



Transport Refrigeration

# Transport Refrigeration



# Daikin

Air is essential to our existence, and our role in protecting it continues to expand.

*"Aiming for sustainable growth and a sustainable society through technological strength and outstanding human resources"*  
- Masanori Togawa, President and CEO, Daikin Industries, Ltd.

Since 1924, we have devoted ourselves with unbridled passion to overcome the ever-evolving challenges of air to become the leading manufacturer of heating, ventilation, air conditioning and refrigeration equipment. Leveraging our innovative technology, we deliver outstanding products and system solutions to provide comfortable and sustainable environments for all people and goods in all regions of the world. This is, and always will be, the Daikin mission.

## Innovation means continuous improvement

We believe that there is always room for improvement, and this mindset is the driving force behind everything that we do at Daikin. From small advances in the production process, to major design breakthroughs that result in substantial energy savings, we aim to inspire technological change. With our regional development centres and global network of manufacturing and logistics facilities, we are serving the full breadth of HVACR needs of the world.

## Our Promise

For forward thinking consumers and businesses, Daikin is the all-inclusive partner, ensuring your peace of mind. For our professional customers, our brand promise is **Reliability – Sustainability – Efficiency.**



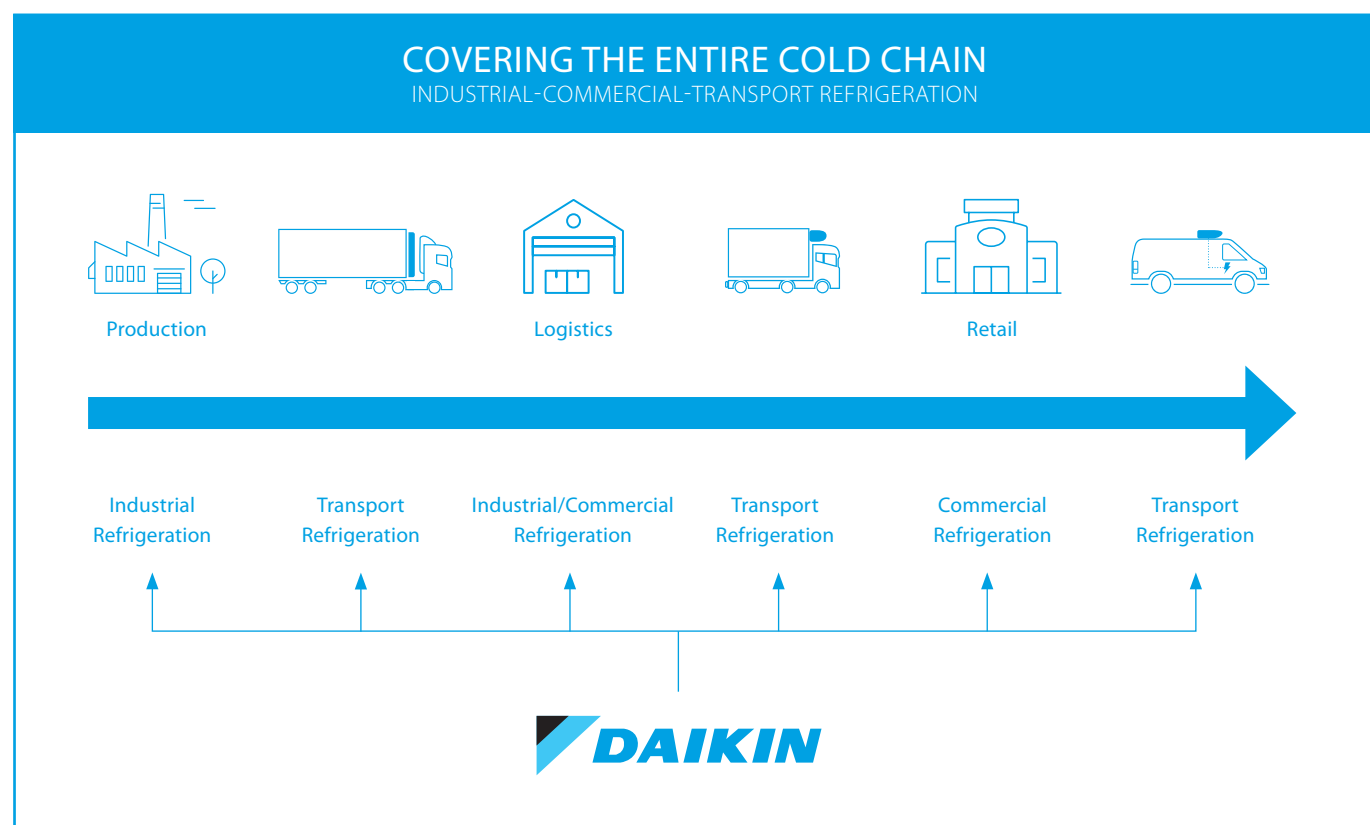


# Cold Chain Expertise

From production to delivery

## Reshaping the future of cold chain supply

Combining refrigeration expertise with innovative technology, Daikin's comprehensive product portfolio delivers integrated temperature control solutions that improve quality and safety through every link in the distribution process from point of origin to the final consumer. Our range of products and services provide the flexibility to meet diverse customer needs across a range of applications, during production, storage, retail and transit. Energy-efficient technologies with low-GWP refrigerants provide reliable and cost-effective operation, safeguarding perishable supplies, whatever the climate, while protecting the environment. We will leverage our strengths **to cover the entire cold chain.**



