

DOMETIC FRIGO 2021

FULLY INTEGRATED COOLING SYSTEMS

FOR REFRIGERATED VEHICLES



 **DOMETIC**



DOMETIC FRIGO: FOR REFRIGERATED AND DEEP-FREEZE VEHICLES

- Mobile and stationary refrigeration for temperature controlled transport
- For load compartments up to 18 m³
- No roof-mounted parts
- Engineered in Germany

NEW: DOMETIC FRIGO DC

Our innovative fully electrical refrigerated system. Lighter, less power consumption and faster to install.
Find out more on page 6.



Fully
WLTP
compliant

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DOMETIC ON THE WEB

Here’s where you can find the complete Dometic range, with detailed information about all products. Plus, interesting facts about our company and download links for all our catalogs.

DOMETIC.COM

DOMETIC FRIGO COOLING SYSTEMS

TEAMWORK OF EXPERTS

With a track record of over 40 years, Dometic is one of the most experienced manufacturers of cooling systems for refrigerated and deep-freeze vehicles. The Dometic Frigo cooling concept was created in cooperation with TWK Karlsruhe, Germany's leading institute for optimised vehicle cooling systems. It covers all industry demands placed on retrofit cooling systems. We exclusively use firstclass quality components from renowned specialist manufacturers, and optimise them for the best performance.

Dometic Frigo was designed as a modular system. Universal basic components give installers all the flexibility they need.

THE NEW GENERATION - FULLY ELECTRICAL

The new Dometic Frigo DC is our answer to new generation vehicles where space in the engine compartment is limited and directdrive compressor installation is often impossible. Our engineers have found a smart solution: We use an electrical compressor with integrated inverter which allow us to control the RPM of the compressor according the required cooling performance and available energy. Variable speed compressor giving constant temperature control, higher performance and lower power consumption.

Read more on this on page 6.

WHAT ABOUT THE ORIGINAL DOMETIC FRIGO?

Good news for the friends of our well proven Dometic Frigo system: the **components continue to be available and can be found on page 8.**



FULLY INTEGRATED COOLING SYSTEMS – CUSTOMISED TO SUIT THE FREIGHT AND THE VEHICLE

The transport of temperature-sensitive freight is a demanding logistic task subject to strict legal regulations. It calls for a vehicle that is equipped to take perishable foodstuffs, medicines or blood donations from one place to another with onedegree accuracy. The modular Dometic Frigo system provides highly reliable cooling solutions for all commonly used refrigerated vehicles. The entire refrigeration system is integrated in the vehicle where it takes up little space – and without the roof-mounted structure you typically have with other manufacturers' systems.

It takes just a few easy steps to create a customised precision cooling system. You start by specifying the type of vehicle, the size of the load compartment and the required temperature conditions. We then put together the modules to suit your specifications. If required, we add optional features such as a stationary cooling system to be operated from the control panel.



DOMETIC FRIGO DC FULLY ELECTRICAL SYSTEM

An innovative fully integrated electrical system, the Dometic Frigo DC 2500 and Dometic Frigo DC 3500 are faster to install, use less power and are completely independent from the engine.

EVAPORATOR FITS TO ROOF INSIDE COOLING AREA.



NEW!

COMBINED COMPRESSOR-CONDENSER-UNIT FITS UNDER THE VEHICLE INTO THE SPAREWHEEL COMPARTMENT



FULLY INTEGRATED
ELECTRICAL
SYSTEM

DOMETIC FRIGO DC
IS INDEPENDENT
FROM BELT DRIVE, VEHICLE TYPE
AND ENGINE TYPE

LIGHT WEIGHT!
Only 43 kg Dometic Frigo DC 500
and 47 kg Dometic Frigo DC 3500
maximum for the complete system

NEW! DOMETIC FRIGO DC – FULL INTEGRATED ELECTRICAL REFRIGERATION SYSTEM

HIGH FLEXIBLE TO VEHICLE SETUP





Today’s compact van models offer little space for retrofitting a transport cooling systems. Quite often, it is impossible to integrate a belt-driving compressor in the engine compartment. The new generation Dometic Frigo DC systems solve this problem in a smart way. The compressor and the condenser are combined in a compact unit which is fitted in the spare wheel compartment. Like with all Dometic Frigo systems, the evaporator is mounted to the ceiling of the cargo hold.



