Pamphlet A2088

TLV®

Clean Steam Traps

LV6 Series
SS3-P/SS5-P

Designed for Bio and Clean Steam Applications

Clean Steam Trap

LV6 Series
SS3-P/SS5-P

All Stainless Steel Construction

- Low-quality stainless steel may corrode when exposed to water with even low ionic content. To solve this problem, the LV6 series uses AISI316L, and the SS3-P/SS5-P body and cover are made of A351 Gr.CF3M with an SUS316L float.

Prevents Condensate Accumulation

- Smooth, virtually crevice-free interior allows for complete condensate drainage.
- The SS3-P/SS5-P has a small drain hole to prevent condensate pooling.

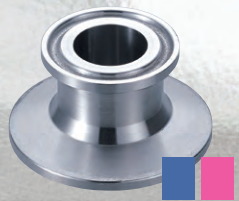
LV6 Series SS5-P

Easy Disassembly and Cleaning

- Consists of only 5 simple components held together by easily removable clamps.
- Clamp pipe connections enable the trap to be easily removed from the pipeline.

Prevents Bacterial Contamination

- Simply constructed clamp has few projections.
- Sanitary high-performance fluorine resin gasket complies with FDA 21 CFR 177, USP Class VI and EN 1935.



- Ferrule clamp joint for clean steam, in accordance with ISO and ASME-BPE (Tri-Clamp compatible) standards, is used for connection to piping. Tube end connections are also available.

- Uniquely designed free-draining X-element* case with large openings allows for complete fluid drainage and easy cleaning. It is electro-polished for the LV6-P/LV6-HP and the optional LV6-EP/LV6-HE.

*LV6-CE/LV6-HC is equipped with a standard X-element.

- The SS3-P and SS5-P free floats have an internal 0.8 μm Ra buff polish.

(The optional SS3-EP and SS5-EP have a 0.4 μm Ra buff and electro-polish [internal and external])

Thermostatic Clean Steam Trap
Compact
LV6 Series

What is the X-element?

- A multi-diaphragm valve mechanism filled with a thermoliquid which opens and closes the valve at approximately 3.6 °F less than saturated steam temperature.

Fail-open Safety Mechanism

- In the event of a damaged diaphragm, the LV6 is not blocked, but remains open, ensuring the operation of the steam using equipment.

Automatic Air Venting

- The LV6 rapidly vents low temperature air and condensate at system start up, therefore reducing overall start-up time and improving productivity.
- In addition to rapid air venting at start up, air at near-to-steam temperature can be almost completely vented during operation, making the LV6 suitable for batch processes.

Free Float Clean Steam Trap
Continuous Discharge
SS3-P/SS5-P

Continuous Discharge of Condensate

- The self-modulating free float automatically adjusts to the level of condensate allowing continuous discharge. There is no condensate backup or accumulation in the equipment.

High Durability and Long Life

- The free float with simple construction and only one moving part, without levers or hinges, has less failure. Valve wear is distributed across the entire float surface, greatly improving valve service life.

Suitable for Condensate Recovery

- Even with a back pressure of 99% of operating steam pressure, the free float operates without fail. The SS3-P and SS5-P are therefore suitable for condensate recovery in closed systems.

LV6 Series

SS3-P

SS5-P

LV6 Series

Specifications

Model	LV6-CE	LV6-CF	LV6-SF	LV6-P	LV6-EP*
Material	Stainless Steel AISI316L				
Connection	Clamp End				
Size (in)	½ , ¾ , 1				
Maximum Operating Pressure (psig) PMO	85				
Minimum Operating Pressure (psig)	Vacuum				
Maximum Back Pressure	90% of Inlet Pressure				
Maximum Operating Temperature (°F) TMO	329				
Maximum Allowable Pressure (psig) PMA	150				
Maximum Allowable Temperature (°F) TMA	365				
Maximum Dischage Capacity (lb/h)	1680				
Subcooling of Capsule Fill (°F)	Up to 3.6				
X-element Type (for **Clean Steam Traps**)	Standard	Free-draining		Free-draining (Electro-polished)	
Clamp Type	2-piece Clamp (Buff-polished)			3-piece Clamp (Buff-polished)	
Finishing (Internal /External)	Natural Machining		0.8 µm Ra / 1.2 µm Ra Fine Machining	0.8 µm Ra / 1.2 µm Ra polished	0.4µm Ra Electro-polished

