

INDUSTRIAL APPLICATIONS

PX2 Series Heavy Duty Pressure Transducers for Potential Use in HVAC Refrigeration Applications

BACKGROUND

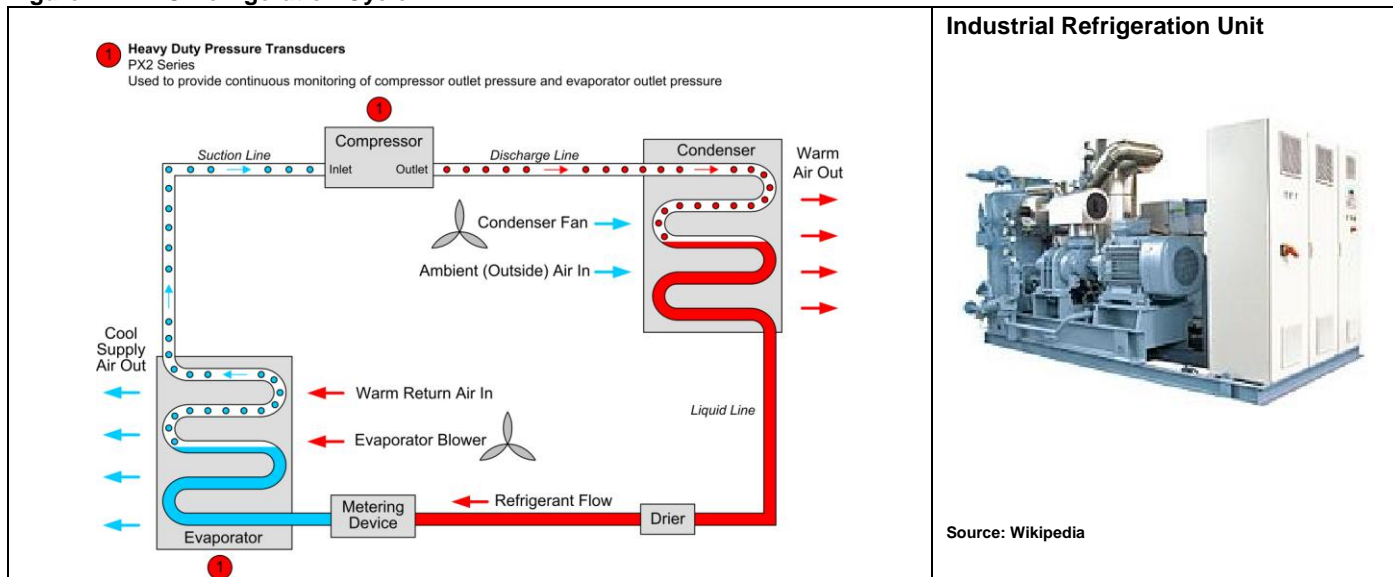
There are four basic components in the HVAC refrigeration cycle used by an industrial refrigeration unit (see Figure 1):

1. **Compressor:** Cool low pressure vapor full of latent heat from the evaporator is compressed and pumped to the condenser.
2. **Condenser:** Hot high pressure vapor from the compressor releases its latent heat to the ambient air and is condensed to a hot liquid.
3. **Metering device:** Hot liquid from the condenser is forced through a flow restriction to reduce the pressure and change the hot liquid to a cold liquid.
4. **Evaporator:** Takes the cold liquid from the metering device and absorbs latent heat from the return air and changes to a cool gas.

The refrigeration cycle works because as the refrigerant changes from one state to another there is a large release or absorption of latent energy. By controlling the pressure of the refrigerant, the temperature of the state change can be controlled. At low pressure, the refrigerant will change from a liquid to a gas and absorb latent heat energy at a lower temperature. At high pressure, the refrigerant gas can change from a gas to a liquid at higher temperatures releasing latent energy.

Due to the high cost of energy refrigeration, systems need to be efficient. Controlling the high side and low side pressure to match the partial load system needs will increase system efficiency and help to reduce energy costs.

Figure 1. HVAC Refrigeration Cycle



SOLUTION

Honeywell's PX2 Series is designed to provide continuous monitoring of compressor outlet pressure and evaporator outlet pressure to help control the flow of refrigerant during partial load conditions (see Figure 2).

Figure 2. PX2 Series

PX2 Series Heavy Duty Pressure Transducers	Features and Benefits
	<ul style="list-style-type: none"> • Designed for configurability and Six Sigma standards • Industry leading Total Error Band (TEB) • Durable and cost effective • Broad compensated temperature range • Good EMC protection • Global support • Application expertise

PX2 Series in HVAC Refrigeration Applications

WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

SALES AND SERVICE

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office or:

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