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#### Dear customers, dear partners,

Our Webasto marine team would like to thank you again for your periodical feedback on our products and for sharing your future needs. This unique customer-supplier cooperation brings an immense value to us and is one of the main input for our future product roadmaps. Your ideas to improve comfort on board, your needs to simplify your systems, your suggestions to facilitate installations and ease diagnosis, even from a remote location are indeed systematically studied with high attention. Our engineering teams are committed to develop innovative technological solutions to match or to surpass your expectations.

Our long-term innovation-based growth strategy is based on this partnership approach. Our commitment to innovation has been making up our great success over the last years and hopefully for many more years to come. We do hope that the numerous new products which are once again being launched in this catalog will match your initial expectations and enhance our complete on board climate solutions with many additional benefits valued by your own customers.

In this new marine catalog 2023/2024, we keep on with our innovation pace not only by introducing several new products to our climate control range but also by launching the new 50-Series sunroof.

You will discover in the following pages our new BlueCool V-PRO chiller system which consists of four different modular chiller units which may be flexibily combined to provide up to 1 Mio. BTU/h. The V-PRO system comes with a number of intelligent functions and optional accessories to match your demands.

The BlueCool Connect has already proven to be an excellent choice for remote operation and monitoring your boat's A/C system. Now, the product has received an update featuring an NMEA2000 interface and also offering a plug & play solution for Raymarine, Simrad, Lowrance and B & G displays with HTML5 functionality.

We are launching a new line of integrated heaters with enhanced versatility and modular features. The new HTX units offer double combination with radial blowers and axial blowers to meet all expectations between silent functioning and powerful air blow. HTX units are very versatile, both 12V and 24V are available and can be mounted in multiple positions, dimensions and performances are comparable to the ones of the equivalent competitors' products. A large variety of modular accessories is available in order to satisfy the multiple combinations required by the market.

Based on the success of our Folding Shade 2500 system which was appreciated by many customers worldwide we have extended our range and introduced the Folding Shade 3500. This shade has a maximum dimension of 3.5 meter in width and 5 meter length! In this catalogue we are now revealing our latest innovation: the Telescopic Shade 2500. It is the perfect solution to provide shade on the rear deck or the flybridge and can be operated at the touch of a button.

The purpose of this catalog is not only to give you a complete, practical insight into our large marine product portfolio but also to enable you to build complete climate solutions adapted to the demands of your customers for heating, cooling, light and fresh air on board. Should you require a custom-made solution for a special project, our engineering teams also have the capability to develop customized products to support you. Just get in touch with us!

International service and consistent quality of support are an essential part of our customer excellence programs. The marine catalog is only one element of the complete set of tools and services with which we systematically provide to every Webasto marine partner. Please don't hesitate to register for our technical training sessions, to request access to our dealer portal, to download our diagnosis and calculation tools, our product information and marketing materials. We are here to support your business so that your customers can enjoy the same high quality service with our products worldwide. Our financial strength, our unique product portfolio, our large international dealer network and our understanding of your key strategic challenges for the future have positioned us as your supplier of choice when it comes to complete comfort solutions.

We would like to thank you again for your continuous feedback and your trust in our products. Your success is our success!

#### Your Webasto marine team

What's new?



The new marine catalog provides you with detailed information on our core products as well as on our added-value accessories. You can then build safe applications and deliver fast, professional assistance to your own customers.

The V-PRO Series is the new variable speed chiller system to build large, chilled water systems.

This chiller system consists of four different modular sizes which may be flexibly combined to provide up to 1 Mio. BTU/h. The V-PRO system comes with a number of intelligent functions and optional accessories to match your demands.

#### New BlueCool V-PRO Series Four units – two sizes – ONE system

- Four modular units of 60, 90, 130 or 180 kBTU/h, providing up to 1 Mio. BTU/h of system cooling capacity
- Variable speed technology for best efficiency
- Highest cooling performance with high efficiency inverter, variable speed scroll compressor and energy saving ECO modes

#### High system availability

 Fully autonomous units for high system availability and continuous operation

#### **Unified hydraulic connection**

 Layout of hydraulic connection is identical for all four models

#### Water flow monitoring

 Water flow monitoring integrated for safe and reliable operation

#### Powerful user interface

- Full color touch-screen display
- Fully redundant, each shows overall system data
- Multiple languages

#### **Outstanding corrosion resistance**

Titanium sea water heat exchanger for outstanding corrosion resistance

#### **Combination of autonomous units**

Simple network cable immediately creates overall system control

#### **BlueCool Connect and Connect App**

- Remote access to all BlueCool Series
- Use any device like Smartphone, Tablet or Computer
- Central monitoring via your Multi-Functional-Display e.g. Garmin, Raymarine, Simrad, Lowrance and B&G with HTML5 functionality
- Remote diagnosis and monitoring system
- NMEA 2000 interface

#### Integrated heat exchangers HTX

- Heating solutions with high performance heating from 3.3 kW to 6.6 kW
- Versatile installation options for optimum integration in diverse boat designs
- Durable, highest quality components from proven series production
- No maintenance needed
- Versatility through optimal combination of power and noise

### New Shading Solutions New since 2022: Telescopic Shade 2500

#### = 12 \/ newered system fully retractable and

- 12 V powered system, fully retractable and customizable widths up to 8 feet (2.500 mm)
- Marine-grade stainless steel tubing
- High-quality, eco-friendly shade fabric
- Easy installation
- Easily retrofitted or integrated by boat builders
- Options for any size or style boat (with an overhead structure)

#### New 50-Series

- Standard high-end product with Dark Grey Glass and Motor cover
- Extremely robust for use in faster boats
- Attractive dimensions and shape to fit in majority of all boat models
- Triple Black Product finish in line with latest design trends
- Automotive based technology and Plug & Play installation
- Suitable for boats up to Category A
- Optional fixed glass panel for full panoramic view



BlueCool V-PRO Series





BlueCool Connect App



Integrated heat exchangers HTX



50-Series

## We are here to help develop your business





### Marine website webasto-marine.com

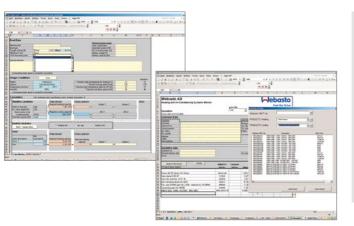
- Quick and appealing product guide
- International dealer locator
- Multi-lingual access
- Marine configurator



#### **Dealer portal**

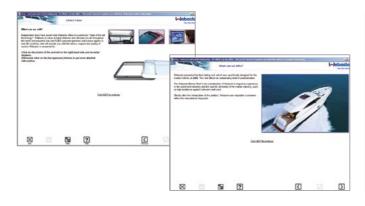
#### http://dealers.webasto.com

- Easy access to complete Webasto documentation
- Powerful search and download tools
- Login-protected access to technical data and applications



#### Webasto quote generator

- All the Webasto expertise at your finger tips
- Accurate quotations documented professionally
- Quick response to your customer requests
- Fresh air calculation included
- Accurate calculation of the cooling or heating demand
- The Webasto quote generator also exists for professional roof quotations



### Marine training program and technical guidelines

- Powerful product training also web-training
- Regular updates on new features
- Various modules adapted to audience
- Important guidelines for safe application engineering
- CAD model downloads



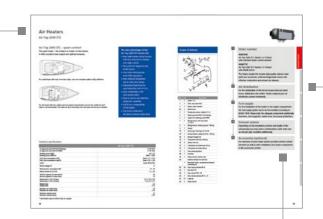


### Marketing documentation and materials

- Marine marketing materials: product brochures, flyers, advertising templates, banners
- Marine animations
- Product data sheets
- Dealer packages

This catalog has been designed to help you in defining a complete comfort solution for boats and yachts.

Page header indicates which part andtype of information you reached within each product section: Product overview, scopes of delivery, accessories, etc.



Colored labels give you direct access to the product range

Page indication for fast access to accessories, etc.



### **Heating products**

| Which heater for your boat?      | 1 |
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### Which heater for your boat?



Along with specific marine installation kits we deliver innovative high-quality air and water heaters, which contribute to the enhancement of comfort on board. These two technologies offer economical, powerful and reliable solutions with heating outputs ranging from 2 kW up to 120 kW. Thus, there is a Webasto heating solution for various needs.

#### Air heaters





- Short heating-up times thanks to effective output
- Available as a complete installation kit for quick and simple retrofitting
- Dehumidification of the cabins
- Silent operation
- Ideal for sailing and motor boats up to 45 feet
- Constant coziness thanks to an electronic thermostat
- Low operating costs
- Practical ventilation function
- Meet current requirements and standards relating to boats
- Simple to install
- Compact, space-saving design

#### **Water heaters**



- Heating comfort just like at home
- Even distribution of warmth by means of radiators
- Hot water for the shower and galley
- Silent operation
- Space-saving installation in the engine room
- Excellent possibilities for combining with Webasto BlueCool air-conditioning systems
- Separate temperature control in every cabin
- Low fuel consumption
- Compact design
- Preheating of the engine possible to avoid cold starts
- Meet current requirements and standards relating to boats
- Robust aluminum casing, resistant to high temperature or salt

#### Fresh-air or Sealed control electronics Precise electronic temperature Continuous heating control system maintains a recirculated and connectors withstand power output provides air-intake marine environment constant cabin temperature exactly the heating through stepless modulation energy needed Quiet operation High air flow output Robust composite Very low electrical casing, resistant to high power and fuel due to powerful temperature or salt consumption radial blower



#### 3 Heaters in 1 with the MultiControl!

- Available as an upgrade on all Webasto Air Top Evo heaters
- Multi mode operation to match your individual heating power demands:
- ECO mode for reduced electrical power consumption
- Boost mode for maximum heating power output
- Ventilation mode to provide fresh and cool air to your cabins on a hot day



#### ThermoConnect TCon2

- With our ThermoConnect app, you can control your water or air heater smarter and more flexible than ever before.
- Available for iOS and Android devices:



App Store



### Air heaters

### Product overview



Air Top 2000 STC See page 18



Air Top Evo 40

See page 20

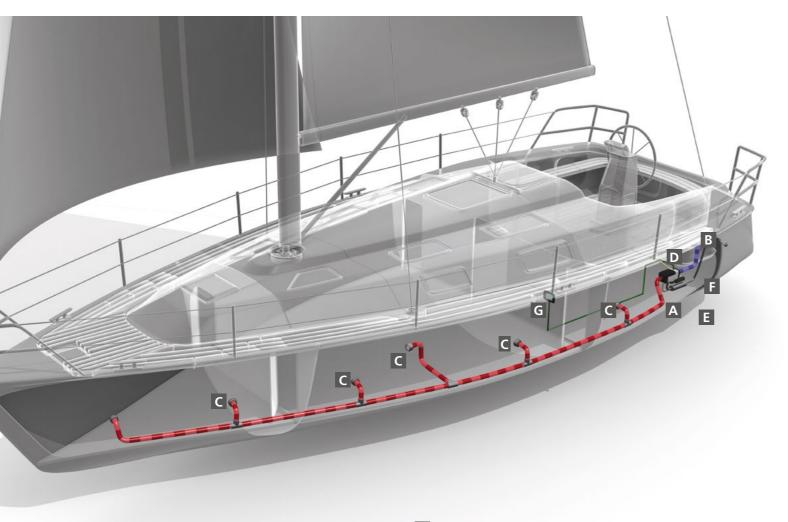
Air Top Evo 55

See page 22

#### **Technical specifications**

|  | Air Top 2000 STC    | Air Top Evo 40*           | Air Top Evo 55**           |
|--|---------------------|---------------------------|----------------------------|
| EC approval mark ECE R122 (Heating)      | E1 00 0216          | E1 00 0385                | E1 00 0386                 |
| EC approval mark ECE R10 (EMC)           | E1 06 1085          | E1 05 5529                | E1 05 5529                 |
| Heat output, control range/boost (kW)    | 0.9 – 2.0           | 1.5 – 3.5/4.0*            | 1.5 – 5.0/5.5**            |
| Heat output, control range/boost (BTU/h) | 3,000 – 7,000       | 5,100 – 12,000/13,600*    | 5,100 – 17,000/18,800**    |
| Fuel, fuel consumption (I/h)             | Diesel, 0.12 – 0.24 | Diesel, 0.18 – 0.43/0.49* | Diesel, 0.18 – 0.61/0.67** |
| Fuel, fuel consumption (gal/h)           | Diesel, 0.03 – 0.06 | Diesel, 0.04 – 0.11/0.12* | Diesel, 0.04 – 0.15/0.17** |
| Rated voltage (V)                        | 12                  | 12, 24                    | 12, 24                     |
| Rated power consumption (W)              | 14 – 29             | 15 – 40/55*               | 15 – 95/130**              |
| Rated current (for 12 V) (A)             | 1.2 – 2.4           | 1.3 – 3.3/4.6*            | 1.3 – 7.9/10.8**           |
| Rated current (for 24 V) (A)             | -                   | 0.6 – 1.7/2.3*            | 0.6 – 4.0/5.4**            |
| Air flow against 0.5 mbar (m³/h)         | 93                  | 132/140*                  | 200/220**                  |
| Air flow against 0.5 mbar (cfm)          | 55                  | 77.7/82.4*                | 117.7/129.4**              |
| Dimensions L x W x H (mm)                | 310 x 120 x 118     | 423 x 148 x 162           | 423 x 148 x 162            |
| Dimensions L x W x H (inch)              | 12.2 x 4.7 x 4.7    | 16.6 x 5.8 x 6.3          | 16.6 x 5.8 x 6.3           |
| Weight (kg)                              | 2.6                 | 5.9                       | 5.9                        |
| Weight (lbs)                             | 5.73                | 13                        | 13                         |
| Diameter air outlet (mm)                 | 60                  | 90                        | 90                         |
| Diameter air outlet (inch)               | 2.36                | 3.54                      | 3.54                       |
| Diameter exhaust (mm)                    | 22                  | 24                        | 24                         |
| Diameter exhaust (inch)                  | 0.87                | 0.94                      | 0.94                       |

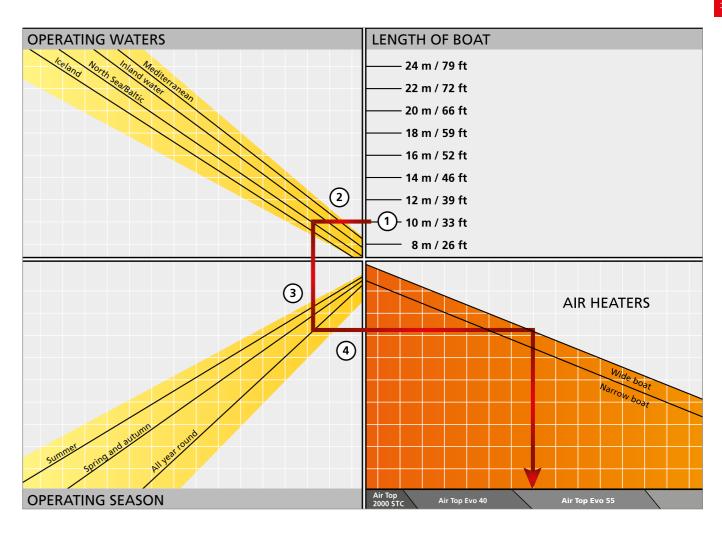
### Application concept



- A Space-saving and inconspicuous installation
- B Intake for fresh air from outside
- C Outlets for even distribution of warm air
- D Safe and clean: the fuel system
- E Combustion-air intake
- F Stainless steel exhaust
- G Controls simple and logical to use

### Air heaters

### Selection tool



#### What's the best air heating system for my boat?

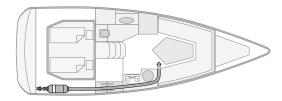
- 1. Select the length corresponding to your boat.
- 2. From there, trace a line to the left until you come to the line corresponding to the waters in which you plan to operate.
- 3. From there, trace a line vertically downwards until you come to the line corresponding to the season in which you plan to operate.
- 4. From there, trace a line to the right: You find the line corresponding to your type of boat in the upper section and then trace a line vertically downwards that's the recommended system.

### Air Top 2000 STC

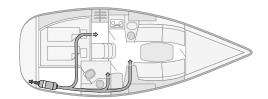


#### Air Top 2000 STC – quiet comfort

The quiet heater – the smallest air heater on the market. It offers excellent heat output and optimal economy.



For small boats with only one main cabin, one non-closable outlet is fully sufficient.



For this boat with two cabins and one head compartment one hot air outlet for each cabin is recommended. The main air duct should go into the salon and be non-closable.

### The new advantages of the Air Top 2000 STC marine kits

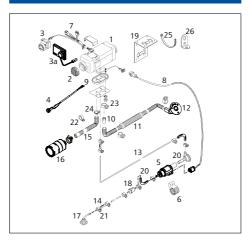
- Two ports for diagnosis and MultiControl
- Low noise fuel pump with PWM operation
- Transparent fuel hose for easy inspection (not in U.S.)
- Easy combination with MultiControl
- Easy to service and maintain, diagnostic capability
- Full W-bus compatibility of the heater
- Improved combustion air silencer reduces noise level

#### **Technical specifications**

|                                      | Air Top 2000 STC  |
|--------------------------------------|-------------------|
| EC approval mark ECE R122 (Heating)  | E1 00 0216        |
| EC approval mark ECE R10 (EMC)       | E1 06 1085        |
| Heating power, control range (kW)    | 0.9 – 2.0         |
| Heating power, control range (BTU/h) | 3,000 – 7,000     |
| Fuel consumption (I/h)               | 0.12 – 0.24       |
| Fuel consumption (gal/h)             | 0.03 – 0.06       |
| Fuels*                               | Diesel DIN EN 590 |
| Rated voltage (V)                    | 12                |
| Rated power consumption (W)          | 14 – 29           |
| Rated current at 12 V (A)            | 1.2 – 2.4         |
| Air flow against 0.5 mbar (m³/h)     | 93                |
| Air flow against 0.5 mbar (cfm)      | 55                |
| Dimensions L x W x H (mm)            | 310 x 120 x 118   |
| Dimensions L x W x H (inch)          | 12.2 x 4.7 x 4.7  |
| Weight (kg)                          | 2.6               |
| Weight (lbs)                         | 5.73              |
| Diameter air outlet (mm)             | 60                |
| Diameter air outlet (inch)           | 2.36              |
| Diameter exhaust (mm)                | 22                |
| Diameter exhaust (inch)              | 0.87              |

<sup>\*</sup> Information about further fuels on request.

