

Operating instructions

Chilled Water Marine Air Conditioning Systems
BlueCool C-Series



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 plant or its surroundings

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 C-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.

Highlight

Explanation

- ✓ Requirements for the following action advisory
- ▶ Necessary action

3 Description

The BlueCool MyTouch is the standard control element for the BlueCool C-Series and enables easy operation and setting of the connected plant. 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.



Notes

- 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.

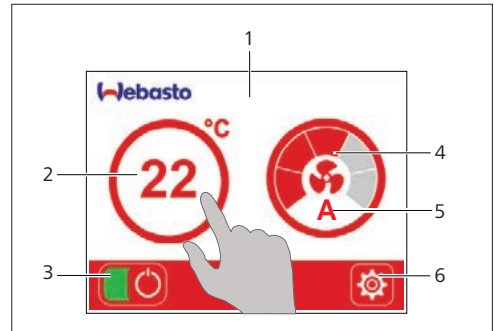


Fig. 1 Design 1

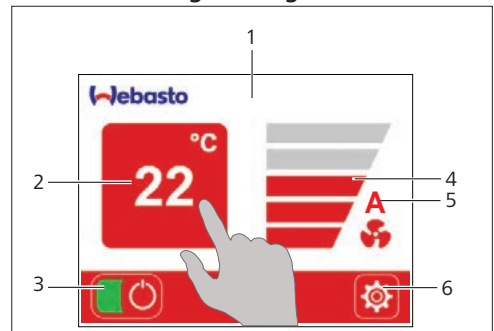


Fig. 2 Design 2

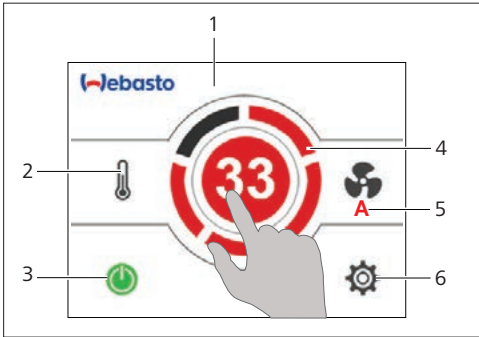


Fig. 3 Design 3

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 air handler 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 air handler control
10	previous
11 22	Setpoint temperature
12	previous
13	Forward
14	Parameter value
15	Select
16	Home screen
17	Scroll up
18	Scroll down
21	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 plant. 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. The plant will assume standby mode if the cabin temperature and the setpoint temperature are the same.



Note

- The plant only cools under the following conditions:
cabin temperature > 15 °C. Setpoint temperature < cabin temperature.
- The plant only heats under the following conditions:
cabin temperature < 29 °C. Setpoint temperature > cabin temperature.

In automatic air handler control mode the fan remains set to speed 1 until the cold water temperature is lower (cooling) or higher (heating) than the cabin temperature.



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

To manually adapt the fan speed:

▶ Tap the air handler symbol (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 air handler 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

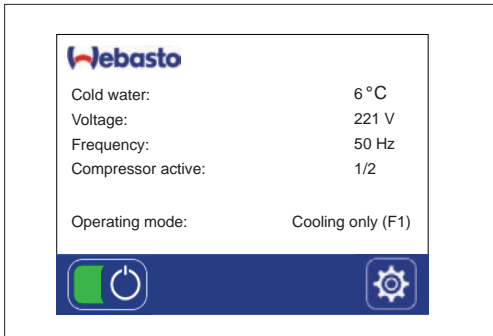


Fig. 5 Example Chiller unit Home screen without cabin control

If the BlueCool C-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 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.

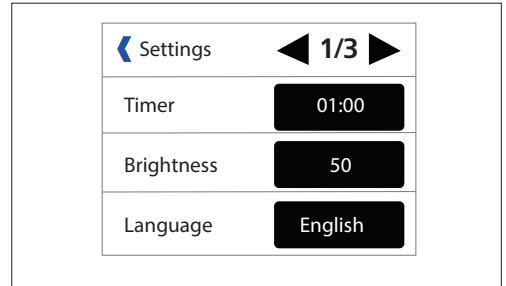


Fig. 6 Example, Settings menu

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.

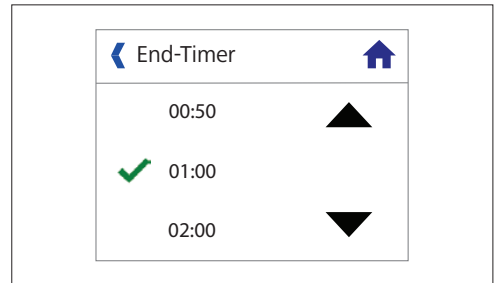


Fig. 7 End-timer

- ▶ 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 plant already switched on:

The timer acts as a remaining time counter. The air conditioning plant switches off automatically after the set time runs down.

With the plant switched off:

The timer acts as a start timer. The plant 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 plant 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.

