



# LUMIKKO

❄️ 45D Plus ❄️



CHILLED, FROZEN, HEATING  
TEMPERATURE CONTROL UNIT  
INSTALLED ON  
THE EXTERIOR OF THE BOX  
WITH ZERO INTRUSION  
INTO THE CARGO AREA.

# LUMIKKO 45D Plus

## Chilled and Heating Application with an Advanced New Design

The Finnish made Lumikko 45D is a refrigeration unit specifically designed for medium sized distribution and transportation. Its superior design is developed to withstand the severe Nordic climatic conditions whilst insuring load protection at all times.

Lumikko 45D is designed for trucks with high cabins and is suitable for installation on most trucks. Due to the external installation the whole load space can be utilized, as there is zero evaporator intrusion into the load space. Lumikko 45D is powered by a silent 3 cylinder diesel engine. It uses R-404A environmentally friendly refrigerant, which is the industry standard for transport refrigeration equipment.

## Lumikko 45D is suitable for multi temperature distribution

The Lumikko 45D offers multi temperature capability. Two compartment configuration with separate temperature settings for each compartment, frozen, chilled or heated as required. The unit is easy to use due to the in cabin control panel.



ISO 9001

Manufacturer:



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Contact:



### Standard Equipment

- battery
- extension cable to mains, 10m 3-phase
- fuel filter and pump incased
- control panel
- option for 2-temperature use
- block heater 500 W / 230 V

### Options

- container equipment
- block heater 230 W / 24V
- fuel heater 12 V
- rear part heating/cooling unit
- water heating from diesel motor
- Start/Stop automatic

### Refrigeration capacities: Outside temperature +30°C

| Inside volume the box °C | Capacity kW | Max m <sup>3</sup> |
|--------------------------|-------------|--------------------|
| +0                       | 5,75        | 91                 |
| -20                      | 3,94        | 62                 |

### Warranty

12 month warranty

### Technical Specification

#### Frame and Cover

Frame: hot galvanized steel  
Cover: UV protected, shock proof ABS plastic  
Anti vibration: compressor and diesel engine are mounted on a separate frame isolated from the main frame by rubber-steel isolators

#### Compressor

Compressor: Bock  
No. of cylinders: two ( 2 )  
Lubrication: pressure lubrication with oil pump

#### Electric Motor

Electric motor: 3-phase motor  
Power: 5,5 kW, 400V  
Transmission: V-belts  
By diesel operation the electric motor works as a generator producing 400 V electricity.

#### Diesel Engine

Diesel engine: 3-cyl.  
Power: 14 kW / 3600 r/min, SAE-J1349  
Transmission: V-belts  
Fuel: from truck's tank or separate tank

### Evaporator and Condenser

Fins: aluminum  
Tubes: copper  
Connections: threaded couplings, connected to the compressor by flexible tubes  
Heaters: Built in to the evaporator, changeable

### Refrigeration Mode

Diesel engine or mains driven, both automatically controlled by a thermostat.  
Refrigerant: R-404A

### Heating Mode

The heat is distributed throughout the box by efficient fans. During electric stand-by operation, only the built-in heaters are used. During diesel operation the electric motor works as a generator, producing electricity to the heaters and fans, 3,2 kW. Additionally available as an accessory water heating 4,5 kW when the diesel engine coolant is circulated in a separate heat exchanger in the evaporator.

### Defrost

Manually or automatically controlled by a pressure difference switch. During defrost the fans are at standstill making the defrost period short and efficient.

### Safety Devices

- low oil pressure cut-out/stop off engine
- high coolant temperature cut-out/stop off engine
- automatic fuse 12V / 400V
- compressor high pressure / low pressure cut-out
- overheat cut-out
- safety valve

### Operation Control

- unit is controlled by a thermostat, which automatically selects heating or cooling mode
- hour meter
- thermostat and display of box temperature in control panel
- preheat and start switch
- diesel or electric switch
- manual defrost switch
- defrost thermostat