

# DuPont™ ISCEON® MO29

## CASE STUDY: STELLAR GROUP

**Stellar Group has success retrofitting 30-ton air conditioning unit with DuPont™ ISCEON® MO29.**



**The Stellar Group was looking for an answer to the increasing requests from their customers for an R-22 replacement that was better for the environment, without having to replace their equipment. ISCEON® MO29 provided them a more environmentally sustainable and cost-effective solution.**

### Background

Stellar Group, Jacksonville, Florida, had been looking for a replacement for R-22 as they planned for the phase-out of HCFCs under the U.S. Clean Air Act. Joe Stump, Southeast Regional Director for Stellar Group, further explained, "We were responding to our customers who want a compatible replacement for R-22 that does not require replacing the entire unit."

Rodney Thompson, senior HVAC contractor with Stellar Group, had a customer operating a major manufacturing facility in Apopka, Florida. The customer was environmentally conscious and specifically asked for a non-ozone-depleting refrigerant to replace R-22 in a Trane 30-ton air conditioning unit with two Trane 30 scroll compressors. Stump and Thompson did not have an alternative in mind, so they contacted Mike Howell, a commercial refrigeration sales representative at Baker Distributing Company, for a suitable alternative and focused in on ISCEON® MO29.

"Baker and Stellar have a great relationship and Mike is my number one go-to guy for refrigerant questions. During early discussions about the retrofit, I contacted Mike and we researched options together. After careful consideration, we ultimately chose ISCEON® MO29 for the retrofit," Stump stated.

What intrigued Stump the most about ISCEON® MO29 as a replacement for R-22 was that the retrofit did not require you to change the oil or any components. "What we set out to do," explains Stump, "was to satisfy our customer's need for an environmentally preferred and cost-effective solution without having to replace the entire unit."

ISCEON® MO29 is an easy-to-use, non-ozone-depleting HFC refrigerant for replacing R-22 in medium- and low-temperature direct expansion (DX) refrigeration applications, including commercial supermarket systems.

# DuPont Refrigerants



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## Situation

The Trane condensing unit had to be replaced on the 30-ton air conditioning unit with two Trane 3D Scroll compressors. The existing evaporator was manufactured for R-22. "Our largest concern was that we did not have a lot of knowledge about the ISCEON® MO29 refrigerant," explains Stump. "We wanted to learn more about it since more of our customers are looking to move away from R-22."

Thompson further states, "Not having to change the thermal expansion valves (TEV) was intriguing to us. This appeared to be by far the best option versus retrofitting to R-407C where we knew we had to change the TEVs or the non-option of staying with R-22."

## Retrofit

Stellar contacted DuPont for assistance. DuPont Technical Services Representative Carlos Saldana was on site to assist in the 30-ton unit conversion. Thompson, Senior Technician for Stellar applauded his efforts. "Carlos worked diligently to resolve all of my questions, did the proper research and was sure I got the information I needed."

Thompson describes the retrofit experience in this way: "Oil returned fine and the system went to temperature—no issues. It seemed to be an easier change-out than what I had done in the past, mostly retrofitting to R-407C. There were no surprises—actually, everything went great! Overall our experience was good."

Thompson did change the mineral oil to POE at the recommendation of DuPont Technical personnel, due to concerns of oil return to the scroll compressor.

## Benefits gained

Stump offers, "The biggest benefit was that we were able to give our customer what they wanted. Oil returned fine, the system went to temperature—no issues. We are happy with the results so far."

## Conclusion

Thompson concludes, "I am recommending ISCEON® MO29 to my customers who are looking for a drop-in replacement for R-22. As far as I can see, it is a great recommendation for replacing R-22 in existing equipment. Customers don't want to replace the entire system, especially in five-year-old equipment. They'd prefer to replace pieces of the system versus the entire system. ISCEON® MO29 allows you to do that!"

DuPont ISCEON® MO29 is the closest match to R-22 capacity and efficiency in most systems with significantly lower discharge temperature versus R-22. This is likely to prolong the life of the compressor.

ISCEON® refrigerants require an engineering assessment before retrofitting from the existing refrigerant.

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