# Vision 2050

## Daikin Environmental Policy

Adopted in 2015, the Paris Agreement contains a target for the latter half of this century of reducing greenhouse gas emissions to net zero and limiting global warming by less than 2°C compared to pre-industrial levels. In the spirit of the Paris Agreement, Daikin has formulated Environmental Vision 2050, with a target of reducing greenhouse gas emissions to net zero by 2050. We have established a reduction target for 2030 and incorporated this into our efforts under the Fusion 25 Strategic Management Plan.

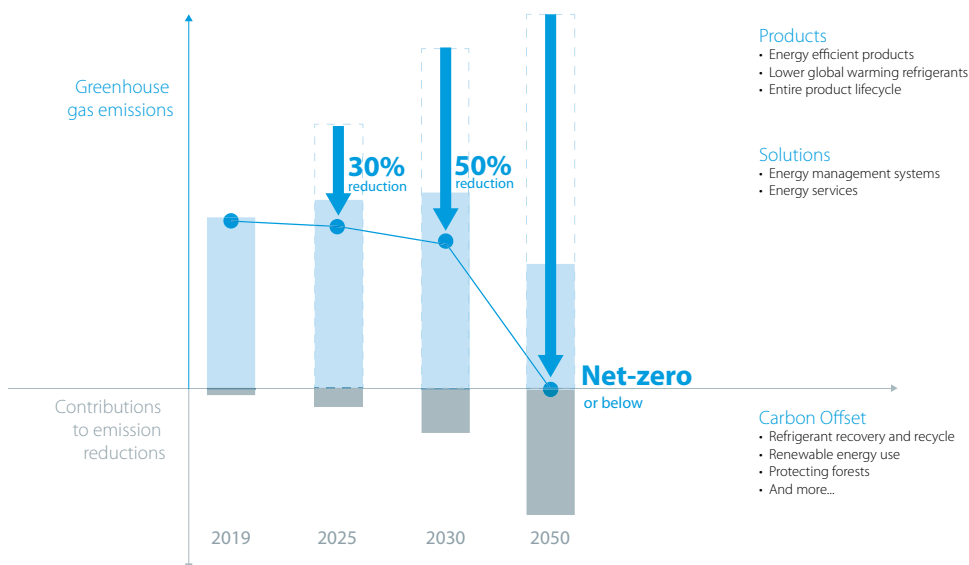
## Our Vision 2050

We will effectively eliminate the greenhouse gas emissions generated throughout the entire lifecycle of our products by 2050. Furthermore, we are committed to creating solutions that link society and customers as we work with stakeholders to reduce greenhouse gas emissions to net-zero. Using IoT and open innovation, we will meet the world's needs for air solutions by providing safe and healthy air environments while at the same time contributing to solving global environmental problems.




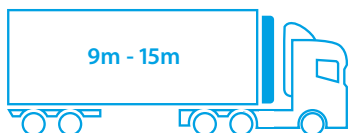













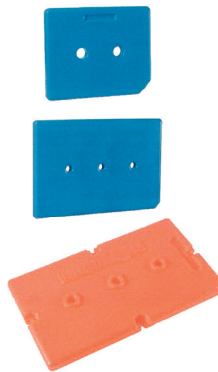
## Refrigeration Medium-Term Outlook

In our Cold Chain business, we are moving towards low-GWP and HFC-free natural refrigerants, while ensuring the correct safety standards are established in our markets. We maintain continuous focus on reducing the energy consumption of all our products. In the Transport Refrigeration industry, we will strive to lead the shift towards electrification and phasing-down of the reliance on combustion engine technologies.

## Net-zero product lifecycle





| LIGHT TRUCK  | TRUCK  |  | TRAILER  |
|--|--|--|--|
| SFZ  | Uno  | Uno Undermount   | Exigo  |
|   |   |    |                               |
| <br>   | <br>  | <br>  |                              |
| SFZ238<br>SFZ248   | U600<br>U800<br>U1000  | UN120  | E1500  |
| <br> | <br> | <br> | <b>EUTECTIC INSERTS</b><br> |
| SFZ238 Multi<br>SFZ248 Multi   | U800 Multi<br>U1000 Multi  | UN120 Multi  | Inpac Small<br>Inpac Medium<br>Inpac Large (Colour)  |







# Light Truck







## SFZ

### SFZ238 | SFZ248

SFZ is a robust direct-drive solution for refrigerated transport on light to medium trucks. It is a proven design optimized for energy-efficiency, low noise, and easy-to-service transport of temperature-controlled goods in medium sized boxes.

