

# TLV<sup>®</sup>

## STEAM & CONDENSATE MANIFOLDS

### MP/M Series



# Streamline Your

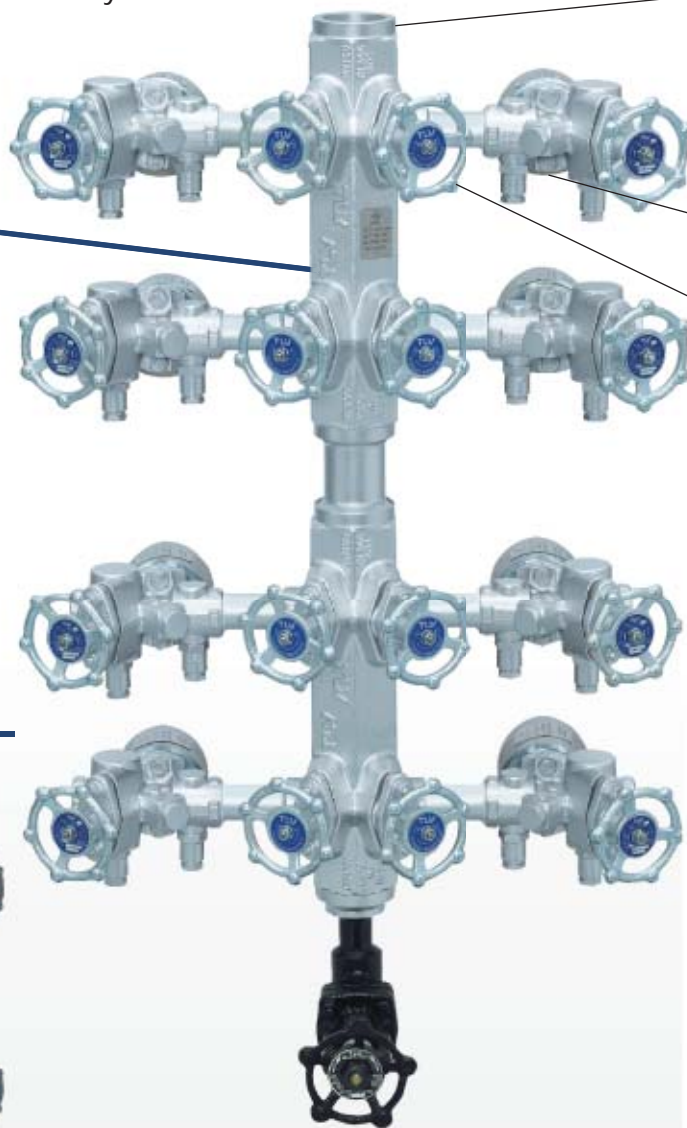
A typical plant uses countless steam supply and condensate recovery lines requiring huge numbers of valves and steam traps.

TLV's rugged and versatile all-in-one packages for steam distribution and condensate collection simplify the control and management of your steam system.

## Condensate Manifold

### M8P

(with trap stations)



## Basic Steam Manifold

### M4P

### M4



### M8



Condensate Collection  
Manifold Package Example  
(M8P + VIP Trap Stations)

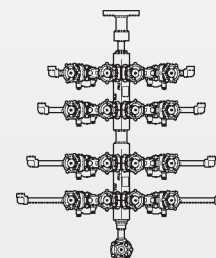
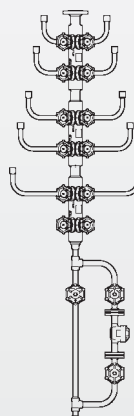
Condensate Collection  
Manifold Package Example  
(M8 + Steam Traps + Globe Valves)

## Basic Product Lineup

| Model                           | M4P          | M8P | M12P | M4                   | M8 | M12 |
|---------------------------------|--------------|-----|------|----------------------|----|-----|
| Integrated Valve                | Piston Valve |     |      | Bellows Sealed Valve |    |     |
| Number of Station Connections   | 4            | 8   | 12   | 4                    | 8  | 12  |
| Max. Operating Pressure (psig)  | 1098*        |     |      | 710*                 |    |     |
| Max. Operating Temperature (°F) | 800*         |     |      | 752*                 |    |     |

Basic Manifolds for use with both steam and condensate

\* Manifold Packages are further restricted by attached valves/traps



Special orders to meet individual design constraints possible. Please consult TLV for details.



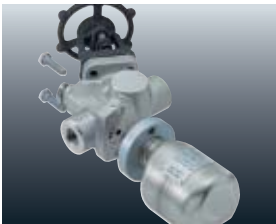
# Steam Line

## Features



### Durable - Forged Steel Body

- TLV Manifolds are constructed with a forged steel body for high endurance and an extremely long service life, minimizing maintenance and replacement costs.
- Valves rated for 3,000 operation cycles.



