EN

Webasto
Feel the Drive

Operating instructions

Chilled Water Marine Air-Conditioning Systems
BlueCool V-Series





Valid for BlueCool V50 M as of change index A (2023 ->):

Type: V50 M: 2510598A ->

Valid for BlueCool V77 T / V64 T, as of change index A (2023 ->):

Type:

V64 T: 2510597A ->

V77 T: 2510596A ->

1 About this document

1.1 Purpose of the document

This operating instructions are part of the product and provides the user with information on the safe operation of the unit.

1.2 Using this document

- ▶ Before operating the unit, read this operating instruction and the supplementary sheet "Important Information on Operating and Installation Instructions".
- ▶ Keep these operating instructions ready to hand.
- ▶ Hand these operating instructions on to the following owner or user of the unit.

1.3 Use of symbols and highlighting



WARNING

Type and source of the risk

Result: non-observance can lead to severe or mortal injuries.

- ▶ Actions to protect yourself against risks.



CAUTION

Type and source of the risk

Result: non-observance leads to property damage.

- ▶ Actions to protect yourself against risks.



Note on a special technical feature

Disregard can result in damage to the system or its surroundings.

Highlight	Explanation
✓	Requirements for the following necessary action
▸	Necessary action

1.4 Warranty and liability

Webasto shall not assume liability for defects or damage that are the result that the installation and operating instructions as well as the instructions contained therein being disregarded.

This liability exclusion particularly applies for:

- ▶ improper use
- ▶ repairs not carried out by a Webasto service workshop
- ▶ use of non-genuine parts
- ▶ conversion of the unit without permission from Webasto

2 Safety

2.1 Intended use

The BlueCool V-Series is approved only for installation in ships.

2.2 Regulations and safety instructions

- ▶ Regulations on the supplementary sheet "Important Information on Operating and Installation Instructions" must be observed.

2.3 Safety precautions



WARNING

Ignition of surrounding gases or highly flammable liquids by sparking of the air-conditioning system!

Danger of fire and explosion of ship or of petrol station.

- ▶ The air-conditioning systems must ALWAYS be switched off during refuelling or while in a petrol station area.

3 Description

The BlueCool MyTouch is the standard control element for the BlueCool V-Series and enables easy operation and setting of the connected system. The screen is designed as a touch screen. System operation is described in the following.

CAUTION

Damage to BlueCool MyTouch

- The screen should not come in contact with any other electrical devices as electrostatic discharge could cause malfunctions.
- Do not use pointed or sharp objects to operate the screen and do not exert excessive pressure with your fingers.

Note

- It is recommended to operate the screen with your fingers. The touch sensitivity of the screen is optimised to direct contact with the fingers. The screen may not respond to touch if gloves are worn.
- Tapping outside the touch-sensitive area at the edge of the screen may not be recognised.

4 Home screen and symbols

There is a choice of 3 different designs of the Home screen with temperature and fan setting. The functions are the same.

To change the design (in settings menu) see “9.1 Selecting Settings menu” on page 7.

Air handlers are connected to the chiller unit

If air handlers are connected to the chiller unit, the Home screen displays the temperature and air handler settings. In such cases, using the MyTouch control element, the chiller unit and the temperature in the cab can be controlled.

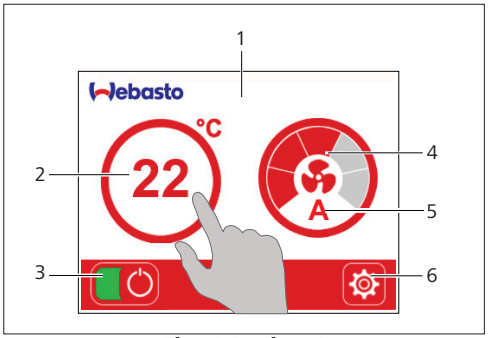

Fig. 1 Design 1

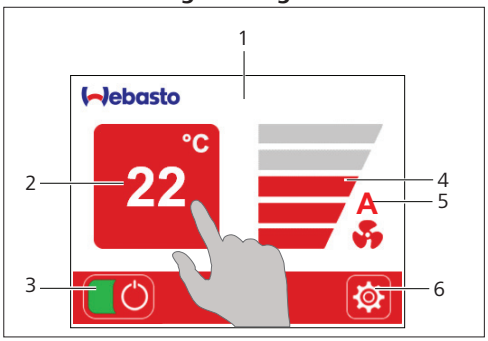

Fig. 2 Design 2



Fig. 3 Design 3

The illustrations show examples of design 1 to 3.