SFZ238 and SFZ248 are designed as nose-mount, installed on the front wall of the box, with multiple configurations of evaporators and fans to meet the requirements of a wide range of vehicle types and applications. A driver-friendly interface in the cabin allows real-time monitoring and control of unit performance to ensure goods are maintained at precisely the right temperature throughout the trip.

#### Key Features:

- ✓ Proven reliability and performance
- ✓ Powered by direct-drive on road, electric grid on stand-by
- ✓ Easy to install and service, light weight
- ✓ Low noise
- ✓ Configurable for a wide range of refrigerated applications in light to medium trucks
- ✓ User-friendly cabin driver interface
- ✓ Telematics-compatible
- ✓ 2-year standard warranty







|   | SFZ238 |       | SFZ248 |      |       |
|---|--------|-------|--------|------|-------|
|   |        |       |        |      |       |
| General   |        |       |        |      |       |
| Refrigerant   | [-]    | R452A |        |      |       |
|   |        |       |        |      |       |
| System net cooling capacity under ATP conditions (30°C ambient temperature) |        |       |        |      |       |
|   | [°C]   | 0°C   | -20°C  | 0°C  | -20°C |
| Road mode   | [W]    | 4700  | 2470   | 5100 | 2570  |
| Stand-by mode   | [W]    | 3830  | 2010   | 4405 | 2005  |
|   |        |       |        |      |       |
| Heating capacity  |        |       |        |      |       |
| Road mode   | [W]    | 3990  |        | 4540 |       |
| Stand-by mode   | [W]    | 3310  |        | 2800 |       |
|   |        |       |        |      |       |
| Airflow rate  |        |       |        |      |       |
| Airflow rate at 100kPa static pressure                                      | [m³/h] | 1670  |        | 3340 |       |
|   |        |       |        |      |       |
| Weight  |        |       |        |      |       |
| Condenser without electric stand-by   | [kg]   | 70    |        | 77   |       |
| Condenser with electric stand-by  | [kg]   | 128   |        | 143  |       |
| Evaporator  | [kg]   | 26,5  |        | 42,5 |       |
|   |        |       |        |      |       |
| Road compressor   |        |       |        |      |       |
| Displacement  | [cc]   | 163   |        | 215  |       |

These products contain fluorinated greenhouse gases (R452A GWP=2140,5).

Stand-by voltages available: 230/1/50 or 400/3/50

Vehicle voltages available: 12VDC or 24VDC

## SFZ Multi-Temp

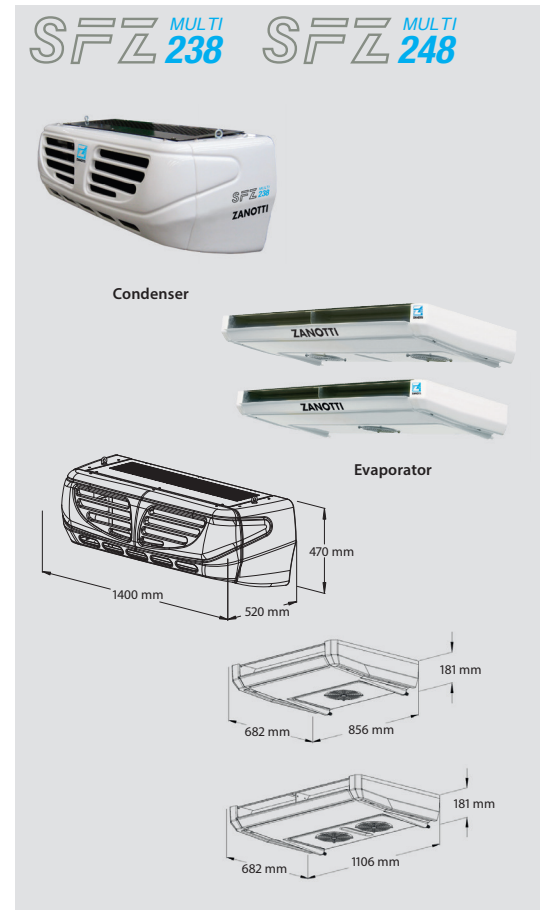
## SFZ238 Multi | SFZ248 Multi

Our SFZ Multi-Temp range is designed to meet the modern needs of refrigeration for light to medium trucks. These units feature additional evaporators to enable transport of products with different temperature requirements in separate zones, available in multiple configurations to adapt to a wide range of applications. It is a proven design optimized for energy-efficiency, low noise, and easy-to-service transport of temperature-controlled goods in medium-sized boxes.

