



## Case Story

# Reducing leaks Increasing peace of mind

Danfoss is no stranger to Innovative Refrigeration Systems, Inc. In fact, the Lyndhurst, Va.-based design builder of industrial refrigeration systems has been a Danfoss customer since the international contractor opened its doors in 1993, purchasing valves and pressure transducers for customers in the food service, cold storage, food processing and pharmaceutical industries.

So when Danfoss introduced its ICF valve station, Innovative Refrigeration was among the first companies to try the new product. Five years later, the company continues to recommend the valve to its customers. In fact, Mike McGinnis, president of Innovative Refrigeration, accepted delivery of the 15,000th unit rolling off the Danfoss production line, bringing to more than 500 the total number of ICF valves the company has installed.

For McGinnis, the biggest selling point with respect to the ICF valve is the absence of flange gaskets. "No flange gaskets means a significantly reduced risk of refrigerant leaks," said McGinnis. "That's especially important to us as an out-of-state contractor, because a service call that is the result of a gasket leak can cost us as much as \$1,000 to repair."

In addition to the reduced maintenance costs, the ICF valve contributes to a company's reputation. As McGinnis explained, "A leak can be devastating for a company with respect to its reputation with its customers. So, if we're reducing the number of leaks, we're improving, or at least solidifying, our reputation with our customers."

The jobsite-ready valve train is a compact, prefabricated solution that is ready for direct installation. It requires just two welds, saving as much as 80 percent installation time when compared to conventional valve trains that require up to 12 welds. Servicing time is reduced, too, because the design of the Danfoss ICF ensures a quick evacuation of the system and easy access to all of the valve modules. In addition, low internal volume ensures minimal refrigerant loss during maintenance.

"We are far less worried about the release of refrigerant when we service these units," said McGinnis, "and the time that we save means people are free to perform other tasks."



# 15,000

**ICF valves installed**

The 15,000 ICF Valve Stations installed and running right now have provided our customer a total time saving of more than 9300 working days.



McGinnis also appreciates the valve station's compact size. "The Danfoss ICF valve is less than a foot long, while a competitor's product is 30 inches long, which can mean three times the size and three times the refrigerant."

And according to McGinnis, the Danfoss ICF valve offers important flexibility. The single one-piece body provides ports for up to six function device modules that can be configured specifically to the customer's application and shipped to the jobsite as a complete subassembly.

"You can put together any valve range that you want," noted McGinnis. "That means you can put in modulating ball valves, EPRs, solenoids, check valves, strainers, sight glasses – everything you need to be customized on the ICF assembly. And the configuration can be changed. You can add, move or replace a module, which further enhances the flexibility of the valve station."

In addition, the valve is designed for low- and high-pressure refrigerants and can be used in liquid lines, compressor injection lines and hot gas lines. "As a contractor that builds both carbon dioxide and ammonia plants, we have been able to reduce our

parts inventory, because we can use the same ICF valve in both plants," added McGinnis.

Generous-sized strainers and replaceable internal components also appeal to McGinnis. "Larger strainers make possible less pressure drop while reducing maintenance and ensuring longer intervals between service," explained McGinnis. "And because the internal components are replaceable, we can service the station without cutting out and replacing the entire valve, which represents a significant savings of time and costs."

Zinc chromate corrosion protection and the absence of wear surfaces helps ensure the Danfoss ICF valve station lasts the lifetime of the system and contributes to the reliability of the product. "Knowing that we received and installed the 15,000th unit last year and have installed hundreds more since then speaks to the reliability of the ICF valve," McGinnis concluded. "There's no doubt in our mind at Innovative Refrigeration that this is the way to go, and as a result, we've been steering all of our customers to the Danfoss product. We believe it truly is the way of the future."



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Mike McGinnis, president,  
Innovative Refrigeration



## About the ICF

- Two welds instead of 12
- One piece steel body with 6 function modules
- Leak potential reduced by 40% due to less gaskets
- Zinc chromate corrosion protection standard inside and outside
- Stainless steel trim standard
- No need to disassemble before welding
- MWP up to 750 psi
- Media temperature range of -76/+248°F

[www.danfoss.us/Industrial\\_Refrigeration](http://www.danfoss.us/Industrial_Refrigeration)

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