#### Scopes of delivery



| Item | Qty | Description                                |  |  |  |  |  |
|------|-----|--|--|--|--|--|--|
| 1    | 1   | Heater 12 V                                |  |  |  |  |  |
| 2    | 1   | Grille, clips open Ø 60                    |  |  |  |  |  |
| 3    | 1   | Heater control element                     |  |  |  |  |  |
| 3a   | 1   | MultiControl                               |  |  |  |  |  |
| 4    | 1   | Temperature sensor, external 2.5 m         |  |  |  |  |  |
| 5    | 1   | Fuel pump DP42.4 with damper               |  |  |  |  |  |
| 6    | 1   | Support for fuel pump EPDM                 |  |  |  |  |  |
| 7    | 1   | Wiring harness with fuse holder<br>12/24 V |  |  |  |  |  |
| 8    | 1   | Wiring harness (fuel pump) 7,000 lg        |  |  |  |  |  |
| 9    | 1   | Gasket                                     |  |  |  |  |  |
| 10   | 1   | Exhaust gas reducing bush 22/24            |  |  |  |  |  |
| 11   | 1   | Exhaust silencer, leakproof Ø 24; 1,800 lg |  |  |  |  |  |
| 12   | 1   | Exhaust through hull                       |  |  |  |  |  |
| 13   | 1   | Transparent fuel hose: 5,000 lg            |  |  |  |  |  |
| 14   | 5   | Rubber fuel hose                           |  |  |  |  |  |
| 15   | 1   | Combustion air intake hose 300 lg          |  |  |  |  |  |
| 16   | 1   | Combustion air intake silencer             |  |  |  |  |  |
| 17   | 1   | Tank extracting device                     |  |  |  |  |  |
| 18   | 1   | Fuel filter                                |  |  |  |  |  |
| 19   | 1   | Heater bracket stainless steel             |  |  |  |  |  |
| 20   |     | Vibration damper for fuel hose             |  |  |  |  |  |
|      | 1   | Bag (with mech. mounting hardware)         |  |  |  |  |  |
|      |     | consisting of:                             |  |  |  |  |  |
| 21   | 10  | Hose clamp (stainless) Ø 14                |  |  |  |  |  |
| 22   | 1   | Pipe clip Ø 30                             |  |  |  |  |  |
| 23   | 1   | Hose clamp Ø 26 – 28                       |  |  |  |  |  |
| 24   | 1   | Hose clamp (stainless) Ø 16 – 27           |  |  |  |  |  |
| 25   | 17  | Cable tie                                  |  |  |  |  |  |
| 26   | 2   | Angle bracket                              |  |  |  |  |  |

#### Order number

#### 9032164C

Air Top 2000 STC Marine 12 V Diesel with standard heater control element

#### 9034777C

Air Top 2000 STC Marine 12 V Diesel with MultiControl

The Marine heater kits include high quality stainless steel parts and accessories, external temperature sensor and effective combustion and exhaust air silencers.

#### Air distribution

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For the distribution of the hot air in your boat you need hoses, distributors and outlets. Please compose your air distribution system individually.

#### **Fuel supply**

For the installation of the heater in the engine compartment the fuel supply system has to be fire-resistant according to EN ISO 7840. Please order the adequate components additionally (fuel lines, fuel supply kit, rubber hose, fuel pump protection).

#### **Exhaust system**

Depending on the installation position and length of the exhaust pipe you may need a condensation water drain and an exhaust pipe insulation additionally.

#### **Accessories (optional)**

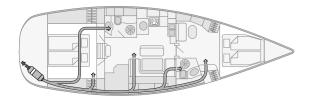
For extension of your heater system you find comfort control elements as well as other installation and system components in the accessories section.

### Air Top Evo 40

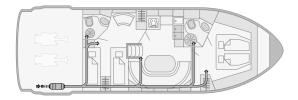


#### Air Top Evo 40 – the smart multi mode heater

High-output, compact and quiet, the heater is ideally suited for the most rigorous requirements. It can be upgraded with the MultiControl to offer additional operation modes depending on individual heating requirements.



Each cabin and head compartment has its own air outlet. One outlet should be non-closable. The temperature sensor as well as the main air outlet is in the salon. The fresh air is taken in via the rear locker from outside



In motor boats, the heater is usually placed in the engine compartment. The fresh air has to be taken in from outside the engine room. Special attention needs to be paid to a fire-resistant fuel supply system. One of the outlets must be non-closable

#### The advantages of the Air Top Evo 40:

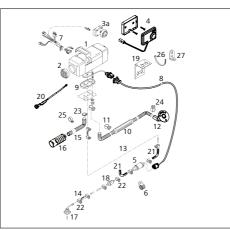
- 4.0 kW power for fast heating
- Intelligent Blower Control
- Improved air intake silencer

- lower blower speed and silent fuel pump (DP42.4)

### Very low electrical power

- consumption due to new
- Automatic cold start function for quick warm-up
- Vibration dampers for fuel line
- Compatible to MultiControl digital user interface
- Very silent operation due to

### **Scopes of delivery**



| ltem | Qty | Description   |  |  |  |  |  |
|------|-----|---|--|--|--|--|--|
| 1    | 1   | Heater 12 or 24 V                                       |  |  |  |  |  |
| 2    | 1   | Grille  |  |  |  |  |  |
| 3a   | 1   | Standard heater control element                         |  |  |  |  |  |
| 4    | 1   | MultiControl  |  |  |  |  |  |
| 5    | 1   | Fuel pump DP42.4  |  |  |  |  |  |
| 6    | 1   | Support for fuel pump EPDM                              |  |  |  |  |  |
| 7    | 1   | Wiring harness (heater); 9,500 lg                       |  |  |  |  |  |
| 8    | 1   | Wiring harness (fuel pump) 7,000 lg                     |  |  |  |  |  |
| 9    | 1   | Gasket  |  |  |  |  |  |
| 10   | 1   | Exhaust silencer leakproof 1,800 lg                     |  |  |  |  |  |
| 11   | 1   | Hose clamp Ø 28 – 35                                    |  |  |  |  |  |
| 12   | 1   | Exhaust through hull                                    |  |  |  |  |  |
| 13   | 1   | Transparent fuel hose 12 V: 5,000 lg;<br>24 V: 8,000 lg |  |  |  |  |  |
| 14   | 5   | Rubber fuel hose  |  |  |  |  |  |
| 15   | 1   | Combustion air intake hose 300 lg                       |  |  |  |  |  |
| 16   | 1   | Combustion air intake silencer                          |  |  |  |  |  |
| 17   | 1   | Tank extracting device                                  |  |  |  |  |  |
| 18   | 1   | Fuel filter   |  |  |  |  |  |
| 19   | 1   | Heater bracket stainless steel                          |  |  |  |  |  |
| 20   | 1   | Temperature sensor, external 2.5 m                      |  |  |  |  |  |
| 21   | 2   | Vibration damper for fuel hose                          |  |  |  |  |  |
|      | 1   | Bag (with mech. mounting hardware) consisting of:       |  |  |  |  |  |
| 22   | 10  | Hose clamp (stainless steel) Ø 14                       |  |  |  |  |  |
| 23   | 1   | Hose clamp Ø 16 – 27 (combustion air)                   |  |  |  |  |  |
| 24   | 2   | Hose clamp Ø 26 – 28 (exhaust)                          |  |  |  |  |  |
| 25   | 1   | Pipe clip (stainless steel) Ø 30                        |  |  |  |  |  |
| 26   | 17  | Cable tie   |  |  |  |  |  |
| 27   | 2   | Angle bracket   |  |  |  |  |  |
|      |     |   |  |  |  |  |  |

#### Order number

#### 9029249A

Air Top Evo 40 Marine 12 V Diesel with standard heater control element

#### 9029250A

Air Top Evo 40 Marine 24 V Diesel with standard heater control element

#### 9036994A

Air Top Evo 40 Marine 12 V Diesel with MultiControl

#### 9036995A

Air Top Evo 40 Marine 24 V Diesel with MultiControl

The Marine heater kits include high quality stainless steel parts and accessories, long wiring harness, external temperature sensor and effective combustion and exhaust air silencers.

#### Air distribution

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For the distribution of the hot air in your boat you need hoses, distributors and outlets. Please compose your air distribution system individually.

#### Fuel supply

For the installation of the heater in the engine compartment the fuel supply system has to be fire-resistant according to EN ISO 7840. Please order the adequate components additionally (fuel lines, fuel supply kit, rubber hose, fuel pump protection).

#### **Exhaust system (optional)**

Depending on the installation position and length of the exhaust pipe you may need a condensation water drain and an exhaust pipe insulation additionally.

#### **Accessories (optional)**

For extension of your heater system you find comfort control elements as well as other installation and system components in the accessories section.

#### **Technical specifications**

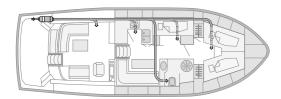
|  | Air Top Evo 40*        |  |  |  |  |
|--|------------------------|--|--|--|--|
| EC approval mark ECE R122 (Heating)        | E1 00 0385             |  |  |  |  |
| EC approval mark ECE R10 (EMC)             | E1 05 5529             |  |  |  |  |
| Heating power, control range/boost (kW)    | 1.5 – 3.5/4.0*         |  |  |  |  |
| Heating power, control range/boost (BTU/h) | 5,100 – 12,000/13,600* |  |  |  |  |
| Fuel consumption (I/h)                     | 0.18 - 0.43/0.49*      |  |  |  |  |
| Fuel consumption (gal/h)                   | 0.04 – 0.11/0.12*      |  |  |  |  |
| Fuels**                                    | Diesel DIN EN 590      |  |  |  |  |
| Rated voltage (V)                          | 12, 24                 |  |  |  |  |
| Rated power consumption (W)                | 15 – 40/55*            |  |  |  |  |
| Rated current at 12 V (A)                  |                        |  |  |  |  |
| Rated current at 24 V (A)                  | 0.6 – 1.7/2.3*         |  |  |  |  |
| Air flow against 0.5 mbar (m³/h)           | 132/140*               |  |  |  |  |
| Air flow against 0.5 mbar (cfm)            | 77.7/82.4*             |  |  |  |  |
| Dimensions L x W x H (mm)                  | 423 x 148 x 162        |  |  |  |  |
| Dimensions L x W x H (inch)                | 16.6 x 5.8 x 6.3       |  |  |  |  |
| Weight (kg)                                | 5.9                    |  |  |  |  |
| Weight (lbs)                               | 13                     |  |  |  |  |
| Diameter air outlet (mm)                   | 90                     |  |  |  |  |
| Diameter air outlet (inch)                 |                        |  |  |  |  |
| Diameter exhaust (mm)                      | 24                     |  |  |  |  |
| Diameter exhaust (inch)                    | 0.94                   |  |  |  |  |

### Air Top Evo 55

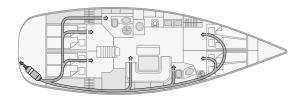


#### Air Top Evo 55 – for extreme conditions

Extremely powerful, compact and quiet, this heater ensures a comfortable climate for larger yachts even under the harshest conditions, and satisfies the most demanding requirements. It can be upgraded with the new multi mode user interface to offer additional operation modes depending on individual heating requirements. Two Air Top heaters can be combined into one system for increased heating demand (up to 11 kW). The whole system can be operated via one central user interface.



Each of this five cabin yacht has an individual air outlet. The air duct to the salon as well as the front should have at least 80 mm  $\varnothing$  to ensure a good air flow and one of the outlets should be non-closable. The fresh air is taken in via the rear locker from outside.

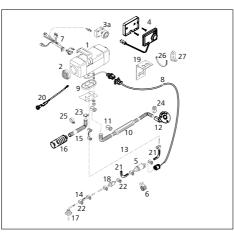


With the heater in the engine compartment, the fuel supply system must be designed to be fire-resistant. The air outlet to the salon has to be non-closable. Air outlets for the other cabins or the head compartment may be closable to enable individual heat regulation.

### The advantages of the Air Top Evo 55:

- 5.5 kW power for fast heating
- Very low electrical power consumption due to new Intelligent Blower Control
- Automatic cold start function for quick warm-up
- Improved air intake silencer
- Vibration dampers for fuel line
- Compatible to MultiControl digital user interface
- Very silent operation due to lower blower speed and silent fuel pump (DP42)

#### Scopes of delivery



| ltem | Qty | Description                                       |
|------|-----|---|
| 1    | 1   | Heater 12 or 24 V                                 |
| 2    | 1   | Grille  |
| 3a   | 1   | Standard heater control element                   |
| 4    | 1   | MultiControl                                      |
| 5    | 1   | Fuel pump DP42.4                                  |
| 6    | 1   | Support for fuel pump EPDM                        |
| 7    | 1   | Wiring harness (heater); 9,500 lg                 |
| 8    | 1   | Wiring harness (fuel pump) 7,000 lg               |
| 9    | 1   | Gasket  |
| 10   | 1   | Exhaust silencer leakproof 1,800 lg               |
| 11   | 1   | Hose clamp Ø 28 – 35                              |
| 12   | 1   | Exhaust through hull                              |
| 13   | 1   | Fuel hose 12 V: 5,000 lg; 24 V: 8,000 lg          |
| 14   | 5   | Rubber fuel hose                                  |
| 15   | 1   | Combustion air intake hose 300 lg                 |
| 16   | 1   | Combustion air intake silencer                    |
| 17   | 1   | Tank extracting device                            |
| 18   | 1   | Fuel filter                                       |
| 19   | 1   | Heater bracket stainless steel                    |
| 20   | 1   | Temperature sensor, external 2.5 m                |
| 21   | 2   | Vibration damper for fuel hose                    |
|      | 1   | Bag (with mech. mounting hardware) consisting of: |
| 22   | 10  | Hose clamp (stainless steel) Ø 14                 |
| 23   | 1   | Hose clamp Ø 16 – 27 (combustion air)             |
| 24   | 2   | Hose clamp Ø 26 – 28 (exhaust)                    |
| 25   | 1   | Pipe clip (stainless steel) Ø 30                  |
| 26   | 17  | Cable tie   |
| 27   | 2   | Angle bracket                                     |

#### Order number

#### 9029256A

Air Top Evo 55 Marine 12 V Diesel with standard heater control element

#### 9029257A

Air Top Evo 55 Marine 24 V Diesel with standard heater control element

#### 9036996A

Air Top Evo 55 Marine 12 V Diesel with MultiControl

#### 9036998A

Air Top Evo 55 Marine 24 V Diesel with MultiControl

The Marine heater kits include high quality stainless steel parts and accessories, long wiring harness, external temperature sensor and effective combustion and exhaust air silencers.

#### Air distribution

For the distribution of the hot air in your boat you need hoses, distributors and outlets. Please compose your air distribution system individually.

#### Fuel supply

2

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5

For the installation of the heater in the engine compartment the fuel supply system has to be fire-resistant according to EN ISO 7840. Please order the adequate components additionally (fuel lines, fuel supply kit, rubber hose, fuel pump protection).

#### **Exhaust system (optional)**

Depending on the installation position and length of the exhaust pipe you may need a condensation water drain and an exhaust pipe insulation additionally.

#### Accessories (optional)

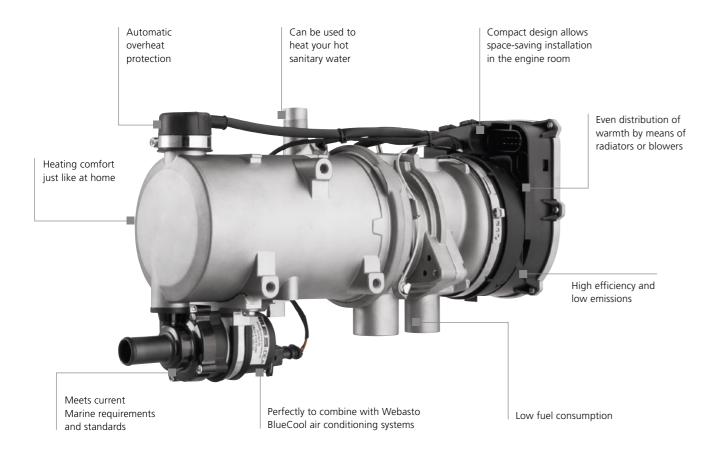
For extension of your heater system you find comfort control elements as well as other installation and system components in the accessories section.