SFZ238 Multi and SFZ248 Multi are designed as nose-mount, installed on the front wall of the box. A driver-friendly interface in the cabin allows real-time monitoring and control of unit performance to ensure goods are maintained at precisely the right temperature throughout the trip.

## Key Features:

- ✓ Multiple temperature zones in the same vehicle
- ✓ Proven reliability and performance
- ✓ Powered by direct-drive on road, electric grid on stand-by
- ✓ Easy to install and service, lightweight
- ✓ Low noise
- ✓ Configurable for a wide range of refrigerated applications in light to medium trucks
- ✓ User-friendly cabin driver interface
- ✓ Telematics-compatible
- ✓ 2-year standard warranty



|   |        | SFZ238 Multi |       | SFZ248 Multi |       |
|---|--------|--------------|-------|--------------|-------|
|   |        |              |       |              |       |
| General   |        |              |       |              |       |
| Refrigerant   |        | [-]          | R452A |              |       |
|   |        |              |       |              |       |
| System net cooling capacity under ATP conditions (30°C ambient temperature) |        |              |       |              |       |
|   | [°C]   | 0°C          | -20°C | 0°C          | -20°C |
| Road mode   | [W]    | 4240         | 2135  | 5080         | 2560  |
| Stand-by mode   | [W]    | 3570         | 1635  | 4130         | 2020  |
|   |        |              |       |              |       |
| Heating capacity  |        |              |       |              |       |
| Road mode   | [W]    | 3850         |       | 4430         |       |
| Stand-by mode   | [W]    | 3230         |       | 3610         |       |
|   |        |              |       |              |       |
| Airflow rate  |        |              |       |              |       |
| Airflow rate at 100kPa static pressure                                      | [m³/h] | 2x 835       |       | 2x 1670      |       |
|   |        |              |       |              |       |
| Weight  |        |              |       |              |       |
| Condenser without electric stand-by   | [kg]   | 70           |       | 77           |       |
| Condenser with electric stand-by  | [kg]   | 128          |       | 143          |       |
| Evaporator  | [kg]   | 2x           |       | 2x           |       |
|   |        |              |       |              |       |
| Road compressor   |        |              |       |              |       |
| Displacement  | [cc]   | 163          |       | 215          |       |

These products contain fluorinated greenhouse gases (R452A GWP=2140,5).

Stand-by voltages available: 230/1/50 or 400/3/50

Vehicle voltages available: 12VDC or 24VDC

Provisional engineering data



# Truck





## Uno

### U600 | U800 | U1000

The redesigned Uno range of units are independently powered with a diesel engine, and available in various capacities to efficiently transport temperature-controlled products in medium to heavy trucks. The Uno features Zanolli's innovative direct coupling design between the engine and the compressor, and utilize Daikin's expertise in design for reliability and performance. Their high cooling performance, energy efficiency and extended maintenance intervals minimise the total cost of ownership, while meeting the most stringent emission, material waste, and noise pollution regulations.

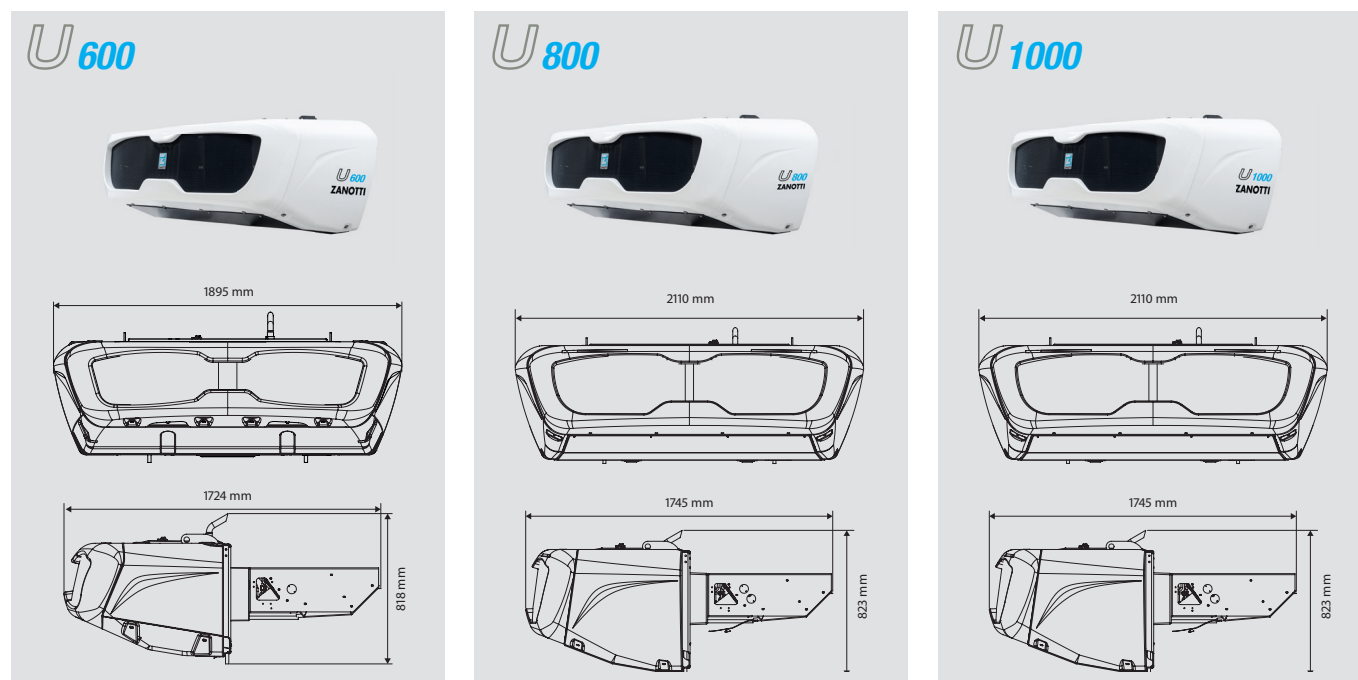
U600, U800, and U1000 are designed as nose-mount, installed on the front wall of the box. The electronics enabled advanced diagnostics and two-way telematics including remote monitoring and control. A robust interface in the cabin can be installed in the vehicle DIN slot or mounted on the dash, allowing real-time monitoring and control of unit performance to ensure goods are maintained at precisely the right temperature throughout the trip.