1 Home screen

2 Temperature setting

3 ON/OFF

4 Fan display

5 Display of automatic fan control

6 Settings

The symbols on the Home screen provide information on the system status. The symbols are explained in the table:

Symbol		Meaning
1		On/Off
2		Temperature
3		Fan
4		Settings
6		Notification
7		Increase values
8		Decrease values
9	AUTO	Automatic fan control
10		previous
11	22	Setpoint temperature
12		previous
13		Forward
14	2	Parameter value
15		Select
16		Home screen
17		Scroll up
18		Scroll down
21	1 2 3 4 5 6 7 8 9 0 clear	Keypad
22		Display selection

Fig. 4 Meaning of symbols

5 Standby

The screen will go to Standby mode after 5 minutes if no entries are made on the screen. Tap anywhere on the screen to call up the Home screen.

6 Notification

The notification symbol appears on the bottom status line to draw your attention to the current status of the system. Tap on the symbol to show the corresponding status message.

7 ON/OFF

■ When the screen is switched off:

▶ Tap the screen.

The screen switches on.

■ When the screen is switched on:

▶ Tap .

The colour of the ON/OFF symbol indicates the operating status (green = switched on, grey = switched off).

8 Operation

After switching on, the control system starts up the chiller unit and the connected air handler in steps and then assumes normal operation. The control element now shows the current temperature where the cabin temperature sensor of the chiller unit is installed. Depending on the installation location, this may also be the temperature of another cabin for example.

After approx. 20 seconds, the base colour of the control element changes to indicate the operating mode (cooling or heating) in which the chiller unit was started. Blue indicates cooling mode, red heating mode. The selection is dependent on the set setpoint temperature and the room temperature measured by the cabin temperature sensor.

Note

■ The system only cools under the following conditions: cabin temperature > 15 °C.Setpoint temperature < cabin temperature.

■ The system only heats under the following conditions: cabin temperature < 29 °C.
Setpoint temperature > cabin temperature.

If the cold water temperature is higher (cooling) or lower (heating) than the cabin temperature, status message BA11 is displayed and the fan will not yet be in operation.

In cooling mode, the cold water temperature is significantly below 15 °C and above 40 °C in heating mode.

8.1 Setting setpoint temperature

To set the required cabin temperature:

▶ Tap on the temperature or on the Home screen.

The setpoint temperature appears to the right:

▶ Tap Plus or Minus to increase or decrease the setpoint temperature.
The Settings menu is automatically exited after 30 seconds and the value last set is adopted.

Note

Alternatively:
Save and exit menu immediately:

▶ Tap Previous .

8.2 Setting fan speed

▶ To set the required fan speed tap on Fan on the Home screen.

With automatic fan control mode selected, the symbol A appears on the Home screen. The control system of the fan automatically adapts the fan speed.

To manually adapt the fan speed:

▶ Tap the fan display (design 1, 2) or .

▶ You can now change the displayed fan speed by tapping Plus or Minus .

▶ Tap AUTO when you wish to return to automatic fan mode.

The Settings menu is automatically exited after 30 seconds and the value last set is adopted.

Note

Alternatively:
Save and exit menu immediately:
▶ Tap Previous ❮ .

8.3 Chiller unit Home screen without cabin control

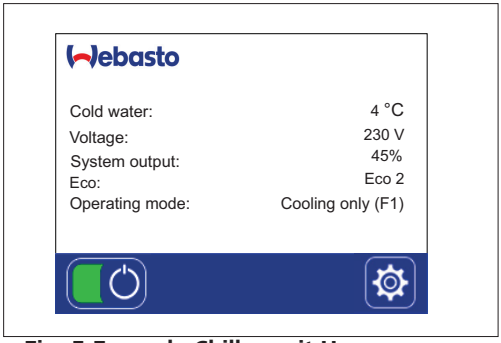

Fig. 5 Example Chiller unit Home screen without cabin control

If the BlueCool V-Series chiller unit is operated without the air handler connected, the alternative Home screen is shown, displaying the current operating values of the chiller unit.