### Easy Trap Replacement

**Trap Station** + **QuickTrap**

- Allows easy removal and replacement of steam traps with only 2 bolts, greatly reducing maintenance time and labour costs.
- Traps can be removed and replaced without disturbing piping.
- Built-in blowdown valve and strainer reduce scale build up.
- Built-in **TrapMan**® test point.



### Choice of Steam Trap - QuickTrap®

- Freely choose from 3 different types of steam trap - free float, disc or thermostatic type - depending on the application requirements. (See back page for further information.)



### Long Term Reliable Seal

**Piston Valve** (MP Series, V1P/V2P Series)

- 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. Also, it is possible to operate with the valve partially open.
- The nuts for the valve bonnet can be tightened to stop any leaks from the seat area.



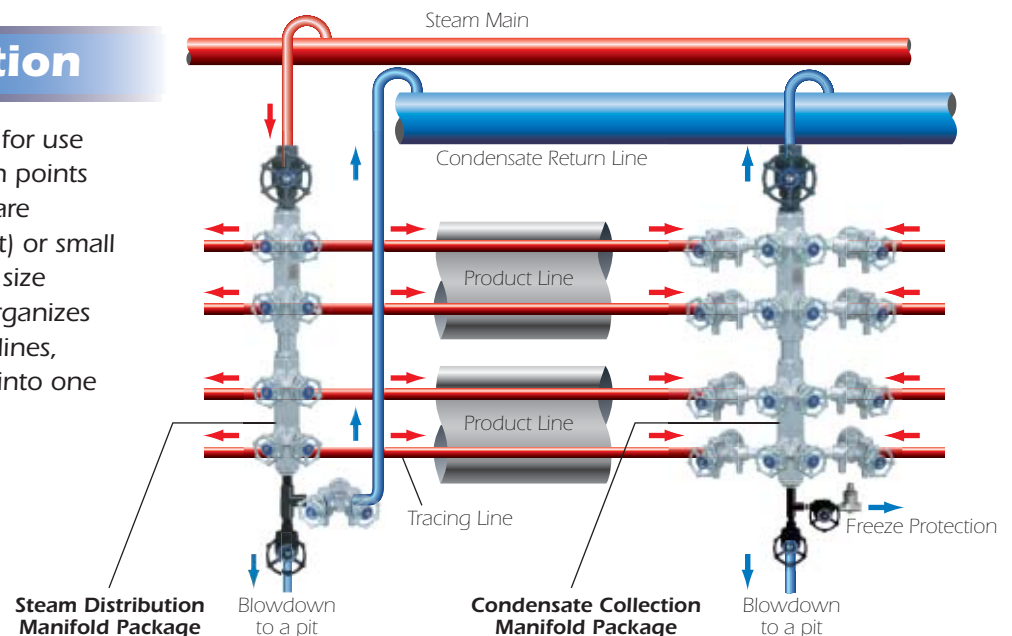
### No Gland Leak

**Bellows Sealed Valve** (M Series, V1/V2 Series)

- Conserves energy by eliminating gland leaks.
- Improves safety and working environment by removing steam clouds.
- Enjoys a long service life through the utilization of stellite-hardened surfaces on valve plug and valve seat.

## Typical Application

TLV manifold packages are ideal for use in areas where steam distribution points or condensate collection points are gathered, e.g. tube tracing (right) or small equipment piping. The compact size reduces installation space and organizes different steam and condensate lines, steam traps and isolation valves into one manageable package.



# Trap Stations - V1/V2/V1P/V2P

## Combining a steam trap and a valve, Trap Stations facilitate simplification of piping.

- The V1/V2 series employs a bellows valve for zero gland leaks, and the V1P/V2P series uses a piston valve exhibiting reliable sealing.
- The steam trap can be selected from the QuickTrap series (free float, disc, and thermostatic types) to most suit the particular application.
- The V1/V1P series have a valve on the inlet side, the V2/V2P series have valves on the inlet and outlet sides. Models equipping a blowdown valve to flush out the interior, and a test valve to check trap operation are also available.
- The V1/V1P series are for applications with the outlet side open to the atmosphere.  
The V2/V2P series are for applications with the outlet side piping used for condensate recovery.  
(Manifolds, main lines, tracers, general processes, etc.)

