

Valmet Conductivity Measurements for Pharmaceutical Applications



Valmet conductivity sensors are ideal for pharmaceutical applications. Valmet conductivity sensors are extremely resistant to rapid temperature changes during steaming in place thanks to unique design. We guarantee our conductivity sensor keeps on measuring accurately, year after year. Typical lifetime of Valmet conductivity sensor is 10 years.

Valmet has a number of special sensors for water for injection (WFI)/ ultra-pure water (UPW) measurement. Valmet also provides hygienic sensors for high conductivity applications.

Extremely reliable sensors make sure there are no un-scheduled production shut downs. All Valmet sensors pharmaceutical applications fulfill EHEDG requirements for material, surface roughness and steam cleaning.

Valmet offers multiple certificates that prove production quality and traceability. The equipment arrives readily calibrated to customer specified value. The pre-calibrated sensors minimize the time required for sensor installation.

Steaming in place and conductivity measurement

Many of the competitor's conductivity sensors are designed to be used in fairly stable temperatures. Frequent temperature changes of more than 100 °C puts a high strain on any equipment as different materials heat expand at different rate. If this strain is not taken into account by sensor design the measurement will drift. In worst case scenario the sensor is breached causing contamination in process and loss of production.

Valmet sensors are designed to withstand temperature changes.

- There are no sensitive electronics in the sensor; the whole measurement is controlled by the TCU
- The structure acts like a spring to counter fast temperature changes of SIP process
- Each sensor is heat treated and pressure tested during production. Leak test is done using pressurized helium to ensure highest quality.

EHEDG certified sensors for WFI (UPW) applications

Sensor type	Connection size	Pressure/Temperature	Measurement range
4613s	2"	12bar / 150 °C	0,05 µS/cm - 10 mS/cm
4624s	2,5"	12bar / 150 °C	0,05 µS/cm - 10 mS/cm
4654s	Varivent DN50	12bar / 150 °C	0,05 µS/cm - 10 mS/cm
4683s	1,5"	12bar / 150 °C	0,05 µS/cm - 10 mS/cm

EHEDG certified sensors for high conductivity applications

Sensor type	Connection size	Pressure/Temperature	Measurement range
4613	2 "	12 bar / 150 °C	5 µS/cm - 200 mS/cm
4624	2,5 "	12 bar / 150 °C	5 µS/cm - 200 mS/cm
4654	Varivent DN50	12 bar / 150 °C	5 µS/cm - 200 mS/cm
4683	1,5 "	12 bar / 150 °C	5 µS/cm - 200 mS/cm

Documentation and services

Valmet provides material certificate 3.1, surface roughness and calibration certificates. The sensors fulfill EC No 1935/2004 and NO 2023/2006 directives as well as FDA 21CFR177.1550 regulations.

The sensors can be pre-calibrated according to customer specification reducing the time required during sensor replacement.

Valmet provides portable conductivity measurements and calibration service for the portable device.

