

# C A BRIGGS COMPANY



THE LEVELWORKS<sup>®</sup> PEOPLE

Level, Flow, Pressure, Temperature and Gas Detection Solutions  
for Industrial Process, Machine Control and Gas Distribution

## HVAC/R, GEMS 3100 SERIES PRESSURE SENSOR



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As demand is continually increasing in the [HVAC/R market](#) due to rising temperatures and increased usage, demand is also being placed on the controls in the HVAC/R systems to raise their efficiency. Smarter controls are being utilized to provide more accurate feedback to the controllers which help with reducing costs by using less energy.

One of the ways to reduce energy costs is to only run the HVAC/R system at a power level equivalent to their actual need. Historically, when demand came for cooling, a pressure switch (simple on/off device) would indicate demand and the system would run at 100% power using the highest amount of energy. When pressure sensors (continuous or analog monitoring devices) are used, if the demand is only for

40% power, the sensor can feed that data to a Cooling Drive System and the whole HVAC/R unit will consume 40% power. Much less energy wasted.

**Challenge:** Finding a pressure sensor that can provide an accurate signal even during demanding conditions, survive a high number of cycles as well as be airtight to prevent leaks.

HVAC/R units are typically mounted on roof tops where outdoor temperature and humidity extremes are seen. A [pressure sensor](#) will need to be able to withstand these types of environments when in use. When working with refrigerants used in the HVAC/R market, leaking is not allowable. Having a tightly sealed sensor will reduce the amount of refrigerant that can be released into the atmosphere. Also, HVAC/R applications are extremely repetitive and can cause a high number of cycles to be placed on the equipment. Devices on the system (including pressure sensors) need to be able to be accurate over many operation cycles over a very long lifetime.

**Solution:** 3100 Series Pressure Sensors

Not only has the [3100 Series Pressure Sensors](#) have been tested and passed strict vibration testing, they use no internal O-rings in the chamber that holds air. The stainless-steel pressure ports and sensing diaphragms are laser-welded together to make an air-tight seal. This will prevent leaks today as well as years in the future as O-rings can break down over time and cause leaks. Along with the 100 million cycle lifetime, the 3100 Series Pressure Sensor are a perfect fit to provide a continuous feedback of air pressure to your controller.



Adding the 3100 Series Pressure Sensors to your HVAC/R applications is a large asset to ensure your equipment will have a long life and low maintenance requirement.

## Features of the Gems 3100 Series Pressure Sensors:

- Exceptional Long-Term Stability = No need for costly field calibration or replacement
- Thermally compensated = Consistent performance under wide temperature conditions
- Stainless Steel body = Able to with stand harsh chemicals and gasses
- Sealed to IP67 = heavy water spray, power-washing
- Enhanced RFI, EMI, and ESD Protection = Clear uninterrupted signal in harsh electrical environments
- Computer Controlled Calibration = High 1:1 Interchangeability from unit to unit
- Passes 20G Vibration test and IEC Free Fall test = Rugged design to handle excessive shock and vibration conditions

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