Note

The following settings are not possible with BlueCool MyTouch on chiller units without cabin control:

- Setting fan speed
- Setting setpoint temperature
- Operating modes with automatic changeover between cooling and heating

9 System settings

The operating logic is explained based on the Timer function. The explanation also applies to other setting levels or functions.



Fig. 6 Example, Settings menu

Call up Settings menu:

▶ Tap the Settings symbol.

The Settings menu opens up.

▶ Tap ◀ or ▶ to scroll between the various pages.



▶ Tap Timer. The setting window for this function opens up.

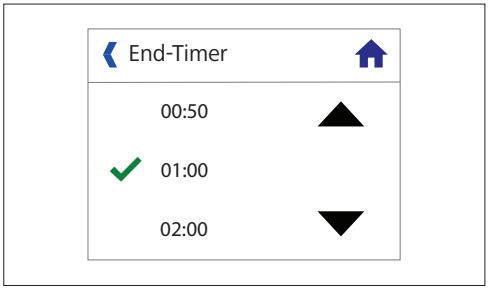

Fig. 7 End-timer

▶ Tap ▲ to reduce the time interval or tap ▼ to increase the time interval.

The ✓ symbol marks the current selection.

▶ Tap on the required time to set the time interval.

▶ Tap the Previous ❮ symbol to go to the previous level. The selected settings are then adopted.

Or:

▶ Tap the Home screen symbol to return to the Home screen.

The selected settings are then adopted.

9.1 Selecting Settings menu

You can call up the Settings menu from the Home screen:

▶ Tap the Settings  symbol.

The Settings menu opens up. The available functions are:

9.1.1 Timer

Adjust the preset Start or Stop on the chiller unit.

With the system already switched on:
The timer acts as a remaining time counter. The air conditioning system switches off automatically after the set time runs down.

With the system switched off: The timer acts as a start timer. The system starts up automatically after the set time has elapsed.

It is not possible to program a switch-on and switch-off time at the same time.

9.1.2 Brightness

Adapts the screen brightness to the ambient light levels.

9.1.3 Language

Sets the operating language.

9.1.4 Design

Changes the screen design.

9.1.5 Colour

Adapts the background colour.

9.1.6 Standby

Sets the BlueCool MyTouch display to standby mode. The available functions are:

- **Webasto Logo**
  Shows the Webasto logo.
- **Customer logo**
  Shows an individual file that can be loaded onto BlueCool MyTouch with the aid of the BlueCool Expert tool.
- **Cabin temperature - bright**
  Shows the current cabin temperature at high brightness levels in areas with bright ambient light.
- **Cabin temperature - dark**
  Shows the current cabin temperature at low brightness levels in areas with little ambient light.
- **Display off**
  No display in standby mode.
- **Operation indicator** An illuminated dot indicates that the system is ready for operation.
- **Standby off**
  Home screen remains active.

9.1.7 Key tone

For setting whether the control element makes a sound when you touch the surface of the screen.

9.1.8 °C / °F

Sets the temperature display in degrees Celsius °C or degrees Fahrenheit °F.

9.1.9 Cleaning

Disables the screen functions for 30 seconds to clean the surface.