DOMETIC FRIGO DC ADAPTER KITS FOR FAST AND EASY INSTALLATION

Our vehicle-specific Dometic Frigo DC adapter kits allow fast and easy installation of the compressor-condenser unit. Available for the most common vans. Contact your local dealer for more information.

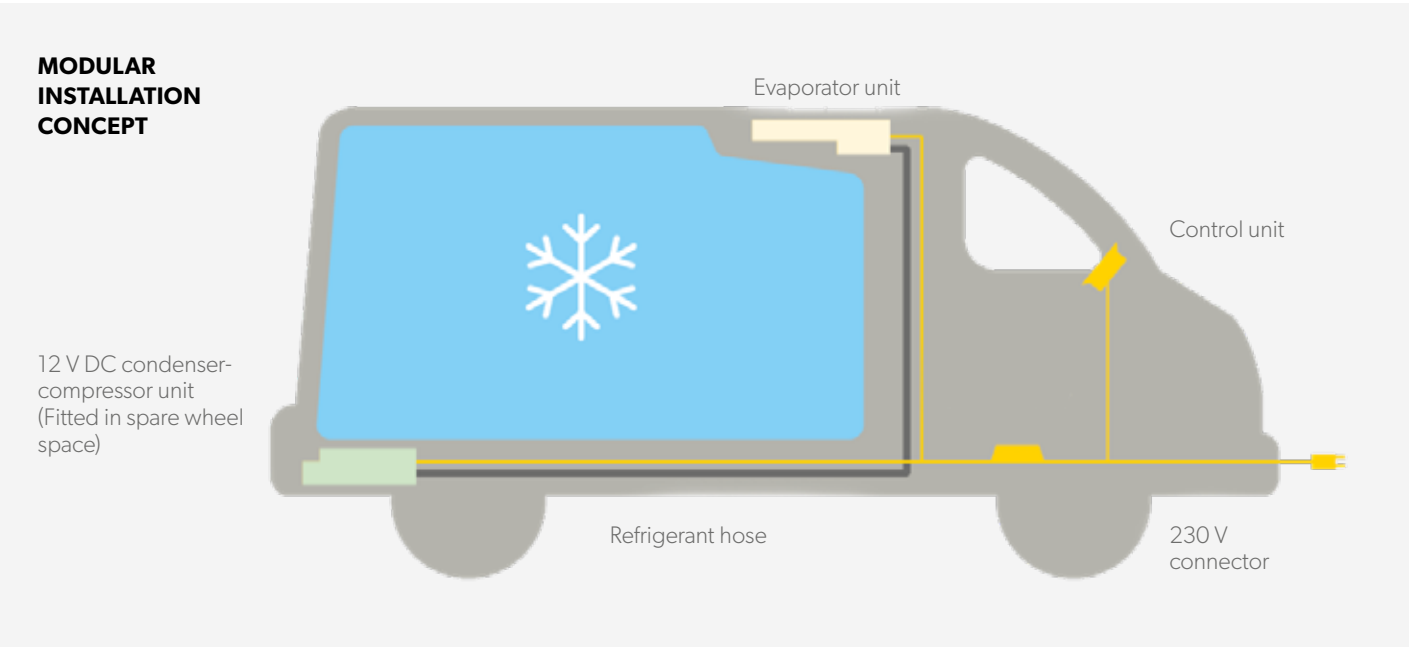
DRIVING MODE COOLING PERFORMANCE

| | | | | | | | |
|---|---|---------|---------|-----------------|-------------------|-----------------------|---------------------|
| NEW! Dometic Frigo DC | 30 °C outside temperature   | | | | | | |
| | Driving cooling | | | Air flow volume | Power consumption | Evaporator dimensions | Total system weight |
| | 0 °C | +7 °C | +12 °C | m³/h | A | mm (W/H/D) | kg |
| DC 2500  | 1.030 W | 1.325 W | 1.565 W | 780 | 68* | 660 x 157 x 500 | 43 |
| DC 3500  | 1.125 W | 1.445 W | 1.670 W | 1,140 | 85* | 900 x 157 x 500 | 47 |
| Refrigerant | R 134a | | | | | | |

Vehicle requirements: the vehicle must have minimum a 125 A alternator and a 90 A/h battery.
(Data for driving mode, stationary mode varies) *For outside temperature 30 °C and 0 °C inside temperature (according ATP)

