

INSTALLATION AND MAINTENANCE INSTRUCTIONS BALANCED PRESSURE THERMOSTATIC CLEAN STEAM TRAPS TSS 7 – TSS 6

GENERAL

- These instructions must be carefully read before any work involving products supplied by VALSTEAM ADCA ENGINEERING S.A. is undertaken.
- The installation procedure is a critical stage in a life of a steam trap and care should be taken to avoid damage to the trap or equipment.
- The TSS 7 and TSS 6 steam traps are specially designed to remove air and condensate from clean and pure steam systems. They give their maximum performance only when the equipment associated with them is correctly sized and installed in accordance with our recommendations.

Note:

- Current regional safety regulations should be take in to account and followed, while doing the installation and maintenance work.
- Handling, installation and maintenance work must be carried out by trained personnel. A supervisor must follow and check all activities.
- For the problems that cannot be solve with the help of this instructions, please contact the supplier or the manufacturer.
- The manufacturer reserves the right to change the design and material of this product without notice.



ATTENTION

- If malfunction of any other equipment or system operation failure may result in a dangerous overpressure, over temperature or even vacuum condition, a safety device must be included in the system to prevent such situations.
- At start up, the presence of small particles in the fluid (dirt, scale, weld splatters, etc) may cause an imperfect closure of the seat. If this occurs, proceed to an accurate cleaning.
- Do not touch the equipment without appropriate protection during working operation because it may conduct heat if the used fluid is at high temperature.
- Before starting maintenance be sure that the equipment is not pressurized or hot. Even if upstream and downstream isolating valves have been closed care should be taken since fluid under pressure may be trapped between them.
- **Before removing the cover of the equipment make sure that its temperature has decreased to ambient levels, otherwise damage of the thermostatic element may occur, due to thermal chock.**
- The equipments must be used within the working temperature and pressure limits laid down for them, otherwise they may fail (refer to nameplate and/or IS- Information Sheet).
- Manual handling of products may present a risk of injury. You are advised to assess the risks taking into account the task, the individual, the load and the working environment.
- Before starting work ensure that you have suitable tools and/or consumables available. Use only genuine ADCA replacement parts.
- Do not remove the nameplate attached to the equipment. Serial number and other useful information is stamped on it.
- During the assembly work, apply protective measures against dirt.
- The equipment should be carefully handled, to prevent any damage on the machined surfaces.
- Correct installation of the equipment is full responsibility of the contractor.
- Steam traps are designed to be applied in places protected from exposure to weather.
- We recommend special constructions or protective measures for applications on the outside or in adverse environments like corrosion-promoting conditions (sea water, chemical vapors, etc).

CLEANING AND PACKING

- This equipment is packed by proper machine with a special film used by food industry.
- These equipments are degreased and cleaned ultrasonically.

TRANSPORT AND STORAGE



ATTENTION

- Handling and lifting of materials should be made with adequate equipments.
- The steam traps and equipments should be protected from impacts and forces during transportation and storage.
- The manufacturer doesn't assume the responsibility of damaged equipments due to inappropriate handling during the transportation and storage.

INSTALLATION



ATTENTION

- Account for over pressure conditions, according with the local laws or standards.
- Steam traps must not be used with other purpose than the one they were built for (e.g. climbing aids or as connecting points for lifting gear).
- For the problems that cannot be solve with the help of this instructions, please contact the supplier or the manufacturer.

Installation area requirements:

- The installation area should have easy access and provide enough space for maintenance and removing operations.
- In order to allow installation and maintenance work without emptying the system, stop valves should be installed upstream and downstream of the steam trap.
- **If the system cannot be stopped for maintenance it is recommended that isolating valves are installed upstream and downstream of the steam trap together with a by-pass manual regulating valve. The process can be then controlled manually during the steam trap maintenance. The by-pass must be kept close during the normal operation.**

Procedure:

- Prior to install check that the product is suitable for the intended application: materials and pressure/temperature ratings.
- Before installing remove plastic covers placed on flanges or connection ends. The equipment has an arrow or Inlet/Outlet designations. Be sure that it will be installed on the appropriate direction.
- Install the steam trap in the point of the system, where the condensate tends to collect. It must be installed in the vertical position.
- Take care with jointing material to ensure that none may be permitted to block or enter the trap.
- The steam trap is designed for sanitary service and it is assumed that the fluid is clean and filtrated. If not, a protection strainer should be used upstream of the steam trap.
- Do not over-tighten clamps because that can damage the gasket.