Status / Error message	Possible cause	Correction
INIT Data communication	Initialisation procedure or system blocked. Electrical wiring defective, interruption in power circuit/short circuit.	Please contact your authorised Webasto Marine dealer.
SEA Sea water flow insufficient	Compressor output limited, compressor constantly switches to low output due to high pressure level in refrigerant circuit. Cooling mode only: sea water temperature too high or sea water flow rate too low. Sea water strainer blocked or no intake. Sea water pump defective.	Check sea water flow rate at sea water outlet. The minimum flow rate must be maintained. Clean sea water strainer and bleed sea water circuit.
BA11 Required cold water temperature not yet reached	Air handler is only switched on when the required cold water temperature is reached.	Correction: No action required. The air handler starts up automatically.
CA11 Compressors deactivated	Set compressor(s) in the control setting are not active.	Please contact your authorised Webasto Marine dealer.
AAA Undervoltage	Switch-off in case of undervoltage. Power supply below set undervoltage value for longer than 5 seconds. Cause is probably excessively long cable, overloading or an insufficiently high power generator output.	Use a on-shore power connection with a more stable power supply. Use a shorter power cable for the on-shore connection. Switch off other electrical loads. Please contact your authorised Webasto Marine dealer.
A01 Low pressure compressor 1	Incorrect pressure sensor measurement.	Please contact your authorised Webasto Marine dealer.
	Compressor switches off in heating mode: sea water flow rate too low or sea water too cold (temperature below 6 °C). Sea water strainer blocked or no intake.	Remove blockage at sea water inlet. Check/clean sea water strainer and bleed sea water circuit.
	Compressor switches off in cooling mode: cold water flow rate too low.	Check operation of the cold water pump. If fitted, open shut-off cock valves. Please contact your authorised Webasto Marine dealer.
	Refrigerant shortage.	Please contact your authorised Webasto Marine dealer.
	Refrigerant circuit blocked.	Operate chiller unit for 5 minutes in heating or cooling mode (if possible), then change over operating mode. Switch chiller unit back on and check whether the fault occurs again.
A02 High pressure compressor 1	Pressure switch defective or power circuit interruption/short circuit.	Please contact your authorised Webasto Marine dealer.
	Incorrect pressure sensor measurement.	
	Compressor switches off in cooling mode: sea water cooling insufficient. Sea water strainer soiled or no intake.	Remove blockage at sea water inlet. The minimum flow rates must be complied with. Clean sea water strainer and bleed sea water circuit.
	Compressor switches off in heating mode: cold water flow rate too low. Cold water pump defective. Plate heat exchanger or cold water circuit blocked. Refrigerant circuit blocked.	Check operation of the cold water pump. If fitted, open shut-off cock valves. Please contact your authorised Webasto Marine dealer.

Status / Error message		Possible cause	Correction
A03	Low pressure compressor 2	Pressure switch defective or power circuit interruption/short circuit.	Please contact your authorised Webasto Marine dealer.
		Cooling mode: Cold water flow rate too low.	Check operation of the cold water pump. If fitted, open shut-off cock valves. Please contact your authorised Webasto Marine dealer.
		Heating mode: - Sea water flow rate insufficient or sea water too cold (Temperature below 6 °C).- Sea water strainer blocked or no intake.	Remove blockage at sea water inlet.Check/clean the sea water strainer.Bleed sea water circuit.
A04	High pressure compressor 2	Pressure switch defective or power circuit interruption/short circuit.	Please contact your authorised Webasto Marine dealer.
		Cooling mode: Sea water cooling insufficient.Sea water strainer soiled or no intake.	Remove blockage at sea water inlet. The minimum flow rates must be complied with.Clean the sea water strainer. Bleed sea water circuit.
		Heating mode: Cold water flow rate too low.	Check operation of the cold water pump. If fitted, open shut-off cock valves. Difference between evaporator inlet/outlet temperature approx. 5 K. Please contact your authorised Webasto Marine dealer.
A09	Cabin temperature sensor	Cabin temperature sensor defective, break/short-circuit in electrical circuit, cabin temperature sensor not connected.	Please contact your authorised Webasto Marine dealer.
A10	Cold water temperature sensor	Cold water temperature sensor defective or break/short-circuit in electrical circuit.	
A15	Cold water flow	The flow monitor identifies insufficient cold water flow 5 seconds after the cold water pump is switched on. Cold water circuit is blocked or wire break at flow monitor if the parameter "flow monitor" in the Deactivation menu is set to Normally open (NO).	
A20	High pressure compressor 1	Incorrect pressure sensor measurement.	Please contact your authorised Webasto Marine dealer.
		Compressor switches off in cooling mode, maximum pressure reached. Insufficient sea water cooling. Sea water strainer soiled or no flow. Sea water pump defective. Refrigerant circuit blocked.	Remove blockage at sea water inlet. The minimum flow rates must be complied with. Clean sea water strainer and bleed sea water circuit. Operate unit for 5 minutes in heating mode (if possible) then switch to cooling mode and check whether the fault occurs again. Please contact your authorised Webasto Marine dealer.
		Compressor switches off in heating mode, maximum pressure reached. Cold water pump defective. Plate heat exchanger or cold water circuit blocked. Refrigerant circuit blocked.	Remove blockage at sea water inlet. The minimum flow rates must be complied with. Clean sea water strainer and bleed sea water circuit. Operate the unit for 5 minutes in cooling mode (if possible) then switch to heating mode and check whether the fault occurs again. Please contact your authorised Webasto Marine dealer.

