

Case Study | Optyma™ Plus INVERTER Condensing Units

# Petrol stations **save energy and money** with a **quality refrigeration system**

**100%**

Uptime since  
installation



**A leading petrol station network in Ireland installed Optyma™ Plus INVERTER condensing units at two new sites in 2017.** Since then, the space-saving solutions have run without any problems, delivering just the right amount of cooling while also saving significant amounts of energy and qualifying for the SEAI's Accelerated Capital Allowance scheme.

Refrigeration systems in petrol forecourts convenience stores can typically consume 40% of the energy, and system failure can be very costly, as chilled goods perish quickly at higher temperatures. In addition, not being able to offer food and drink damages the image of any convenience store. When one of Ireland's biggest petrol station networks started looking at new store refrigeration systems, reliability and energy efficiency were therefore the two most important considerations. The technical manager of the petrol station company was very clear about what he needed: high serviceability at a reasonable price, high energy efficiency, and absolute reliability.

### **Optyma™ Plus INVERTER condensing unit: the perfect choice**

To reach these targets, the petrol station company chose Danfoss Optyma™ Plus INVERTER refrigeration solutions for two sites, acting on the recommendation of installation

company Streamline Enterprises which handles the service and maintenance of refrigeration systems in the petrol station network.

Streamline director Johnny Lowry describes the relatively small inverter solution as the perfect choice for convenience stores where using a larger system would be inefficient. Put simply, you do not need supermarket-scale cooling power in a convenience store that only has a handful of refrigeration cabinets.

The compact footprint also makes the Optyma™ Plus INVERTER ideal for stores where space is limited, and it was important to the customer to have a solution that did not take up a whole service yard.

### **ACA-compliant energy efficiency**

The condensing unit is designed for energy efficiency.

“They’re cost-effective and easier to install. It’s just a good product!”, concludes Johnny Lowry.

Its variable speed technology provides a 3.5:1 turndown ratio, meaning that cooling capacity is continuously adapted to demand, and temperatures are maintained correctly at all times without wasting energy. All chilled systems in the store (See details in the fact box) rely on just one inverter unit, greatly reducing energy consumption while also simplifying service work.

The result: It is estimated that the new Danfoss units will consume roughly 20% less energy than the previous refrigeration solutions used at other sites. Data from similar installations back this up, and then some: At a comparable in-store installation elsewhere in Ireland, the Optyma™ **Plus INVERTER** delivered energy savings of 29% over the previous refrigeration solution!

The proven energy efficiency of the Optyma™ series has been recognised by the Sustainable Energy Authority of Ireland (SEAI) which has approved the Optyma™ series for its Accelerated Capital Allowance (ACA) scheme. Participating companies can write down the cost of approved equipment in the year of purchase. This was also important to the petrol station company when choosing Danfoss.

Johnny Lowry mentions one additional financial advantage in purchasing an Optyma™ **Plus INVERTER** solution. “The capital spend is reduced because you’re reducing the number of units and the amount of engineering running pipes to each individual unit”, he says. “The cost of an inverter unit is slightly higher than a standard unit, but as you now have only one unit instead of, for example, three, you’re reducing the purchase cost anyway.”

### Problem-free operation from the get-go

For the petrol station company, reliability was a key consideration, and in this respect, too, the Danfoss solution has delivered. Since being installed and commissioned in April and August 2017, respectively, the new systems have run without any problems at all.

The result: 100% uptime, no unforeseen service costs, and no loss of perishable goods due to refrigeration system failure.

All of this, of course, improves the bottom line and helps the petrol station company provide optimum customer service. Indeed, the Danfoss solution makes it easy to achieve constant uptime and low energy costs.

### Customer to install more Optyma™ solutions

Results from the two sites are so encouraging that the petrol station company is installing more Optyma™ condensing units elsewhere in Ireland. The customer is confident of getting a reliable, energy-efficient solution, and being able to rely on the full support of a quality name brand that is available in the Irish market.

“I would definitely recommend the Optyma™ **Plus INVERTER** condensing units”, concludes Johnny Lowry. “For today’s market and the way convenience stores have developed, they’re just a much better solution for installation. They’re cost-effective and easier to install. It’s just a good product!”



### Components installed

Danfoss Optyma™ **Plus INVERTER** condensing unit

The condensing unit drives two Pastorfrigor display cabinets and one chilled cold room.

Find out more information on the Optyma™ **Plus INVERTER** condensing unit on our website: [optymaplusinverter.danfoss.co.uk](http://optymaplusinverter.danfoss.co.uk)

### More information

For more information on the Danfoss Optyma™ **Plus INVERTER** series, please contact Irish distributor RSL:

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RSL assisted Streamline Enterprises in sizing the new Danfoss refrigeration equipment for the installations.

