



REFRIGERATED CASES

PRODUCT: Model 3100

APPLICATION DETAILS:

The customer is recognized as a world leader in manufacturing, selling, installing and servicing merchandising equipment and refrigeration systems for customers in the retail food industry. Pressure sensors typically reside at two main locations in the system: the output side of the evaporator and the discharge side of the compressor.

CUSTOMER PROBLEM:

High sensor failure rate in harsh application

The constant freeze/thaw cycles in a refrigeration environment make it one of the harshest environments for a pressure transducer. The most critical component in most systems is the expansion valve. Without the capability to function in freezing environments, the expansion valve won't be able to rapidly reduce pressure in the high-pressure liquid refrigerant. As a result, the phase change of liquid to vapor wouldn't be possible, disabling the production of cold vapor, which is critical in any refrigeration environment. The cost of failure in a refrigeration system is extremely high, because of inventory loss, spoiled product, and clean up at the facility.

SETRA SOLUTION:

Setra was able to provide the customer with a pressure transducer that could withstand the harsh environment of the application. The IP67 rating on new Packard, Deutsch, and DIN connectors along with a robust humidity-proof Tantalum Nitride sensing element and an all-welded stainless steel body free of epoxy or elastomer seals, make the Model 3100 transducer capable of the high performance demands of the refrigeration industry.



WHY SETRA WON:

Provided rugged sensor to withstand harsh environment

The Model 3100 is an industry leader in price-to-performance. Setra was able to provide the customer with a rugged and reliable pressure sensor that was able to withstand the many freeze thaw cycles in refrigerated cases. Setra also provided the customer piece of mind for their application.

SETRA STRENGTHS

- $\pm 0.25\%$ FS Accuracy
- Long-Term Stability Better Than $\pm 1\%$ FS/YR
- IP67 Rating
- Small Footprint
- Choice of mA, Voltage or Ratiometric Outputs
- Isolated Sensor