

Qualifying Washer Disinfectors for Minimally Invasive Surgery (MIS) Instruments

Background

The loading trays of [Washer Disinfectors](#), used for cleaning and disinfecting the instruments used for minimally invasive surgery (MIS), are often supplied with detergent and rinsing water through manifolds and nozzles, instead of the rotating spray arms typically found in washing machines.



Challenges of Qualifying Washer Disinfecter Units

The main challenges associated with qualifying Washer Disinfecter units that have been fitted with manifolds, besides ensuring that the temperature profiles operate in accordance to EN 15883, is to check that the flow of rinsing water through the piping is adequate enough to ensure disinfection.



Cleaning and disinfecting the instruments used for MIS, is performed by connecting pressure sensors directly on the manifold outlets in the washer disinfecter chamber. The pressure readings are then compared to readings from different nozzles in order to detect possible pressure differences, which could lead to inadequate cleaning. A pressure variation within +/- 20% is usually accepted. The pressure sensor can also be used to perform a leak test (at 180 mBar) of the endoscope's outer protection tube. This test is performed in order to detect possible leakage that could otherwise lead to water ingress – and highly expensive repairs of the washer disinfecter.

As very aggressive detergents are sometimes used during the cleaning phase of endoscopes, it is essential to check the quality of the rinsing water. This is done by measuring the conductivity level and in some cases the corresponding pH level.

Guidelines for Qualifying Washer Disinfectors

To qualify a [Washer Disinfection](#) chamber, the usual number of temperature measuring points is 12:

- 1 sensor in each corner (8 sensors total)
- 1 sensor on each side wall (2 sensors total)
- 1 sensor on the center of the roof
- 1 sensor at the in-built regulatory control temperature sensor

Validating the pressure differences in a washer disinfecter chamber, used for MIS, usually require 1-2 pressure sensors for each manifold – typically mounted at the inlet and outlet in order to measure the pressure differentials.

To validate the quality of the rinsing water, a single logger with a conductivity sensor is required and should be placed in the chamber where it is kept wet during the operation.

For more information
on [TrackSense®](#) or
to find the right solution for your needs:

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What does Ellab offer?

Ellab offers a full range of **TrackSense®** sensors to qualify Washer Disinfector units, these include **interchangeable pressure sensors**, **4-channel temperature sensors** and **conductivity sensors** to go along with the wireless loggers. These data loggers can also be equipped with a **SKY module option** for real time data.

Our **ValSuite® software** comes with both an ISO 15883 Washer Disinfector Report and ISO 15883 Advanced Washer Disinfector Report that analyzes and evaluates the gathered data and the process as a whole.

Benefits of Choosing Ellab Data Loggers for Washer Disinfectors

- **SKY Module** - get a real time view of critical data during Washer Disinfector processes
- **Pressure sensors** - accurately evaluate the pressure conditions within manifolds and perform optional leak tests
- **Conductivity sensor** - ensure the quality of rinsing water to gain a spotless result
- **4-channel temperature sensor** - PTFE flexible sensors provide the ideal solution for measuring several temperature measuring points within the chamber, all at once



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