

# Operation Manual

## WEBASTO BLUE COOL PREMIUM

### Chilled Water Systems



#### General Information

Dear Webasto Customer!

This operation manual provides an overview about how to use the compact air condition system and its control panel. An extensive description and documentation can be found in the installation and service manual.

#### Safety Notes

In general, all A/C systems run at 230 Volts AC. For all work performed on components like pumps, compressor, blowers or electronics, the power connection must be interrupted. All work on electrical wiring must be performed by specialized installers.

Before starting the air-condition system, check the following points:

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

#### Warranty claims

Failure to follow the installation manual 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 monthly

- Air filter in the return air grilles (where applicable) and clean if necessary.
- Sea water circuit for leaks in the whole system from the sea-cock to the sea water exit.
- Condensation drain for free flow and leaks.
- Air-ducting for damage, interruption and free flow.
- Function of the system by having it run for at least 10 minutes.

##### Winter storage

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

## Designated Control Panels

The chiller unit is operated and controlled by the **Chiller Control** digital 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 **Air Control** digital control panels.

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

### Chiller Control

- Start and stop of the chiller unit
- Programming and setup of the chiller unit
- Setup of directly connected air-handlers
- Selection of operation mode (Automatic, Cooling, Heating)

### Air Control

- 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 Air Control!**

## „Chiller Control“ for chiller and directly connected air-handlers

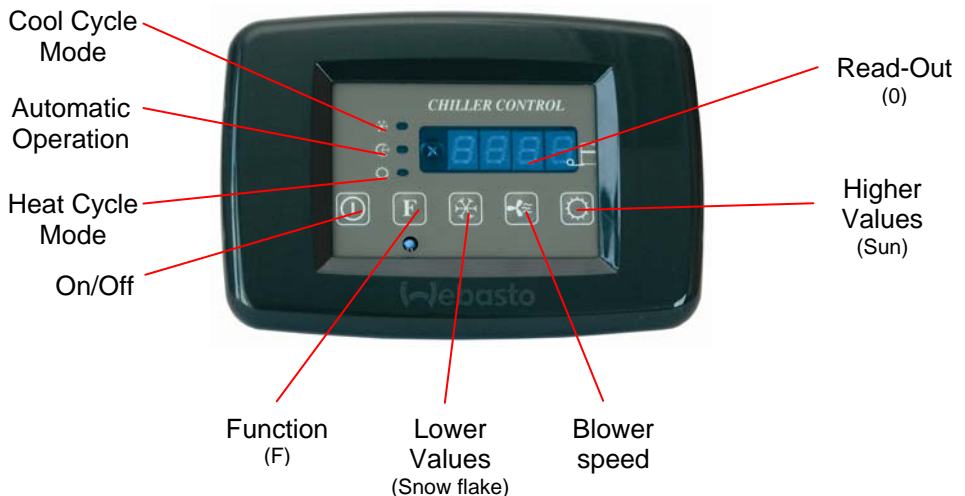
The digital control panel is always factory pre-programmed and the secondary commands are code-protected.

- If your chilled water system has a heating option, the cabins can be heated until the sea-water temperature drops below 10°C (50°C).

**The function „Automatic with Reverse Cycle“ (f3) is pre-set.**










- If an external water heater is integrated in your chilled water system, you can heat independently from the sea-water temperature (See chapter “External Heater” in the operation manual).

