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## introduction of Hultsteins Ecogen 2

- Introduction
- What is Ecogen & how does it work
- What are the benefits using Ecogen
- Diagrams & photos

#### **Background & Brief intro**

**Hultsteins** introduced the first hydraulically powered cooling unit in 1962 and since that time have led the field in the design and production of cost-saving, clean-air transport refrigeration systems.

Over five decades the Swedish and British manufacturer has worked in tandem with the perishable goods transport industry to innovate, finesse and fine-tune their simple yet ingenious technology to provide an affordable and sustainable alternative to conventional diesel-powered refrigeration.

The Ecogen journey has its origins back in 2008 when it was invented by a small English company. The project was mothballed due to a very limited desire for operators to invest. Red diesel was cheap and there was no requirements to reduce carbon emissions.

Hultsteins saw the prototype product in 2018 and purchased the company in 2019.

Following a complete redesign after having the products running across the Nordics, Holland , Denmark ,UK & New Zealand . Ecogen 2 was launched in April 22 after extensive testing running 2 fridge at once in Sweden

The investment cost to date is around £1.8 million.

#### What is Ecogen Cost Saver

Ecogen is a parasitic device taking a small amount of power from the tractor engine .

This is done by means of an engine PTO from the tractor engine that drives a 30kva (27kwh) permanent magnet alternator. This generates 400V @50htz or 480 V @ 60htz of electricity. This supply of electric is fed into the on board electric motor via a high voltage suzie cable to the diesel fridge unit. This is a constant supply no matter what the RPM of truck engine operating at.

#### What does Ecogen save?

The Ecogen Costsaver is a sustainable solution that fits to all marques of diesel, CNG or LNG truck engines . it is retrofittable to some marques of truck \*. It allows operators to run their fridge units on electric when coupled to a tractor. This reduces diesel fridge carbon emissions by around 80 to 90%, slashing DPM by >98% and reducing > NOx 400%.

It will also reduce R&M on the diesel engine of the fridge and reduce fridge running costs allowing existing fridge trailer last longer .

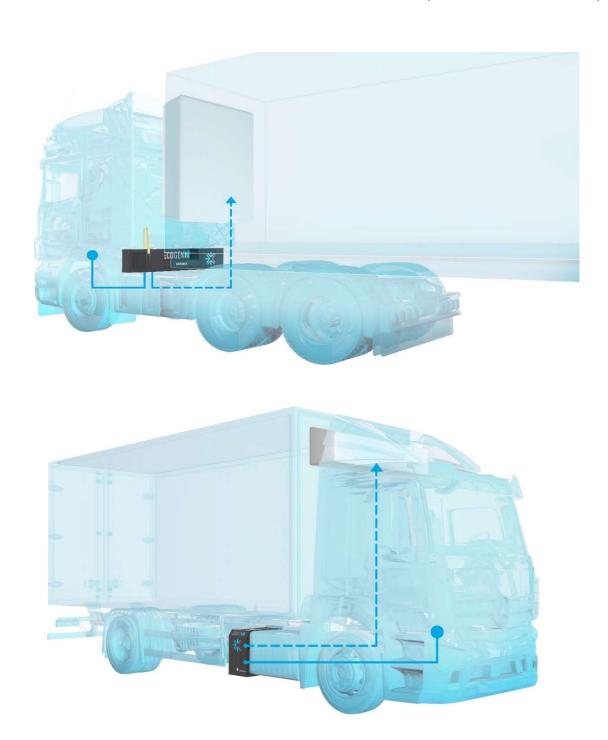
It will last around 10 to 12 years and be swapped from tractor to tractor

Very low maintenance costs and needs 1 service per year.



### **Ecogen fits to all marques of trucks**

\*Can be retrofitted to Scania , Volvo & Renault tractor units operation on the road today





## **Some of the Ecogen Operators**





# **HULTSTEINS** \*\*