#### **Technical specifications**

|  | Air Top Evo 55*        |
|--|------------------------|
| EC approval mark ECE R122 (Heating)        | E1 00 0386             |
| EC approval mark ECE R10 (EMC)             | E1 05 5529             |
| Heating power, control range/boost (kW)    | 1.5 – 5.0/5.5*         |
| Heating power, control range/boost (BTU/h) | 5,100 – 17,000/18,800* |
| Fuel consumption (I/h)                     | 0.18 - 0.61/0.67*      |
| Fuel consumption (gal/h)                   | 0.04 – 0.15/0.17*      |
| Fuels**                                    | Diesel DIN EN 590      |
| Rated voltage (V)                          | 12, 24                 |
| Rated power consumption (W)                | 15 – 95/130*           |
| Rated current at 12 V (A)                  | 1.3 – 7.9/10.8*        |
| Rated current at 24 V (A)                  | 0.6 – 4.0/5.4*         |
| Air flow against 0.5 mbar (m³/h)           | 200/220*               |
| Air flow against 0.5 mbar (cfm)            | 117.7/129.5*           |
| Dimensions L x W x H (mm)                  | 423 x 148 x 162        |
| Dimensions L x W x H (inch)                | 16.6 x 5.8 x 6.3       |
| Weight (kg)                                | 5.9                    |
| Weight (lbs)                               | 13                     |
| Diameter air outlet (mm)                   | 90                     |
| Diameter air outlet (inch)                 | 3.54                   |
| Diameter exhaust (mm)                      | 24                     |
| Diameter exhaust (inch)                    | 0.94                   |

<sup>\*</sup> Boost power level for a maximum duration of 30 min. 
\*\* Information about further fuels on request.

#### Thermo Pro 90: The renowned





Full control – everywhere
With our ThermoConnect TCon2 you operate
your water or air heater easily with your smartphone.
Never board a cold vessel anymore!

### **Water heaters**

### Product overview



Thermo Top Evo Thermo Pro 50 Eco

See page 30



Thermo Pro 90

See page 32



Thermo Top Pro 120/150

See page 34

### Product overview

|                               | Par            | t no.          | EC approval mark   | Heat ou                              | ıtput                  | Fuel,<br>Fuel consumption                                   | Rated<br>voltage | Rated pow<br>consumpti  |  | Flow rate of coolant pumps                | Dimensions heater<br>(L x W x H)            | Dimensions<br>control<br>unit with<br>mounting<br>(L x W x H) | Weight heater<br>incl. fuel pump |
|-------------------------------|----------------|----------------|--|--------------------------------------|------------------------|---|------------------|---|--|---|---|---|----------------------------------|
|                               | 12 V<br>Diesel | 24 V<br>Diesel |  | part load                            | full load              |   |                  | part load   | full load                                    |   |   |   |                                  |
| Thermo Top Evo Marine         | 9042322B       | -              | E1 00 0258 (ECE R122)<br>E1 04 5627 (ECE R10)                | 1.8 kWkW<br>6,100 BTU/h              | 5.0 kW<br>17,100 BTU/h | Diesel, 0.22– 0.62 l/h<br>Diesel, 0.06 – 0.16 gal/h         |                  | 10 W<br>0.8 amps  | 33 W<br>2.7 amps                             | 500 l/h against 0.14 bar<br>2.2 gal/min   | 218 x 91 x 147 mm<br>8.6 x 3.6 x 5.8 inch   | 68 x 48 x 15 mm<br>2.7 x 1.9 x 0.6 inch                       | 2.1 kg<br>4.6 lbs                |
| Thermo Pro 50 Eco<br>Marine   | -              | 9028080E       | E1 00 0471 (ECE R122)<br>E1 06 7609 (ECE R10)                | 2.5 kW<br>8,500 BTU/h                | 5.0 kW<br>17,100 BTU/h | Diesel, 0.30 – 0.60 l/h<br>Diesel, 0.08 – 0.16 gal/h        |                  | 28 W<br>1.2 amps  | 46 W<br>1.9 amps                             | 500 l/h against 0.14 bar<br>2.2 gal/min   | 218 x 91 x 144 mm<br>8.6 x 3.6 x 5.7 inch   | -   | 2.2 kg<br>4.9 lbs                |
| Thermo Pro 90 Marine          | 9029940C       | 9029941C       | E1 00 0320 (ECE R122)<br>E1 04 6196 (ECE R10)                | 1.8 – 7.6 kW<br>6,100 – 26,000 BTU/h | 9.1 kW<br>31,000 BTU/h | Diesel 0.18 – 1.08/1.3 l/h<br>Diesel 0.05 – 0.24/0.34 gal/h |                  | 20 – 83 W<br>3.0 – 6.9 amps at 12 V<br>1.5 – 3.5 amps at 24 V | 90 W<br>7.5 amps at 12 V<br>3.8 amps at 24 V | 700 l/h against 0.3 bar<br>3.1 gal/min    | 385 x 131 x 232 mm<br>15.2 x 5.2 x 9.1 inch | 134 x 53 x 90 mm  | 5.3 kg<br>11.7 lbs               |
| Thermo Pro 90 Chiller         | 9029942C       | 9029943C       | E1 00 0320 (ECE R122)<br>E1 04 6196 (ECE R10)                | 1.8 – 7.6 kW<br>6,100 – 26,000 BTU/h | 9.1 kW<br>31,000 BTU/h | Diesel 0.18 – 1.08/1.3 l/h<br>Diesel 0.05 – 0.24/0.34 gal/h |                  | 20 – 83 W<br>3.0 – 6.9 amps at 12 V<br>1.5 – 3.5 amps at 24 V | 90 W<br>7.5 amps at 12 V<br>3.8 amps at 24 V | -   | 385 x 131 x 219 mm<br>15.2 x 5.2 x 8.6 inch | 134 x 53 x 90 mm  | 4.9 kg<br>10.8 lbs               |
| Thermo Top Pro 120            | 9035585A       | 9035584A       | E1 00 0480,<br>E1 00 0481 (ECE R122)<br>E1 05 7735 (ECE R10) | 12.0 k)<br>40,950 Bī                 |                        | Diesel, 1.6 l/h<br>Diesel, 0.42 gal/h                       |                  | 80 W<br>6.7 amps at 12<br>3.3 amps at 24                      |  | 1,500 l/h against 0.56 bar<br>6.6 gal/min | 470 x 200 x 200 mm<br>18.5 x 7.9 x 7.9 inch | -   | 11.7 kg<br>25.7 lbs              |
| Thermo Top Pro 120<br>Chiller | _              | 9042807A       | E1 00 0480,<br>E1 00 0481 (ECE R122)<br>E1 05 7735 (ECE R10) | 12.0 k\<br>40,950 BT                 |                        | Diesel, 1.6 l/h<br>Diesel, 0.42 gal/h                       |                  | 80 W<br>3.3 amps at 24  | V  | -   | 470 x 200 x 200 mm<br>18.5 x 7.9 x 7.9 inch | -   | 11.7 kg<br>25.7 lbs              |
| Thermo Top Pro 150            | 9035583A       | 9035582A       | E1 00 0480,<br>E1 00 0481 (ECE R122)<br>E1 05 7735 (ECE R10) | 15.0 k\<br>51,180 BT                 |                        | Diesel, 1.7 l/h<br>Diesel, 0.45 gal/h                       |                  | 100 W<br>8.3 amps at 12<br>4.2 amps at 24                     |  | 1,500 l/h against 0.56 bar<br>6.6 gal/min | 470 x 200 x 200 mm<br>18.5 x 7.9 x 7.9 inch | -   | 11.7 kg<br>25.7 lbs              |





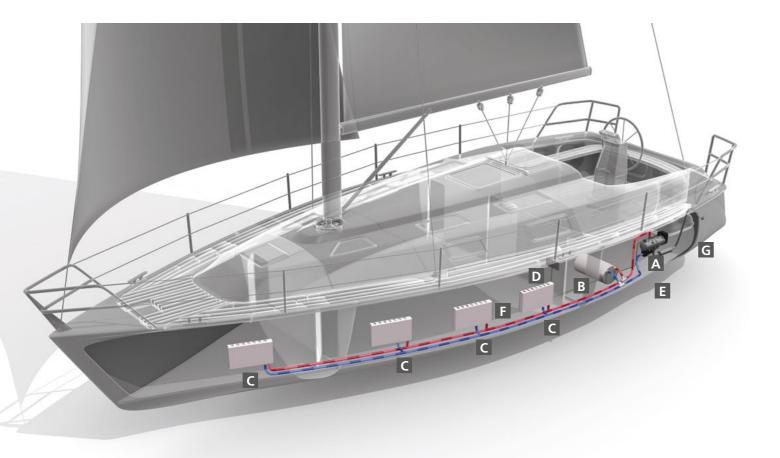


Thermo Top Evo Marine

Thermo Pro 90 Marine

Thermo Top Pro 120/150

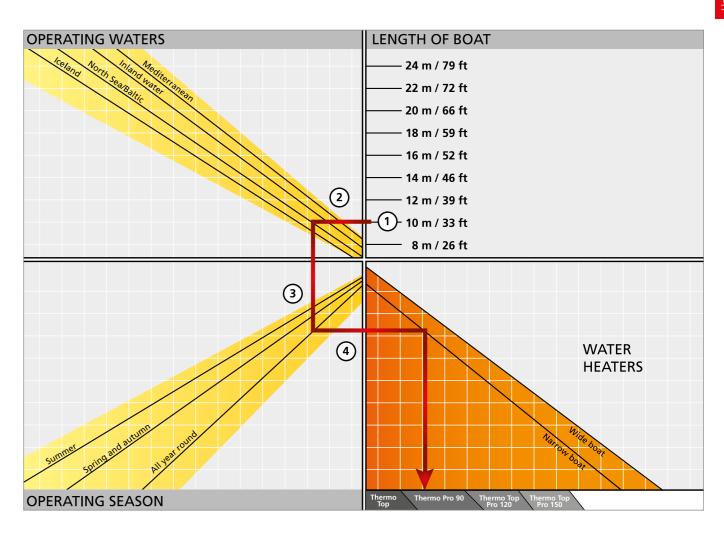
### Application concept



- A Space-saving and inconspicuous installation in the engine room
- B Boiler for heating hot water for extra comfort
- One radiator for each cabin allows an individual temperature control
- D Controls simple and logical to use
- E Coolant pump
- F Fresh water tank
- G Stainless steel exhaust

### **Water heaters**

### Selection tool



#### What's the best water heating system for my boat?

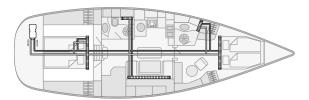
- 1. Select the length corresponding to your boat.
- 2. From there, trace a line to the left until you come to the line corresponding to the waters in which you plan to operate.
- 3. From there, trace a line vertically downwards until you come to the line corresponding to the season in which you plan to operate.
- 4. From there, trace a line to the right: Select the line corresponding to your type of boat in the lower section and then trace a line vertically downwards that's the recommended system.

### Thermo Top Evo/Thermo Pro 50 Eco

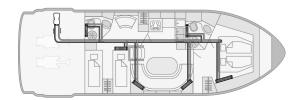


#### Thermo Top water heaters

This compact 5 kW unit is ideal for the majority of marine applications. Compact design, variable temperature control, service friendly technology and low noise levels.



The Thermo Top Evo is placed in the locker compartment of the boat. Due to the fact that electrical autonomy in this size of boat is often very important and radiators do not consume electricity of the battery, radiators are used to heat up the boat.



The Thermo Top Evo in the engine compartment is able to heat the entire boat. Each cabin has individually sized convectors to match the heating requirements.

#### The advantages of water heaters:

- Even distribution of warmth by means of radiators
- and galley
- Space-saving installation
- Perfectly to combine with Webasto BlueCool
- Separate temperature control in every cabin

- resistant to high temperature

### generation about?

- Stepless heating power adjustment between
- Less start-stops
- Exhaust temperature control to ensure optimal combustion and lowest emissions
- diagnostic indicator

- Hot water for both shower

- air-conditioning systems
- Low fuel consumption
- Preheating of the engine possible to avoid cold starts
- Robust aluminum casing, or salt

### What is the new

- 1.8 and 5 kW

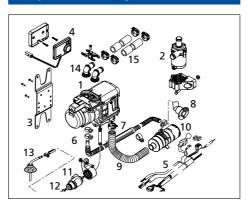
- Mainswitch with integrated

#### **Technical specifications**

|  | Thermo Top Evo    | Thermo Pro 50 Eco |
|--|-------------------|-------------------|
| EC approval mark ECE R122 (Heating)                    | E1 00 0258        | E1 00 0471        |
| EC approval mark ECE R10 (EMC)                         | E1 04 5627        | E1 06 7609        |
| Heating power (kW)                                     | 5.0               | 5.0               |
| Heating power (BTU/h)                                  | 17,100            | 17,100            |
| Fuel consumption (I/h)                                 | 0.22 – 0.62       | 0.3 – 0.6         |
| Fuel consumption (gal/h)                               | 0.06 – 0.16       | 0.08 – 0.16       |
| Fuels*   | Diesel DIN EN 590 | Diesel DIN EN 590 |
| Rated voltage (V)                                      | 12                | 24                |
| Rated power consumption (W)                            | 10 – 33           | 28 – 46           |
| Rated power consumption (amps)                         | 2.7 – 3.5         | 1.2 – 1.9         |
| Flow rate of coolant pump (against 0.14 bar) (I/h)     | 500               | 500               |
| Flow rate of coolant pump (against 0.14 bar) (gal/min) | 2.2               | 2.2               |
| Flow rate of coolant pump (against 0.10 bar) (I/h)     |                   | 900               |
| Flow rate of coolant pump (against 0.10 bar) (gal/min) | _                 | 4                 |
| Dimensions L x W x H (mm)                              | 218 x 91 x 147    | 218 x 91 x 144    |
| Dimensions L x W x H (inch)                            | 8.6 x 3.6 x 5.8   | 8.6 x 3.6 x 5.7   |
| Weight (kg)  | 2.1               | 2.2               |
| Weight (lbs)   | 4.6               | 4.9               |

<sup>\*</sup> Information about further fuels on request.

#### **Scopes of delivery**



| Item | SOD | Description                      |
|------|-----|----------------------------------|
| 1    | •   | Heater                           |
| 2    | •   | Coolant pump U4847 with fixation |
| 3    | •   | Heater bracket                   |
| 4    | •   | MultiControl with bracket        |
| 5    | •   | Wiring harness                   |
| 6    | •   | Exhaust reducer                  |
| 7    | •   | Exhaust silencer                 |
| 8    | •   | Exhaust through hull             |
| 9    | •   | Combustion air pipe              |
| 10   | •   | Air intake silencer              |
| 11   | •   | Fuel pump DP42.4 with fixation   |
| 12   | •   | Fuel hose                        |
| 13   | •   | Tank extracting device           |
| 14   | •   | Coolant connection piece         |
| 15   |     | Coolant hose                     |
|      | •   | Mounting parts                   |

#### Order number

#### 9042322B

2

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Thermo Top Evo Marine Classic 12 V Diesel 9028080E

Thermo Pro 50 Eco Marine 24 V Diesel

#### Water system

For the distribution of heat in your boat you may need extra hoses, valves, expansion tank, convectors, air handlers etc. Please compose your water system individually.

#### **Fuel supply**

For the installation of the heater in the engine compartment the fuel supply system has to be fire-resistant according to EN ISO 7840. Please order the adequate components additionally (fuel lines, fuel supply kit, rubber hose, fuel pump protection).

#### **Exhaust system**

Depending on the installation position coolant pump and length of the exhaust pipe you may need a condensation water drain and an exhaust pipe insulation additionally.

#### **Accessories (optional)**

For extension of your heater system you find comfort control elements as well as other installation and system components in the accessories section.

#### Thermo Pro 90 / Thermo Pro 90 Chiller

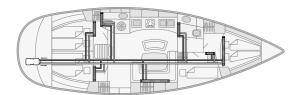


### Thermo Pro 90 Marine – state-of-the art controller and easy service

Experience the advantages of one of our most renowned heating devices! With its high heating output, proven long-term durability, and low cost of ownership it is your perfect choice for small to midsize boats.

#### Thermo Pro 90 Chiller - the heater for integration into an A/C system

If you want to build a BlueComfort system with a Thermo 90 heater (see chapter "Integrated solutions"), use the Thermo Pro 90 Chiller version. It comes with a special electronic control unit and without the water pump which is not needed.



This 44' sailing yacht uses convectors to heat all cabins separately. Convectors are noiseless and do not consume any electrical power of the battery, giving the yacht improved electrical autonomy.





In this 40' motor yacht electrical fan blowers are used to heat up the boat. They are very compact and may be easily installed in small spaces, blowing hot air through air ducts into each cabin. The windscreen has a separate blower to demist and defrost.

#### **Technical specifications**

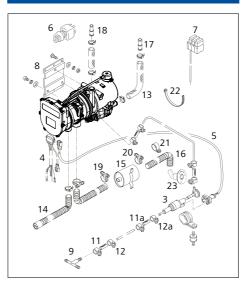
|   | Thermo Pro 90               | Thermo Pro 90 Chiller       |
|---|-----------------------------|-----------------------------|
| EC approval mark ECE R122 (Heating)                   | E1 00 0320                  | E1 00 0320                  |
| EC approval mark ECE R10 (EMC)                        | E1 04 6196                  | E1 04 6196                  |
| Heating power, control range/boost (kW)               | 1.8 – 7.6/9.1               | 1.8 – 7.6/9.1               |
| Heating power, control range/boost (BTU/h)            | 6,100 – 26,000/31,000       | 6,100 – 26,000/31,000       |
| Fuel consumption, control range/boost (I/h)           | 0.18 – 1.08/1.3             | 0.18 – 1.08/1.3             |
| Fuel consumption, control range/boost (gal/h)         | 0.05 – 0.24/0.34            | 0.05 - 0.24/0.34            |
| Fuels*  | Diesel DIN EN 590           | Diesel DIN EN 590           |
| Rated voltage (V)                                     | 12, 24                      | 12, 24                      |
| Rated power consumption, control range/boost (W)      | 20 – 83/90                  | 20 - 83/90                  |
| Rated power consumption, control range/boost (amps)   | 3.0 – 6.9 amps/7.5 at 12 V, | 3.0 – 6.9 amps/7.5 at 12 V, |
|   | 1.5 – 3.5/3.8 at 24 V       | 1.5 – 3.5/3.8 at 24 V       |
| Flow rate of coolant pump (against 0.3 bar) (I/h)     | 700                         | _                           |
| Flow rate of coolant pump (against 0.3 bar) (gal/min) | 3.1                         | -                           |
| Dimensions L x W x H (mm)                             | 352 x 131 x 232             | 385 x 131 x 219             |
| Dimensions L x W x H (inch)                           | 13.9 x 5.2 x 9.1            | 15.2 x 5.2 x 8.6            |
| Weight (kg)   | 5.3                         | 4.9                         |
| Weight (lbs)  | 11.7                        | 10.8                        |

<sup>\*</sup> Information about further fuels on request.

