

UNDER TEMPERATURE ALARMS

There are several potential root causes for Under Temperature Alarms. Each is briefly discussed below for use in field troubleshooting.

Loss of Steam

If the integral boiler or house steam boiler malfunctions, the boiler can lose its ability to produce adequate steam to satisfy the demand of the sterilizer. The sterilizer will not maintain the required temperature and an Under Temperature Alarm will result.

Steam to Chamber Valve Malfunction

If the steam to chamber valve will not open properly, the steam sterilizer will not maintain the proper temperature, resulting in the same outcome as the loss of steam discussed above.

Drain Bleed Valve Plugged/Closed

If the drain bleed valve is plugged, inadvertently closed, or obstructed in some way, the drain will fill with condensate. When the condensate reaches the RTD, it will begin cooling it down, giving a false temperature reading that will ultimately reach the Under Temperature Alarm set point.

The Under Temperature Alarm Point Is Not Set Correctly

From the factory, the default set point is 1.5 degrees. If this set point has been adjusted in the field, an inadvertent alarm could result. For instance, since the temperature specification for a standard PRIMUS unit is ± 1 °C, a setpoint of 0.5 °C could result in an Under Temperature Alarm.

Air to Gasket Leak

If the sterilizer has the air-to-gasket optional feature, air could leak into the chamber and be driven down into the drain. The air would then insulate and cool the RTD and generate an alarm.



UNDER TEMPERATURE ALARMS(continued)

High Limit Pressure Set Incorrectly

If the limit is changed in the field to an improper value, it could shut off steam to the chamber which will result in an alarm.

Low Steam Quality

If the steam contains a high percentage of water (wet steam), the excessive condensate will cool off the drain RTD and cause an alarm.

Bad RTD

The drain RTD could become defective and generate an alarm.

Defective Sensor (PSS500)

On PSS500 control systems, the pressure and temperature channels are not isolated; therefore, a defect in one sensing device can affect one or more of the other sensors. A defect in a seeming unrelated sensor could generate an Under Temperature Alarm.

Pin Trap Clogged

Check the pin trap for debris. This should be done once a day.

Plugged Jacket Trap

A plugged jacket trap will cause the jacket to fill with water. A cold jacket will cause a significant increase in condensate in the chamber which in turn could cool the drain RTD.

Plugged Chamber Trap

If the chamber trap is plugged, the chamber bleed valve is not capable of removing all the condensate and could trigger an Under Temperature alarm.



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