#### Key Features:

- ✓ Designed for high reliability with a custom Yanmar engine
- ✓ Innovative powertrain design enabling high performance and energy efficiency
- ✓ Reduced fuel consumption and noise
- ✓ Extended maintenance intervals
- ✓ All-new electronics compatible with two-way telematics
- ✓ 2-year standard warranty







|   |        | U600            |       | U800 |       | U1000 |       |
|---|--------|-----------------|-------|------|-------|-------|-------|
| General   |        |                 |       |      |       |       |       |
| Refrigerant   | [-]    | R452A           |       |      |       |       |       |
| Defrost   | [-]    | Hot gas defrost |       |      |       |       |       |
| System net cooling capacity under ATP conditions (30°C ambient temperature) |        |                 |       |      |       |       |       |
|   | [°C]   | 0°C             | -20°C | 0°C  | -20°C | 0°C   | -20°C |
| Road mode   | [W]    | 6200            | 3200  | 8600 | 4700  | 10000 | 5700  |
| Stand-by mode   | [W]    | 3700            | 1700  | 6500 | 3500  | 8300  | 4500  |
| Heating capacity  |        |                 |       |      |       |       |       |
| Road mode   | [W]    | 5400            |       | 7500 |       | 8700  |       |
| Stand-by mode   | [W]    | 3200            |       | 5700 |       | 7200  |       |
| Airflow rate  |        |                 |       |      |       |       |       |
| Airflow rate at 100kPa static pressure                                      | [m³/h] | 1500            |       | 2200 |       | 2500  |       |
| Weight  |        |                 |       |      |       |       |       |
| Monoblock road and stand-by   | [kg]   | 485             |       | 500  |       | 549   |       |
| Monoblock road-only   | [kg]   | 435             |       | 455  |       | 504   |       |
|   |        |                 |       |      |       |       |       |
| Diesel engine   |        |                 |       |      |       |       |       |
| Displacement  | [cc]   | 854             |       | 1116 |       | 1116  |       |
| Rated power output  | [kW]   | 11,5            |       | 15,1 |       | 15,1  |       |
| Maintenance interval  | [hrs]  | 2000            |       | 2000 |       | 2000  |       |
| Road compressor   |        |                 |       |      |       |       |       |
| Displacement  | [cc]   | 235             |       | 325  |       | 390   |       |
| Stand-by compressor   |        |                 |       |      |       |       |       |
| Displacement  | [m³/h] | 11,3            |       | 14,4 |       | 21,4  |       |

These products contain fluorinated greenhouse gases (R452A GWP=2140,5).  
 Stand-by voltages available: 400/3/50





## Uno

### U800 Multi | U1000 Multi

The redesigned Uno range of units are independently powered with a diesel engine, and available in various capacities to efficiently transport temperature-controlled products in medium to heavy trucks. The Uno features Zanotti's innovative direct coupling design between the engine and the compressor, and utilise Daikin's expertise in design for reliability and performance. Their high cooling performance, energy efficiency and extended maintenance intervals minimise the total cost of ownership, while meeting the most stringent emission, material waste, and noise pollution regulations.

U800 Multi and U1000 Multi are designed as nose-mount, installed on the front wall of the box, with multiple configurations of evaporators and fans to meet the requirements of a wide range of vehicle types and applications. The electronics enabled advanced diagnostics and two-way telematics including remote monitoring and control. A robust interface in the vehicle DIN slot or mounted on the dash, allowing real-time monitoring and control of unit performance to ensure goods are maintained at precisely the right temperature throughout the trip.