### The advantages of the Thermo Pro 90:

- Stepless variable power adjustment
- High heat output
- Compact dimensions
- Service friendly technology
- Extremely low noise level
- Low fuel consumption and low emissions

#### **Scopes of delivery**



| Item | Qty | Description   |
|------|-----|---|
| 1    | 1   | Heater 12 or 24 V including coolant pump<br>U4840 and electronic control unit (no<br>coolant pump with Thermo Pro 90 Chiller) |
| 2    | 1   | Electronic control unit   |
| 3    | 1   | Fuel pump DP42.4  |
| 4    | 1   | Wiring harness (heater, 570 lg)   |
| 5    | 1   | Wiring harness (fuel pump, 5,000 lg)  |
| 6    | 1   | Switch with lamp 12 or 24 V<br>(not with 9029942A and 9029943A)   |
| 7    | 1   | Fuse holder with wiring harness   |
| 8    | 1   | Heater bracket  |
| 9    | 1   | T-piece + fuel hoses & hose clamps<br>(8 x 5 x 8)   |
| 10   | 1   | Hose Ø 5 x 1.5; 6,000 lg  |
| 11   | 4   | Fuel hose Øi 4.5/Øa 10.5; 50 lg   |
| 11a  | 2   | Fuel hose Øi 8/Øa 12; 70 lg   |
| 12   | 8   | Hose clamp (steel; Ø 10)  |
| 12a  | 4   | Hose clamp (steel; Ø 12)  |
| 13   | 1   | Bent hose Øi 20 / Øa 29; 2,200 lg   |
| 14   | 1   | Air intake silencer PAK Øi 30,5/Øa 38;<br>1,160 lg  |
| 15   | 1   | Exhaust silencer Øa 38  |
| 16   | 1   | Flexible pipe (inoxyd.) Øi 38/Øa 42;<br>1,600 lg (1 x 1,000 mm + 1 x 600 mm)  |
| 17   | 2   | Connection pipe Ø 18 x 20   |
| 18   | 2   | Connection pipe Ø 20 x 20   |
| 19   | 7   | Hose clamp Ø 23 35  |
| 20   | 3   | Hose clamp Ø 39 42  |
| 21   | 2   | Pipe clip Ø 42  |
| 22   | 15  | Cable tie 178 lg  |
| 23   | 1   | Exhaust through hull  |

Order number

9029940C

Thermo Pro 90 Marine 12 V Diesel

9029941C

Thermo Pro 90 Marine 24 V Diesel

9029942C

Thermo Pro 90 Chiller 12 V Diesel

9029943C

Thermo Pro 90 Chiller 24 V Diesel

Water system

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For the distribution of heat in your boat you may need extra hoses, valves, expansion tank, convectors, air handlers etc. Please compose your water system individually.

**Fuel supply** 

For the installation of the heater in the engine compartment the fuel supply system has to be fire-resistant according to EN ISO 7840. Please order the adequate components additionally (fuel lines, fuel supply kit, rubber hose, fuel pump protection).

**Exhaust system** 

Depending on the installation position and length of the exhaust pipe you may need a condensation water drain and an exhaust pipe insulation additionally.

**Control element** 

Please order an adequate control element. For the Thermo Pro 90 Chiller no control element is needed. The heater is activated via the air-conditioning control.

**Accessories (optional)** 

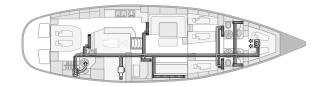
For extension of your heater system you find comfort control elements as well as other installation and system components in the accessories section.

### Thermo Top Pro 120/150



### Greater performance and innovation in terms of customer comfort & safety

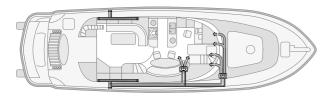
The Thermo Top Pro 120 and Thermo Top Pro 150 constitute a new generation of water heaters in the high-performance categories of 12 and 15 kW. These powerful heaters are each available in 12 and 24 V versions.

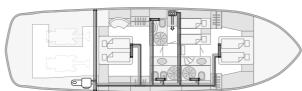


In this 64' sailing yacht the heater is installed in the technical compartment. Mainly convectors are used as heat exchangers. Fan blowers are only used in cabins with space restrictions or where quick heating up or air circulation is required.

### The advantages of the Thermo Top Pro 120/150:

- Compact design
- Conventional diesel fuel and 100% paraffinic diesel fuel (incl. renewable fuels, such as HVO)
- ECU and all connections on one side
- Easy to reach plugs for a fast installation
- Low noise emission
- More safety and diagnostic functions
- New, powerful coolant pump U4850





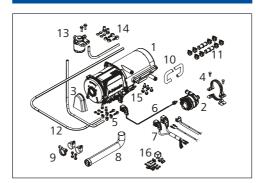
The heater in this 50' motor yacht provides heating for both decks. A combination of convectors and fan blowers is used.

#### **Technical specifications**

|  | Thermo Top Pro 120     | Thermo Top Pro 150     |
|--|------------------------|------------------------|
| EC approval mark ECE R122 (Heating)                    | E1 00 0480, E1 00 0481 | E1 00 0480, E1 00 0481 |
| EC approval mark ECE R10 (EMC)                         | E1 05 7735             | E1 05 7735             |
| Heating power (kW)                                     | 12.0                   | 15.0                   |
| Heating power (BTU/h)                                  | 40,950                 | 51,180                 |
| Fuel consumption (I/h)                                 | 1.6                    | 1.7                    |
| Fuel consumption (gal/h)                               | 0.42                   | 0.45                   |
| Fuels*   | Diesel DIN EN 590      | Diesel DIN EN 590      |
| Rated voltage (V)                                      | 12, 24                 | 12, 24                 |
| Rated power consumption (W)                            | 80                     | 100                    |
|  | 6.7 amps at 12 V       | 8.3 amps at 12 V       |
|  | 3.3 amps at 24 V       | 4.2 amps at 24 V       |
| Flow rate of coolant pump (against 0.56 bar) (I/h)     | 1,500                  | 1,500                  |
| Flow rate of coolant pump (against 0.56 bar) (gal/min) | 6.6                    | 6.6                    |
| Dimensions L x W x H (mm)                              | 470 x 200 x 200        | 470 x 200 x 200        |
| Dimensions L x W x H (inch)                            | 18.5 x 7.9 x 7.9       | 18.5 x 7.9 x 7.9       |
| Weight (kg)  | 11.7                   | 11.7                   |
| Weight (lbs)   | 25.7                   | 25.7                   |

<sup>\*</sup> Information about further fuels on request.

#### **Scopes of delivery**



#### Contents scope of delivery/ installation kit

| Part | SOD<br>Basic | SOD<br>Chiller | IK* | Description   |
|------|--------------|----------------|-----|---|
| 1    | •            | •              |     | Heater  |
| 2    | •            |                |     | Coolant pump U4850                                  |
| 3    | •            | •              |     | Splash guard  |
| 4    | •            |                |     | Bracket coolant pump                                |
| 5    | •            | •              |     | Mounting material fuel                              |
| 6    |              |                | -   | Wiring harness coolant pump                         |
| 7    |              | •              | -   | Wiring harness vehicle,<br>vehicle fan, fuse holder |
| 8    |              | •              |     | Exhaust flex pipe**                                 |
| 9    |              | •              | •   | Mounting material exhaust**                         |
| 10   |              |                | -   | Coolant hose  |
| 11   |              |                | -   | Mounting material coolant                           |
| 12   |              | •              | -   | Fuel hose   |
| 13   |              | •              | -   | Fuel filter   |
| 14   |              | •              | -   | Mounting material fuel filter                       |
| 15   |              | •              | •   | Mounting material heater                            |
| 16   |              | •              | -   | Mounting material electric                          |
|      |              | -              | -   | Further mounting material                           |
|      |              |                |     | Technical documentation                             |

- \* Only for SOD Basic, not for SOD Chiller
- \*\* For marine application additional exhaust system components necessary

#### Order number

#### 9035585A

Thermo Top Pro 120 Basic 12 V Diesel

#### 9035584A

Thermo Top Pro 120 Basic 24 V Diesel

#### 9035583A

Thermo Top Pro 150 Basic 12 V Diesel

#### 9035582A

Thermo Top Pro 150 Basic 24 V Diesel

#### 9042807A

Thermo Top Pro 120 Chiller 24 V Diesel

#### Installation kit

#### 9035492A

2

3

4

6

Installation kit 12 V Standard

#### 9035160A

Installation kit 24 V Standard

#### Water system

For the distribution of heat in your boat you may need extra hoses, valves, expansion tank, convectors, air handlers etc. Please compose your water system individually.

#### Fuel supply

Please compose the adequate system components for your boat individually. For the installation of the heater in the engine compartment the fuel supply system has to be fire-resistant according to EN ISO 7840.

#### **Exhaust system**

Please order exhaust hose, the exhaust silencer and skin fitting additionally. Depending on the installation position and length of the exhaust pipe you may need a condensation water drain and an exhaust pipe insulation additionally.

#### **Accessories (optional)**

For extension of your heater system you find comfort control elements as well as other installation and system components in the accessories section.

### Isotemp hot water boilers



#### Isotemp water heaters

The Isotemp water heaters deliver high water heating performances thanks to thick insulation and smart design. Indeed, the engine water heat exchanger as well as the electrical heat element are positioned in the lowest part of the tank where the water is coldest in order to ensure an equal heating of all the water in the tank. The water in- and outlets are especially designed to minimize the mixture of cold and hot water.

#### **Product specifications:**

- Large range from 15 liter to 75 liter
- 4 product lines: Basic, Slim, Square, Spa
- Extra long, corrugated coils for high heat exchange efficiency
- Special 6.0 or 7.0 bar safety valve; simple winter drain
- Ultra-thick insulation for lowest temperature loss
- Electrical plug and play
- Immersion heating element especially designed to heat also the water at the bottom of the tank
- Thermostat mixing valve standard on Basic and Slim; optional on Square and Spa
- Immersion heating element optional available in 750; 1,200; 2,000 W; 2,000 W heating element is compatible on 230 V versions only

Isotemp Double Coil boilers are the perfect option to be integrated into Webasto water heating systems. Select among three models: Basic 24 Double Coil, Basic 40 Double Coil or Basic 75 Double Coil.



Basic

Spa

36



Slim



Square 16



| Туре                    | Order number     | Volume | L x diameter D             | Weight | Max.     | Valve  |   | Immersion heater                     |                |                 |                 |                |                 |
|-------------------------|------------------|--------|----------------------------|--------|----------|--|---|--------------------------------------|----------------|-----------------|-----------------|----------------|-----------------|
|                         |                  | (1)    | (mm)                       | (kg)   | pressure | Standard<br>safety<br>without<br>mixing<br>valve | LK safety<br>without<br>mixing<br>valve | LK safety<br>with<br>mixing<br>valve | 230 V<br>750 W | 230 V<br>1200 W | 230 V<br>2000 W | 115 V<br>750 W | 115 V<br>1200 W |
| Basic                   |                  |        |                            |        |          |  |   |                                      |                |                 |                 |                |                 |
| Basic 24                | 602431B000003    | 24     | 470 x 395                  | 12.5   | 7        | _  | _                                       | •                                    | -              | -               | -               | 0              | _               |
| Basic 30                | 603031B000003    | 30     | 535 x 395                  | 13.5   | 7        | _  | -                                       | •                                    | -              | -               | -               | 0              | -               |
| Basic 40                | 604031B000003    | 40     | 640 x 395                  | 15.5   | 7        | _  | -                                       | •                                    | •              | 0               | -               | 0              | 0               |
| Basic 50                | 605031B000003    | 50     | 760 x 395                  | 17     | 7        | _  | -                                       | •                                    | •              | 0               | 0               | 0              | 0               |
| Basic 75                | 607531B000003    | 75     | 1,050 x 395                | 24.5   | 7        | _  | -                                       | •                                    | -              | 0               | 0               | 0              | 0               |
| Basic Double Coil       |                  |        |                            |        |          |  |   |                                      |                |                 |                 |                |                 |
| Basic 24 Double<br>Coil | 602431BD00003    | 24     | 470 x 395                  | 13     | 7        | _  | _                                       |                                      |                | _               | -               | 0              | _               |
| Basic 40 Double<br>Coil | 604031BD00003    | 40     | 640 x 395                  | 16     | 7        | _  | _                                       |                                      |                | 0               | -               | 0              | 0               |
| Basic 75 Double<br>Coil | 607531BD00003    | 75     | 1,050 x 395                | 25     | 7        | -  | _                                       |                                      |                | 0               | 0               | 0              | 0               |
| Slim                    |                  |        |                            |        |          |  |   |                                      |                |                 |                 |                |                 |
| Slim 15                 | 601531S000003    | 15     | 520 x 295                  | 9      | 7        | _  | -                                       | •                                    | -              | -               | -               | 0              | _               |
| Slim 20                 | IM602031S000003  | 20     | 645 x 295                  | 10.5   | 7        | -  | -                                       | •                                    | -              | 0               | -               | 0              | 0               |
| Slim 25                 | 602531S000003    | 25     | 765 x 295                  | 12     | 7        | _  | -                                       | -                                    | -              | 0               | 0               | 0              | 0               |
| Spa                     |                  |        |                            |        |          |  |   |                                      |                |                 |                 |                |                 |
| SPA 15                  | 6P1531SPA0100    | 15     | 450 x 310                  | 7.5    | 6        |  | -                                       | -                                    | -              | -               | -               | 0              | -               |
| SPA 15 LK MV            | 6P1531SPA0003    | 15     | 450 x 310                  | 8      | 6        | -  | -                                       |                                      | -              | -               | -               | 0              | -               |
| SPA 20                  | 6P2031SPA0100    | 20     | 550 x 310                  | 9      | 6        | •  | -                                       | -                                    | •              | -               | -               | 0              | -               |
| SPA 20 LK MV            | 6P2031SPA0003    | 20     | 550 x 310                  | 9.5    | 6        | -  | -                                       | •                                    | -              | -               | -               | 0              | -               |
| SPA 25                  | 6P2531SPA0100    | 25     | 650 x 310                  | 10     | 6        |  | -                                       | -                                    | -              | 0               | 0               | 0              | 0               |
| SPA 25 LK MV            | 6P2531SPA0003    | 25     | 650 x 310                  | 10.5   | 6        | -  | -                                       | •                                    | -              | 0               | 0               | 0              | 0               |
| SPA 30                  | 6P3031SPA0100    | 30     | 535 x 390                  | 12     | 6        |  | -                                       | -                                    | -              | -               | -               | 0              | -               |
| SPA 30 LK MV            | 6P3031SPA0003    | 30     | 535 x 390                  | 12     | 6        | -  | -                                       | •                                    | -              | -               | -               | 0              | -               |
| SPA 40                  | 6P4031SPA0100    | 40     | 640 x 390                  | 14     | 6        |  | -                                       | -                                    | -              | 0               | -               | 0              | 0               |
| SPA 40 LK MV            | 6P4031SPA0003    | 40     | 640 x 390                  | 14     | 6        | -  | -                                       | -                                    | -              | 0               | -               | 0              | 0               |
| SPA 50                  | IM6P5031SPA0003  | 50     | 745 x 392                  | 15.5   | 6        | -  | -                                       | •                                    | -              | 0               | 0               | 0              | 0               |
| SPA 60                  | IM6P6031SPA0003  | 60     | 850 x 392                  | 17.6   | 6        | -  | -                                       | •                                    | -              | 0               | 0               | 0              | 0               |
| Square                  |                  |        | Dimension<br>L x H x W (mn | 1)     |          |  |   |                                      |                |                 |                 |                |                 |
| Square 16 LK            | IM601631QX00000A | 16     | 400 x 180 x 560            | 15     | 5        | _  | -                                       | _                                    | -              | _               | _               | 0              | -               |
|                         |                  |        |                            |        |          |  |   |                                      |                |                 |                 | _              |                 |

37

IM601631QX00003AA

16 400 x 180 x 560 15.5

### Integrated heat exchanger

### HTX S - HTX S HD - HTX M - HTX M HD

### NEW

#### Maximum flexibility between comfort and ease of installation

The new HTX heat exchanger product line has been designed with the focus on easy integration in recreational, special vehicles and marine. Considering various customer requirements, the HTX series offers versatile installation capabilities.

With four heating performance classes, starting from 3.3 kW and up to 6.6 kW, it is guaranteed that every customer will find the best suited solution for their individual project. Durable, highly efficient fans and blowers deliver powerful and constant airflow and thus provide optimal distribution of air boat. High quality, automotivegrade components have been selected to guarantee reliability and long service life. Additionally, versatility of HTX series is underlined by the variety of available accessories and installation kits, including control units, air vents and ducts.