Fault code Screen	LED "Alive"	Description	Possible cause	Correction
AAA	1x flashing, pause...	Undervoltage	Switch-off in case of undervoltage. Power supply below set undervoltage value for longer than 5 seconds. The cause is probably excessively long power cable for the on-shore connection, small cable cross sections, overloading or low 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	2x flashing, pause...	Low pressure compressor 1	Pressure switch defective or power circuit interruption/short circuit. COOLING MODE: Cold water flow rate too low. HEATING MODE: – Sea water flow rate insufficient or sea water too cold (Temperature below 6 °C). – Sea water strainer blocked or no intake.	Please contact your authorised Webasto Marine dealer. Check operation of the cold water pump. If fitted, open shut-off cock valves. Please contact your authorised Webasto Marine dealer. Remove blockage at sea water inlet. Check/clean the sea water strainer. Bleed sea water circuit.
A02	3x flashing, pause...	High pressure compressor 1	Refrigerant shortage. Pressure switch defective or power circuit interruption/short circuit. COOLING MODE: Sea water cooling insufficient. Sea water strainer soiled or no intake. HEATING MODE: Cold water flow rate too low.	Please contact your authorised Webasto Marine dealer. Remove blockage at sea water inlet. The minimum flow rates must be complied with. Clean the sea water strainer. Bleed sea water circuit. 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.

Screen	Fault code LED "Alive"	Description	Possible cause	Correction
A03	4x flashing, pause...	Low pressure compressor 2	See A01	See A01
A04	5x flashing, pause...	High pressure compressor 2	See A02	See A02
A05	6x flashing, pause...	Low pressure compressor 3	See A01	See A01
A06	7x flashing, pause...	High pressure compressor 3	See A02	See A02
A07	8x flashing, pause...	Low pressure compressor 4	See A01	See A01
A08	9x flashing, pause...	High pressure compressor 4	See A02	See A02
A09	10x flashing, pause...	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	11x flashing, pause...	Cold water temperature sensor	Cold water temperature sensor defective or break/short-circuit in electrical circuit.	
A11	12x flashing, pause...	Low pressure compressor 5	See A01	See A01
A12	13x flashing, pause...	High pressure compressor 5	See A02	See A02
A13	14x flashing, pause...	Low pressure compressor 6	See A01	See A01
A14	15x flashing, pause...	High pressure compressor 6	See A02	See A02

Screen	Fault code LED "Alive"	Description	Possible cause	Correction
A15	16x flashing, pause...	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. Cable break on the flow monitor. Setting error on the control element.	Please contact your authorised Webasto Marine dealer.
CA11	n.a.	Compressors deactivated.	Set compressor(s) in the control setting are not active.	
INIT	17x flashing, pause...	Data communication.	Data communication: Electrical wiring defective. Power circuit interruption/short circuit.	
n/a	n/a	No pc-board output.	Fuse faulty or break/short-circuit in this electrical circuit. Pc-board damaged by high voltage Electronic relay (TRIAC) defective.	Please contact your authorised Webasto Marine dealer.
n/a	n/a	Compressor not running.	Compressor defective or break/short-circuit in compressor wiring. Compressor overload or overload protection element on top of compressor defective. Incorrect compressor settings.	Allow some time for equipment to cool down or, in the event of a malfunction, please contact your authorised Webasto Marine dealer. Please contact your authorised Webasto Marine dealer.
n.a.	n.a.	Sea water pump(s) start up directly after the control is switched on.	Wiring of sea water pump and cold water pump interchanged.	
n/a	n/a	Compressor keeps cutting in and out.	Too little cold water.	Check cold water system for leaks.

Fault code Screen LED "Alive"	Description	Possible cause	Correction
n/a	No or insufficient cooling or heating capacity.	Poor air or water flow, soiled or circulation blocked.	Secure adequate air or water flow.
n/a	n/a	Refrigerant shortage.	Please contact your authorised Webasto Marine dealer.
n/a	n/a	Oil block.	Leave air-conditioning system running in heating mode. Call out a refrigerant specialist if necessary. Technical datasheet available.
n/a	n/a	Refrigerant circuit blocked (drier, capillary lines or expansion valve).	Have checked by refrigerant specialist. Technical datasheet available.
n/a	n/a	Compressor fault.	Have checked by refrigerant specialist.
n/a	Incorrect cabin/ambient temperature or water temperature displayed.	Temperature sensor positioned incorrectly, subject to interference or display values falsified.	Check whether the temperature sensor is subject to direct fault sources such as direct sunlight or devices radiating heat.
n.a.	The automatic operating modes cannot be selected.	Screen settings are not selected correctly.	Please contact your authorised Webasto Marine dealer.
n.a.	Chiller unit in cooling mode (or heating mode) required despite cabin temperatures needing heating mode (or cooling mode).	Wrong position selected for the cabin temperature sensor	Check position of cabin temperature sensor

In multilingual versions the German language is binding.

The telephone number of each country can be found in the Webasto service centre leaflet or the website of the respective Webasto representative of your country.

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