**The function „Automatic with External Heater“ (f4) is pre-set.**



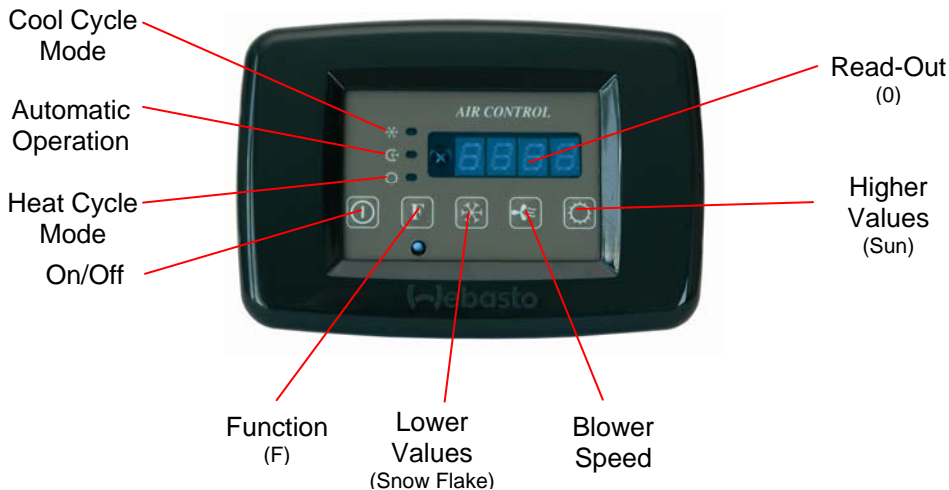
## Operating the Chiller Control










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

<b>Starting</b>	Press once the  button. <i>On</i> is displayed and after appr. 20 sec. the current room temperature, e.g. <i>28.5</i> (°C) (83°F) is shown. Depending on the room and set-point temperature the appropriate mode will start. Mode indication by LED. → A malfunction is indicated by a blinking error code (see below) → <i>ba11</i> is no error code that causes a system stop (see below)
<b>Setting the temperature</b>	With the buttons  and  between 15°C (59°F) and 29°C (84°F) while the room-temperature is displayed.  e.g. room temperature 25° C (77°F) Set temperature = 20°C (68°F), Cool mode starts. Set temperature = 29°C (84°F), Heat mode starts.
<b>Setting the Blower Speed</b>	Press the button  until <i>b</i> is shown to the left and the selected value to the right, e.g. <i>b 5</i> (Blower speed 5) <ul style="list-style-type: none"><li>• Value Range (Blower speeds): <i>1-2-3-4-5</i> and <i>A</i></li><li>• Factory Setting: <i>A</i> (Automatic Blower Speed)</li></ul> Program with the buttons  and  . Confirm by pressing the  button. The display shows <i>memo</i> . Your setting is secured.  → In the automatic blower speed mode ( <i>b A</i> ) the blower start and operation depends on the temperature. If there is no need for blower operation, the display shows <i>ba11</i> . It can take some time before the blower starts. → The manual blower speed mode ( <i>1 to 5</i> ) is indicated by the LED „Manual blower operation“.
<b>Displaying the chilled water temperature</b>	Press the  button until <i>H</i> is shown to the left and a numerical value to the right, e.g. <i>H10.5</i> . Check if the current operation mode is functioning properly. → Cool mode (LED snow flake) = Evaporator temperature drops constantly → Heat mode (LED sun) = Evaporator temperature rises constantly.
<b>Access to further program levels</b>	Press the  button until <i>code</i> is displayed. With a special access code specific settings can be modified (by the installer). Further information can be found in the installation manual.

## „Air Control” for indirectly connected air handlers

The digital control panel is always factory pre-programmed and the secondary commands are code-protected.



<b>Starting</b>	Press once the  button. <b>On</b> is displayed and after appr. 20 sec. the current room temperature, e.g. <b>28.5</b> (°C) (83°F) is shown.
<b>Setting the Temperature</b>	With the buttons  and  between 15°C (59°F) and 29°C (84°F) while the room-temperature is displayed. e.g. room temperature 25° C (77°F) Set temperature = 20°C (68°F), Cool mode starts. Set temperature = 29°C (84°F), Heat mode starts. <b>Attention: Only the mode that is preselected by the Chiller Control can be started.</b>
<b>Setting Blower Speed</b>	Press the button  until <b>b</b> is shown to the left and the selected value to the right, e.g. <b>b 5</b> (Blower speed 5) • Value Range (Blower speeds): <b>1-2-3-4-5</b> and <b>A</b> • Factory Setting: <b>A</b> (Automatic Blower Speed) Program with the buttons  and  . Confirm by pressing the  button. Secure your setting by pressing the  button. The display shows <b>memo</b> and then the room-temperature.  → In the automatic blower speed mode ( <b>b A</b> ) the blower start and operation depends on the temperature. If there is no need for blower operation, the display shows <b>ba11</b> . It can take some time before the blower starts. → The manual blower speed mode ( <b>1 to 5</b> ) is indicated by the LED „Manual blower operation“.
<b>Displaying the Evaporator Temperature</b>	Press the  button until <b>E</b> is shown to the left and a numerical value to the right, e.g. <b>E10.5</b> .

## Error code display and actions

The error codes are viewed on the display screen. After the error codes are displayed, the system is shut off for 60 sec. and re-started (except for **ba11**). If the same error occurs within 30 minutes, the A/C system will be completely stopped. In this case, it can only start again if the error has been solved and the system has been completely switched off and on again.

## Error codes and causes

<b>AAA</b>	Persistent low voltage (below 195 Volt for more than 5 sec.)
<b>A01</b>	Low pressure cut-out compressor 1 → Not enough refrigerant in the system, please inform service station. → Sea water temperature in heat mode too low (<7°C), heat mode not possible.
<b>A02</b>	High pressure cut-out compressor 1 → Sea water circuit interrupted, please check circuit. → Too much refrigerant in system, please call service station. → Sea water temperature in heat mode too high (>17°C), heat mode not possible.
<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 (external or internal) defective or absent.
<b>A10</b>	Temperature sensor at evaporator defective or absent.
<b>CA11</b>	All compressors have been deactivated. Re-activate with the <b>code</b> menu
<b>ba11</b>	Blower operation not yet active (not a system stop). The current chilled water temperature does not correlate with the programmed room-temperature.