

# Operating Instructions

## Webasto BlueCool C-Series

### Chilled Water Marine Air-Conditioning Systems



## General information

Dear Webasto Customer!

These operating Instructions provide an overview about how to use the chilled water air-conditioning system and its control panels.

An extensive documentation and description can be found in the Installation and Service Instructions.



To ensure safe use of the appliance, ALWAYS read and follow all instructions in this manual. It is very important that an authorized Webasto dealer carries out any repair or maintenance not described in this manual.

## Safety notes

In general, all Webasto BlueCool C-Series air-conditioning systems are running on 230 Volt AC. For all work at any of the components like pumps, compressor, blowers or electronics, the power connection has to be interrupted. All work at the electric wiring must be performed by specialized installers.

Before starting the Chiller unit, check the following points:

- The closing valve at the sea water valve is open!
- The sea water strainer is clean and filled with water!
- The boat has enough water under the body and the sea water inlet is not blocked!
- All supply and return air grilles are open and not blocked by luggage, clothing or anything else!
- After turning the system on, water comes out of the over-board discharge. If not, switch off the system and check the sea water circuit again!

## Designated Control Panels

The Chiller unit is operated and controlled by the digital Chiller control panel.

**Directly** connected air handlers for one cabin are also operated by this control panel.

Other cabins with **indirectly** connected air handlers are controlled by separate digital cabin control panels.

**The system must be started with the digital Chiller control panel prior to normal functionality of the air handlers in other cabins.**

**Digital Chiller control panel:**

- Switching the Chiller unit on and off
- Programming and setup of the Chiller unit
- Setup of directly connected air handlers
- Selection of operation mode (Automatic, Cooling, Heating)

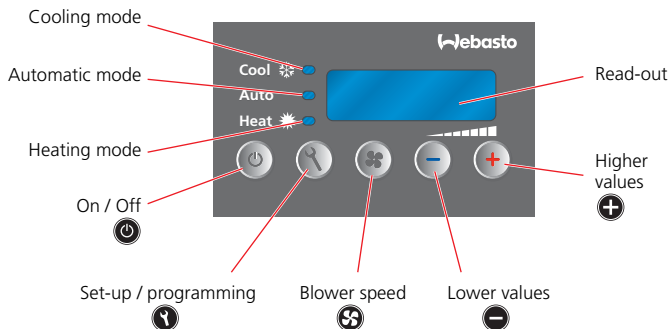
## Digital cabin control panel:

- Start and stop of indirectly connected air handlers
  - Temperature and blower setting for indirectly connected air handlers
- The operation mode can not be selected with the cabin control panel!**

## Digital Chiller control panel for Chiller units and directly connected air handlers

The digital Chiller control panel is factory pre-programmed. The secondary commands are code-protected.


- If your Chiller unit has a heating option, the cabins can be heated until the sea water temperature drops below 6 °C.  
**The function „Automatic with reverse heating operation“ (F3) is pre-set.**
- If an external water heater is integrated in your chilled water air-conditioning system, you can heat independently from the sea water temperature (See installation instructions for external heater).  
**The function „Automatic with external heater“ (F4) is pre-set.**



# Operating the Chiller control panel



When the air-conditioning system is connected with the electrical power, the system initializes itself. The display shows **Init** and afterwards the frequency, e.g. **50 Hz**.

## Starting

Press once the  button.

**On** is displayed and after appr. 5 sec. the current room temperature, e.g. **28.5** (°C) is shown.

## Setting the temperature

With the buttons  and  between 15 °C and 29 °C while the room temperature is displayed.


e.g. room temperature 25 °C

Set temperature = 20 °C, Cooling mode starts.

Set temperature = 29 °C, Heating mode starts.

**Attention: Only the mode that is preselected by the digital Chiller control panel can be started.**

## Setting blower speed


Press the button  until **b** is shown to the left and the selected value to the right, e.g. **b 05** (blower speed 5)

- Value range (blower speeds): **1-2-3-4-5** and **A**
- Factory Setting: **A** (Automatic blower speed)

Set value with the buttons  and . Your setting is secured.


- ⇒ In the automatic blower speed mode (**b A**) the blower start and operation depends on the temperature.  
It can take some time before the blower starts.

## Displaying the chilled water temperature

Press the  button until **E** is shown to the left and a numerical value to the right, e.g. **E10.5**.  
Check if the current operation mode is functioning properly.

- ⇒ Cooling mode (LED snow flake) =Chilled water temperature drops constantly  
⇒ Heating mode (LED sun) =Chilled water temperature rises constantly

## Access to further program levels

Press the  button until **code** is displayed. With a special access code specific settings can be modified (by the installer).

Further information can be found in the Installation Instructions.

# Digital cabin control panel for indirectly connected air handlers

Illustration see section "Digital Chiller control panel for Chiller units and directly connected air handlers".