- Heating solutions deliver high performance heating from
   3.3 kW to 6.6 kW
- HD models provide a 3-speed blower which allows to adjust the air flow as needed
- Durable, highest quality components from proven series production
- No maintenance needed
- Versatility through optimal combination of power and
- Various air outlet options are available as accessory (see pages 40 – 41)



#### HTX S

| Model overview | Scope of delivery | Order number |
|----------------|-------------------|--------------|
| HTX S 12 V     | Heating system    | 8410215B     |
| HTX S 24 V     |                   | 8410216B     |



#### HTX S HD

| Model overview | lel overview Scope of delivery |          |  |  |
|----------------|--------------------------------|----------|--|--|
| HTX S HD 12 V  | Heating system                 | 8410213B |  |  |



#### HTX M

| Model overview | Scope of delivery | Order number |
|----------------|-------------------|--------------|
| HTX M 12 V     | Heating system    | 8410219B     |
| HTX M 24 V     |                   | 8410220B     |



#### HTX M HD

| Model overview | Scope of delivery | Order number |
|----------------|-------------------|--------------|
| HTX M HD 12 V  | Heating system    | 8410217B     |
| HTX M HD 24 V  |                   | 8410218B     |

#### Technical data

| Model overview                              | HTX S           | HTX S HD        | нтх м           | HTX M HD        |  |  |  |
|---|-----------------|-----------------|-----------------|-----------------|--|--|--|
| Nominal heating capacity (kW)               | 3.3             | 4.7             | 4.9             | 6.6             |  |  |  |
| Nominal voltage (V)                         | 12/24           |                 |                 |                 |  |  |  |
| Max total current absorbition 12 – 24 V (A) | 1.2/0.6         | 8.5/4.2         | 2.4/1.2         | 13.5/6.8        |  |  |  |
| Max . blower volume flow (m³/ h)            | 161             | 276             | 320             | 605             |  |  |  |
| Dimensions L x W x H (mm)                   | 128 x 241 x 161 | 215 x 241 x 166 | 126 x 341 x 146 | 195 x 411 x 146 |  |  |  |
| Water connection Ø (mm)                     | 18              |                 |                 |                 |  |  |  |



### Integrated heat exchanger

Accessories

### NEW

|  | HTX S | HTX S HD | HTX M | HTX M HD | Order number |
|--|-------|----------|-------|----------|--------------|
| Air duct  118 x 245 x 163.1 mm Ø 58 mm   | -     | •        |       |          | 8410221A     |
| black                                    |       |          |       |          |              |
| Air duct                                 |       |          |       |          | 6446553      |
| 92 x 246 X 163.1 mm<br>black             |       |          |       |          | 8410222A     |
| Air duct                                 |       |          |       |          |              |
| 22.5 x 290 x 195 mm<br>black             |       |          |       |          | 8410223A     |
| Air duct                                 |       |          |       |          |              |
| 115 x 416 x 145.8 mm<br>Ø 60 mm<br>black |       |          |       | •        | 8410224A     |

|      |   | HTX S | HTX S HD | HTX M | HTX M HD | Order number |
|------|---|-------|----------|-------|----------|--------------|
|      | 89 x 416 x 147.8 mm<br>black              |       |          |       | •        | 8410225A     |
|      | Air duct  89 x 346 x 147.8 mm black       |       |          | •     |          | 8410226A     |
| 0000 | Air duct  115 x 346 x 147.8 mm Ø 60 black |       |          |       |          | 8410227A     |
|      | Air duct  22.5 x 400 x 182 mm black       |       |          |       |          | 8410228A     |

123 x 80 x 40

0.4

### **Blower heat exchangers**

The blower modules are the ideal combination for Webasto water heaters. Thanks to their powerful blowers, the cabins of boats and yachts can be heated up quickly. Most models have an adjustable blower speed to fine-tune the air flow according to individual needs. In addition to their compact dimensions they ensure an easy installation.

#### The product range



Florida 3 – extra-silent single speed 3 kW model with very low power consumption



Florida 5 – Compact 3-speed 5 kW model with blower speed and heat output regulation



Florida 5 – Compact 3-speed 5 kW model without controls



Whisperer – Very compact and silent 1,8 kW model with single speed axial fan



Madeira 4 – Lightweight and variable 4 kW

model, 3 blower speeds, choice of air outlet



Madeira 8 – Lightweight and variable 7,3 kW model, 3 blower speeds, choice of air outlet



BB4 - Compact 2,5 kW model with 3-speed blower regulation and metal casing



BB8 - Powerful 8 kW model with 3-speed blower regulation and robust metal casing

#### **Blower speed control**

The blower speed control is the perfect match for all blower heat exchangers. It provides temperature regulated automatic blower speed control or manual 5-speed blower regulation. With a variable temperature setting, everybody can find his perfect comfort climate.



Blower speed control – temperature-regulated blower speed control for the blower modules Florida 5 without controls, BB4, BB8. With separate mounting also possible for Madeira 4 and Madeira 8.

| Scopes of delivery            |  |
|-------------------------------|--|
| Control element               |  |
| Electronic PWM module         |  |
| Temperature sensor (5 meters) |  |

| Model                           | Order<br>number   | Colour                      | Voltage<br>(V) | Heat<br>output<br>at Q100<br>(kW) | Air flow<br>at free<br>discharge<br>(m³/h) | Water connection diam. (mm) | Electrical<br>power<br>consumption<br>(W) | Dimensions<br>W x H x D<br>(mm) | Weight<br>(kg) |
|---------------------------------|-------------------|-----------------------------|----------------|-----------------------------------|--|-----------------------------|---|---------------------------------|----------------|
| Florida 3 No Noise              | 3200740A          | light grey                  | 12             | 3                                 | 120  | 16                          | 12  | 269 x 198 x 141                 | 1.4            |
|                                 | 3200741A          | light grey                  | 24             | 3                                 | 120  | 16                          | 12  | 269 x 198 x 141                 | 1.4            |
| Florida 5 with controls         | 3200679A          | light grey                  | 12             | 5.2                               | 285  | 16                          | 120                                       | 269 x 198 x 218                 | 2              |
|                                 | 3200680A          | light grey                  | 24             | 5.2                               | 285  | 16                          | 120                                       | 269 x 198 x 218                 | 2              |
| Florida 5 without controls      | 3200681A          | light grey                  | 12             | 5.2                               | 285  | 16                          | 120                                       | 269 x 198 x 218                 | 2              |
|                                 | 3200682A          | light grey                  | 24             | 5.2                               | 285  | 16                          | 120                                       | 269 x 198 x 218                 | 2              |
| Whisperer                       | 3200673A          | Inox (front)                | 12             | 1.8                               | 120  | 16                          | 8.4                                       | 210 x 210 x 125                 | 1.2            |
|                                 | 3200674A          | Inox (front)                | 24             | 1.8                               | 120  | 16                          | 8.4                                       | 210 x 210 x 125                 | 1.2            |
| BB4                             | 71174000          | grey                        | 12             | 2.5                               | 190  | 16                          | 38  | 310 x 150 x 150                 | 3.5            |
|                                 | 71174500          | grey                        | 24             | 2.5                               | 190  | 16                          | 38  | 310 x 150 x 150                 | 3.5            |
| BB8                             | 3395977A          | grey                        | 12             | 8                                 | 525  | 16                          | 65  | 480 x 170 x 305                 | 12             |
|                                 | 3395978A          | grey                        | 24             | 8                                 | 525  | 16                          | 65  | 480 x 170 x 305                 | 12             |
| Madeira 4                       | 71174550          | light grey<br>and dark grey | 12             | 4.6                               | 200  | 16                          | 70  | 275 x 115 x 203                 | 1.8            |
|                                 | 71174552          | light grey<br>and dark grey | 24             | 4.6                               | 200  | 16                          | 70  | 275 x 115 x 203                 | 1.8            |
| Madeira 8                       | 71174554          | light grey<br>and dark grey | 12             | 7.3                               | 300  | 16                          | 150                                       | 376 x 115 x 250                 | 3.1            |
|                                 | 71174556          | light grey<br>and dark grey | 24             | 7.3                               | 300  | 16                          | 150                                       | 376 x 115 x 250                 | 3.1            |
| Outlet versions                 |                   |                             |                |                                   | ·  |                             |   |                                 |                |
| Air grille 90 x 90 mm*          | 3396524A          | black                       |                |                                   |  |                             |   |                                 |                |
| Air hose connector diam. 55 mm* | 3396525A          | black                       |                |                                   |  |                             |   |                                 |                |
| * When ordering the Madeira     | 4 or Madeira 8, p | lease specify the ty        | pe and amo     | unt of desired a                  | ir outlets. Madeir                         | ra 4 requires 2 an          | ıd Madeira 8 requ                         | ires 4 outlets.                 |                |
| Control elements                |                   |                             |                |                                   |  |                             |   |                                 |                |

<sup>3391288</sup>C 12/24 \* Please refer to pictures of Madeira 4 and Madeira 8 for example of air grille and hose connectors, see previous page.



## Accessories for heating systems

| Coolant pumps               | 46 |
|-----------------------------|----|
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| Exhaust system              | 53 |
| Fuel system                 | 56 |
| Hot air system              | 58 |
| Water system                | 72 |
| Valve                       | 76 |
| Mounting parts              | 78 |
| Electrical accessories      | 81 |
| Maintenance and diagnostics | 82 |

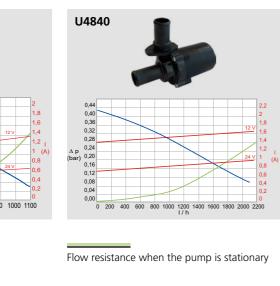
### **Coolant pumps**

### **Coolant pumps**

#### **Technical features**

These coolant pumps are suitable for hot water circulation. They are not designed for sea water use.







Volume flow with water/glycol mixture (50:50) 20 °C

Rated power consumption

#### Technical data

| Model overview<br>(Heater and pumps) | Thermo Top Evo 4/5/5+,<br>Thermo Pro 50 Eco | Thermo Top Pro 120/150 |  |
|--------------------------------------|---|------------------------|--|
|                                      | U4847 Econ                                  | U4840                  | U4850                                  |
| Nominal voltage (V)                  |   | 12/24                  |  |
| Nominal power consumption (W)        | 15  | 29                     | 67                                     |
| Volume flow (I/h)                    | 500<br>(0.14 bar)                           | 700<br>(0.34 bar)      | 1,500<br>(0.56 bar)                    |
| Dimensions L x W x H (mm)            | 109 x 49 x 79                               | 134 x 53 x 90          | 118 x 80 x 104                         |
| Water connection Ø (mm)              |   | 20                     |  |
| Weight (kg)                          | 0.3   | 0.4                    | 0.7                                    |
| Order number 12 V                    | 9002514B<br>130° connection piece           | 1321930A               | Included SOD<br>Thermo Top Pro 120/150 |
| Order number 24 V                    | 98237B                                      | 1321932B               | Included SOD<br>Thermo Top Pro 120/150 |

### **Control elements**

### **Control elements**

|  |  | Air Top 2000 | Air Top Evo | Thermo Top | Thermo Pro | Thermo Pro | Thermo Top | Order number |
|--|--|--------------|-------------|------------|------------|------------|------------|--------------|
| Wireless   |  |              |             |            |            |            |            |              |
|  | ThermoConnect TCon2  |              |             |            |            |            |            |              |
| September 19 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | - 12/24 V  - Available functions: heating, ventilation, setting of timers, heating time management (HTM), location based features through integrated GPS antenna  - Multiple vehicle control with one app possible  - Including push button with integrated temperature sensor and operation indicator  - App available for Android, iOS and Web App my.webasto-connect.comfor every web connected device  - Alexa skill myWebasto available for Alexa capable devices | •            | •           | •          | •          | •          | •          | 9040223E     |
|  | Remote control Telestart T100 HTM  |              |             |            |            |            |            |              |
| E SIC  | <ul> <li>12 V</li> <li>Including 1 hand-held transmitter with battery, receiver, self-adhesive window antenna, ESV adapter and temperature sensor HTM</li> <li>Automatic heating time calculation</li> </ul>   |              |             | •          |            | •          | •          | 1314637A     |
|  | Hand-held transmitter T100 HTM   |              |             |            |            |            |            |              |
| 3 21 °C  | <ul> <li>Including battery</li> <li>Included in kit 1314637A</li> <li>Up to four transmitters can be connected</li> </ul>  |              |             | •          |            |            | •          | 1314638B     |
|  | Remote control Telestart T99   |              |             |            |            |            |            |              |
| OFF  | - 12 V - Available control functions: heating, ventilation - Individual operating time between 10 – 120 minutes and continuous heating - Including one handheld transmitter with battery, receiver, self-adhesive window antenna and wiring harness  |              |             | •          |            | •          | •          | 9039217A     |
|  | Hand-held transmitter T99  |              |             |            |            |            |            |              |
| OFF ON   | - Including battery - Included in kit 9039217A - Up to four transmitters can be connected  |              |             | •          |            | •          | •          | 9039224A     |
|  | Y-adapter for parallel installation of an additional control   |              |             |            |            |            |            |              |
|  | – For connecting a second control element  | •            | •           | •          | •          | •          | •          | 1319820A     |

| nermo Pro 50 Eco | nermo Top Pro 120/1 |
|------------------|---------------------|
|------------------|---------------------|

rder number

#### Wired

|   | UniControl  |   |   |   |   |   |   |          |
|---|---|---|---|---|---|---|---|----------|
| Webasto  OS 27  ○ Wide  Heating   | - 12/24 V  - Available control functions: heating, ventilation, one activatable timer (3 preselectable on-times per day, programmable for 7 days in advance), quick start button  - Individual operating time between 10 – 120 minutes and continuous heating  - Quick and intuitive operation thanks to a large TFT display and multifunction button  - Instrument lighting (terminal 58)  - Ignition plus (terminal 15, for ad hoc continous heating)  - ADR  - Cover panel dimensions (L x W): 88.6 x 41.3 mm, installation depth: 30.6 mm  - Including wiring harness adapter UniControl – 9034555A |   | • | • |   | • |   | 9034520C |
|   | UniControl - replacement set standard timer 1531  |   |   |   |   |   |   |          |
| © 227  ○ 1  | - 12/24 V  - Available control functions: heating, ventilation, one activatable timer (3 preselectable on-times per day, programmable for 7 days in advance), quick start button  - Individual operating time between 10 – 120 minutes and continuous heating  - Quick and intuitive operation thanks to a large TFT display and multifunction button  - Instrument lighting (terminal 58)  - Ignition plus (terminal 15, for ad hoc continous heating)  - ADR  - Cover panel dimensions (L x W): 88.6 x 41.3 mm, installation depth: 30.6 mm  - Including adapter cable timer 1531 – 9034596A          |   | • |   |   | • |   | 9034521C |
|   | Adapter cable UniControl  |   |   |   |   |   |   |          |
| Inhebosta Warstan, ees 17   | – 10-pole (UniControl) to 4-pole standard plug<br>– Cable length 0.13 m   | • |   | • |   | • |   | 9034555A |
|   | Adapter cable UniControl - replacement standard timer<br>1531   |   |   |   |   |   |   |          |
| State | - 10-pole (UniControl) to 12-pole connector of presection timer 1531  - Cable length 0.2 m  | • | • |   | • | • |   | 9034596A |
|   | Expansion kit UniControl  |   |   |   |   |   |   |          |
|   | - Expansion cable for additional wiring (e.g. switching input, terminal 15) - 5 single wires with one-sided crimped flat connector - Flat connectors can be pinned into the still vacant slots of the 10-pole UniControl plug - Including 5 butt connectors - Cable lenght 3 m  | • | • | • | • | • | • | 9034597A |

### **Control elements**

|           |  | Air Top 2000 STC | Air Top Evo 40/55 | Thermo Top Evo | Thermo Pro 50 Eco | Thermo Pro 90 | Thermo Top Pro 120/150 | Order number |
|-----------|--|------------------|-------------------|----------------|-------------------|---------------|------------------------|--------------|
| 121       | Installation frame UniControl, short   |                  |                   |                |                   |               |                        |              |
|           | – Cover panel dimensions (L x W): 120 x 60 mm<br>– With installation materials   | •                | •                 | •              | •                 | •             |                        | 474630       |
|           | MultiControl Mar RV ATE  |                  |                   |                |                   |               |                        |              |
| F-lebosto | - 12/24 V  - Available control functions: heating, ventilation, 21 activatable timer (3 preselectable on-times per day, programmable for 7 days in advance), quick start button  - Individual operating time between 10 – 120 minutes and continuous heating  - Quick and intuitive operation thanks to a large TFT display and multifunction button  - Cover panel dimensions (L x W) 68 x 48 mm, installation depth: 15 mm  - Including adhesive pad  - Pre-set to Air Top 2000 STC, all other air heaters can be selected |                  |                   |                |                   |               |                        | 9030910E     |
|           | MultiControl Mar RV TT   |                  |                   |                |                   |               |                        |              |
| (Alebasto | - 12/24 V - Available control functions: heating, ventilation, 21 activatable timer (3 preselectable on-times per day, programmable for 7 days in advance), quick start button - Individual operating time between 10 – 120 minutes and continuous heating - Quick and intuitive operation thanks to a large TFT display and multifunction button - Cover panel dimensions (L x W) 68 x 48 mm, installation depth: 15 mm - Including adhesive pad - Pre-set to Thermo Top Evo, all other water heaters can be selected       |                  |                   | •              | •                 | •             | •                      | 9030911D     |
|           | Holding frame Multi-/SmartControl  |                  |                   |                |                   |               |                        |              |
| , , ]     | - Fastened by screws at the mounting point - Multi-/SmartControl is clicked into the holding frame   | •                | •                 | •              | •                 | •             | •                      | 9030077A     |

### **Control elements**

|            |  | Air Top 2000 STC | Air Top Evo 40/55 | Thermo Top Evo | Thermo Pro 50 Eco | Thermo Pro 90 | Thermo Top Pro 120/150 | Order number |
|------------|--|------------------|-------------------|----------------|-------------------|---------------|------------------------|--------------|
| Switches   |  |                  |                   |                |                   |               |                        |              |
| o Kyebasto | Rotary selector switch  - 12/24 V  - Available control functions: steplessly adjustable heating  - With operation indicator and fault display by blink code  - Cover panel dimensions: Ø 49 mm, installation depth 55 mm | •                | •                 |                |                   |               |                        | 1322581A     |
|            | Installation cover panel   |                  |                   |                |                   |               |                        |              |
|            | – For rotary selector switch (1322581A)<br>– Cover panel dimensions (L x W): 84 x 41.6 mm  | •                | •                 |                |                   |               |                        | 1319733A     |
|            | Installation cover panel with rocker switch  |                  |                   |                |                   |               |                        |              |
| CO W       | <ul> <li>For rotary selector switch (1322581A)</li> <li>Cover panel dimensions (L x W): 84 x 41.6 mm</li> <li>For heating and ventilation</li> </ul>   | •                | •                 |                |                   |               |                        | 92240A       |
|            | Rocker switch ON/OFF   |                  |                   |                |                   |               |                        |              |
| 133        | - 12/24 V - Available functions: ON/OFF-switch - LED to indicate heater operation - Cover panel dimensions (L x W): 23 x 23 mm (drilling hole 20 mm)   |                  |                   |                | •                 | •             | •                      | 9032550A     |
| ,          | Adapter cable ventilation  |                  |                   |                |                   |               |                        |              |
| Land B. S. | Additional adapter cable harness ventilation for Evo heaters   |                  |                   |                | •                 | •             |                        | 1320829A     |

### **Combustion air line**

### Order number Di = 22, L = 20,000 1321565A Di = 25, L = 5,000 1321587A Di = 30, L = 5,000 1321557A Di = 22 1320144A Di = 25 1320278A Di = 22, Da = 27, L1 = 1,000, L2 = 80, black 1320842A 1322455A Di = 22, L = 800, PAK, without protection cap 1319924A Di = 25, L = 650, PAK, with protection cap Di = 30, L = 1,160, PAK, without protection cap 1319607A D1a D1a = 24.2, D2a = 52, L = 138, complete with 300 mm flexible pipe, plastic 9025956A

Please refer to our separate heating product catalog for our full range of accessories.

