ASHCROFT®
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FREEZE-PROOF OPTION XUP FOR PRESSURE TRANSDUCERS

PIP #: TR-PI-23

Applicable to:
G2, T2, A2, A4 and G3 Pressure Transducers

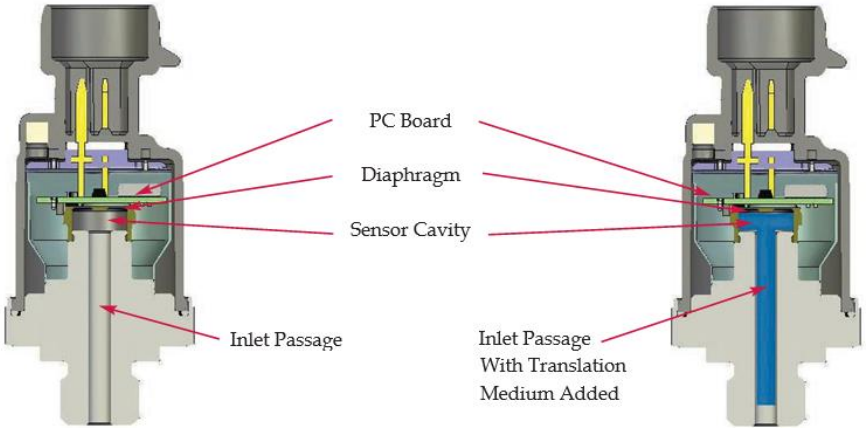
Measuring water pressure in freezing temperatures can damage sensitive electronic pressure measuring instrumentation. Despite an operator's best effort to drain and purge water from a system, a small diaphragm cavity and pressure passage inside the transducer's sensor can trap or hold water. When frozen, the expanding ice can force the diaphragm beyond its travel limits, causing it to permanently distort. Once the ice is melted away, the transducer will no longer return to zero, rendering it unusable and requiring replacement.

Engineered Solution:
To eliminate the problem, Ashcroft® engineers have developed a unique modification in which a stable, emulsified lubricant is injected into the diaphragm cavity and most of the inlet passage. This viscous material displaces air and seals the cavity, thus preventing water from contacting the diaphragm and settling in the cavity. Once injected, the emulsion adheres to the inner walls of the sensor and forms a thin skin inside the inlet passage, preventing it from leaking out of the sensor, even when the transducer is mounted in the upright position. As water pressure is introduced, the emulsion serves as a translation medium, exerting a force upon the diaphragm equal to the force exerted upon it by the pressurized water.

Effect on Performance:
With the addition of the translation medium, a slight deviation from the transducer's advertised specifications for accuracy and response time may result. However, in most applications, this variance may be regarded as insignificant.

Common Applications:
Ashcroft® transducers equipped with this modification are intended exclusively for use in monitoring water pressure in environments with freezing temperatures. Such installations may include irrigation systems, firefighting equipment, snow making equipment and frozen food processing.

How to Order:
Select the appropriate product code from the datasheet for the pressure transducer of choice and add the option XUP on the options location. Only one X is needed if more options are selected. For example, G2 pressure transducer product code with certificate of calibration and freeze-proof options (G27M0105GN30#G-XRHUP). G2 pressure transducer product code with freeze-proof option only (G27M0105GN30#G-XUP).



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