TYPE LSTS-100

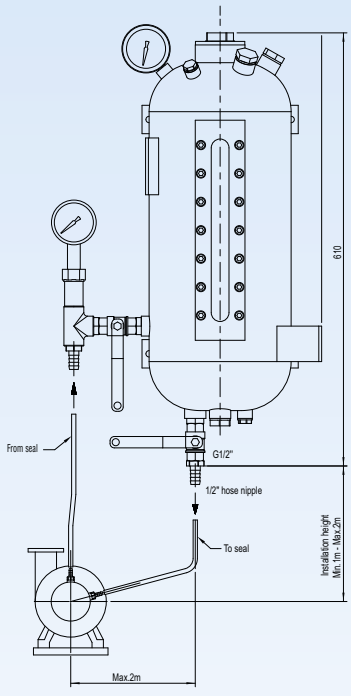
The objective of a thermosiphon system is to provide a flow of cooling media to the mechanical seal at the required pressure.

The Media recirculates through the seal by heat convection generated as the pump shaft rotates through the seal. The media in the vessel is forced into the seal through the bottom line as the hot barrier fluid leaves the seal through the top line back into the vessel.

The media flows in the circuit and is cooled by contact with the walls of the tank and the cooling coil if used. The thermosiphon system is therefore passive and stand-alone, avoiding the cost and complexity of a conventional liquid pump.

In order to achieve this natural cooling effect, the tank containing a suitable sealing liquid must be located approx. 1-2 m above the seal and not more than 2 m on any side, connecting the seal and the tank with pipes in stainless steel.

Depending on the application, local conditions and client preference, a thermosiphon system can be delivered in a number of different versions by combining several options and a basic package.



Installation diagram

Item	Description
Tank	Volume: 12 liters, approx. media volume 7 liters Max. Operating Pressure: 16 bar Material: EN. 1.4436 / AISI 316
Sight Glass	For media level inspection
Cooling Coils	Fixed Cooling Coil is standard in every tank
Manometer	Displays Pressure in the tank
Thermometer	Displays media temperature in the seal return line
Ball valves	On the “in” and “out” ports, these are used to stop flow and isolate the seal during maintenance
Fittings	G-Series pipe thread hose fittings for “in” and “out” ports
Plugs for option ports	All unused ports are plugged and sealed.

Circulation in accordance with:
API Plan 52, API Plan 53A, API Plan 54 with circulating pump in the seal inlet line