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## Starting

Press once the  button.

**On** is displayed and after appr. 20 sec. the current room temperature, e.g. **28.5** (°C) is shown.

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With the buttons  and  between 15 °C and 29 °C while the room temperature is displayed.


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**Attention: Only the mode that is preselected by the digital Chiller control panel can be started.**

## Setting blower speed

Press the button  until **b** is shown to the left and the selected value to the right, e.g. **b 05** (blower speed 5)

- Value range (blower speeds): **1-2-3-4-5** and **A**
- Factory Setting: **A** (Automatic blower speed)


Set value with the buttons  and . Your setting is secured.

⇒ In the automatic blower speed mode (**b A**) the blower start and operation depends on the temperature. If there is no need for blower operation, the display shows **ba11**. It can take some time before the blower starts.

## Displaying the chilled water temperature

Press the  button until **H** is shown to the left and a numerical value to the right, e.g. **H10.5**.

## Error code display and actions for the digital Chiller and cabin control panel

The following malfunctions will be displayed directly on the digital control panel by a code or emitted as LED flash code directly on the Chiller controller card. It will be followed by a system halt. Whenever any of these codes appear the system is stopped for approx. 60 seconds and then a restart is attempted. If for more than 30 minutes the same malfunction occurs, the system will be stopped completely and the error code will become steady. No more restarts will be attempted and the user will have to re-set the system by pushing the  key or by temporarily cutting out the AC supply to the system.

**Code A01 to A15:** Pressure safety cut-out of compressors 1 to 6. The high pressure and low pressure safety switches are directly controlled by the controller card. This also applies to the time-delays for restart and other functions.

**Attention:** If any of these error codes appear too frequently and no appropriate action can be taken with the available means on board, it is necessary to call a specialist..

Do not insist with manual restarts in such case as this may cause major damage to the principal components of the air-conditioning system (compressors, pumps, etc.).

## Error codes and causes

<b>AAA</b>	Persistent low voltage (below limit for more than 5 sec. See Installation Instructions for further details.)
<b>A01</b>	Low pressure cut-out compressor 1 ⇒ Cooling mode: Insufficient chilled water flow. ⇒ Heating mode: Insufficient seawater flow or seawater temperature in heating mode too low (< 7 °C), heating mode not possible.
<b>A02</b>	High pressure cut-out compressor 1 ⇒ Cooling mode: Insufficient seawater flow. ⇒ Heating mode: Insufficient chilled water flow.
<b>A03</b>	Low pressure cut-out compressor 2 (causes see A01)
<b>A04</b>	High pressure cut-out compressor 2 (causes see A02)
<b>A05</b>	Low pressure cut-out compressor 3 (causes see A01)
<b>A06</b>	High pressure cut-out compressor 3 (causes see A02)
<b>A07</b>	Low pressure cut-out compressor 4 (causes see A01)
<b>A08</b>	High pressure cut-out compressor 4 (causes see A02)
<b>A09</b>	Room temperature sensor defective or absent.

<b>A10</b>	Temperature sensor at chilled water circuit defective or absent.
<b>A11</b>	Low pressure cut-out compressor 5 (causes see A01)
<b>A12</b>	High pressure cut-out compressor 5 (causes see A02)
<b>A13</b>	Low pressure cut-out compressor 6 (causes see A01)
<b>A14</b>	High pressure cut-out compressor 6 (causes see A02)
<b>A15</b>	5 seconds after switch-on of chilled water pump, flow monitor detects insufficient chilled water volume flow
<b>CA11</b>	All compressors have been deactivated. Re-activate with the <b>code</b> menu
<b>INIT</b>	Initialization procedure or system block.
<b>bA11</b>	Cabin control panel only. No error but status information. Indicating that blower is in standby mode. Blower will automatically start once chilled water circuit has reached required temperature.

## Warranty claims

Failure to follow the Installation Instructions and the information, recommendations and descriptions therein will void all warranties. The same applies if repairs are carried out incorrectly, with the use of non-genuine parts or by unauthorized personnel. Warranty claims are only valid if the claimant can verify that he has complied with the maintenance and safety instructions.

## Maintenance

### Check daily:

- Sea water strainer. Clean it and remove any debris if required.

### Check monthly:

- Air filter in the return air grilles (where applicable). Clean if necessary.
- sea water circuit for leaks in the whole system from the sea water valve to the sea water outlet.
- condensation drain for free flow and leaks.
- air-ducting for damage, interruption and free flow.
- Function of the system. Run the system for at least 10 minutes.

### Check yearly:

- electrical connections for corrosion of contacts and to ensure that they are secure.

### Winter storage

- At frost temperatures the whole sea water circuit must be emptied and the sea water valve closed.

### General Recommendation

When leaving the boat unattended for a longer period close all sea water valves.