



Eberspächer



**Diavia**

# ***Frigosoft*** **Refrigeration**

## **User Instructions & Service History**

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## **Introduction**

Thank you for purchasing an Eberspächer / Diavia Frigo refrigeration system. To guide you with your purchase we have written some simple explanations and answers to some of the frequently asked questions. We hope you find this useful and if you have any further questions about this or any other Eberspächer supplied products please contact us.

### **How do I operate my refrigeration system?**

1. Before starting to load the vehicle, refrigerate the goods and bring the temperature of the vehicle to the required set temperature, this will prevent interruption of the cold chain.
2. Load the vehicle carefully ensuring that the cold air can fully circulate the product. Ensure there is a gap below and above the product. Do not stack items within 200mm below the fans on the evaporator.
3. Ensure that the product does not in any way block the airflow to the evaporator fans or the outlet from the evaporator. Please be vigilant to ensure that wrappers do not become drawn up by the fans obstructing the airflow.
4. Keep door opening to a minimum, if the door has to be opened frequently it is advised that curtains are fitted.
5. Remember that whilst the vehicle engine is stopped unless the vehicle is run on its standby system that the refrigeration system is not cooling.
6. Do not obstruct the fans fitted to the standby compressor or the electrical power supply box mounted within the passenger compartment (where fitted).
7. Do not set the temperature lower than required, it will not pull down the temperature any quicker, and may damage your product if left on this setting.
8. If your vehicle is fitted with standby do not engage the power lead with the power turned on at the supply, this may cause damage to the plug contacts, with consequential damage to your refrigeration system.

### **What temperature will my system operate at?**


A chiller system supplied by Eberspächer / Diavia is rated to 3 degrees C. A freeze system is rated to -18 degrees C. There is also an intermediate system rated for -10. This unit is fitted with a defrost system. The different systems operate using different refrigerant gases. Both these figures are dependant upon your vehicle being insulated to the correct specification.


### **Turning the refrigeration system on**


There are three types of controller currently fitted to Frigosoft Refrigeration systems.


## Controller Instructions




The  button increases the setting values. It will also initiate a manual defrost if the unit is programmed to allow defrost.

The  button decreases the setting values.

The  button is for switching on/off and also allows access for an Eberspächer engineer to access the control parameters.

The  button is used to access the set point. Pressing this button displays the current set temperature.

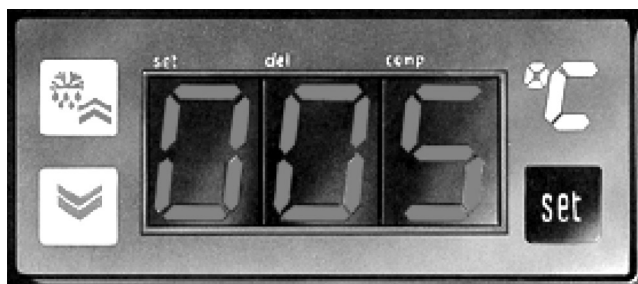
Start up the vehicle engine. To turn on the unit it is necessary to push and hold the  button for 5 seconds. The LED display on the control panel will blink for a few seconds while the unit performs a function test. After a short delay the compressor and fans can be expected to run if the unit is not at or below the set temperature.

If the controller is not turned on when the ignition is turned on, the display will go through its test procedure and then turn off with only the lower LED remaining on.


To turn off the system, push the  button and hold for 5 seconds.


Whilst running in normal operation the display shows the actual temperature in the product load space.

## Controller Instructions



Press and release the **set** button to display the set point, this is the temperature at which the system will operate. The temperature will fluctuate by 2 degrees above this setting as the fridge operates off cycle.

The  button is for value decrease. This is used to alter the set point when you are in the set menu. To alter the set point, depress the **set** button first. If the button is held in, the setting will change rapidly. The lowest setting is limited by a preset engineers setting.

 is the value increase button. This is used to alter the set point when you are in the set menu, if this button is held in, the setting will change rapidly. The highest setting is limited by a preset engineers setting. This button is also used to start a manual defrost.

Start up the vehicle engine, push the round switch next to the controller and the controller will display a series of 888 as it self tests.

To turn on the unit it is necessary to push the switch off. Once the test function is complete the box temperature will be displayed in °C. After a short delay the compressor and fans can be expected to run if the unit is not at or below the set temperature.



## Controller Instructions



Start the vehicle engine, if the unit is on the temperature will be displayed, if it is turned off the word 'off' will be displayed. To turn the unit on it is necessary to press the **SET** button.


To display the 'Set Point', press the 'SET' **SET** key and release it immediately and the Set Point is displayed in °C (setting for the desired temperature inside the refrigeration cell).

To modify the 'Set Point' press the 'SET' **SET** key and keep it pressed for 2 seconds. The current setting appears and the compressor LED starts blinking.

Pressing the 'UP'  or 'DOWN'  keys lets you modify this parameter.

To save the new setting, press the 'SET' **SET** key once more or, to exit programming automatically, wait at least 15 seconds before pressing any other key. The display with the new temperature 'Set Point' blinks for a few seconds and then displays the current temperature inside the cell.

