

Working towards a greener, more environmentally responsible future



## Refrigerants

Williams leads the way in developing the use of greener refrigerants, offering systems based on hydrocarbons and glycol.



Design Excellence : Cool Technology



# Hydrocarbons

Helping you reduce your carbon footprint

Ozone Depleting Potential (ODP): Zero  
Global Warming Potential (GWP): Low



### Why hydrocarbons?

#### Because they're better for the environment

Hydrocarbons (HC) are naturally occurring, highly efficient refrigerant gasses which have almost no negative impact on the environment.

#### Because they save energy

R290HC, the hydrocarbon used by Williams, is pure propane. Its thermodynamic properties are so superior that it reduces energy consumption by up to 15% compared to standard refrigerants.

#### Because they improve the working environment

Using hydrocarbons means both heat and noise outputs from the condenser are reduced, making a Williams HC cabinet very easy to live with.

### Are hydrocarbons dangerous?

Not in Williams equipment. The refrigerant charge in all Williams HC equipment is so small as to be below the 150g threshold – which means it can be placed in any size of room and will not affect your insurance.

All Williams Hydrocarbon equipment uses hermetically sealed refrigeration systems that are hydrogen lead-tested to a detection rate of 2g per year.

What's more, Williams Hydrocarbon cabinets are comprehensively tested and audited by a third party, ensuring full compliance with BS EN 378 (safety and environment protection).

### Developing a hydrocarbon range

All our hydrocarbon models have been extensively redesigned to optimise their performance with R290HC.

As part of this process, Williams liaised with component manufacturers, academics and industry advisers. All HC models undergo extensive testing and incorporate the latest technological innovations, resulting in substantial energy savings.



Refrigerant	GWP	ODP
R290 HC (Hydrocarbon)	3	0
R404A HFC (Hydrofluorocarbon)	3800	0
R134a HFC (Hydrofluorocarbon)	1300	0



# Glycol

the ultimate environmentally friendly refrigeration

Ozone Depleting Potential (ODP): Zero  
Global Warming Potential (GWP): Low

## SIMPLIFIED GLYCOL SETUP



### Why glycol?

#### Because it's totally safe, for you and the environment

Glycol is a totally safe, and food-safe, liquid – there are no health risks. It has no impact on the environment whatsoever. Glycol refrigeration is as green as it gets.

#### Because it's more effective

Glycol liquid retains its cooling properties throughout the cooling process, while the system uses 100% flooded coils, as opposed to 65% in traditional systems. Which means it works more efficiently, giving almost instant temperature pull down.

#### Because it saves energy

A glycol system gives better performance than a traditional refrigerant system. It also reduces energy consumption and helps reduce your carbon footprint.

#### Because it saves running costs

A glycol system will cost up to 25% less to run than other systems. Because it emits little or no heat into the kitchen, it cuts ventilation costs, too. And because it maintains temperature so well, it reduces food waste.

#### Because it's reliable

Glycol systems are renowned for their reliability.

#### Because it's quiet

Being a remote system, it reduces noise levels in the kitchen

### How does it work?

The glycol system links a number of independently controlled cabinets on a refrigeration system 'ring main'. The glycol is pumped round the system's pipes, cooling all the cabinets. The glycol chiller that powers the system is sited remotely – usually outside, for example on the roof or in the grounds. It can also be sited in a plant room.

A glycol system is suitable for all equipment running at 1°C and above. Williams has developed two glycol systems, both of which can run a huge range of products. The **100% Back Up** version has two chiller units, each capable of running the systems independently. Every 24 hours the system automatically switches between chiller A and chiller B. Should one unit fail the other takes over for as long as is required. The **Single Chiller System** is suitable for smaller sites or where space is at a premium.

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Guaranteed Chlorine Free