DOMETIC FRIGO DC – THE SMARTEST AND EASIEST COOLING SYSTEM

- Combined compressor and condenser unit fitted in the spare wheel compartment giving faster and easier installation
 - Variable speed compressor giving constant temperature control, higher performance and lower power consumption
 - As no installation is required in the engine compartment it can be fitted to most vehicle
 - Easy to service and maintain – less components, beltless compressor
 - Integrated hotgas defrost function (serial)
- Intelligent compressor control unit which controls the RPM of the compressor and condenser fan according available energy (battery protection) and cooling performance requirement.
 - Patented Power Management
 - Approved according to automotive standards
 - Easy to upgrade
- For detailed information about the Dometic Frigo modular system, please refer to the Dometic Frigo price and programme overview.






DOMETIC FRIGO DC OVERVIEW

| | |
|---|---|
| EVAPORATOR DC 2500  | EVAPORATOR DC 3500  |
| COMPRESSOR-CONDENSER UNIT  | COMPRESSOR-CONDENSER UNIT  |
| HOSE, 4 M  | HOSE, 6 M  |
| OPTIONAL | OPTIONAL |
| VEHICLE ADAPTER KIT, STAND-BY KIT | VEHICLE ADAPTER KIT, STAND-BY KIT |

DOMETIC FRIGO – BELT DRIVEN SYSTEM




Dometic Frigo refrigeration systems comprise several components, some of which are available as options. The modular concept allows easy customizing for refrigerated and deep-freeze applications. Reliable cooling at constant temperatures can be achieved for load compartment volumes up to 18 m³. Regardless of whether it's long distance or local distribution, continuous cooling is guaranteed at all times.

DRIVING MODE – REFRIGERATION R 134A

| | | | | | | |
|---|---|---------|---------|-----------------|-------------------|------|
| Dometic Frigo | 30 °C outside temperature   | | | | | |
|  | Driving cooling | | | Air flow volume | Power consumption | |
| | 0 °C | +6 °C | +12 °C | m³/h | A | |
| | 2500 | 1.752 W | 2.107 W | 2.524 W | 780 | 22 A |
| | 3500 | 2.385 W | 2.888 W | 3.452 W | 1.140 | 27 A |
| | 4500 | 2.454 W | 3.051 W | 3.589 W | 1.560 | 31 A |
| Refrigerant | R 134a | | | | | |

Data for driving mode, stationary mode varies)

DRIVING MODE – DEEP-FREEZE R 404A

| | | | | | | |
|---|---|---------|---------|-----------------|-------------------|------|
| Dometic Frigo | 30 °C outside temperature   | | | | | |
|  | Driving cooling | | | Air flow volume | Power consumption | |
| | 0 °C | -10 °C | -20 °C | m³/h | A | |
| | 2500 | 2.394 W | 1.797 W | 1.034 W | 780 | 22 A |
| | 3500 | 2.496 W | 2.016 W | 1.334 W | 1.140 | 27 A |
| | 4500 | 2.567 W | 2.062 W | 1.283 W | 1.560 | 31 A |
| Refrigerant | R 404a | | | | | |

Data for driving mode, stationary mode varies)

You start with selecting the right size of evaporator, then you add the matching condenser and compressor. All in all, it will take only 8 to 12 hours to install the three basic components.

