

**HULTSTEINS** 



**REFRIGERATION  
WITHOUT DIESEL**  
BOOST PROFIT-SLASH CO<sub>2</sub>

**ECOFRIDGE** POWERFUL. RELIABLE. SIMPLE.

# WELCOME TO ECOFRIDGE – HYDRAULIC POWERED REFRIGERATION

**Hultsteins is a Swedish and British hydraulic- powered refrigeration systems manufacturer.** The company has been designing and producing hydraulic and electric-drive transport refrigeration systems for over 60 years and as the environmental and economic effects of diesel consumption become more evident, systems such as Ecofridge are increasingly seen as a sustainable solution.

## What's fitted to the truck engine to run Ecofridge?

Ecofridge can be fitted to any truck with an engine drive PTO (power take off). Whether it be single, multi-temperature, or longitudinal lane operation, Ecofridge is the all-round sustainable solution for your refrigerated transport operations.

## HOW IT WORKS

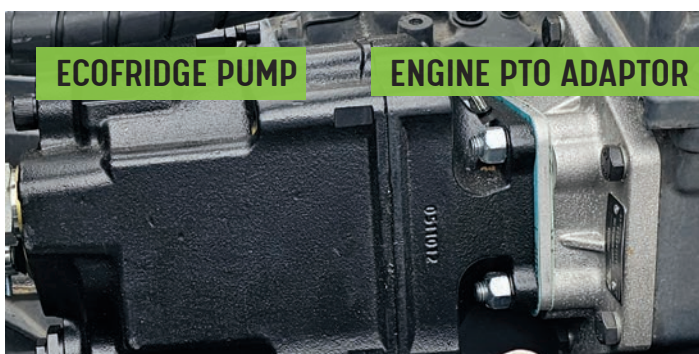


**Ecofridge is a hydraulic-drive truck-mounted refrigeration unit.**

**We use a standard engine-mounted power take off (PTO) to provide constant power when the truck engine is running.**

Using the euro 6 diesel engine or CNG/LNG gas engine to drive the PTO. This offers the most efficient method to run the fridge compressor, substantially reducing operating costs, emissions and noise. Hultsteins hydraulic pumps ensure we provide high cooling capacity even when the engine is at idle speed which is essential when undertaking urban multi-drop operations.

- 1** Engine PTO with hydraulic pump
- 2** Hydraulic motor to power fridge compressor



## WHAT'S FITTED TO THE TRUCK ENGINE TO RUN ECOFRIDGE?

The engine requires a permanent drive PTO (power take off) to power the Ecofridge hydraulic pump and compressor. All marques of truck offer this permanent engine drive PTO as an option, which is to be specified at point of vehicle order.

# BENEFITS OF RUNNING ECOFRIDGE

- ▶ **High cooling capacity** - even at idle.
- ▶ **70-80% fuel saving\*** - depending on operation.
- ▶ **70%-80% carbon reduction.\***
- ▶ **98% reduction in DPM** (diesel particulate matter).\*
- ▶ **2.5X<sup>+</sup> reduction in NOx.\***
- ▶ **Clean air** - As we use power from the truck engine, emissions are governed to a euro 6 minimum standard.
- ▶ **Maximum reliability** - All Hultsteins products are designed for simple yet reliable operation.
- ▶ **Low maintenance** - Ecofridge offers the lowest maintenance costs that do not increase with vehicle age.
- ▶ **Low noise** - Ideal for urban and night time deliveries.
- ▶ **Constant Temperature** - Hultsteins optional Intelli-start automatically starts and stops the truck engine to maintain temperature set point.\*\*
- ▶ **Universal compatibility** - Works with any truck fitted with an engine drive PTO (power take-off).
- ▶ **On-board heating** - Hultsteins optional heating control is generated by the truck engine and integrated within the cooling system - effectively providing warm air at no additional cost. This method of capturing heat from hot water in the truck to warm the load has been used for many years in Nordic countries.

\*In comparison to running a traditional diesel fridge. \*\*Intelli-start is subject to truck make and model.

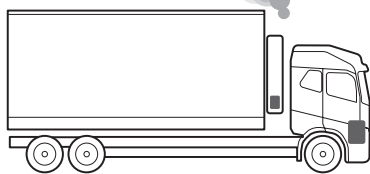
## INTELLI-START

Hultsteins Intelli-start is an integrated system that allows the vehicle's engine to stop and start automatically whilst the vehicle is locked, using a demand signal from the refrigeration unit.