### **Exhaust system**

|     | Exhaust pipe extension  | Air Top 2000 STC | Air Top Evo 40/55 | Thermo Top Evo | Thermo Pro 50 Eco | Thermo Pro 90 | Thermo Top Pro 120/150 | Order number   |
|-----|---|------------------|-------------------|----------------|-------------------|---------------|------------------------|--|
| Da  | Di = 22, Da = 24, L = 40, stainless steel   | •                |                   | •              | •                 |               |                        | 1320382A   |
| Di  | Flexible pipe  Stainless steel  Di = 22, Da = 26, L = 1,000, with end cap  Di = 24, Da = 28, L = 10,000  Di = 38, Da = 41, L = 5,000  Di = 38, Da = 41, L = 10,000  Di = 38, Da = 41, L = 20,000  Protective pad  Insulation blanket for silencer | •                | •                 |                |                   | •             | •                      | 1322414A<br>1321523A<br>1321540A<br>1321541A<br>1321539A<br>9028104A |
| Di  | Heat protection hose  Fiberglass, with cover, non-flammable, interior resistant to temperatures up to 500 °C  Di = 28, Da = 38, L = 324  Di = 45, Da = 55, L = 1,000  |                  | •                 | •              | •                 | -             | -                      | 1319670A<br>1328352A   |
| Di  | Flexible heat protection hose  Di = 70, Da = 120, fiberglass  L = 1,250  L = 1,700  L = 1,850   |                  |                   |                |                   | •             | -                      | 9016230B<br>9016231B<br>1320830A                                     |
| Di- | Flexible heat protection hose  L = 10,000  Di = 28, GA-A  Di = 45, GA2-A  | •                |                   |                |                   | •             | •                      | 1321601A<br>1321602C   |

### **Exhaust system**

# ixilaust system

|                |  | Air Top 2000 STC | Air Top Evo 40/55 | Thermo Top Evo | Thermo Pro 50 Eco | Thermo Pro 90 | Thermo Top Pro 120/150 | Order number         |
|----------------|--|------------------|-------------------|----------------|-------------------|---------------|------------------------|----------------------|
| 7              | Exhaust connecting pipe  Da = 24, L = 50, stainless steel  |                  |                   |                |                   |               |                        | 1319937A             |
| Da             |  |                  |                   |                |                   |               |                        |                      |
|                | Exhaust connecting pipe  |                  |                   |                |                   |               |                        |                      |
| Da M10x1       | Da = 38, L = 65, stainless steel, with condensate drain  |                  |                   |                |                   | •             |                        | 1320959A             |
| →Dir97         | Exhaust elbow  |                  |                   |                |                   |               |                        |                      |
|                | Di = 24, Da = 24, L = 97, stainless steel  Without condensate drain                              |                  |                   |                |                   |               |                        | 1320383A             |
| → M10x1        | With condensate drain  |                  | •                 |                |                   |               |                        | 1320378A             |
| → <b>J</b> ←Di | Exhaust elbow  |                  |                   |                |                   |               |                        |                      |
| Da→▼           | Without condensate drain   | _                |                   |                |                   |               |                        | 42224474             |
| Di 🧡 H         | Di = 22, Da = 22, L = 65, H = 46, aluminium  Di = 38, Da = 38, L = 131, H = 100, stainless steel | •                |                   | •              | •                 |               |                        | 1320117A<br>1328762A |
| 1              |  |                  |                   |                |                   |               |                        | 13207827             |
| →Dir-          | Exhaust elbow  |                  |                   |                |                   |               |                        | 42402004             |
|                | Di = 38, Da = 38, 180°, with condensate drain, stainless steel                                   |                  |                   |                |                   |               |                        | 1319380A             |
|                | Condensate drain   |                  |                   |                |                   |               |                        |                      |
| 00 50 m        | L = 128, M10x1, with mounting parts, copper  |                  |                   | •              | •                 | •             |                        | 92621A               |

### **Exhaust system**

|             |  | Air Top 2000 STC | Air Top Evo 40/55 | Thermo Top Evo | Thermo Pro 50 Eco | Thermo Pro 90 | Thermo Top Pro 120/150 | Order number |
|-------------|--|------------------|-------------------|----------------|-------------------|---------------|------------------------|--------------|
|             | Exhaust lead through  Double walled, bended, stainless steel                           |                  |                   |                |                   |               |                        |              |
| 00          | Da = 24  |                  | •                 |                |                   |               |                        | 1320364A     |
|             | Da = 38  |                  |                   |                |                   | •             | •                      | 1320365A     |
| 0           | Exhaust lead through   |                  |                   |                |                   |               |                        |              |
|             | Double walled, straight, stainless steel   |                  |                   |                |                   |               |                        |              |
|             | Da = 24  |                  | •                 |                |                   |               |                        | 1320363A     |
|             | Da = 38  |                  |                   |                |                   |               | •                      | 1320983A     |
| <b>∞</b> Da | Exhaust silencer   |                  |                   |                |                   |               |                        |              |
| <b>*</b>    | Di = 24.5, Da = 56, L = 1,800, L1 = 650, L2 = 850                                      |                  | ٠                 |                |                   |               |                        | 1322001A     |
| WDa         | Di = 38, L = 1,000, outside with partial fiberglass insulation                         |                  |                   |                |                   | •             | •                      | 1321823A     |
|             | Exhaust silencer   |                  |                   |                |                   |               |                        |              |
| 189 Da 129  | Da = 38, L = 270, stainless steel  |                  |                   |                |                   |               |                        | 1321397A     |
|             | Insulating tape  |                  |                   |                |                   |               |                        |              |
| B           | L = 50,000, W = 60, white, fibre glass, temperature up to 450 $^{\circ}$ C, 2 mm thick | •                | •                 |                | •                 | •             | •                      | 1320357A     |

Please refer to our separate heating product catalog for our full range of accessories.

### **Fuel system**

|  |  | Air Top 2000 STC | Air Top Evo 40/55 | Thermo Top Evo | Thermo Pro 50 Eco | Thermo Pro 90 | Thermo Top Pro 120/150 | Order number |
|--|--|------------------|-------------------|----------------|-------------------|---------------|------------------------|--------------|
| \ D <sub>0</sub>   | Connecting hose ISO 7840   |                  |                   |                |                   |               |                        |              |
| Di Tumu L  | Di = 5, Da = 12, L = 50, ISO 7840, rubber  | •                |                   | •              | •                 |               |                        | 1320857A     |
| \ D <sub>0</sub>   | Fuel hose kit ISO 7840, USCG   |                  |                   |                |                   |               |                        |              |
| Da   | Di = 3.5, ISO7840, USCG, black   |                  |                   |                |                   |               |                        |              |
| Miles  | L = 1,000  | •                | •                 |                | •                 | •             |                        | 3317180A     |
| TOTAL A  | L = 3,300  | •                | •                 | •              | •                 | •             |                        | 3317046A     |
| Dis  | L = 6,000  | •                |                   |                |                   | •             |                        | 3317047A     |
| DIX  | L = 10,000   | •                | •                 | •              | •                 | •             |                        | 3317048A     |
| ¥ a  | Flexible heat protection hose  |                  |                   |                |                   |               |                        |              |
| Da   | Di = 14.5, Da = 16.5, GA-A   | П                | $\Box$            |                |                   |               |                        |              |
|  | L = 5,000  | •                | •                 | •              | •                 | •             |                        | 1321585B     |
| Di Comming Millimit  | L = 20,000   | •                | •                 | •              | •                 | •             |                        | 1321584B     |
|  | Fuel line kit  |                  |                   |                |                   |               |                        |              |
| 3  | Da = 5, L = 5,000  |                  |                   |                |                   |               |                        |              |
| ( )  | Di = 2, stainless steel  | •                | •                 |                | •                 | •             |                        | 1320860A     |
| Secretarian de la companya de la com | Fuel line kit with connecting hoses, crews and clips, stainless steel  | •                | •                 | •              | •                 | •             |                        | 66958B       |
|  | Mini jacket fuel pump protector  |                  |                   |                |                   |               |                        |              |
|  | Protection device for fuel pumps with mufflers, required by ISO 7840 if the fuel system is installed in engine rooms |                  | •                 | •              | •                 | •             |                        | 1319522A     |
| 6  | Tank extracting device, riser pipe   |                  |                   |                |                   |               |                        |              |
| 26<br>6,1<br>630   | Da = 6, L = 630, steel, zinc coated, with return, 90° extractor connection piece, for installation in metal tanks    |                  |                   |                |                   |               | •                      | 1322830D     |
|  |  |                  |                   |                |                   |               |                        |              |

### **Fuel system**

|   |  | Air Top 2000 STC | Air Top Evo 40/55 | Thermo Top Evo | Thermo Pro 50 Eco | Thermo Pro 90 | Thermo Top Pro 120/150 | Order number         |
|---|--|------------------|-------------------|----------------|-------------------|---------------|------------------------|----------------------|
| 6,5 458<br>Da+1+                                | Tank extracting device  Da = 5, 90°, clamps and fuel hose pieces   | •                | •                 | •              | •                 | •             |                        | 1322632A             |
| 6,5 Da  | Tank extracting device, riser pipe  Di = 2.6, Da = 5, L = 650, steel, zinc coated, 90° extractor connection piece, for installation in metal tanks  Di = 6, Da = 8, L = 500, steel, zinc coated, 90° extractor connection piece, for installation in metal tanks | •                | •                 | •              | -                 | -             | •                      | 1320399A<br>1319372A |
| Di <sub>2</sub> Di <sub>2</sub> Di <sub>1</sub> | Fuel filter  Da = 76, H = 108, filter holder with interchangeable filter, KC 20  |                  |                   |                |                   |               | -                      | 9036520A             |
| Da=5 60<br>26                                   | Fuel filter kit  Da = 5, L = 60, with hose clips and connecting hoses, plastic, transparent  | •                | •                 | •              | •                 | •             |                        | 1319466A             |

Please refer to our separate heating product catalog for our full range of accessories.

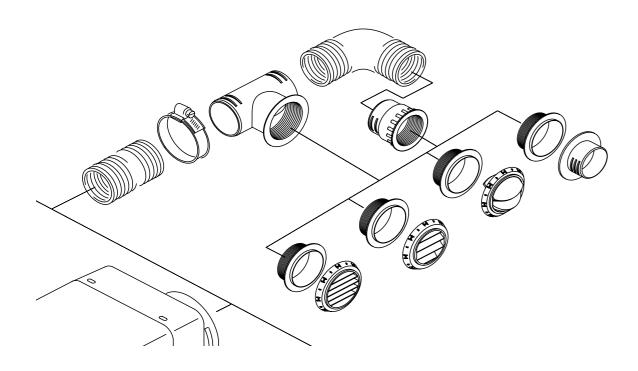
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### Advantages and features

Webasto offers a wide range of components for air distribution with high flexibility to fit any application.

#### The advantages:

- Full range of mounting parts needed for any application
- Multiple combination possibilities to suit any application
- Coloured air outlets, black, white, grey and brown fitting to any interior
- Fast and easy installation, also in small spaces
- High temperature resistance from -40 °C up to +140 °C with PA6.6 GF30 glass fibre reinforced synthetic material



Webasto is not liable for applications made with non-Webasto air ducting parts, especially for parts not guaranteeing high temperature resistance.

### Hot air system

### Air flow resistance calculation

To ensure correct application with the correct air distribution system, it is important to have a continuous main line with openings that cannot be closed. The sum of the resistance points of the main line must not exceed the maximum number of resistance points for each air heater model. Lines branching off from the main line are not taken into account.

Consequently, the branches can also be designed with closable outlets. In the following table, several air ducting parts are listed. Exceeding the number of points (excessive air resistance of the heating air system) is detected by the heater after starting. For safety reasons, continuous heating operation is then no longer possible and the heater switches to control pause.

|  |    | Ai<br>max. 3 | r Top 2000 ST<br>25 resistance | C:<br>points | Air Top Evo 40:<br>max. 550 resistance points<br>Air Top Evo 55:<br>max. 375 resistance points |              |                      |  |  |
|--|----|--------------|--------------------------------|--------------|--|--------------|----------------------|--|--|
|  |    |              | 5/60 mm inle                   |              |  | 0/90 mm inle |                      |  |  |
| Intoko avill/avillo                          |    | Dim. in mm   | Points 24                      | 1320163A     | Dim. in mm   | Points 65    | 1310581A             |  |  |
| Intake grill/ grille                         |    | 60           | 24                             | 132U103A     | 90   | 65           | 1510561A             |  |  |
| Flexible tubing per meter                    |    | 55           | 30                             | various      | 80   | 27           | various              |  |  |
| Di.  |    | 60           | 27                             | various      | 90   | 25           | various              |  |  |
| Additional points for elbow in flexible tube |    | 55           | 10                             | various      | 80   | 7            | various              |  |  |
|  | 7  | 60           | 8                              | various      | 90   | 6            | various              |  |  |
| Air ducting si-<br>lencer                    | 18 | -            | -                              | -            | 90   | 24           | 1321734A             |  |  |
| DIO  |    | -            | -                              | -            | 90   | 16           | 1320996A             |  |  |
| Reducing adapter<br>air intake               | 0  |              |                                |              | 90 > 80  | 45           | 1320186A             |  |  |
| Reducing<br>adapter                          |    | 60 > 55      | 27                             | 1320127A     | 80 > 55  | 223          | 1319477A             |  |  |
| D1a  |    | -            | -                              | _            | 90 > 60  | 211          | 1320760A             |  |  |
| D2a  | 60 | -            | _                              | _            | 90 > 80  | 45           | 1320185A             |  |  |
| Hose connector                               |    | -<br>55      | 12                             | 1319473A     | 90 > 80  | 45           | 1320925A<br>1319476A |  |  |
|  |    |              |                                |              |  |              |                      |  |  |
| Da   |    | 60           | 10                             | 1320469A     | 90   | 5            | 1319869A             |  |  |