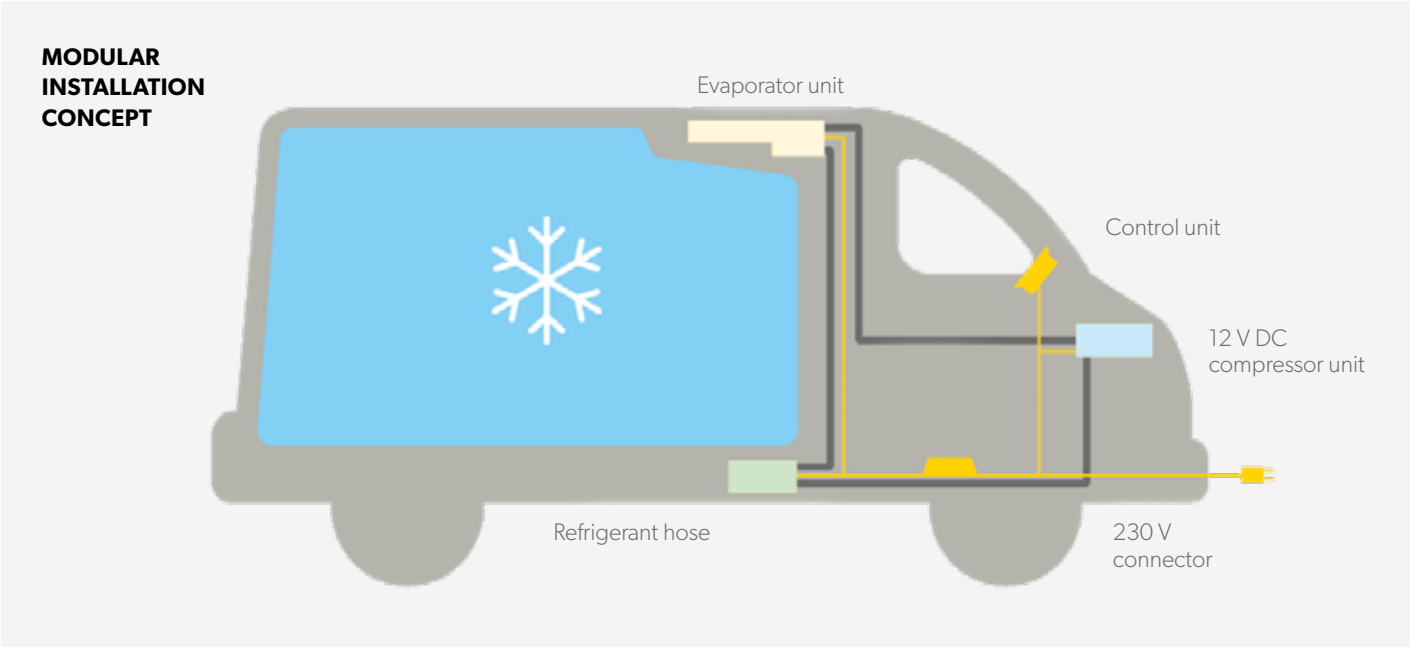
Our tip for deep-freeze applications

The Dometic Frigo DC kit includes all special components you need: hot gas defrosting for the evaporator and condensation drain, a low-pressure switch, and an oil separator.