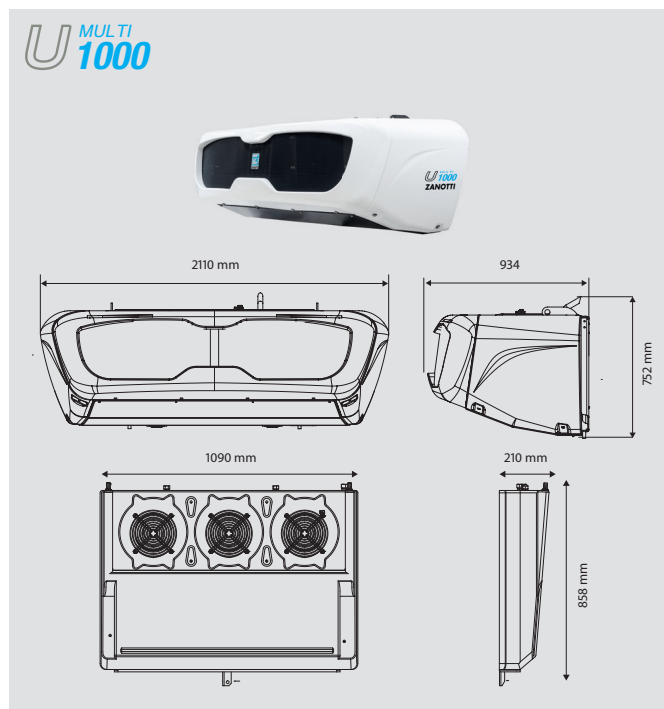
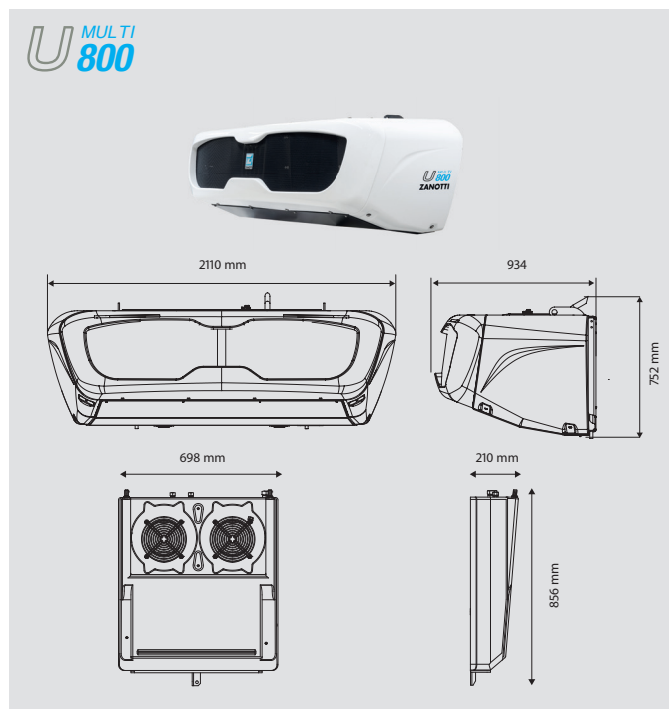
#### Key Features:

- ✓ Multiple temperature zones in the same vehicle
- ✓ Designed for high reliability with a custom Yanmar engine
- ✓ Innovative powertrain design enabling high performance and energy efficiency
- ✓ Reduced fuel consumption and noise
- ✓ Extended maintenance intervals
- ✓ All-new electronics compatible with two-way telematics
- ✓ 2-year standard warranty, extendable up to 5 years



The all-new Uno cabin controller is modern technology in a robust build.

## U800 Multi | U1000 Multi



|   |        | U800 Multi      | U1000 Multi |      |       |
|---|--------|-----------------|-------------|------|-------|
| General   |        |                 |             |      |       |
| Refrigerant   | [-]    | R452A           |             |      |       |
| Defrost   | [-]    | Hot gas defrost |             |      |       |
| System net cooling capacity under ATP conditions (30°C ambient temperature) |        |                 |             |      |       |
|   | [°C]   | 0°C             | -20°C       | 0°C  | -20°C |
| Road mode   | [W]    | 7970            | 4140        | 9800 | 5400  |
| Stand-by mode   | [W]    | 6050            | 3075        | 8700 | 4500  |
| Heating capacity  |        |                 |             |      |       |
| Road mode   | [W]    | 7300            | 8500        |      |       |
| Stand-by mode   | [W]    | 4900            | 7600        |      |       |
| Airflow rate  |        |                 |             |      |       |
| Airflow rate at 100kPa static pressure                                      | [m³/h] | 2x 1680         | 2x 2520     |      |       |
| Weight  |        |                 |             |      |       |
| Split road and stand-by   | [kg]   | 500             | 505         |      |       |
| Monoblock road-only   | [kg]   | 460             | 465         |      |       |
| Evaporator  | [kg]   | 35 x 2          | 40 x 2      |      |       |
| Diesel engine   |        |                 |             |      |       |
| Displacement  | [cc]   | 1116            | 1116        |      |       |
| Rated power output  | [kW]   | 13,2            | 13,2        |      |       |
| Maintenance interval  | [hrs]  | 2000            | 2000        |      |       |
| Road compressor   |        |                 |             |      |       |
| Displacement  | [cc]   | 325             | 390         |      |       |
| Stand-by compressor   |        |                 |             |      |       |
| Displacement  | [m³/h] | 14,4            | 21,4        |      |       |

