



Installation and Maintenance

Armstrong FT 4000 Stainless Steel Float and Thermostatic Steam Traps

This bulletin should be used by experienced personnel as a guide to the installation and maintenance of FT 4000 Series float and thermostatic steam traps. Selection or installation of equipment should always be accompanied by competent technical assistance. We encourage you to contact Armstrong or its local representative if further information is required.

Installation

Note: Float and Thermostatic steam traps are not ideally suited for use where water hammer, freezing conditions or considerable dirt is present. Maximum allowable pressure (vessel design) is 485 psig (32 bar) @ 600°F (315°C). Superheat in excess of 45°F (7.2°C) could damage the thermostatic air vent.

- Before installing any trap, blow down the piping that leads to the trap's inlet. Use full line pressure. Be sure that the maximum operating pressure (MOP) of the trap is adequate for the installation. (The trap's MOP is shown on the label affixed to the trap body.) See Table 2-1.
- Install so the trap inlet is below the outlet of the equipment to be drained. **Use good piping practices. Make inlet piping as short as possible. Use a minimum number of elbows and other restrictions in inlet and outlet piping. Install a dirt pocket in the line ahead of the trap.**
- For proper operation, the trap arrow label must be upright in a "vertical to the eye" position. **NOTE: Use of wrenching surfaces other than specified on the IS-2 (integral strainer) connector can result in damage to the gasket seating area.**
- To allow maintenance and provide maximum service, install a valve on each side of the trap and a downstream testing tee. All valves should be of the fullported type to avoid restricting flow. Provide a strainer ahead of the inlet.
- Install a union downstream of the trap unless the discharge line is open and short.
- Avoid elevating the condensate if the equipment is under modulated control. If the discharge piping is to be elevated, ensure that adequate differential pressure exists at all times to provide proper drainage. When elevating condensate, install a check valve in the discharge piping near the trap to prevent backflow when the system is not in operation.
- Do not exceed the maximum differential pressure (difference between inlet and outlet pressure) marked on the trap label. Exceeding the maximum differential pressure will cause the trap to lock shut. Higher pressure traps, however, may be used at all lower pressures provided they are of sufficient capacity.
- Closed Return Systems: It is convenient for replacement and trap testing purposes to install an isolation valve on each side of the trap with a test valve between the trap outlet and the downstream isolation valve. Trap replacement is further simplified by installing a TVS 4000 trap valve station style connector.

Table 2-1. Maximum Operating Pressure

FT 4075	75 psi (5 bar)
FT 4150	150 psi (10 bar)
FT 4225	225 psi (16 bar)
FT 4300	300 psi (21 bar)
FT 4465	465 psi (32 bar)

Maintenance

- When the steam trap is suspected of malfunctioning, it can be checked by observing the discharge of the trap. Float and Thermostatic traps discharge continuously except under very low load conditions. If the trap is locked shut, check the pressure differential to verify that the maximum differential pressure (shown on the trap label) is not exceeded.
If the trap is blowing live steam, close the inlet valve for a few minutes, then gradually open to verify failure. Do not confuse the discharge of flash steam with live steam loss. If the trap continues to blow live steam, remove the trap from the line, back flush it with compressed air or water, and check it again for normal operation.

2. If it can not be made to operate normally, verify that the trap is correct for the application (capacity, differential pressure, etc.). If correct, install a new steam trap of the same series and of equal capacity in its place. **NOTE:** When performing maintenance on any steam trap, the common practice is to remove the trap in question and immediately install a good trap in its place. Maintenance can then be performed with minimum equipment downtime.

For assistance with an unusual installation or service problems, contact your local Armstrong Representative or Armstrong International's application engineering department.