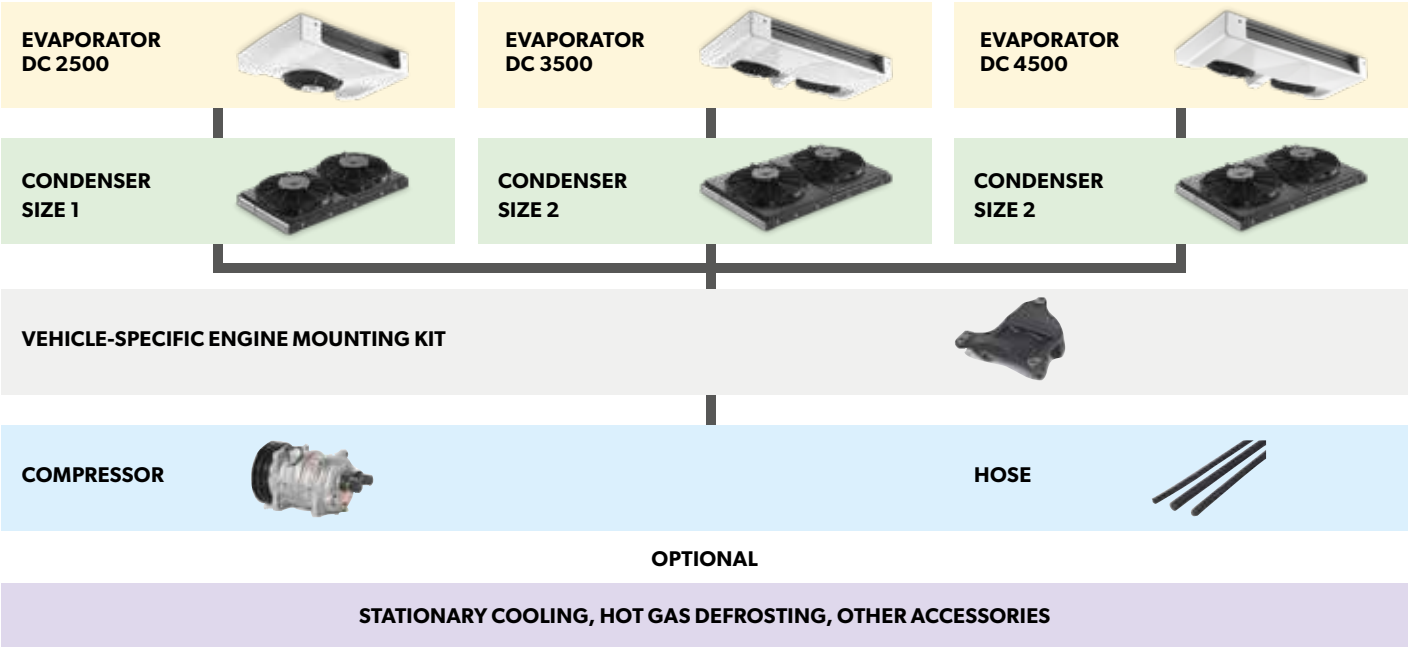
For cargo rooms up to 18 m³

MODULAR SYSTEM FOR EASY CUSTOMIZING

- Internal assembly of the evaporator – no impact on the appearance or the aerodynamic properties of the vehicle
 - Nothing on the roof – no risk of damage when driving into underground car parks
 - Safer when having to make sudden movements as the vehicle's centre of gravity is not changed
 - No need to cut into the roof trusses or sheet panel – the chassis' torsional stability and anti-corrosion properties are preserved
- For detailed information about the Dometic Frigo modular system, please refer to the Dometic Frigo price and programme overview.

