

| Part              | During Disassembly  | During Reassembly  |
|-------------------|---|--|
| Cover             | Remove with a 1 5/8" (41 mm) socket wrench                        | Coat threads with anti-seize and tighten to 87 lbf-ft (119 N-m)                |
| Disc              | Remove, being careful not to scratch the lapped surface           | Make sure the seat surface (the lapped side) is facing down, toward valve seat |
| Disc Holder Ring  | Remove without bending, as it will not return to its proper shape | Make sure that it does not stick up higher than the valve seat surface         |
| Air Vent Ring     | Remove without bending  | Reinsert without bending   |
| Module Valve Seat | Remove, being careful not to scratch the lapped surface           | Insert into the body levelly, do not tilt                                      |
| Module Gasket     | Do not remove   | If gasket is damaged, replace module valve seat                                |

### 7. Troubleshooting

|   |  |  |
|---|--|--|
| No condensate discharged (blocked) or discharge is poor | Screen is clogged with rust or scale (Model 721)                                 | Clean  |
|   | Air vent ring (bimetal) is broken or worn, causing air-binding                   | Replace air vent ring                                  |
|   | Disc holder ring is broken or worn, causing air binding                          | Replace disc holder ring                               |
|   | Disc is sticking to valve seat (due to oil etc.)                                 | Clean  |
| Steam leakage or blowing from valve seat                | Valve closure is obstructed by scale, etc.                                       | Clean or replace screen                                |
|   | Disc or module valve seat is worn  | Replace worn parts                                     |
|   | Air vent ring (bimetal) or disc holder ring is broken, obstructing valve closure | Replace broken parts                                   |
| Valve chattering (leakage)                              | Disc is sticking to top of cover (due to oil, etc.)                              | Clean  |
|   | Foreign matter or oil film on disc or module valve seat                          | Clean  |
| Leakage from a location other than valve seat           | Scratches or wear on disc or module valve seat                                   | Replace disc or module valve seat                      |
|   | Bypass valve is damaged or open  | Replace or close valve                                 |
|   | Module valve seat gasket is damaged  | Replace module gasket                                  |
|   | Cover is loose or sealing surface between cover and module valve seat is damaged | Tighten or replace cover, or replace module valve seat |
|   | Inlet and discharge channels may be connected, due to erosion                    | Replace trap (study trap capacity)                     |

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4. disasters or forces of nature; or
5. abuse, abnormal use, accidents or any other cause beyond the control of TLV; or
6. improper storage, maintenance or repair; or
7. operation of the Products not in accordance with instructions issued with the Products or with accepted industry practices; or
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9. use of the Products in a manner inconsistent with the Specifications; or
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