### Air flow resistance calculation

|                                |    |            | max. 3     | r Top 2000 ST<br>25 resistance<br>5/60 mm inle | points   | max. 5<br>/<br>max. 3 | 0:<br>points<br>5:<br>points<br>et |                      |  |
|--------------------------------|----|------------|------------|--|----------|-----------------------|------------------------------------|----------------------|--|
|                                |    |            | Dim. in mm | Points   | ld.      | Dim. in mm            | Points                             | ld.                  |  |
| Elbow for air outlet           |    |            | 60         | 35   | 1320124A | -                     | -                                  | -                    |  |
| Elbow                          |    |            | -          | -  | -        | 80                    | 50                                 | 1319272A             |  |
| Da O                           |    |            | _          | -  | -        | 90                    | 77                                 | 1320706A             |  |
| Branch                         |    |            | 55/55/55   | 10   | 1321019A | 80/55/80              | 8                                  | 1319479A             |  |
| D1a D1a                        | 00 | <b>Q</b> 4 | 60/60/60   | 9  | 1320472A | 80/80/80              | 9                                  | 1319315A             |  |
|                                |    |            | -          | _  | _        | 90/60/90              | 8                                  | 1320707A             |  |
|                                |    | _          | -          | -  | -        | 90/60/90              | 8                                  | 1321034A             |  |
| Branch                         |    |            | 55/55/55   | 22   | 1321019A | 80/55/80              | 230                                | 1319479A             |  |
| D1a D1a                        |    | X.P        | 60/60/60   | 21   | 1320472A | 80/80/80              | 50                                 | 1319315A             |  |
|                                |    | 1          | _          | _  | _        | 90/60/90              | 228                                | 1320707A             |  |
|                                |    |            | -          | -  | _        | 90/60/90              | 228                                | 1321034A             |  |
| Y-piece                        |    |            | 60/60/60   | 20   | 1320814A | 80/55/55              | 230                                | 1320753A             |  |
| D2a D1a                        | 8  |            | _          | _  | _        | 80/60/60              | 201                                | 1320471A             |  |
| D2a                            |    | ▲          | -          | _  | _        | 80/80/80              | 50                                 | 1320375A             |  |
| Tniasa                         |    |            | -          | 13   | 12204744 | 90/90/90              | 13                                 | 1320470A<br>1320473A |  |
| T-piece Da Da                  |    | -1         | 60/60/60   | 13   | 1320474A | 90790790              | 13                                 | 13204/3A             |  |
| T-piece Da Da Da               |    | •          | 60/60/60   | 63   | 1320474A | 90/90/90              | 61                                 | 1320473A             |  |
| Distributor with control valve |    |            | 55/55/55   | 19   | 1319224A | 80/80/80              | 21                                 | 1319214A             |  |
| Di                             |    |            | 60/60/60   | 20   | 1320352A | 90/90/90              | 21                                 | 1320926A             |  |
| Distributor<br>Y-piece         |    | •          | 55/55/55   | 21   | 1319416A | 80/80/80              | 50                                 | 1319212A             |  |

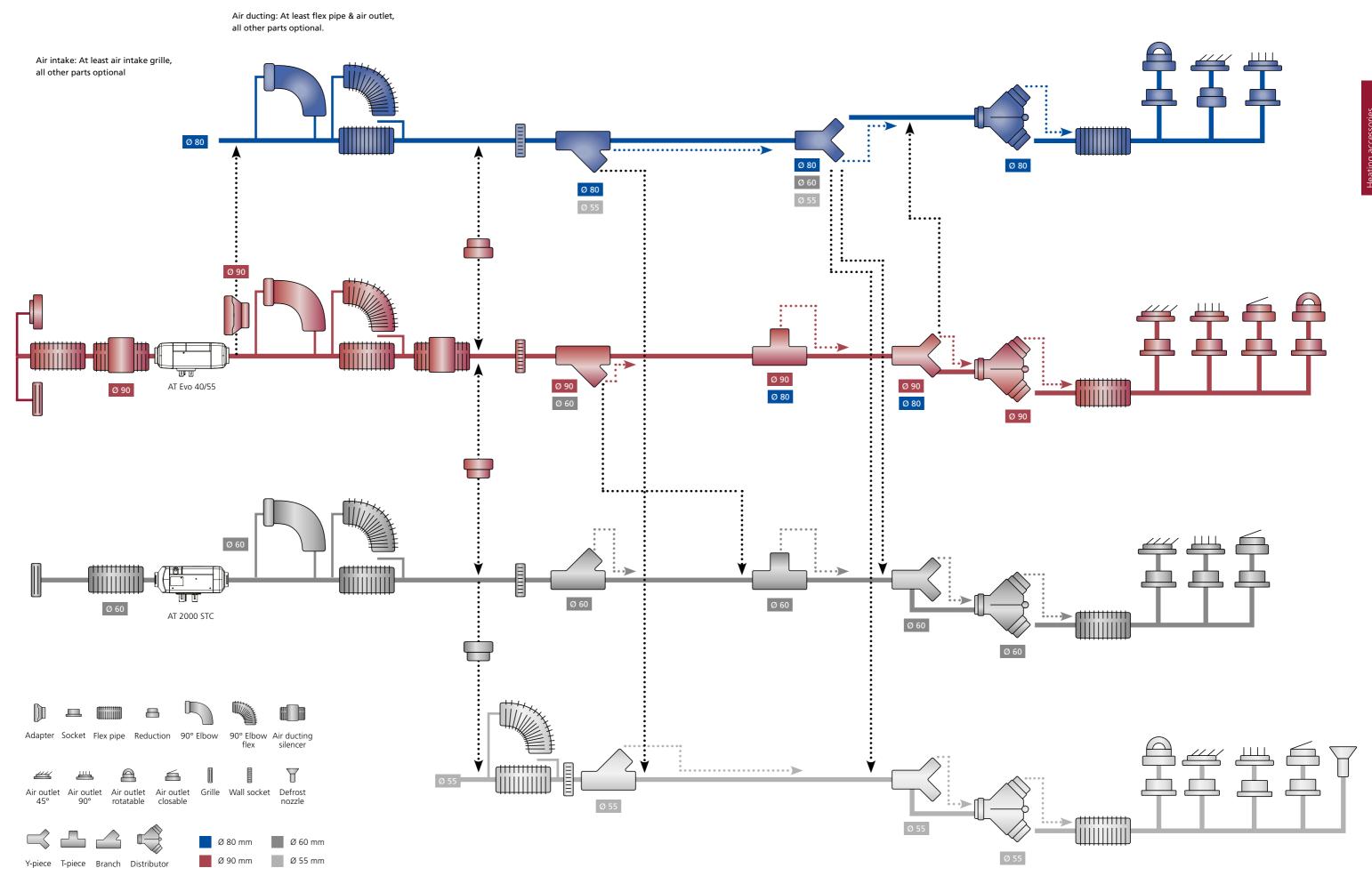
### Hot air system

### Air flow resistance calculation

|                      |     |   | max. 3         | ir Top 2000 ST<br>25 resistance | points   | max. 5<br><i>J</i><br>max. 3 | Air Top Evo 40:<br>50 resistance p<br>Air Top Evo 55:<br>75 resistance p | points           |
|----------------------|-----|---|----------------|---------------------------------|----------|------------------------------|--|------------------|
|                      |     |   | 5              | 5/60 mm inle                    | t        | 8                            | 0/90 mm inlet  | t                |
|                      |     |   | Dim. in mm     | Points                          | ld.      | Dim. in mm                   | Points   | ld.              |
| eaded<br>ece         |     |   | 60/60/60       | 8                               | 1320476A | 90/60/90                     | 11   | 1320475A         |
| Da                   |     | • |                |                                 |          |                              |  |                  |
| eaded<br>ece         |     | 4 | 60/60/60       | 36                              | 1320476A | 90/60/90                     | 254  | 1320475A         |
| atable<br>outlet     |     |   | Ø 60/black     | 24                              | 1322405A | -                            | -  | -                |
| seable               |     |   | Ø 55/black     | 64                              | 1320812A | _                            | _  | _                |
| outlet               |     |   | Ø 60/ black    | 59                              | 9012300A |                              |  |                  |
|                      | 1   |   | Ø 60/white     | 59                              | 9012301A | Ø 90/white                   | 50   | 1320713A         |
|                      |     |   | Ø 60/grey      | 59                              | 9012302A | Ø 90/black                   | 50   | 1320355A         |
|                      |     |   | Ø 60/brown     | 59                              | 1320208A | Ø 90/grey                    | 50   | 1320714          |
| let 45°              |     |   | Ø 55/45°/black | 142                             | 107836   | Ø 80/45°/black               | 136  | 107984           |
|                      |     |   | Ø 60/45°/black | 139                             | 9012294A | Ø 90/45°/<br>black/pivoted   | 134  | 1320956 <i>A</i> |
|                      |     |   | Ø 60/45°/white | 139                             | 9012295A | Ø 90/45°/black               | 134  | 1320709A         |
|                      |     |   | Ø 60/45°/grey  | 139                             | 9012296A | Ø 90/45°/white               | 134  | 1320710          |
|                      |     |   | Ø 60/45°/brown | 139                             | 1320761A | Ø 90/45°/grey                | 134  | 1320354/         |
| et 90°               |     |   | Ø 55/90°/black | 37                              | 101625   | -                            | -  | -                |
|                      |     |   | Ø 60/90°/black | 35                              | 9012297A | Ø 80/90°/black               | 35   | 1322710          |
|                      |     |   | Ø 60/90°/white | 35                              | 9012298A | Ø 90/90°/black               | 33   | 1320932          |
|                      |     |   | Ø 60/90°/grey  | 35                              | 9012299A | Ø 90/90°/grey                | 33   | 1320712          |
|                      |     |   | Ø 60/90°/brown | 35                              | 1320762A | Ø 60/90°/white               | 33   | 1320711          |
| l socket             |     |   | 55             | 10                              | 1319417A | 80                           | 11   | 1319471          |
| OP                   |     |   | 55             | 10                              | 1320063A | 90                           | 12   | 1320924          |
|                      |     |   | 60             | 10                              | 1320923A | -                            |  | -                |
| socket<br>air outlet |     |   | 60             | 24                              | 1322634A | -                            | -  | -                |
| ntake grille         | li. |   | 60             | 139                             | 1319269A | 80                           | 137  | 1319269 <i>A</i> |
|                      |     |   |                | -                               | -        | 90                           | 134  | 1319269          |

 $\mathsf{O}$ 

### Air ducting combination possibilities:



|     |  | Air Top 2000 STC | Air Top Evo 40/55 | Order number |
|-----|--|------------------|-------------------|--------------|
|     | Flexible pipe, 55 mm, suitable only with adapter                                     |                  |                   |              |
|     | Di = 55  |                  |                   |              |
|     | L = 2,000, APK, black  |                  | •                 | 1315889A     |
|     | L = 2,000, AFK, Black<br>L = 2,000, PAPK, grey                                       |                  |                   | 1321580B     |
|     | L = 10,000, APK, black   | •                | •                 | 1322082A     |
|     | L = 10,000, PAK  |                  |                   | 1321701B     |
|     | L = 10,000, PAK<br>L = 25,000, APK, black  | •                | •                 | 1311891C     |
| DI  | L = 25,000, PAPK, grey   |                  |                   | 1311896C     |
|     |  |                  |                   | 13110900     |
|     | Flexible pipe, 60 mm, suitable for Air Top 2000 STC, for other heaters with adapter  |                  |                   |              |
|     | Di = 60  | _                | _                 | 42245740     |
|     | L = 2,000, APK, black  | •                |                   | 1321574B     |
|     | L = 2,000, PAPK, grey  | •                | •                 | 1321504A     |
|     | L = 5,000, APK, black  | •                |                   | 1321575C     |
|     | L = 10,000, APK, black   | •                | •                 | 1322083C     |
|     | L = 10,000, PAR, black   | •                | •                 | 1321692B     |
|     | L = 10,000, PAPK, grey   | •                | •                 | 1321727C     |
|     | L = 20,000, PAK, black   | •                |                   | 1321697B     |
| Di  | L = 25,000, APK, black   | •                | •                 | 1311892C     |
| `   | L = 25,000, PAPK, grey   | -                | •                 | 1311898C     |
|     | Flexible pipe, 80 mm, suitable only with adapter                                     |                  |                   |              |
|     | Di = 80  |                  |                   |              |
|     | L = 1,000, AA, grey  | •                | -                 | 1321531A     |
|     | L = 2,000, APK, black  | •                | •                 | 1321576C     |
|     | L = 2,000, PAPK, grey  | •                |                   | 1321582B     |
|     | L = 5,000, APK, black  | •                | •                 | 1321577B     |
|     | L = 10,000, AA, grey   | •                | •                 | 1321533A     |
|     | L = 10,000, APK, black   | •                | •                 | 1321718C     |
|     | L = 10,000, PAK  | •                | •                 | 1322147B     |
|     | L = 10,000, PAPK, grey   | •                | •                 | 1321729B     |
| Di, | L = 25,000, APK, black   | •                | •                 | 1311893C     |
| \   | L = 25,000, PAPK, grey   | -                | -                 | 1311900C     |
|     | Flexible pipe, 90 mm, suitable for Air Top Evo 40/55, for other heaters with adapter |                  |                   |              |
|     | Di = 90  |                  |                   |              |
|     | L = 2,000, APK, black  | •                | •                 | 1321578C     |
|     | L = 2,000, PAPK, grey  | •                | -                 | 1321506B     |
|     | L = 5,000, APK, black  | •                | •                 | 1321579C     |
|     | L = 5,000, PAPK, grey  | •                | -                 | 1321508A     |
|     | L = 10,000, APK, black   | •                | -                 | 1321719C     |
|     | L = 10,000, PAPK, grey   | •                | •                 | 1321731C     |

#### Hose specification

L = 25,000, APK, black

L = 25,000, PAPK, grey

**APK:** Aluminium, paper, plastic – black, with white Webasto logo

PAK: Paper, aluminium, plastic – black, with white Webasto logo

PAPK: Paper, aluminium, paper, plastic – grey, with red and blue Webasto logo, extra strong 4 layer design

### Hot air system

|           |   | Air Top 2000 STC | Air Top Evo 40/55 | Order number                                 |
|-----------|---|------------------|-------------------|--|
|           | Elbow  Di = 80.5, Da = 79, L = 115, steel, corrosion-resistant, 90°   | •                | •                 | 1319272A                                     |
| Di Di     | Insulated hose  L = 12,000, PAK  Di = 80  Di = 90   | •                | •                 | 1321515A<br>1321517A                         |
| D2a       | Adapter for heater connection  D1i = 90, D2a = 80, L = 40, plastic  |                  | -                 | 1320186A                                     |
| D2a D2a L | Adapter for heater connection  D1i = 60, D2a =75, L = 40, plastic   | •                |                   | 1321005A                                     |
|           | Adapter ring  Di = 55, Da = 60, aluminium   | •                | -                 | 1320224A                                     |
| D1a D1a   | Plastic, for connecting flexible pipes, black D1a = 55, L = 55 D1a = 60, L = 51 D1a = 80, L = 75 D1a = 90, L = 51 | -                | •                 | 1319473A<br>1320469A<br>1319476A<br>1319869A |

1311894C

1311902C

### Hot air system

|            | End cap  Plastic, black  Da = 60  Da = 90   | Air Top 2000 STC | ■ ■ Air Top Evo 40/55 | Order number<br>1320477A<br>1319870A |
|------------|---|------------------|-----------------------|--------------------------------------|
| D1i D2a    | Extension adapter  D1i = 90, for connecting flexible pipes, in connection with union nut 1320468A, plastic, black  D2a = 60, L = 59  D2a = 80, L = 50 |                  | •                     | 1320760A<br>1320925A                 |
| D1a<br>D2a | Reduction adapter  Plastic, for connecting flexible pipes, black  D1a = 60, D2a = 55, L = 35  D1a = 80, D2a = 55, L = 82  D1a = 90, D2a = 80, L = 45  |                  | •                     | 1320127A<br>1319477A<br>1320185A     |
| Da         | Elbow  Da = 90, plastic, black  | •                | •                     | 1320706A                             |
| Da         | Hot air elbow 90° for heater connection  Di = 60, Da = 60, plastic, black   | •                | •                     | 1320124A                             |
| D1a D2a    | Wall feed-through  Plastic, black  D1a = 85, D2a = 55  D1a = 90, D2a = 60  D1a = 120, D2a = 90  | •                | •                     | 1319417A<br>1320923A<br>1320924A     |

|          | Adapter wall socket  | Air Top 2000 STC | Air Top Evo 40/55 | Order number |
|----------|--|------------------|-------------------|--------------|
| \ D2a    | L = 72.5, plastic, black   |                  |                   |              |
|          | D1a = 90, D2a = 55   | •                | -                 | 1320063A     |
| D1a 72,5 | D1a = 110, D2a = 80, can be combined with wall feed-through                  | •                | •                 | 1319471A     |
|          | Union nut  |                  |                   |              |
|          | L = 60, plastic, black   |                  |                   |              |
| D1a      | D1a = 60, in combination with 60 mm air outlet                               | -                | -                 | 1320922A     |
|          | D1a = 90, in combination with 90 mm air outlet                               | •                | •                 | 1320468A     |
|          | Junction fitting   |                  |                   |              |
|          | 45°  |                  |                   |              |
|          | D1a = 55, D2a = 55, L = 137, plastic, black                                  |                  | •                 | 1321019A     |
| D2a/     | D1a = 60, D2a = 60, L = 145, plastic, black                                  |                  | •                 | 1320472A     |
| \\D1a    | D1a = 80, D2a = 55, L = 151, plastic, black                                  | •                | •                 | 1319479A     |
| / A bia  | D1a = 80, D2a = 80, L = 186, plastic, black                                  | •                | •                 | 1319478A     |
|          | D1a = 80, D2a = 80, L = 370, steel, corrosion-resistant                      | •                | •                 | 1319315A     |
| 743      | D1a = 90, D2a = 60, L = 146, plastic, black                                  | •                | •                 | 1320707A     |
| Dia      | D1a = 90, D2a = 60, L = 185, plastic, black                                  | •                | •                 | 1321034A     |
|          | T-piece  |                  |                   |              |
|          | L = 110, plastic, black  |                  |                   |              |
|          | Da = 60  | •                | •                 | 1320474A     |
| Da       | Da = 90  | •                | -                 | 1320473A     |
|          | T-piece  |                  |                   |              |
| Di       | Di = 60, black   |                  |                   |              |
|          | Da = 60, L = 100, plastic, in combination with 60 mm air outlet, with thread | •                | •                 | 1320476A     |
|          | Da = 90, L = 140, plastic, in combination with 60 mm air outlet, with thread | •                | -                 | 1320475A     |