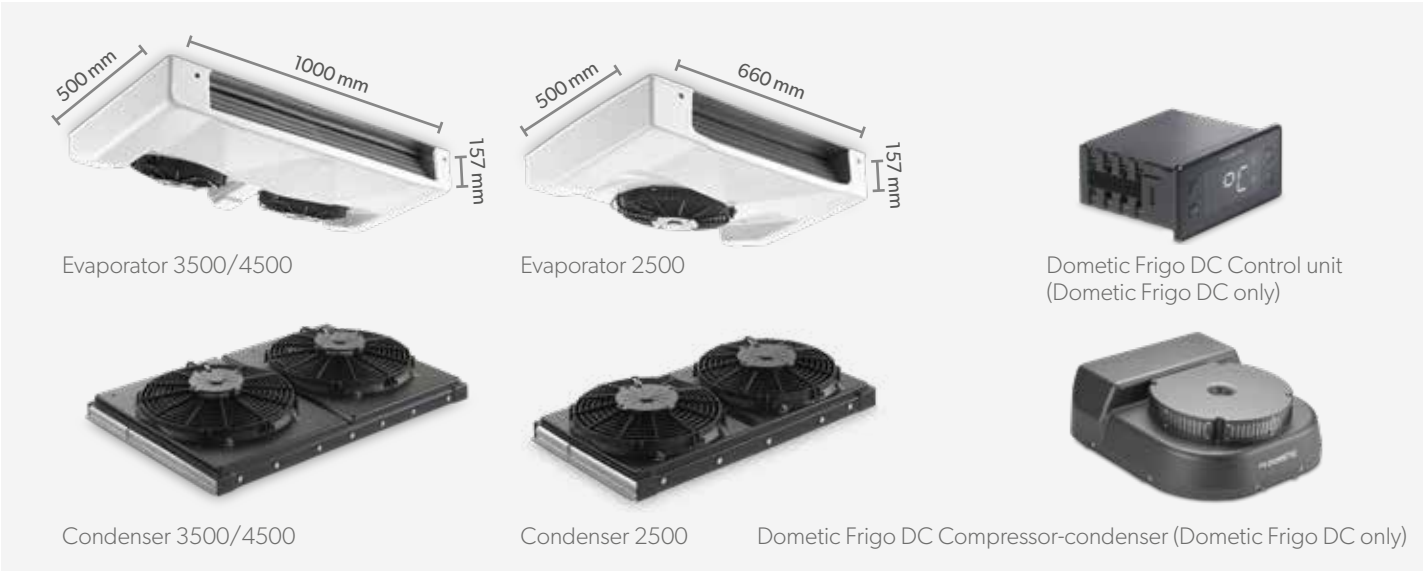
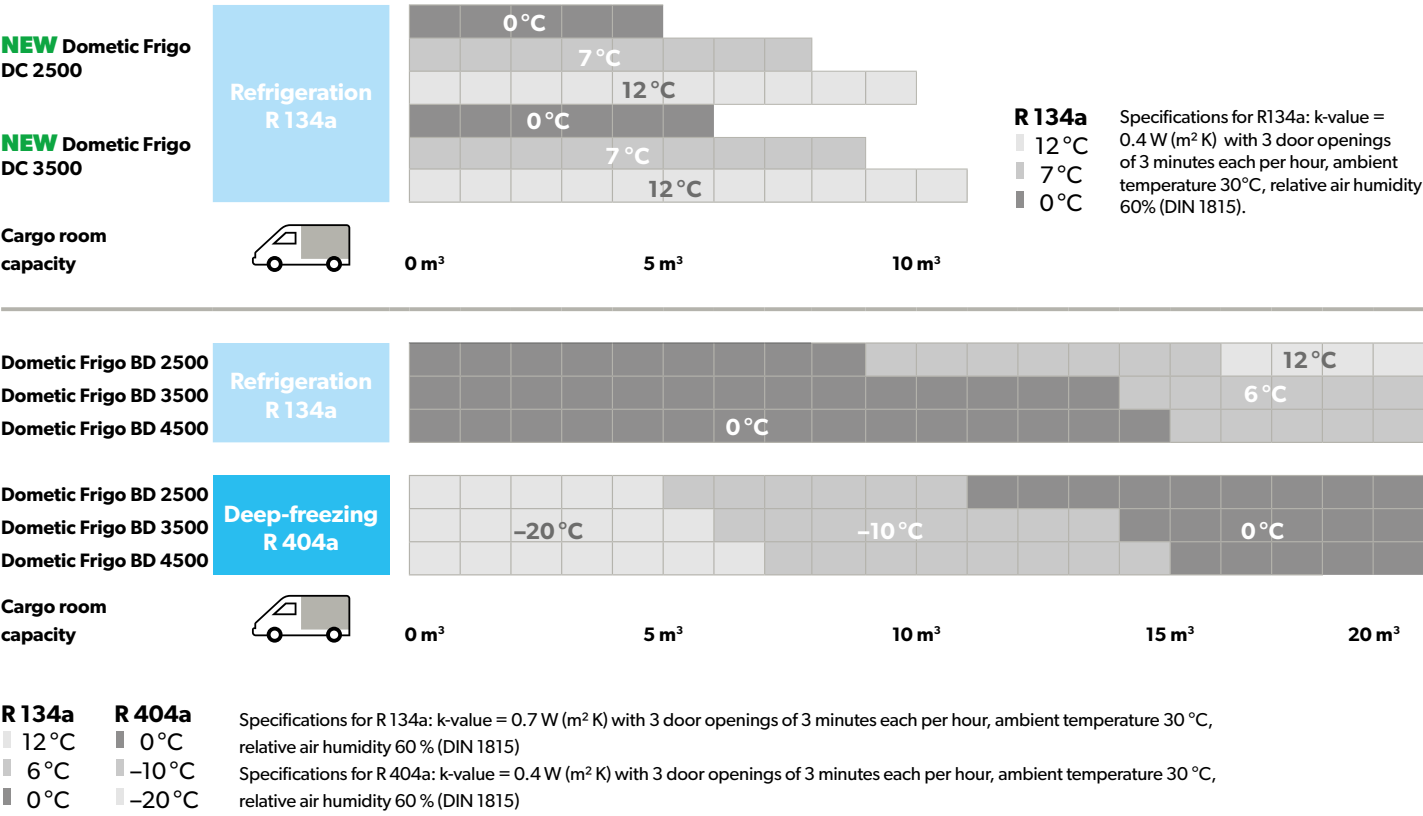


COMPONENTS CAN BE COMBINED FOR ANY APPLICATION



PRODUCT SELECTION

Operation performance according to ATP regulations with 3 door openings per hour at 30 °C outside temperature.



INFO

The Dometic Frigo control unit displays when service is due. The cooling system will keep running, though. The calculation of the operating hours is based on the time the compressor is in operation. Service is due after the first 100 operating hours after the cooling system's initial start-up, and then every 1,000 operating hours.

UNIQUE TECHNICAL DETAILS
DOMETIC FRIGO EXCELS WITH QUALITY

Performance, efficiency, durability, ease of installation and ease of maintenance: these are the requirements to be met by the designers of fully integrated cooling systems. Here are just a few technical details where Dometic Frigo systems make a difference.