These products contain fluorinated greenhouse gases (R452A GWP=2140,5).  
Stand-by voltages available: 400/3/50

Uno Undermount

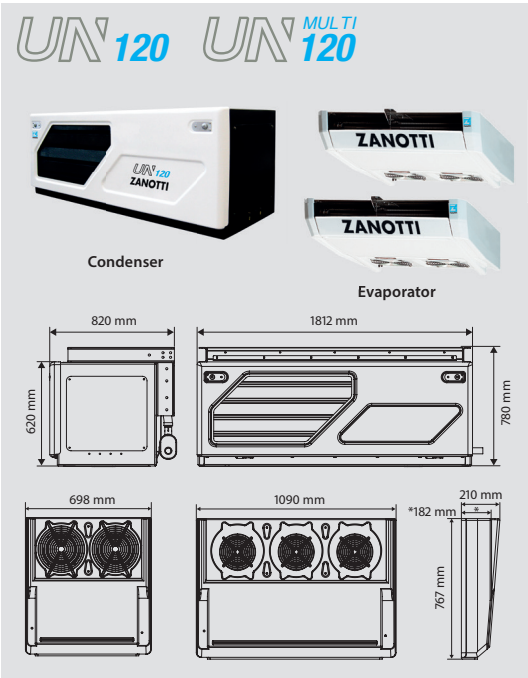
UN120 | UN120 Multi

Uno Undermount models are independently powered with a diesel engine, and available in various capacities to efficiently transport temperature-controlled products in heavy trucks. The units feature Zanotti’s innovative direct coupling design between the engine and the compressor.

UN120 and UN120 Multi are undermount units designed to be installed under the box. UN120 Multi features additional evaporators to enable transport of products with different temperature requirements in separate zones. A driver-friendly interface in the cabin enables them to monitor and modify performance to ensure it is kept at precisely the right temperature throughout the trip.

Key Features:

- Multiple temperature zones in the same vehicle (Multi model only)
- Designed for high reliability with a custom Yanmar engine
- Innovative powertrain design enabling high performance and energy efficiency
- Reduced fuel consumption and noise
- Telematics-compatible
- 2-year standard warranty



|   |        | UN120           |       | UN120 Multi |       |
|---|--------|-----------------|-------|-------------|-------|
| General   |        |                 |       |             |       |
| Refrigerant   | [-]    | R452A           |       |             |       |
| Defrost   | [-]    | Hot gas defrost |       |             |       |
| System net cooling capacity under ATP conditions (30°C ambient temperature) |        |                 |       |             |       |
|   | [°C]   | 0°C             | -20°C | 0°C         | -20°C |
| Road mode   | [W]    | 11500           | 6200  | 10600       | 5700  |
| Stand-by mode   | [W]    | 8200            | 4200  | 7500        | 3900  |
| Heating capacity  |        |                 |       |             |       |
| Road mode   | [W]    | 10000           |       | 9500        |       |
| Stand-by mode   | [W]    | 7100            |       | 6700        |       |
| Airflow rate  |        |                 |       |             |       |
| Airflow rate at 100kPa static pressure                                      | [m³/h] | 4500            |       | 2x 2520     |       |
| Weight  |        |                 |       |             |       |
| Condensing unit road and stand-by   | [kg]   | 510             |       | 510         |       |
| Condensing unit road-only   | [kg]   | 475             |       | 475         |       |
| Evaporators   | [kg]   | 40              |       | 40 x 2      |       |
| Diesel engine   |        |                 |       |             |       |
| Displacement  | [cc]   | 1116            |       | 1116        |       |
| Rated power output  | [kW]   | 13,2            |       | 13,2        |       |
| Maintenance interval  | [hrs]  | 2000            |       | 2000        |       |
| Road compressor   |        |                 |       |             |       |
| Displacement  | [cc]   | 390             |       | 390         |       |
| Stand-by compressor   |        |                 |       |             |       |
| Displacement  | [m³/h] | 21,4            |       | 21,4        |       |

