PENDOTECH
Adding Value To Your Process

PendoTECH Single Use Pressure Sensors

PendoTECH Single Use Pressure Sensors™ measure static and dynamic pressure of gases and liquids in your processes accurately and cost effectively. They are perfect for filtration and chromatography processes, monitoring of glass and disposable bioreactors, filling operations and more. They feature the PendoTECH High Accuracy Pressure (MEMS-HAP™) chips inside. The sensors connect to monitors via a 12-foot (3.7m) reusable cable. Suitable monitors include a PressureMAT™ monitor/transmitter, a PendoTECH Process Control System, or other pre-qualified third party monitors. They are the alternative low-cost solution for use with tubing and bioprocess containers to the existing stainless steel pressure transducers on the market.

- Available for tubing from 1/16 to 1 inch (0.16 to 2.5 cm) inner diameter
- Can be gamma radiated with tubing and bag assemblies
- Operating range from -7 to 75 psi (-0.48 to 5.2 bar)
- 100% tested for accuracy and leaks during manufacturing
- Available in polycarbonate or caustic resistant polysulphone material of construction
- All fluid path materials meet USP Class VI requirements
- Certificate of quality included
- Manufactured in a FDA Registered, ISO 13485 certified facility; Class 100,000 clean room

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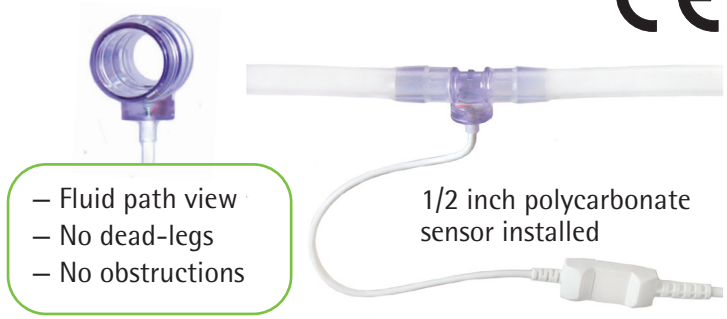
Process Scale Sensors

To optimally adapt to tubing and bag assemblies, the process scale sensors have a hose barb fitting that can securely adapt to tubing. The design imparts no obstruction on the fluid path that can cause a pressure drop and there is no dead-leg at the point where the pressure is measured. The hose-barb design features no mold parting-line where the tubing is secured, which can be a source of leaks. The single barb design provides space for the hose to relax behind the barb, causing the tie-wrap to work like a drawstring. If more security than a tie-wrap is desired, other options are available. Anti-rotation ribs, lock the tubing, preventing it from loosening from a twisting motion.



– Fluid path view
– No dead-legs
– No obstructions

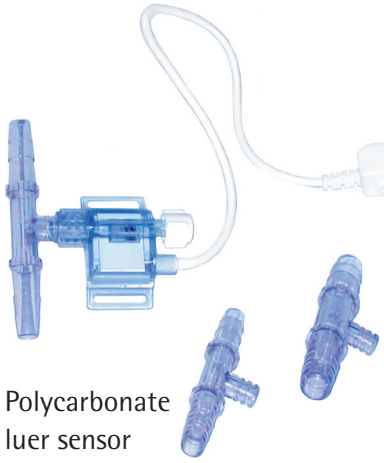
1/2 inch polycarbonate sensor installed

1 inch polycarbonate

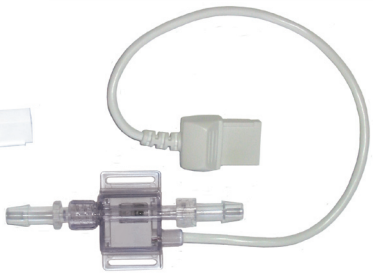
1/2 inch polysulphone

Small Scale Sensors

They have male/female luer lock inlet/outlet ports and come with a cap on the female luer port for dead-end applications. With the universal luer fitting, they can be adapted to processes in different manners. They can be used in-line at low flow rates (1/16 or 1/8 inch tubing) by using luer to barb adapters (see picture on far right). There are optional adapter tees available and since the polycarbonate sensor comes sterile, it may be aseptically connected to one of the 1/4 or 3/8 inch adaptor tees that is part of an autoclaved process assembly (see photos to right). Testing has indicated that accurate process pressure readings are obtained in the tee configurations. They can also be connected directly to the vent port on some filters.