MULTI-POINT REFRIGERANT INJECTION

Dometic Frigo systems owe their excellent cooling performance to a multi-point injection system and the use of evaporators with optimised capacity. The multi-point injection system ensures that the refrigerant is evenly distributed in the evaporator. This, in turn, results in a homogenous evaporation process and improves the cooling performance.



Optimised cooling: the multi-point injection system on the evaporator improves the distribution of the refrigerant.

FILTER DRIER WITH SIGHT GLASS

Another beneficial detail is the filter drier with the integrated sight glass, which makes it easy to monitor the fill level and condition of the refrigerant. A single glance on the sight glass is enough to know when the drier needs to be replaced. Damage to the system or downtimes can be effectively avoided. (Dometic Frigo only)

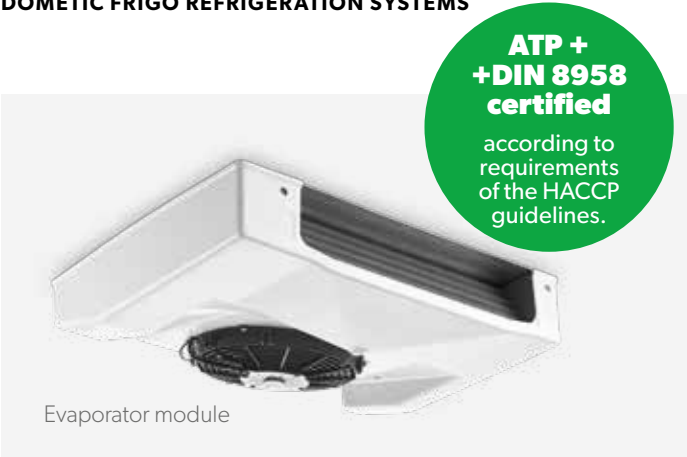
SPLASH-PROOF COMPONENTS

Quality is also the hallmark of the Stand-by cooling system. Dometic is the only manufacturer to offer a splash-proof 230-volt connection to be fitted on the bumper, a patented solution from DEFA.



Optimised check-up: the sight glass on the filter drier allows you to monitor the cooling system (Dometic Frigo only)





CERTIFIED REFRIGERATION FOR RELIABLE COLD CHAIN MANAGEMENT

Companies transporting foodstuffs or other temperature-sensitive products have to meet strict legal requirements. They are responsible for ensuring that the cold chain is maintained throughout the product’s way to the consumer. No problem – Dometic Frigo cooling systems for refrigerated vehicles are 100 % reliable.

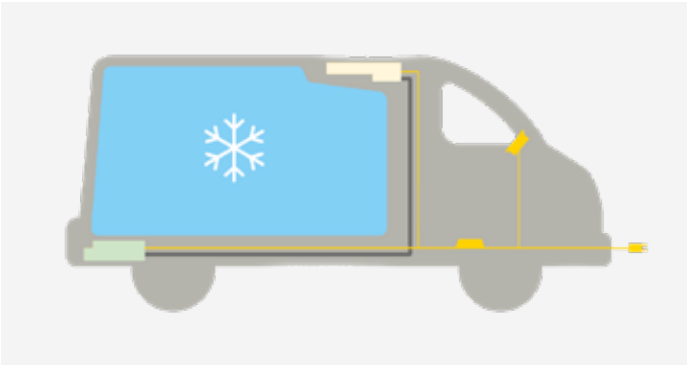
Our systems are ATP-approved and certified to DIN 8958, a standard regulating the performance and functioning of cooling systems for thermally insulated means of transportation. Customers can be sure they can transport their sensitive freight safely and reliably at alltimes.

Read more on this on page 14.



STAND-BY COOLING OPTION FOR DOMETIC FRIGO

The optional stand-by cooling kit optimises the logistic workflow. The vehicle can be loaded or remain loaded overnight so as to be ready in the morning to get on its way. There is no need to store the goods temporarily in a stationary cooling room. The compressor of the stand-by cooling kit is installed in the driver’s cab underneath the seat; a 230 V external socket for connecting the system is built into the front bumper. As the cooling components of the installation are also supplied with on-board current in stationary mode, we have added a high-quality IU0U charger which ensures the vehicle battery is properly charged.



