



Armstrong® Armstrong Simplifies Your Tracing Line Systems

Steam Trapping and Steam Tracing Equipment

Designed to simplify and supply all the components (steam traps, manifolds, valves, etc.) necessary for your drip and tracer line applications, Armstrong's new Steam Distribution and Condensate Collection Manifolds bring all components together to reduce installation costs and provide a compact, easily accessible, centrally located assembly.

Armstrong's manifold series includes four different configurations, a Steam Distribution (MSD/SMSD), and a Condensate Collection Assembly (CCA/CCAF). As an option, the condensate manifolds can offer freeze protection.

In either case, you will save the expensive headaches of trying to fabricate in-house. What's more, your manifold will be backed by the famous Armstrong quality—and a standard three-year limited warranty.

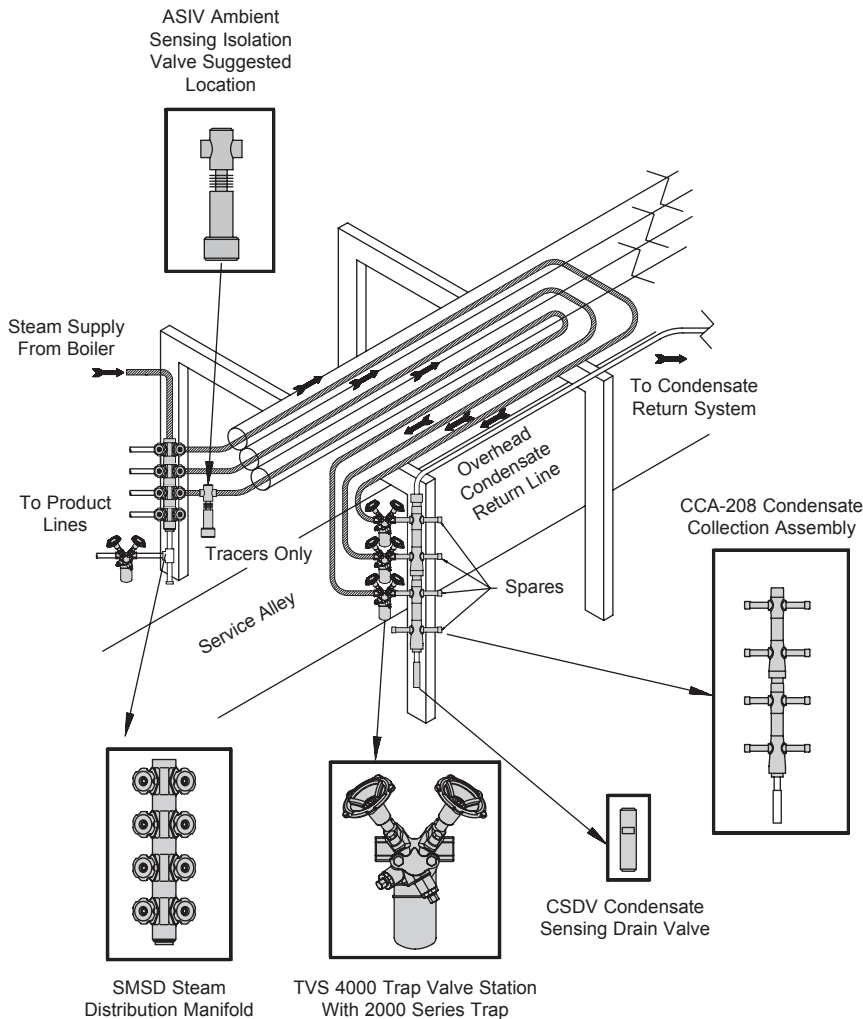
Steam Distribution Manifolds

As a Steam Distribution Assembly (MSD/SMSD), the manifold places all steam supply valves in one location. Standardizing components and centralizing their location simplifies installation, cutting costs from the beginning. You also save because routine maintenance is faster.

Condensate Collection Manifolds

To make industry's trapping and valving more efficient, Armstrong combines its stainless steel steam trap valve stations with manifolds into a package called the Condensate Collection Assembly (CCA). This prepackaged assembly offers many great benefits—cost savings in installation, design flexibility, and reduced purchasing time. CCAF would also include syphon tube freeze protection.

Whatever your condensate collection or steam distribution needs, Armstrong has the manifold for savings over the long term.



Shown are typical locations for Armstrong manifolds. The many manifolds in chemical/petrochemical plants consume valuable floor space and often block movement among the units. Operating costs are high, and installation requires expensive custom fabrication on site. Clearly, a prefabricated manifold permitting standardization of components offers substantial savings over conventional units. Shaded products are available from Armstrong. Call or consult your Armstrong Representative if additional product details are required.

The Proof Is in the Piston

Many of Armstrong's manifolds utilize the piston valve because of its years of excellent performance in steam systems all over the world. The proof of Armstrong's long service life for manifolds...is in the piston.