Polycarbonate luer sensor with adapter tee



Polysulphone luer sensor with hose barb adapters

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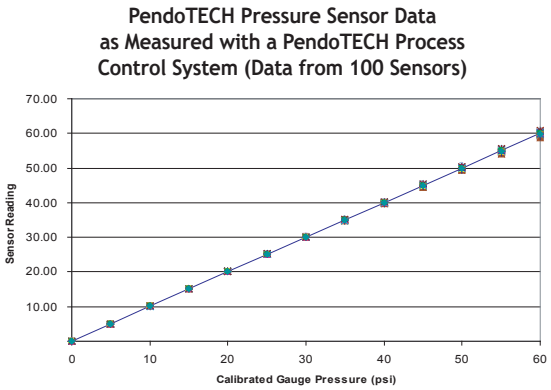
Product Information

Each pressure sensor comes individually packaged and labeled in a Tyvek® pouch.

Custom adaptor cables that connect the sensors to monitors/pumps with RJ12 phone cable inputs are available.



Data from 100 random sensors manufactured with the PendoTECH High Accuracy Pressure chips (MEMS-HAP).

Detail	Specifications
Accuracy	Better than +/- 2% of reading in the range of 0 to 6 psi (0 to 0.41 bar); Better than +/- 3% of the reading in the range of 6 to 30 psi (0.41 to 2.07 bar); In range of 30 to 60 psi (2.07 to 4.14 bar) typically better than +/- 5% of reading
Pressure range	-7 to 75 psi (-0.48 to 5.2 bar)
Biocompatibility	All materials in contact with product fluid path meet USP Class VI requirements
Manufacturing environment	FDA Registered, ISO 13485 certified facility; Class 100,000 clean room
Gamma irradiation	Up to 50 kiloGrays
Operating temperature	15˚C to 40˚C (other ranges with process qualification)
Storage temperature	-25˚C to 65˚C
Input / Output impedance	270 Ohms to 400 Ohms
Excitation voltage	2.5 to 10 Volts DC
Sensor Output	0.2584 mV/psi/Volt
Connector	Custom molded 4 pin connector; signal + / - and excitation + / -
Packaging	White Tyvek® and clear pouch with easy-open chevron seal; box of 25 sensors in double polyethylene bags (except sterile sensors are not in poly bags)

Ordering Information	Description
PRESS-N-025	Single Use Pressure Sensor, non-sterile, polycarbonate, 0.25 inch hose barb (0.64 cm)
PRESS-N-050	Single Use Pressure Sensor, non-sterile, polycarbonate, 0.50 inch hose barb (1.3 cm)
PRESS-N-075	Single Use Pressure Sensor, non-sterile, polycarbonate, 0.75 inch hose barb (1.9 cm)
PRESS-N-100	Single Use Pressure Sensor, non-sterile, polycarbonate, 1 inch hose barb (2.5 cm)
PREPS-N-025	Single Use Pressure Sensor, non-sterile, polysulphone, 0.25 inch hose barb (0.64 cm)
PREPS-N-050	Single Use Pressure Sensor, non-sterile, polysulphone, 0.50 inch hose barb (1.3 cm)
PREPS-N-075	Single Use Pressure Sensor, non-sterile, polysulphone, 0.75 inch hose barb (1.9 cm)
PRESS-S-000	Single Use Pressure Sensor, polycarbonate, with luer - Sterile
PREPS-N-000	Single Use Pressure Sensor, non-sterile, polysulphone, with luer
LUER FITTINGS	Contact PendoTECH for more details on luer to hose barb adapters
PDKT-103-03	1/4 inch x 1/4 inch (0.64 x 0.64 cm) polycarbonate adapter tee with luer port
PDKT-104-03	3/8 inch x 3/8 (0.95 x 0.95 cm) inch polycarbonate adapter tee with luer port
PDKT-650-298	Reusable shielded cable for sensor - 12 foot (3.7 m) maximum length (if sensors are to be used with 3rd party monitor or pump system, specify brand)

NOTICE: NOT FOR USE ABOVE 75 PSIG (5.2 BAR). Each prospective user must test the sensor for its proposed application to determine its suitability for the purpose intended prior to incorporating the sensor into any process or application. The sensor is not designed, intended or authorized for use as components in life support or medical devices. Product is not designed for any application in which the failure of the product could result in personal injury, death or property damage. For warranty see www.pendotech.com/warranty. ACDF Status: Compliant with EMEA 410 Rev 2 Guidelines.