| MODEL                           | V1-RL                                                                             | V1-RB                                                                             | V1-LB                                                                             | V2-RL                                                                             | V2-RB                                                                             | V2-LB                                                                             |
|---------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Valve Type                      | Bellows Sealed Valve                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Station Picture                 |  |  |  |  |  |  |
| Flow Diagram                    |  |  |  |  |  |  |
| Flow Direction                  | Right or Left                                                                     | Right                                                                             | Left                                                                              | Right or Left                                                                     | Right                                                                             | Left                                                                              |
| Blowdown Valve                  | —                                                                                 | ✓                                                                                 | ✓                                                                                 | —                                                                                 | ✓                                                                                 | ✓                                                                                 |
| Test Valve                      | —                                                                                 | —                                                                                 | —                                                                                 | —                                                                                 | ✓                                                                                 | ✓                                                                                 |
| Max. Operating Pressure (psig)  | 650*                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Max. Operating Temperature (°F) | 752*                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |



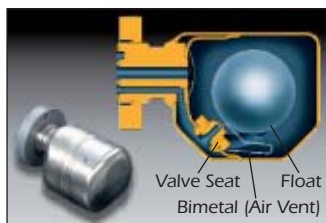
| MODEL                           | V1P-RL                                                                            | V1P-RB                                                                            | V1P-LB                                                                            | V1P-RW                                                                            | V1P-LW                                                                            | V1P-RV                                                                            | V1P-LV                                                                              | V2P-RL                                                                              | V2P-RB                                                                              | V2P-LB                                                                              |
|---------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Valve Type                      | Piston Valve                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Station Picture                 |  |  |  |  |  |  |  |  |  |  |
| Flow Diagram                    |  |  |  |  |  |  |  |  |  |  |
| Flow Direction                  | Right or Left                                                                     | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                              | Right                                                                             | Left                                                                                | Right or Left                                                                       | Right                                                                               | Left                                                                                |
| Blowdown Valve                  | —                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | —                                                                                 | —                                                                                   | —                                                                                   | ✓                                                                                   | ✓                                                                                   |
| Test Valve                      | —                                                                                 | —                                                                                 | —                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                   | —                                                                                   | ✓                                                                                   | ✓                                                                                   |
| Max. Operating Pressure (psig)  | 725*                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max. Operating Temperature (°F) | 800*                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Please see Specification Data Sheet (SDS) V1/V2, V1P/V2P for further details. \* For trap station only; further restricted by mounted trap unit

## QuickTrap® - Steam Trap Units

### Free Float Steam Trap

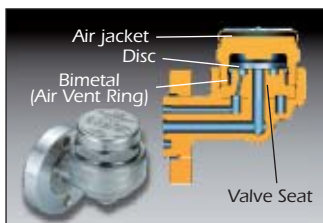
- Durable float rated to withstand surges of up to 1740 psi hydraulic pressure
- Unique 3-point seating provides tight shutoff
- Rapid removal of start-up air by internal thermostatic vent



| Model*                           | S3  | S5   | S5H |
|----------------------------------|-----|------|-----|
| PMO (psig)                       | 300 | 450  | 650 |
| TMO (°F)                         | 752 | 752  | 800 |
| Max. Discharge Capacity** (lb/h) | 475 | 1510 | 530 |

### Thermodynamic Steam Trap

- Rugged thermodynamic principle for arduous conditions
- Standard air-jacketed cap prevents no load actuation
- Rapid removal of start-up air by internal thermostatic vent

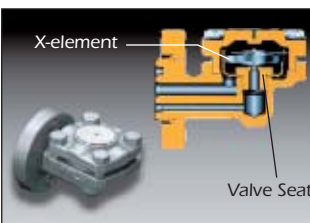


| Model*                           | P46UC |
|----------------------------------|-------|
| PMO (psig)                       | 640   |
| TMO (°F)                         | 752   |
| Max. Discharge Capacity** (lb/h) | 1630  |

### Thermostatic Steam Traps

#### L Series

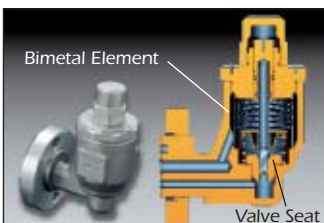
- Patented "Fail Open" feature of balanced pressure X-element
- Outstanding air venting capability
- Rugged, 4 diaphragm capsule



| Model*                           | L21  | L32 |
|----------------------------------|------|-----|
| PMO (psig)                       | 300  | 450 |
| TMO (°F)                         | 455  | 464 |
| Max. Discharge Capacity** (lb/h) | 1050 | 930 |

#### X1

- Discharge temperatures can be set between 120 and 390 °F to utilize the sensible heat in condensate.
- Built-in auger device removes scale from valve seat



| Model*                           | X1  |
|----------------------------------|-----|
| PMO (psig)                       | 300 |
| TMO (°F)                         | 662 |
| Max. Discharge Capacity** (lb/h) | 650 |

\* For more information, see the QuickTrap Specifications Data Sheet (SDS) 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.

\*\* Actual discharge capacity will vary depending on operating conditions; see relevant SDS for details.



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.



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

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Manufacturer



ISO 9001/ISO 14001