Model	LV6-HC	LV6-HS	LV6-HP	LV6-HE*
Material	Stainless Steel AISI316L			
Connection	Clamp End / Tube End			
Size (in)	½ , ¾ , 1			
Maximum Operating Pressure (psig) PMO	85			
Minimum Operating Pressure (psig)	Vacuum			
Maximum Back Pressure	90% of Inlet Pressure			
Maximum Operating Temperature (°F) TMO	329			
Maximum Allowable Pressure (psig) PMA	150			
Maximum Allowable Temperature (°F) TMA	365			
Maximum Dischage Capacity (lb/h)	2250			
Subcooling of Capsule Fill (°F)	Up to 3.6			
X-element Type (for **Clean Steam Traps**)	Standard	Free-draining	Free-draining (Electro-polished)	
Clamp Type	2-piece Clamp (Buff-polished)		3-piece Clamp (Buff-polished)	
Finishing (Internal /External)	Natural Machining	0.8 µm Ra / 1.2 µm Ra Fine Machining	0.8 µm Ra / 1.2 µm Ra Buff-polished	0.4µm Ra Electro-polished

*Option

SS3-P/SS5-P

Specifications

Model		SS3-E [1]	SS3-P	SS3-EP [1]	SS5-P	SS5-EP [1]
Material		Body: Cast Stainless Steel A351 Gr. CF3M Float: Stainless Steel SUS316L (AISI316L)				
Connection [2]		Clamp End [3]				
Size (in)		½ , ¾			1, 1½	
Maximum Operating Pressure (psig) PMO		85				
Maximum Differential Pressure (psig) ΔPMX		85				
Maximum Operating Temperature (°F) TMO		329				
Maximum Allowable Pressure (psig) PMA		150				
Maximum Allowable Temperature (°F) TMA		365				
Maximum Dischage Capacity (lb/h)		350			1160	
Clamp Type		3-Piece Clamp				
Finishing [4]	Internal	25 µm Ra Electro-polished	0.8 µm Ra Buff-polished	Buff-polished then 0.4 µm Ra Electro-polished	0.8 µm Ra / 1.2 µm Ra Buff-polished	Buff-polished then 0.4 µm Ra Electro-polished
	External		25 µm Ra Electro-polished		Bead blasted and Electro-polished	

[1] Option [2] Tube end connections available on request [3] ISO 2852 ASME-BPE (Tri-Clamp compatible) [4] Treated base surface are lost-wax casted

⚠CAUTION 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.

Full product details (sizes, pressures, capacities and materials, etc.) are included in the individual specification data sheets (SDS).

Tri-Clamp is a registered trademark of Alfa Laval Corporate AB.

TLV Stainless Steel Product Series

Steam Traps

SS1NL

SS3N

Air & Drain Traps

SS1VA

Pressure Reducing Valves

COS DR20 A-DR20

Clean PRV

DR8-P

A-PN-DR

Air Vents

Clean Air Vent

VS3-P

Check Valves

CKF3M

Separator Filters

SF1

Contact TLV for more information on these and other stainless steel products.

⚠CAUTION 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
13901 South Lakes Drive, Charlotte, NC 28273-6790
Tel: 704-597-9070 Fax: 704-583-1610
E-mail: tlv@tlvengineering.com **https://www.tlv.com**
For Technical Service 1-800 "TLV TRAP"

Member of FCI Fluid Controls Institute, Inc. Technical Resource for Instrumentation and Fluid Control

Manufacturer
TLV CO., LTD.
Kakogawa, Japan
is approved by LRQA Ltd. to ISO 9001/14001

ISO 9001
ISO 14001
LRQA CERTIFIED

Pamphlet A2088 Rev. 03/2025
Specifications subject to change without notice.