

# Careers in transport refrigeration engineering

**Experience and innovation**  
in temperature control





## Who are MWL?

Michael Ward Limited (MWL) is a leading independent provider of temperature control maintenance solutions for commercial vehicles and a sales and service dealer for FRIGOBLOCK, a manufacturer of electric transport refrigeration systems.

Based in Bolton just off the M61, where we have a large purpose-built depot, we also have a regional depot near Wolverhampton and employ around 80 people nationwide, providing service and support to a wide range of customers operating refrigerated equipment.

### What is FRIGOBLOCK?

FRIGOBLOCK is owned by Trane Technologies Inc a world leader in temperature control systems.

It manufactures engineless transport refrigeration systems for heavy trucks and trailers. The system works by generating electrical power from the vehicle engine by connecting an alternator via a belt. It avoids using a separate diesel engine and the associated harmful CO2 and noxious fumes resulting from burning additional fossil fuels. They are very efficient systems and can also be powered by rechargeable battery packs, including the battery pack of a fully electric lorry.



# Transport Refrigeration

## What is transport refrigeration?

Perishable goods such as food, pharmaceuticals, flowers and medical products transported in vans, lorries and trailers, are required to be kept at a certain temperature to prevent them from deteriorating and losing value.

The equipment installed to these vehicles to control the temperature are called transport refrigeration systems. Their function is to remove unwanted heat from the storage area to maintain a set temperature. For some frozen products this could be as low as -25 degrees centigrade.

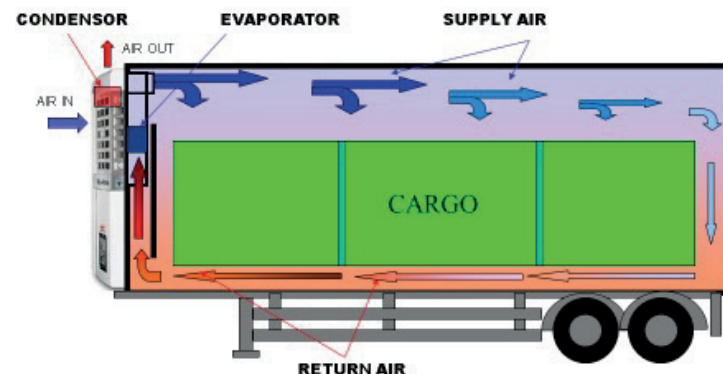
## The basic refrigeration principle

In a standard refrigeration system, the aim is to remove heat from the air in the space surrounding the stored product and then release the heat into the area outside of the storage space.

This is achieved by causing a liquid refrigerant to change state from a liquid to a gas within the storage space, and thereby absorbing heat from the air in the space during this process.

The absorbed heat is then carried within the gas to the outside of the storage space, there it is condensed back to a liquid and in the process gives up its heat to the atmosphere.

This cycle is repeated continuously to achieve the desired temperature within the storage space.



# The Role

## The role of a transport refrigeration engineer

In order to keep machinery working as efficiently as possible regular maintenance is very important and transport refrigerant systems are no exception.

The cargo carried in refrigerated vehicles is often very high value and it is very important to ensure the equipment is working correctly to protect the product on board.

A transport refrigeration engineer will install and commission systems on vehicles and trailers, provide regular servicing and respond to breakdowns and has a very important role in ensuring the country's supply chain keeps moving.

## Opportunities for students of land-based engineering

The use of refrigerated vehicles is growing as witnessed by the huge growth in home delivery by the major supermarkets and the delivery of COVID-19 vaccines during the pandemic. It is also going through a period of rapid changes in technology as the world moves towards NET ZERO and strives to reduce harmful CO2 emissions.

The transport refrigeration system of the past few years that may have been powered by a diesel engine is likely to be powered in the future by a battery pack that has the capability of being recharged from the electricity grid, solar panels or regenerated power from the vehicle's axles.

There has never been a better time for someone with good basic mechanical skills, and an inquisitive, enquiring mind to enter the industry.

MWL are at the forefront of developments with our relationship with FRIGOBLOCK which makes innovative systems that take power from the propulsion engine or battery pack to drive the refrigeration system.

Transport refrigeration engineers are in high demand and good, experienced engineers can earn £40-60k with overtime.

Many of the core disciplines on the land-based engineering courses are common to transport refrigeration. The ability to work on different types of equipment safely using the correct tools, often on a customer's premises under time pressure are characteristics that are needed to become a successful transport refrigeration engineer.

At MWL we employ engineers who have a background of agricultural engineering and it is also the background of the UK Regional Service Manager of FRIGOBLOCK, demonstrating that for the individual with drive and ambition there are further opportunities across the industry at management level.



# What we Offer

If we have whetted your appetite and you would like to know more, you can meet us at our Bolton depot for an informal chat and tour. You will meet some of the senior technical managers and engineers to hear first-hand what the job is all about. From there if you are interested, we can arrange a formal interview for the position of a trainee transport refrigeration engineer.

If successful, we can organise block release with Myerscough to give you work experience while you are completing your course.

Beyond that if you take up the offer you can start work with us after completing your course and enter our trainee scheme.

In the first year this involves basic refrigeration training with our training partner and on the job training in our workshop. You will then progress to more advanced training including the F Gas City & Guilds 2079 qualification, which will allow you to work with highly regulated ozone depleting refrigerants. After you have passed your F Gas you will then progress to FRIGOBLOCK factory approved courses to learn how to work on more complex equipment. By this stage you will be accompanying experienced mobile engineers to help with service and breakdowns on customer sites.

The next stage would then be the aim to work independently on equipment with limited assistance, but with the safety net of a technical support team. You would be equipped with a fully equipped van and would be asked to form part of the 24-hour call out rota.



# Carving a career at MWL

**Adrian Taylor**  
UK Area Service Manager

**FRIGOBLOCK**  
Trane Technologies  
[www.frigoblock.com](http://www.frigoblock.com)

I left school in 1979 with average exam results and no idea exactly what I wanted to do. Being brought up on a farm and interested with taking anything apart. I joined an Agricultural Engineering Company and completed a 4-year apprenticeship which involved block release to Evesham College.

In 1985 I was asked if I wanted to transfer to a New Depot they were opening. Always keen for a challenge I agreed. Within 3 years I became the Service Manager for the Depot and continued to grow the area. At this point I got interested in refrigeration as I started to learn and train other engineers to repair the Air Conditioning systems on the farm equipment. This proved very successful. I then set up the whole Dealer group up with their own trained engineers to repair and maintain Agricultural Air Conditioning.

In 1997 again I was asked to transfer to a larger Depot and look after the agricultural and Grasscare workshops with an additional smaller Depot. This was a different challenge as it was mainly office based. In the company at that time, I could not progress any further from a service perspective and only aged 36 I wanted a new challenge.

I left and joined a Transport Refrigeration Company at the bottom as an engineer and learned the job asking lots of questions. Over the coming years the company grew and once again I went into the office and trained new engineers, until in 2017 I was approached and asked if I wanted a role as UK Area Service Manager for FRIGOBLOCK.

Today the German FRIGOBLOCK all Electric Refrigeration Equipment is still the best performing unit on the market and the perfect choice for Electric Vehicles (EV) and multi drop deliveries to restaurants and fast-food chains.

With the Agricultural mind set and the hunger to learn anyone entering this sector should excel.

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