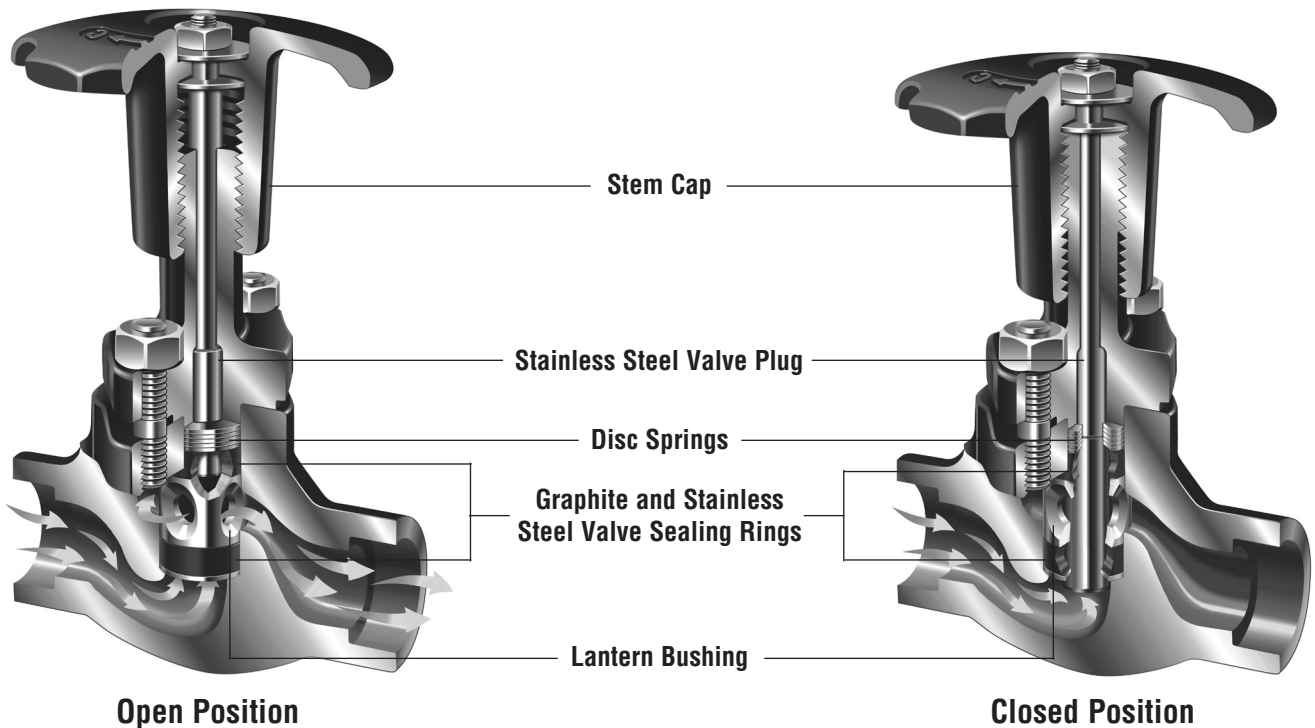
All types of valves—plug valves, gate valves, piston valves and even ball valves—have been summoned for duty in steam service. Due to its excellent sealing characteristics in steam service, and because it has no gland packing, the piston valve is frequently selected for steam systems.

People who have used it over the past 90 years can testify that leakage to atmosphere is extremely rare, even without any maintenance. The elastic contact between piston and valve sealing rings provides a perfect tightness, both in-line and to atmosphere.

Steam system valves, whatever their design, are used to isolate steam and condensate lines or when a faulty steam trap needs to be removed from the line. This means the valves stay in the open position for long periods and are nearly always in contact with the atmosphere. It is not surprising, therefore, that when the valves need to be closed, they can often prove difficult to operate. Our experience and the demands from end users for energy efficiency have led us to a sealing system designed especially for steam service.

The Piston Valve

Armstrong Steam Distribution Manifolds (MSD/SMSD) and TVS 4000 Trap Valve Stations incorporate advanced piston sealing technology for safer, longer lasting steam isolation service.



- **Dual sealing action.** The piston valve is a seatless valve that includes two graphite and stainless steel valve sealing rings that seal the stem and function as a seat. This combination provides long-term protection against leaks to the atmosphere and downstream piping.

- **Self-cleaning action.** Stainless steel piston slides without rotating between the two valve sealing rings, preventing dirt from damaging the surfaces.

- **Sealing integrity.** Flexible disc springs automatically provide leak tightness by exerting pressure, which keeps the upper and lower valve sealing rings compressed at all times. Sealing tightness is ensured by the compression of the sealing rings against the

Designs, materials, weights and performance ratings are approximate and subject to change without notice. Visit armstronginternational.com for up-to-date information.

piston and valve body. This combination of disc springs and dual valve seal rings protects against expansion and contraction due to heating and cooling. This ensures dependable operation, even after years of service.

- **Protected valve stem.** The valve stem and sealing surfaces are completely protected from dirt and corrosion by the stem cap, whether in an open or closed position.

- **In-line repairability.** All sealing valve components may be easily replaced in-line.

- **Long-term operation.** Piston valve design ensures actuation even after many years without operation.