Safety is paramount: when Intelli-start is activated, if any controls in the cab are tampered with, the engine shuts down. Intelli-start is subject to truck make and model.

**Diesel fridge units DO NOT have any particulate or filtration capture.  
All exhaust emissions go to atmosphere.**

**DPM & NOx**



**1 1 Diesel-Powered  
Fridge Unit**

**=**



**up to  
1,000 Euro 6  
cars**

**DIESEL FUMES ARE CLASSIFIED AS A GROUP 1 CARCINOGENIC, PROVEN TO CAUSE CANCER**  
World Health Organisation

# SLIMLINE 12

SINGLE AND MULTI-TEMP



- ▲ Lower CO<sub>2</sub>, NOx and DPM emissions\*
- ▲ Lower service costs
- ▲ Mounted between the box and cab
- ▲ Mains connection 400v
- ▲ Touchscreen LED display

## Options

- Intelli-start, subject to truck make and model
- High-capacity water heating
- Multi-temperature options

\*In comparison to running a traditional diesel fridge

# SLIMLINE 15

SINGLE AND MULTI-TEMP



- ▲ Lower CO<sub>2</sub>, NOx and DPM emissions\*
- ▲ Lower service costs
- ▲ Mounted between the box and cab
- ▲ Mains connection 400v
- ▲ Touchscreen LED display

## Options

- Intelli-start, subject to truck make and model
- High-capacity water heating
- Multi-temperature options

\*In comparison to running a traditional diesel fridge

# TOPLINE 13/16

SINGLE AND MULTI-TEMP



- ▲ Lower CO<sub>2</sub>, NOx and DPM emissions\*
- ▲ Lower service costs
- ▲ Mounted between the box and cab
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- ▲ Touchscreen LED display

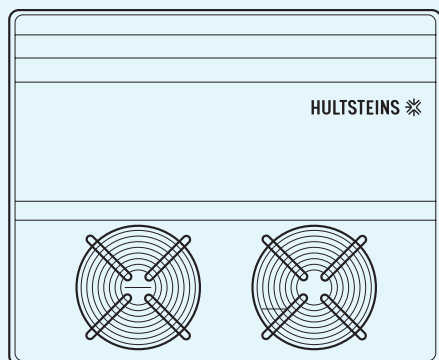
## Options

- Intelli-start, subject to truck make and model
- High-capacity water heating
- Multi-temperature options

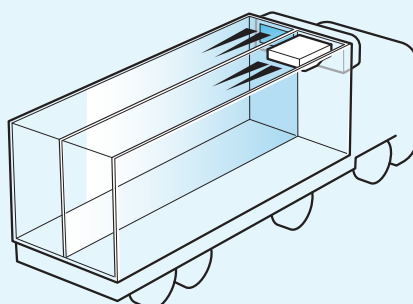
\*In comparison to running a traditional diesel fridge

# MULTILINE 7MTL/8MT

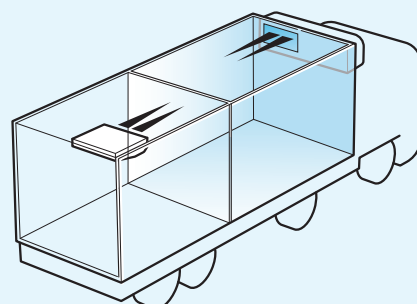
ACCESSORIES SINGLE AND MULTI-TEMP



**Hultsteins internal evaporators** are controlled from the cab using the same control panel as the main unit.



**Multiline 7MTL** is a slim unit - only 800 mm wide (one pallet width). It can be fitted in a refrigeration corridor both at the front and the rear.



**Multiline 8MT** is 1100 mm wide and can be mounted in several places. A suitable solution for a movable partition that divides the box crosswise.

## ELECTRIC FRIDGES TO SUIT BEV TRUCKS

All Hultsteins fridges can be specified to run on electric trucks using the truck's batteries as the power source. Optional battery packs can be added to run the fridge independently from the fridge batteries.



# ECOGEN – RUNNING YOUR EXISTING DIESEL FRIDGE ON ELECTRIC

Ecogen is a truck-driven hydraulic electric generator powered via the engine drive PTO which can make an otherwise, dirty diesel transport refrigeration unit (TRU) into a clean hybrid electric-powered refrigeration unit during transit.

Ecogen has transformed the potential for how we use diesel powered refrigeration units by running the TRU on electric, which is generated by drawing a small amount of power from the Euro 6 or gas engine, while on the road.



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