### Activating the DEFROST cycle (possible if a defrost device is installed)

This procedure is to be performed in case of a system performance problem. Such problems are noted by the excessive accumulation of ice on the refrigeration unit (very damp goods, very low operating temperature). Activate by pressing the 'DEFROST'  key and keeping it pressed for 2 seconds. The defrost LED blinks when the defrost is running. The programmed defrost has a maximum duration of 8 minutes. When this time has elapsed, a drip time is set before the refrigeration system automatically starts up again. If the defrost conditions do not exist (e.g. temperature detected by the probe inside the refrigeration unit is higher than the defrost off setting), the operation is not performed.

## **Other Frequently Asked Questions**

### **Is there anything I can do to keep the refrigeration system working?**

On vehicles, the best advice is to run the system continuously. Eberspächer systems are efficient and will not add greatly to the fuel consumption. Continuous running ensures that the refrigerant and oil are circulated throughout the system, keeping the seals lubricated and preventing refrigerant leakage. The controller should be set to the required temperature.

### **Should my system fail to operate what should I do?**

Eberspächer have a network of approved service agents throughout the UK and also for Diavia products there is a network of European dealers. To gain warranty assistance please have the following details to hand:

- Vehicle supplier,
- Vehicle type,
- Registration details,
- The part number of the system,
- The serial number of the system.

The serial number should be found on the vehicle as a silver self adhesive label attached under the bonnet of the vehicle, or on the warranty control card and commissioning paperwork in the wallet supplied with the vehicle.

The controller can show an error code in place of the temperature reading and may also emit an audible warning. This can be overridden, please contact Eberspächer for details. If you wish you may either contact your local Eberspächer Agent direct or contact Eberspächer (UK) Ltd on 01425 480151 who can give you the details of your local agent. The agent will then carry out any repairs as necessary within the warranty terms and conditions.

### **How long is the warranty period?**

The standard warranty is 24 months, subject to a service after 12 months, with a 3rd year of cover for parts only. This may be extended to parts and labour upon proof of servicing to the schedule approved by Eberspächer (UK) Ltd.

### **What happens if a system is not regularly serviced?**

If a refrigeration system is not serviced, a build-up of moisture in the refrigeration circuit can occur. The built-in filter drier is designed to store any moisture and contamination present in the system. If the filter is not changed then its element will eventually become saturated and cause potentially damaging and expensive failures. Failure to replace the drive belt and the idler/tensioner devices may result in engine damage.

## **Other Frequently Asked Questions**

### **How often should my vehicle refrigeration system be serviced?**

Eberspächer recommend that the refrigeration system be checked annually as part of a vehicle's service routine. This annual check should include a check of refrigerant quantity, refrigerant pressure, system temperatures, refrigerant hoses, replacement of drive belts and EBUK supplied idler/tensioner pulleys, drive belts, wiring harnesses, and operation.

### **Who can service my refrigeration system?**

Eberspächer's network of approved Agent's throughout the UK have access to the genuine spare parts and technical information required to maintain your system to its full potential. You may either contact your local Eberspächer Agent direct, or contact Eberspächer on 01425 480151 who can give you the details of your local agent. Note, service is required to maintain the warranty.

### **I have a standby system are there any special instructions?**

Your system operates in exactly the same way on standby as on truck drive. There are no changes needed to operate the refrigeration system. The power lead should not be plugged in live and the system should be operated from an rcd protected supply.

If you have any further questions regarding the operating or servicing of your Eberspächer refrigeration system please contact the Air Conditioning and Refrigeration Division on 01425 480151.



# Approved First Year Service Schedule

## *FrigoSoft*



TASK	ACTION		
1. Before running fridge.	Calibrate temp probe Calibrate coil probe		
2. Fit refrigerant gauges.			
3. Replace Belt.	Renew belt		
4. Replace any EBUK supplied idler / tensioner pulley.	Renew		
5. Check Compressor.	Mount kit Clutch bearings Bolts	Yes / No Yes / No Yes / No	
6. Check hoses.	Fittings Security Chafing	Yes / No Yes / No Yes / No	
7. Check condenser.	Security Clear of debris Fans operating	Yes / No Yes / No Yes / No	
8. Check evaporator.	Security Clear of debris Fans operating	Yes / No Yes / No Yes / No	
9. Defrost.	Off/cycle Hot gas Electric	Yes / No Yes / No Yes / No	
10. Pressure switch.	LP MP HP		bar bar bar
11. Electrics.	Fuses <b>Connections:</b> battery ignition earth		
12. Controller settings.	LSE HSE diF FST Set-point		
13. Check for leaks.	Dye added	Yes / No	
14. Reclaim refrigerant.			
15. Replace filter drier.			
16. Leak/pressure test system.	20 minutes		bar
17. Evacuate system.			
18. Recharge system.	Refrigerant type Refrigerant charge Oil type Oil added		kg g g
19. Run and test unit.	Pull down to set-point		
20. Any additional work.			

# **Frigosoft** **Service Record**

Vehicle Make / Model ..... Vehicle Reg. ....  
 Body Builder. .... Body N°. ....  
 Date Into Service. .... Fleet N°. ....

Date	Job N°	Repair or Service History	Frigosoft 6 mth / 12 mth	Name of Dealer





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