

## ECOLIN - Cold energy to go

Filling refrigerated vehicles with liquid nitrogen



### Advantages:

- Safe and handy filler coupling
- Single hose system
- Automatic filling
- Flow volume metering
- Quiet
- Low-maintenance

## Liquid nitrogen – environmentally friendly cooling

Almost 80% of the air we breathe consists of nitrogen. In liquefied form, it represents a cooling energy store, which is increasingly being used in modern refrigerated vehicles to maintain the cold chain during transport. With indirect cooling, liquid nitrogen from a storage tank on the truck is vaporised in a heat exchanger, thereby cooling the circulating air that passes the heat exchanger. This ensures a stable and cool atmosphere in the truck's load area.



### The advantages of vehicle cooling with nitrogen:

- Quiet – 40dB with an indirect cooling system
- Environmentally friendly
  - No pollutant or CO<sub>2</sub> emissions
  - Average reduction of 20 tonnes of CO<sub>2</sub> emissions per truck per year
- Efficient – Very rapid cooling rates thanks to permanent availability of nitrogen as coolant on truck.
- Low-maintenance – The system operates without compressors.
- Safe – With the indirect system, the cooling energy is transferred via heat exchangers, thus ensuring that no nitrogen gets into the load compartment.



The ECOLIN filling concept developed by Messer allows the user to fill up refrigerated vehicles with liquid nitrogen quickly and safely.

### Main features:

- Single hose system with quick release coupling
- Automatic monitoring of filling process
- Rapid filling (approx. 100 litres/min)
- Automatic pressure release after filling process
- Optional flow volume metering and connection to an ERP system



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