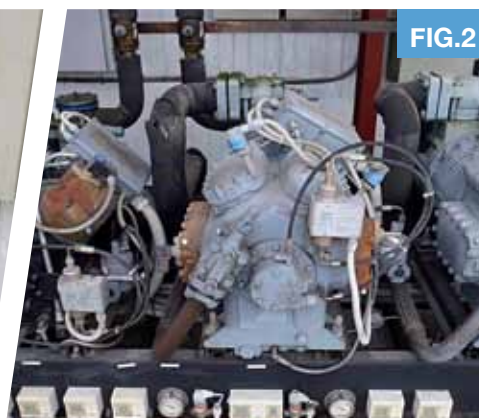


# Ballon Meats save 40% on Oil Costs

BALLON MEATS – CO. CARLOW



#### Financial Benefits:

Cost Savings: 40% Reduction in oil costs  
Investment: €47,599  
Payback: 36 Months

#### Environmental Benefits:

CO<sub>2</sub> Reduced: 92% fuel efficiency

**Figure.1** Image of hot water temperature gauge coming from heat exchange.

**Figure.2** Refrigeration pack with heat exchange taking heat from compressor and heating boiler feed water.

## Description of Business

Ballon meats, a family run business, has been producing Irish meats of the highest quality for over 35 years from their Co.Carlow factory. Situated beside the family farm in Ballon the small factory that started 35 years ago has developed into a world-class plant, processing cattle, sheep and pigs.

## Project Description

While product quality has always been a key focus at Ballon, in recent years they have started looking at improving the efficiencies of water and energy use. Due to the nature of the business, refrigeration is the major part of their electricity load and hot water the major part of their thermal load. Consequently Ballon decided to look at harnessing some of the heat given off by the refrigeration compressors to heat the water used around the site.

There are 12 chills on site and one large blast freezer and this air-cooled refrigeration system consists of 3 different packs. Hot water, which is used in the process, hand washing and for cleaning is supplied by an oil boiler. Ballon, in conjunction with Murcon Refrigeration, investigated the different options available and decided on installing a compressor desuperheater. This tubular heat exchanger was installed as part of a major refrigeration upgrade and now pre-heats the boiler feed water from approx 13°C to 45°C.

## The Result

It is estimated that oil costs for hot water heating have been reduced by approx 35% to 40% and in addition electricity costs are lowered as the refrigeration system doesn't have to work as hard, though this has not been quantified.

Since then Ballon Meats have continued their resource efficiency improvements and recently upgraded their pipe lagging to Armaflex 25mm. This was installed on all pipes throughout the site, both hot and cold, to conserve energy and reduce potential issues during cold weather freezing. While not quantified, the savings from this on hot water costs has been estimated at between 5-10% of the total heating oil bills.