Status / Error message		Possible cause	Correction
A21	Excess current inverter	Excess current caused by undervoltage. Insufficient power supply. Cause is probably excessively long cable, overloading or an insufficiently high power generator output.	Improve power supply or activate ECO mode.
A22	Excess temperature inverter	Ambient temperature too high or insufficient cooling.	Check whether the air vents in the electrical box are blocked. Remove dust deposits from the heat sink. The max. ambient temperature must not exceed 60 °C.
A23	Excess temperature compressor 1	Incorrect temperature measurement.	Please contact your authorised Webasto Marine dealer.
		Compressor switches off in cooling mode, maximum compressor temperature reached. Sea water cooling insufficient. Sea water strainer soiled or no flow. Sea water pump defective. Refrigerant circuit blocked.	Remove blockage at sea water inlet. The minimum flow rates must be complied with. Clean sea water strainer and bleed sea water circuit. Operate unit for 5 minutes in heating mode (if possible) then switch to cooling mode and check whether the fault occurs again. Please contact your authorised Webasto Marine dealer.
A24	High pressure sensor	Pressure sensor defective or power circuit interruption/short circuit.	Please contact your authorised Webasto Marine dealer.
A25	Low pressure sensor	Pressure sensor defective or power circuit interruption/short circuit.	
A26	Compressor temperature sensor	Compressor temperature sensor defective or break/short-circuit in electrical circuit.	
A27	Data communication inverter	No data communication between inverter and pc-board.	
A28	Characteristic diagram	Compressor operation outside characteristic map. Incorrect pressure sensor measurement.	
		Compressor operates outside the characteristic diagram in cooling mode, maximum pressure reached. Insufficient sea water cooling. Sea water strainer soiled or no flow. Sea water pump defective; refrigerant circuit blocked.	Remove blockage at sea water inlet. The minimum flow rates must be complied with. Clean sea water strainer and bleed sea water circuit. Operate the unit for 5 minutes in heating mode (if possible) then switch to cooling mode and check whether the fault occurs again. Please contact your authorised Webasto Marine dealer.
		Compressor operates outside the characteristic diagram in heating mode, maximum pressure reached. Cold water pump defective. Plate heat exchanger or cold water circuit blocked. Refrigerant circuit blocked.	Check cold water flow rate and increase if necessary. Difference between evaporator inlet/outlet temperature approx. 5 K. Operate chiller unit for 5 minutes in cooling mode (if possible) then switch to heating mode and check whether the fault occurs again. Please contact your authorised Webasto Marine dealer.
A30	Excess temperature inverter	The permissible temperature in the inverter housing is exceeded.	Check whether the air vents in the electrical box are blocked. Remove dust deposits from the heat sink. If possible, reduce the max. ambient temperature to below 60 °C.