- External stresses that may be induced by the system due to pipe expansion, etc, can affect this product. The necessary precautions are recommended during the systems design and equipment assembly.
- The steam trap pipework should be properly supported and free from strain and it should not be subjected to undue surges of pressure. The start-up condition should be considered.

START UP



ATTENTION

- Current regional safety regulations should be take in to account and followed.
- Protective insulation and warning notice may be required.
- Until the start up of an existing or a new plant, the following must be checked:
 - All works are completed.
 - The steam trap is correctly installed.
 - All the necessary safety devices have been installed.
- **At start up, the presence of small particles in the fluid (dirt, scale, weld splatters, joint particles, remains of Teflon tape, etc) may cause an imperfect closure of the seat. If this occurs, proceed to an accurate cleaning.**

Periodical checking:

- 24 hours after the start up, it is recommended to check pipe connections for leaks and retighten the connections if necessary.

MAINTENANCE

- We recommend the steam traps to be serviced as necessary. Steam traps should be checked periodically (at least yearly), to verify if they are operating correctly and to clean the internal parts and strainer screen (if any).
- When reassembling make sure that all gasket faces are clean and always use a new gasket.
- Lubrication must be avoided for oxygen service. When it's necessary, only the lubricants recommended by the manufacture should be use.
- Maintenance should proceed as follows:
 1. Isolation valves should be closed and the pressure and temperature must be atmospheric.
 2. Remove sanitary clamps or other type of connection used.
 3. Execute the maintenance work.
 4. Replace and tighten the clamps. (Don't forget to substitute the gasket).
 5. Consider the start up conditions.

TROUBLESHOOTING

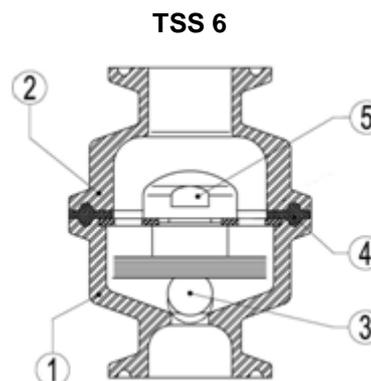
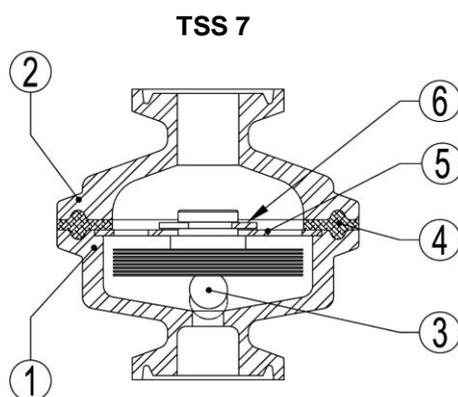


ATTENTION

- If the malfunctions cannot be solved with the help of the following chart, please consult the manufacture.
- Some of these faults may only occur in some models.

TROUBLE SHOOTING CHART

FAULT	POSSIBLE REASON	SOLUTION
Continuous steam discharge	Damaged seat. Residues deposit limiting the thermostatic element movement. Damaged thermostatic element due to superheated steam.	Substitute seat. Clean the thermostatic element and the trap. Substitute the thermostatic element.
The condensate isn't discharged	Obstructed strainer	Proceed to an accurate clean and identify the possible reason of contamination.

SPARE PARTS


PARTS			PARTS		
POS.Nr.	DESIGNATION	MATERIAL	POS.Nr.	DESIGNATION	MATERIAL
1	Body	AISI316L / 1.4404	1	Body	AISI316L / 1.4404
2	Cover	AISI316L / 1.4404	2	Cover	AISI316L / 1.4404
3	* Thermostat	AISI316L / 1.4404	3	* Thermostat	AISI316L / 1.4404
4	* Gasket	PTFE/TFM® Envelope gasket **	4	* Gasket	PTFE/TFM® Envelope gasket **
5	* Regulator support	Stainless steel	5	* Regulator support	Stainless steel
6	* Retaining rings	Stainless steel			

* Available spare parts; ** FDA Approved

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PRODUCTS RETURNING


ATTENTION

- Information regarding any hazards and precautions to be considered because of contaminating fluids and residues or mechanical damage that may represent a health, safety or environmental risk, must be provided in writing by the distributors and costumers when returning products to Valsteam ADCA engineering.
- Health and safety data sheets regarding substances identified as hazardous or potentially hazardous must be provided with the information mention above.



ATTENTION

- **LOSS OF WARRANTY:** Total or partial disregard of above instructions involves loss of any right to warranty.