FULLY INTEGRATED COOLING – NO ROOF-MOUNT STRUCTURE

Dometic Frigo refrigeration systems give you the unique benefit of fully integrated installation. The evaporator unit is fitted to the ceiling of the cargo compartment in a space-saving manner. It’s never in the way – neither during loading and unloading, nor during clean-up. Unlike with other manufacturers’ systems, there’s no roofmounted structure. **That means:**

- No problems with headroom restrictions, e.g. in underground car parks
- Safer driving even in tricky situations, because the vehicle’s centre of gravity remains unchanged
- No roof cut-out required – the chassis’ stability and anticorrosion-properties are preserved
- No impairment of the vehicle’s appearance and aerodynamics



HOT GAS DEFROSTING AS STANDARD OR OPTIONAL

Problems with long idle times when the evaporator is iced and needs to be thawed? Simply activate the Dometic Frigo hot gas defrosting system to get your vehicle back on the road in no time at all. It heats up the refrigerant between the compressor and evaporator and thaws the evaporator quickly, so it can work with full efficiency again.

Hot gas defrosting is included as standard on Dometic Frigo DC systems, but optional on the Dometic Frigo version.



REFRIGERATION AND DEEP-FREEZE CONTAINERS ALSO AVAILABLE

TOP LOADING OF FRONT LOADING FROM 200 L UP TO 1000 L FOR MORE INFORMATION PLEASE CONTACT A DOMETIC REPRESENTATIVE

You want to create a separate freezer area in the refrigerated vehicle or also want to transport fresh goods in a freezer vehicle? Then you should take a look at the new cooling containers from Dometic. Theycome in six varieties: front or top loading, each in three different sizes. The top-loading containers, which can also freeze products, allow you to switch between two set temperatures: +4 °C or –18 °C.

The temperature is set as standard to +4 °C on all front loaders. Practical details such as easy-to-operate slide doors, pallet feet and transport rollers (accessories) ensure comfortable handling. The optional battery set can retain the set temperature for up to 8 hours without an external power supply.

FRONT LOADER (+4 °C FIXED TEMPERATURE)

- A factory-set fixed temperature: +4 °C
- Frontloading, top can be used for storage
- Heavy-duty design – rugged, long-life
- Pallet feet for safe loading and unloading with fork-lifts
- Attachments to tie the box safely down in the vehicle
- Customer-specific accessories (e.g. battery set, transport rollers, data logger, smartphone app)

TOP LOADER (+4 °C / –18 °C FIXED TEMPERATURE)

- Two factory-set fixed temperatures: +4 °C / –18 °C
- Toploading, minimum refrigeration losses
- Heavy-duty design – sturdy with long life expectancy
- Pallet feet for secure loading and unloading with fork-lifts
- Attachments to tie the box safely down in the vehicle
- Customer-specific accessories (e.g. battery set, transport rollers, data logger, smartphone app)



Independent energy supply: The optional battery set ensures a constant cooling temperature for up to 8 hours (at an external temperature of 32 °C), without an external power supply.

APPROVALS AT A GLANCE

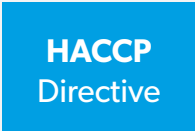


ATP

ATP is an international agreement that covers the rules and standards for the transportation of perishable foodstuffs. In essence, ATP defines the technical requirements to the special equipment used for cross-border carriage of foodstuffs. Strictly defined type approvals or individual testing are used to find out whether a specific cooling system is suitable for food transport according to ATP. The findings are documented in a test protocol.

DIN 8958

DIN 8958 defines the technical requirements to cooling equipment used in insulated means of transportation. It also describes the test methods to be applied to measure the system’s performance. The standard considers the various types of cooling equipment.



HACCP

„HACCP stands for “Hazard Analysis Critical Control Points”, a quality management concept for the production of foodstuffs. During production, the quality of foodstuffs can be impaired by biological, physical or chemical hazards. The HACCP system helps identify the critical points in the manufacturing process and have them under control. As a result, health risks for consumers can be systematically avoided. HACCP is integrated in European Council Directive 93/43/EEC as a preventive system for food hygiene.



Dometic is a global company that makes mobile living easy – by providing great solutions to satisfy people’s essential needs when they are on the move. Like cooking, taking care of personal hygiene and maintaining a pleasant temperature. We offer smart and reliable products with outstanding design.



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