Status / Error message		Possible cause	Correction
A31	Excess current inverter	Current too high due to sudden changes in load, short-circuit in motor line, incorrect parameter settings.	Please contact your authorised Webasto Marine dealer.
A32	Phase connection compressor 1	Compressor, phase connection. Break in compressor connection cable.	
A33	Earth leakage current	Earth fault found. Earth current too high.	
A34	Excess current inverter	HW excess current. Current too high due to sudden changes in load, short-circuit in compressor connection line, incorrect inverter parameter settings.	
A35	DC-Bus inverter	DC bus fault. No input voltage at power supply.	
A36	Undervoltage inverter PFC	Undervoltage “power factor correction”. Insufficient power supply.	
A37	Undervoltage inverter	Undervoltage due to low supply voltage or defective inverter.	
A38	Compressor speed 1	Incorrect speed or incorrect parameters at too high a load.	
A39	Cable bridge inverter	Compressor 1 switched off because the input is not bypassed/open. Cable not connected. Function of external relay, 24V voltage not applied.	
A40	Compressor 1 overload	Maximum permissible current was exceeded within the defined time window.	
A41	Overvoltage	The DC voltage of the intermediate circuit has exceeded the maximum permissible value as the result of excessively long delay or overvoltage peaks in the supply voltage.	
A42	Under temperature inverter	Temperature in inverter below permissible level.	
A43	Excess temperature compressor 1	The measured PTC thermistor temperature corresponds to a resistance >2600 ohm.	
A44	IGBT inverter	Internal fault.	
A45	CPU inverter	CPU fault. Data loss in memory.	
A46	Parameter inverter	Parameters were reset automatically to factory setting: User-specific parameter setting corrupted.	
A47	Data communication inverter	Data communication fault. Data reception faulty.	
A48	Thermistor inverter	Internal inverter thermistor fault.	
A49	Automatic adjustment inverter	Automatic adjustment faulty. Incorrect parameters.	

Status / Error message	Possible cause	Correction
A50 Fan inverter	Internal fan fault.	Please contact your authorised Webasto Marine dealer.
A51 PFC module inverter	Module fault. Excess current C1, C2: connections short-circuited.	
A53 STO inverter	Internal module fault “Safe Torque Off”. No contact between "Safe Torque Off" connection and pc-board.	
A54 STO inverter		
No display on screen; compressor and sea water pump not running.	Fuse faulty or break/short-circuit in this electrical circuit.	
	Pc-board damaged by high voltage (RT1 blown).	
Sea water pump(s) start up directly after the control is switched on.	Wiring of pump 1 (sea water) and pump 2 (cold water) interchanged.	Please contact your authorised Webasto Marine dealer.
Compressor keeps cutting in and out.	Shortage of cold water.	
No or insufficient cooling or heating capacity.	Poor air or water flow, soiled or circulation blocked.	Secure adequate air or water flow (see A01 and/or A02).
	Refrigerant shortage.	Please contact your authorised Webasto Marine dealer.
	Oil block.	
	Refrigerant circuit blocked. (Filter or expansion valve).	
	Compressor fault.	
Incorrect room/ambient temperature or water temperature displayed.	Temperature sensor positioned incorrectly, subject to interference or display values falsified.	Check whether the sensor is subject to direct fault sources such as direct sunlight or devices radiating heat. Please contact your authorised Webasto Marine dealer.
Compressor not running.	The target temperature of the cold water is reached. No correction necessary: 0°C (cooling mode), 49°C (heating mode).	The system starts up on reaching a defined cold water temperature. Cut-in temperature: 4 ... 8 °C (cooling mode), 41°...45°C (heating mode).
	Compressor defective or break/short-circuit in compressor wiring.	Please contact your authorised Webasto Marine dealer.
	Compressor 2: Compressor overload or overload protection element on top of compressor defective.	
	Incorrect compressor settings.	

To request this document in another language, please locate and contact your local Webasto dealer.
You can find your nearest dealer at:https://dealerlocator.webasto.com/en-int
To provide feedback (in English or German), please send an email to: feedback2tdt@webasto.com

Ident-Nr. WBCL0110825E • 01/23 • Änderungen und Irrtümer vorbehalten • © Webasto Thermo & Comfort SE

Europe, Asia Pacific

Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
Germany

Company address:
Friedrichshafener Str. 9
82205 Gilching
Germany

Only from within Germany
Tel: 0395 5592 229
E-mail: kundencenter@webasto.com

UK only

Webasto Thermo & Comfort UK Ltd
Webasto House
White Rose Way
Doncaster Carr
South Yorkshire
DN4 5JH
United Kingdom

www.webasto.com