These products contain fluorinated greenhouse gases (R452A GWP=2140,5). Stand-By voltages available: 400/3/50

Provisional engineering data







# Trailer





E1500



## Exigo E1500

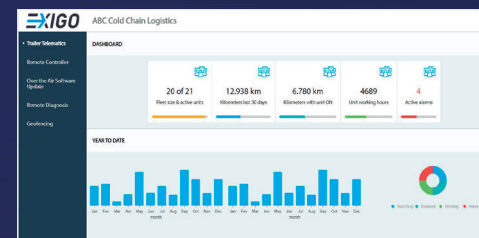
Daikin Exigo E1500 is the reflection of our legacy in innovation, reliability, and transport refrigeration expertise. E1500 is the pinnacle of diesel-powered refrigeration, built on an electric-ready platform.

### Exigo offers minimum total cost of ownership and maximum peace of mind

- › Full variable speed achieving lower fuel consumption than fixed speed units
- › Electric architecture providing 15kW true capacity both on the road and the grid
- › Highest cooling power of the category in frozen applications
- › Ease of unit operation with high resolution graphical user interface
- › Ease of fleet management via advanced telematics, compatible across platforms
- › Daikin components with proven reliability and lightweight design (over 100kg lighter)
- › Low-noise as standard, PIEK available
- › Reduced maintenance downtime with 3000h service interval as standard
- › 2-year warranty, telematics and maintenance coverage included as standard
- › EMEA sales and service network backed by Daikin



High resolution graphical user interface

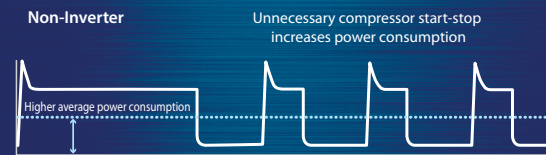


Advanced telematics included as standard



E1500



Inverter reduces power and fuel consumption by eliminating unnecessary compressor start-stop

#### Specifications\*

|   |  |
|---|--|
| Cooling Capacity 30/0°C (W) - Road and Grid     | 15000  |
| Cooling Capacity 30/-20°C (W) - Road and Grid   | 8800   |
| Heating Capacity -20/+2°C (W) - Road and Grid   | 10500  |
| Air Flow Rate Evaporator at Max Pulldown (m³/h) | 5500   |
| Engine  | Kubota Custom Diesel Engine<br>1500 cc / 4 Cylinders<br>NRMM Stage V Compliant |
| Generator                                       | 15kW / 400V 3P 50Hz / Direct Drive   |
| Compressor                                      | Custom Scroll Compressor / Economizer / Inverter                               |
| Variable Speed Components                       | Compressor / Evaporator Fans / Condenser Fans                                  |
| Temperature Zones                               | Single   |
| Controller                                      | Daikin PCB   |
| User Interface                                  | 7" High Resolution LCD   |
| Refrigerant                                     | R452A  |
| Weight (kg)                                     | 700  |
| Unit Dimensions W x H x D (mm)                  | 2072 x 2227 x 440  |
| Low Noise                                       | PIEK as option   |
| Maintenance Interval (h)                        | 3000   |
| Connectivity                                    | Telematics with 2-year contract included                                       |
| Maintenance                                     | Maintenance with 2-year contract included                                      |

\* Provisional engineering data









Coming soon

**EXIGO** *electric*

# Telematics

Daikin Telematics help trailer fleet managers gain greater insight and control over their fleet remotely. The back-end of our system is supported by an EU-based provider highly experienced in commercial vehicle telematics providing connectivity across EMEA. Exigo comes standard with two-year telematics and renewable annually afterwards.

The telematics framework is designed with the customer in mind, providing utmost flexibility by being configurable for third-party fleet management software. The included telematics portal provides state-of-the-art visibility and control of each unit in the fleet.

- ✓ Live location monitoring on map
- ✓ Remote HMI display and control
- ✓ Error messages with push notification
- ✓ Geofence alarm and low-noise programming
- ✓ Remote unit diagnostics
- ✓ Over-the-air software update
- ✓ Intuitive online fleet management portal
- ✓ Configurable for existing fleet management software



| Service Contracts   | Zanotti Van & Truck Range<br>(First 2 years) | Daikin Exigo<br>(First 2 years) | Daikin Exigo<br>(Annual Renewal)   |
|---|--|---------------------------------|--|
| <b>Warranty</b><br>EMEA parts and labor warranty coverage                       | Included                                     | Included                        | Optional Extended Warranty<br>(requires) Telematics and<br>Maintenance Plan) |
| <b>Telematics</b><br>EMEA coverage and fleet management portal access           |  | Included                        | Optional   |
| <b>Maintenance Plan</b><br>National scheduled preventative maintenance          |  | Included                        | Optional   |
| <b>24/7 Breakdown Support</b><br>Call center support in main European languages |  | Included                        | Optional   |