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Sample Cooler (SC50) Series

Installation & Maintenance Instructions for Sample Cooler (SC50) Series

Warning: Steriflow Sanitary Sample Coolers must only be used, installed and repaired in accordance with these Installation & Maintenance Instructions. Observe all applicable public and company codes and regulations. In the event of leakage or other malfunction, call a qualified service person; continued operation may cause system failure or a general hazard. Before servicing any valve, disconnect, shut off, or bypass all pressurized fluid. Before disassembling a valve, be sure to release all spring tension.

Please read these instructions carefully!

Your Steriflow/Jordan product will provide you with long, trouble-free service if it is correctly installed and maintained. Spending a few minutes now reading these instructions can save hours of trouble and downtime later. When making repairs, use only genuine Steriflow Valve parts, available for immediate shipment from the factory.

SC50 Sample Cooler

The SC50 Sample Cooler is designed to allow clean steam and high purity water samples to be taken quickly and easily while maintaining product sterility during testing.

Design conditions

Coil design pressure	145 psig /10 barg
Shell design pressure	145 psig /10 barg

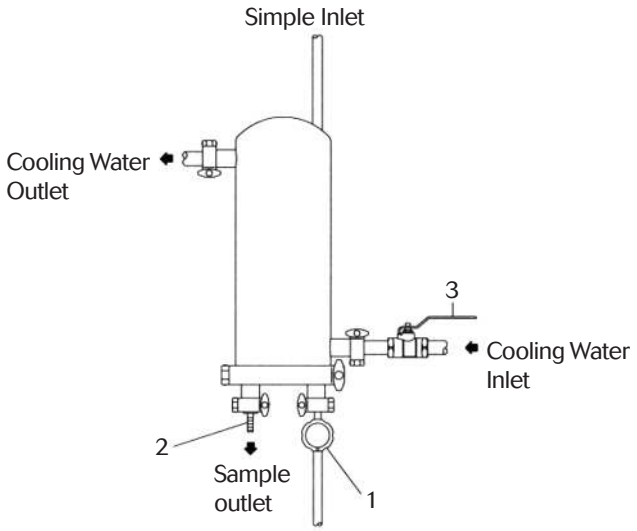
Installation

The sample cooler should be oriented vertically and fixed in place using a standard 4" pipe clamp. Cooling medium, typically city, well, or chilled water, should be connected to the lower body side connection. In order to allow the flow of cooling medium to be controlled during testing an isolation valve (3) should be included. The cooling water outlet should be piped to drain, and be free of obstructions or isolation valves. An orifice fitted in the cooling water supply can be used to control the max flow of cooling medium.

Where steam is the sample medium, a valve (1) suitable for continuous steam duty (SV) must be used. Valves with a "soft" seat will rapidly fail due to erosion of the seating surfaces, loosing their ability to give appropriate control or isolate.

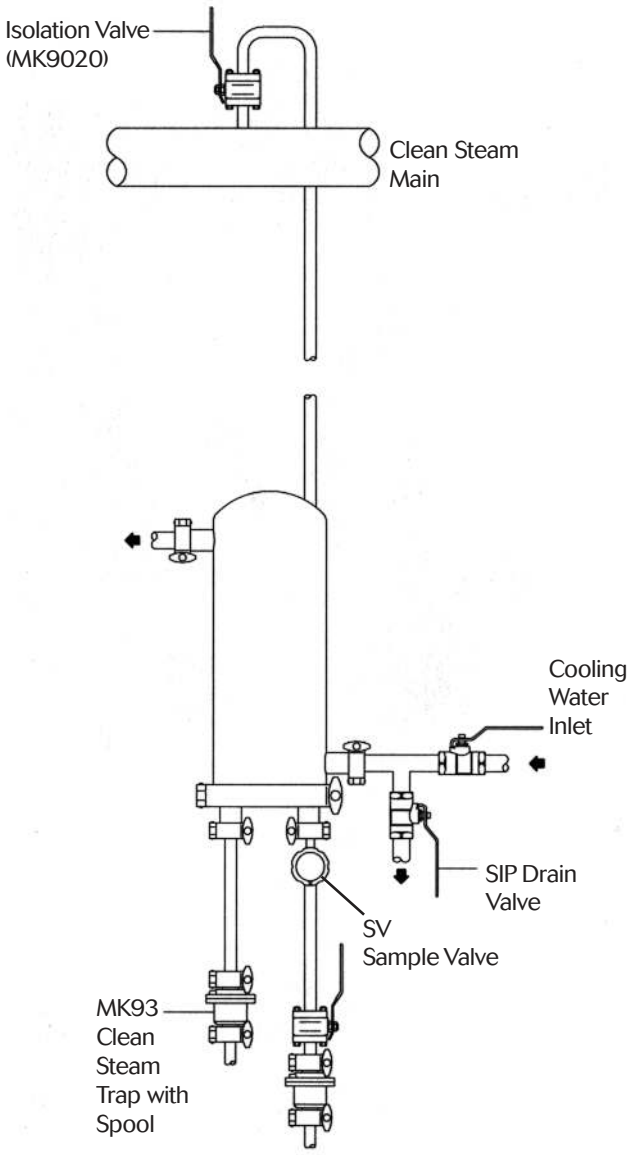
Operation

1. Open the cooling water inlet valve (3) and ensure that a flow of cooling medium is present.
2. Slowly open the sample inlet valve (1) until a sample is obtained. Note that excessive sample flow will result in a high sample temperature. Both cooling water and sample valves can be regulated to adjust the sample outlet temperature.
3. Once a suitable sample has been obtained the sample inlet valve (1) and cooling water valve (3) should be isolated. If no further samples are required the main steam supply should then be isolated and the sample valve (1) opened fully. This will allow any residual condensate held within the cooler to drain through the supply leg steam trap (see installation drawing).



Accessories	
1	SV Sample Valve
2	HA 1/4" Hose Adaptor
3	Cooling Water Valve

Typical Installation for Steam Sampling



To ensure a representative steam sample is obtained, the steam feed should be taken off the top of the steam main or header as illustrated.

The steam supply should drop below the sample valve and be fitted with a suitable steam trap. The steam supply to the sample valve should be taken off the side of this vertical supply. If used, the SV sample valve should be installed with the sample inlet in the horizontal as illustrated.

Caution: The SC50 will become hot during operation and sterilization. Personnel should be protected against contact with the installation by installing appropriate insulation or guarding.

Sterilization in Place (SIP)

Prior to testing or at periodic intervals, it may be appropriate to sterilize the SC50 to ensure that sample integrity is maintained during testing.

In order to sterilize the SC50 in place, the following installation is recommended.

1. A drain valve should be included between the cooling water isolation valve and cooling water inlet to allow residual cooling water to be purged from the shell prior to sterilization. Unless drained, this water will boil during sterilization.

   The cooling water outlet connection should always be vented to atmosphere during sterilization to prevent any pressure build up in the shell of the unit.

2. A clean steam trap (MK93) should be fitted on the sample outlet connection. A minimum drain leg of 6" (150mm) should be allowed between the sample outlet connection and the trap to ensure that the coil is kept free of condensate during sterilization.

To sterilize the SC50 first ensure that the shell has been drained of cooling water and that the spool and steam trap have been fitted. Open the steam main isolation valve and allow the supply piping to warm. Gently open the steam sample valve to allow steam in to the coil of the SC50. Sterilize as required.

Once sterilization is complete, isolate the SV and allow the unit to cool. Remove the spool and trap. Isolate the cooling water drain valve. The unit is now ready for normal use.

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