

MEASURING THE LIQUID VOLUME IN A FLEXIBLE BIOPROCESS CONTAINER WITH PENDOTECH® SINGLE USE PRESSURE SENSORS

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PendoTECH has recently developed a novel Single Use Pressure Sensor with a new form factor for use in flexible bioprocess containers. In order to validate this sensor for measuring the liquid volume in a flexible bioprocess container, PendoTECH performed an experiment that simulates actual end-user usage. The sensor was installed on the bottom of a 200L 2D bag, supported by a custom tote, and connected to a PendoTECH High Resolution PressureMAT® Sensor Monitor. The sensor at the bottom of the bag measured the pressure exerted by the water in the bag as it was filled. The pressure reading at specific fill points was then converted to a theoretical liquid level, which was compared to the actual liquid level in the bag as measured with a caliper. The theoretical liquid level was within 2% of the actual liquid level at all points and the average error was less than 1%. This experiment demonstrates that PendoTECH's single use pressure sensor can be a valuable, low cost, convenient tool for measuring the volume in flexible bioprocess containers.



Figure 1 – Image of a PendoTECH's Single Use Pressure Sensor connected to a PendoTECH custom port plate