### Hot air system

| Da         | Plastic, black Da = 55, with remote control flap valve Da = 60 Da = 80, with remote control flap valve Da = 90                   | Air Top 2000 STC | ■ ■ ■ Air Top Evo 40/55 | Order number  1319224A 1320352A 1319214A 1320926A |
|------------|--|------------------|-------------------------|---|
| Da         | Distributor Y-unit  Plastic, black  Da = 55  Da = 80   | ī                | •                       | 1319416A<br>1319212A                              |
| Da         | Plastic, black Da = 60 Da = 90   | ī                | •                       | 1320814A<br>1320470A                              |
| D2a<br>D1a | Air outlet 45° rotatable  Plastic, black  D1a = 80, D2a = 55  D1a = 80, D2a = 60  D1a = 90, D2a = 80                             | i                | •                       | 1320753A<br>1320471A<br>1320375A                  |
| D1a<br>D2a | Air outlet  D2a = 100, L = 63, black, plastic, lockable, with wall feed through, use for secondary flow only  D1a = 55  D1a = 70 |                  | -                       | 1320812A<br>1319946A                              |
| 90° D1a    | Air outlet  L = 65, plastic, insert grid, straight, rotating, 90°, black  D1a = 55, D2a = 87  D1a = 80, D2a = 110                | :                | -                       | 101625<br>1322710A                                |

|  |  | Air Top 2000 STC | Air Top Evo 40/55 | Order number         |
|--|--|------------------|-------------------|----------------------|
|  | Air outlet   |                  |                   |                      |
|  | Plastic, through flow with bushing, 45°                                      |                  |                   | 9012294A             |
| DIA  | D1a = 60, D2a = 85, L = 31.5, black D1a = 60, D2a = 85, white                |                  |                   | 9012294A<br>9012295A |
|  | D1a = 60, D2a = 85, brown  |                  |                   | 1320761A             |
|  | D1a = 60, D2a = 85, Brown D1a = 60, D2a = 85, grey                           |                  |                   | 9012296A             |
|  |  |                  |                   | 1320354A             |
| DZa  | D1a = 90, D2a = 115, grey D1a = 90, D2a = 115, black                         |                  |                   | 1320709A             |
|  | D1a = 90, D2a = 113, black D1a = 90, D2a = 115, white                        |                  |                   | 1320710A             |
|  | Air outlet   |                  |                   | 1320710A             |
|  | Lockable, with wall feed through   |                  |                   |                      |
|  | D1a = 60, D2a = 85, black, plastic   |                  | •                 | 9012300A             |
| DIA  | D1a = 60, D2a = 85, white, plastic   |                  | -                 | 9012301A             |
| The state of the s | D1a = 60, D2a = 85, brown  |                  | -                 | 1320208A             |
|  | D1a = 60, D2a = 85, grey, plastic  |                  |                   | 9012302A             |
|  | D1a = 90, D2a = 115, black, plastic  |                  | •                 | 1320355A             |
| 024  | D1a = 90, D2a = 115, white, plastic  |                  |                   | 1320713A             |
|  | D1a = 90, D2a = 115, grey, plastic   |                  | •                 | 1320714A             |
|  | Air outlet   |                  |                   |                      |
|  | Plastic, 90°, with wall feed through   |                  |                   |                      |
|  | D1a = 60, D2a = 85, black  |                  | •                 | 9012297A             |
| 012  | D1a = 60, D2a = 85, white  |                  |                   | 9012298A             |
|  | D1a = 60, D2a = 85, grey   |                  | •                 | 9012299A             |
|  | D1a = 90, D2a = 115, white   |                  | •                 | 1320711A             |
|  | D1a = 90, D2a = 115, grey  |                  | •                 | 1320712A             |
| 028  | D1a = 60, D2a = 85, brown  |                  | •                 | 1320762A             |
|  | D1a = 90, D2a = 115, black   |                  | •                 | 1320932A             |
| D10:   | Air outlet   |                  |                   |                      |
| D1a<br>D2a<br>98   | D1a = 60, D2a = 92, black, plastic, rotatable, with ball-shape outlet, black | •                | •                 | 1322405A             |
| D2a)   | Air outlet   |                  |                   |                      |
| D1a  | L = 65, plastic, rotatable, black  |                  |                   |                      |
|  | D1a = 55, D2a = 90, 45°  |                  | •                 | 107836               |
|  | D1a = 80, D2a = 110  | -                | •                 | 107984               |
| 45°/~~   |  |                  |                   |                      |

### Hot air system

|                 |   | Air Top 2000 STC | Air Top Evo 40/55 | Order number         |
|-----------------|---|------------------|-------------------|----------------------|
| D2a<br>D1a      | Air outlet  D1a = 90, D2a = 120, L1 = 65, L2 = 108, drilling diameter = 95 mm, plastic, through flow with bushing, 45°, black | •                | •                 | 1320956A             |
| D1a<br>D2a      | Air outlet  D1a = 60, D2a = 97, L = 50, plastic, axiale flow, with wall feed through, black                                   | •                | •                 | 1322634A             |
| 180 10<br>66 Da | Demist nozzle  Da = 55, steel, corrosion-resistant  | •                | •                 | 1319470A             |
|                 | Protective screen  For intake and outlet openings of heater, plastic, black  Di = 60  Di = 90                                 |                  | -                 | 1320163A<br>1310581A |
|                 | Protective screen  Di = 60, for flex tube intake, rubber  | •                |                   | 1320173A             |
| 170             | Louvre plate  L = 190, H = 170, aluminium, for air intake only  | •                | •                 | 1319269A             |

|           | Air ducting silencer Di = 90, L = 640, aluminium/plastic                              | ■ Air Top 2000 STC | ■ Air Top Evo 40/55 | Order number<br>1321734A |
|-----------|---|--------------------|---------------------|--------------------------|
| Di 640    |   |                    |                     |                          |
| Da 317    | Air ducting silencer  Di = 90, Da = 122, L = 317, plastic, black                      | •                  | •                   | 1320996A                 |
| 6,5<br>57 | Console  10 pieces  | •                  | •                   | 1321044A                 |
|           | Control cable  With grip and outer sleeve, for Y-pieces  L = 850  L = 1,500           | •                  | -                   | 1320785A<br>1320786A     |
| R         | Control device for distributor  L = 2,000, for Y-pieces, with control butterfly valve | •                  | -                   | 1319868A                 |
|           | Clamp  For bowden cable 1320785A and 1320786A   | •                  | •                   | 1319688A                 |

Please refer to our separate heating product catalog for our full range of accessories.

# Water system

# Accessories: Water system

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#### Webasto offers a wide range of high-quality Hep<sub>2</sub>O products.

- Cabling ability Hep<sub>2</sub>O provides faster, safer and more cost effective installation
- Less jointing Hep<sub>2</sub>O flexible polybutylene pipe system requires less jointing, thus saves time and materials
- Joint security the Hep<sub>2</sub>O push-fit piping offers reliable jointing and safe assembly
- High resistance to impact and vibration solder free, and the Hep<sub>2</sub>O system is extremely strong and resistant to denting and accidental damage from impact or vibration
- Corrosion free Hep<sub>2</sub>O completely eliminates electrolytic corrosion and is highly resistant against aggressive salt-water and other corrosive media

For the complete overview of  $\operatorname{Hep}_2O$  parts please refer to the water system section for BlueCool accessories in this catalog.

# Water system

| Da       | Hose<br>EPDM, black                                      | Thermo Top Evo | Thermo Pro 50 Eco | Thermo Pro 90 | Thermo Top Pro 120/150 | Order number         |
|----------|--|----------------|-------------------|---------------|------------------------|----------------------|
| Di       | Di = 15, Da = 22, L = 2,400<br>Di = 20, Da = 27, L = 380 | -              | •                 | -             | •                      | 1320300A<br>1320960A |
|          | Molded hose 90°  |                |                   |               |                        |                      |
|          | Black  |                |                   |               |                        |                      |
|          | Di = 15, Da = 22, L1 = 1020, L2 = 50, 90°                | •              | -                 | •             | -                      | 1320789A             |
| <b>D</b> | Di = 18, Da = 25, L1 = 136, L2 = 92, 90°                 | •              | •                 | •             | -                      | 1320907A             |
| Da       | Di = 18, Da = 25, L1 = 500, L2 = 47, 90°                 | •              | -                 | •             | -                      | 1319953A             |
| 90°/ 1L2 | Di = 18, Da = 25, L1 = 1020, L2 = 50, 90°                | •              | •                 | •             | -                      | 1320794A             |
|          | Di = 20, Da = 27, L1 = 70, L2 = 70, 90°                  | •              | -                 | •             | -                      | 1319839A             |
| 10-00    | Di = 20, Da = 27, L1 = 130, L2 = 48, 90°                 | •              | •                 | •             | -                      | 1320147A             |
| Di T     | Di = 20, Da = 27, L1 = 360, L2 = 20, 90°                 | •              | •                 | •             | -                      | 1320961A             |
| L1       | Di = 20, Da = 27, L1 = 615, L2 = 56, 90°                 | •              | •                 | •             | -                      | 1320197A             |
| 2214     | Molded hose 90°  |                |                   |               |                        |                      |
| Di 18    | Di = 18, Da = 25, 90°                                    | •              |                   |               | •                      | 1319418A             |
| 11 /     | Molded hose 180°   |                |                   |               |                        |                      |
|          | 180°, black  |                |                   |               |                        |                      |
|          | Di = 18, Da = 25, L1 = 18, L2 = 18, r = 25 mm            | •              | -                 | •             | -                      | 1319401A             |
| Da Di L2 | Di = 20, Da = 27, L1 = 40, L2 = 64, r = 24 mm            | •              |                   |               |                        | 1319623A             |
| 12 -     | Molded hose 180°   |                |                   |               |                        |                      |
| Di Ž     | L2 = 20, H = 75, 180°                                    |                |                   |               |                        |                      |
|          | Di = 15, Da = 22, L1 = 580                               |                | •                 | -             |                        | 1320790A             |
| 511      | Di = 18, Da = 25, L1 = 580                               |                | •                 | •             |                        | 1319421A             |
|          | Di = 18, Da = 25, L1 = 1,100                             |                | •                 | •             | •                      | 1322496A             |
| Da L1    |  |                |                   |               |                        |                      |
|          | Molded hose 180°   |                |                   |               |                        |                      |
| L3       | 180°, black  |                |                   |               |                        |                      |
| L2       | Di = 18, Da = 25, L1 = 110, L2 = 20, H = 54              |                | •                 | •             | •                      | 1322493A             |
| Da       | Di = 20, L1 = 190, L2 = 113                              |                | •                 | •             |                        | 1322473A             |
| Di Di L1 |  |                |                   |               |                        |                      |

# Water system

|                               |  | Thermo Top Evo | Thermo Pro 50 Eco | Thermo Pro 90 | Thermo Top Pro 120/150 | Order number |
|-------------------------------|--|----------------|-------------------|---------------|------------------------|--------------|
| D2a                           | T-piece  |                |                   |               |                        |              |
|                               | D1a = 15, D2a = 15, L = 75, plastic, black                                     | -              | -                 | •             | •                      | 1327573A     |
| D1a                           | D1a = 18, D2a = 18, L = 75, plastic, black                                     | •              | •                 | •             | •                      | 1321001A     |
| D1a L                         | D1a = 20, D2a = 25, L = 100, aluminium   |                |                   |               | •                      | 1328140B     |
| _ <b>→</b>   _   <b>←</b> D2a | T-piece  |                |                   |               |                        |              |
| 5,8<br>D1a<br>D1a             | D1a = 20, D2a = 20, L = 75, brass, with restrictor, restrictor diameter 5.8 mm | •              | •                 | •             | •                      | 1319817A     |
| 4.0 Da                        | T-piece  |                |                   |               |                        |              |
| Da Da                         | Da = 18, L = 75, brass, with restrictor, restrictor diameter 4 mm              | •              | •                 |               | •                      | 1319800A     |
|                               | Connecting pipe  |                |                   |               |                        |              |
|                               | L = 63, black  |                |                   |               |                        |              |
|                               | D1a = 15, D2a = 20, plastic, 10 pieces   | •              | •                 | •             | •                      | 1321000A     |
| D2a                           | D1a = 17, D2a = 20, plastic  | •              | •                 | •             | •                      | 1320143A     |
|                               | D1a = 18, D2a = 18, plastic, 10 pieces   | •              | •                 | •             | •                      | 9006211A     |
|                               | D1a = 18, D2a = 20, plastic, 10 pieces   | •              | •                 | •             | •                      | 9005819C     |
| D1a 63                        | D1a = 18, D2a = 22, plastic  | •              | •                 | •             | •                      | 1320155A     |
| D14.5 00                      | D1a = 20, D2a = 20, plastic  | •              | -                 | •             | •                      | 1320342A     |
|                               | D1a = 20, D2a = 22, plastic  | -              | -                 | •             |                        | 1319594A     |
| Da<br>Da<br>Da<br>Da          | Connecting pipe, y-type  Da = 18, L = 75, steel, corrosion-resistant           | •              | •                 | •             | •                      | 1319266A     |
|                               | Connecting pipe with thread  |                |                   |               |                        |              |
| Da                            | Da = 18, L = 100, M22x1.5, steel, corrosion-resistant, for thermostat          |                | •                 | •             | •                      | 1320792A     |

# Water system

| D. Committee of the control of the c | Braided protection hose  Di = 24, L = 1,500, polyester, chafing guard for water hoses 22 – 35 mm  | Thermo Top Evo | ■ Thermo Pro 50 Eco | ■ Thermo Pro 90 | Thermo Top Pro 120/150 | Order number<br>1322409A |
|--|---|----------------|---------------------|-----------------|------------------------|--------------------------|
| - \  |   |                |                     |                 |                        |                          |
| <mark>∢ Da</mark> ▶  | Rubber ring (anti-chafing device)  L = 20, not permitted for exhaust systems, elastomer   |                |                     |                 |                        |                          |
| <b>→</b>   Di   <b>∢</b> -   | Di = 20.5, Da = 40  |                | •                   | •               | •                      | 1312785A                 |
| L  | Di = 25.5, Da = 45  | •              | •                   | •               | •                      | 1312780A                 |
|  | Pressure expansion tank   |                |                     |                 |                        |                          |
| 290 230  | 8 l, prepressure 0.5 bar, red   | •              | •                   | •               | •                      | 1320545A                 |
| a de la companya della companya della companya de la companya della companya dell | Header tank vertical  |                |                     |                 |                        |                          |
| 190 190  | L = 180, W = 120, H = 270, 5 liter, net content 3 liter, vertical, made of polypropylene for high temperature resistance, tank kit includes 3 stainless steel mounting brackets   | •              | •                   | •               | •                      | 9024038A                 |
|  | Header tank horizontal  |                |                     |                 |                        |                          |
| 110  | L = 270, W = 120, H = 180, 5 liter, net content 3 liter, horizontal, made of polypropylene for high temperature resistance, tank kit includes 3 stainless steel mounting brackets | •              |                     |                 |                        | 9024039A                 |

Please refer to our separate heating product catalog for our full range of accessories.

# Valve

|                        |   | Thermo Top Evo | Thermo Pro 50 Eco | Thermo Pro 90 | Thermo Top Pro 120/150 | Order number         |
|------------------------|---|----------------|-------------------|---------------|------------------------|----------------------|
| Da H Da Da             | Electric valve 3/2 way  Da = 18, L = 84, W = 55, H = 101, V = 12, metal/plastic, 3/2-way, normally open | •              | •                 | •             | •                      | 9014606A             |
| Da                     | Check valve  Plastic, with leak hole, black  Da = 15, L = 104  Da = 18, L = 90                          | -              | -                 | •             | •                      | 1320239A<br>1319250A |
| Da                     | Check valve  Da = 18, L = 100, plastic, without leak hole, black  | •              | •                 | •             | •                      | 1319484A             |
| D1a<br>D1a<br>D2a<br>H | Check valve  D1a = 18, D2a = 18, L = 146, H = 42, without leak hole, plastic, black                     | •              | •                 | •             | •                      | 1319485A             |
| L                      | Check valve L = 94 Da = 18, H = 42 Da = 20, H = 43  | -              | -                 | •             | •                      | 1327550A<br>1327551A |
| H                      | Check valve  Da = 18, L = 94, H = 52, double check valve ball-type T                                    | •              | •                 | •             | •                      | 1327549A             |

# Valve

|       |  | Thermo Top Evo | Thermo Pro 50 Eco | Thermo Pro 90 | Thermo Top Pro 120/150 | Order number         |
|-------|--|----------------|-------------------|---------------|------------------------|----------------------|
| H     | Check valve  Da = 18, L = 94, H = 46, double check valve ball-type for heater connection | •              | •                 | •             | •                      | 9043408A             |
|       | Bleeding valve   |                |                   |               |                        |                      |
|       | L = 75, with bleeding valve, steel, corrosion-resistant                                  | _              |                   |               |                        | 42402244             |
|       | Da = 15 Da = 18  | •              |                   |               |                        | 1319221A             |
|       | Da = 18<br>Da = 20   | •              |                   |               | •                      | 1319219A<br>1320989A |
| Da 75 | <i>Da</i> = 20   |                |                   |               |                        | 1320303A             |
|       | Bleeding valve   |                |                   |               |                        |                      |
| Da    | Da = 21, L = 25, ball valve, for 20 and 21 mm hoses                                      |                |                   |               |                        | 9044045A             |

Please refer to our separate heating product catalog for our full range of accessories.

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# **Mounting parts**

# **Mounting parts**

|   | Heater bracket   | Air Top 2000 STC | Air Top Evo 40/55 | Thermo Top Evo | Thermo Pro 50 Eco | Thermo Pro 90 | Thermo Top Pro 120/150 | Order number |
|---|--|------------------|-------------------|----------------|-------------------|---------------|------------------------|--------------|
| الم | L1 = 157, L2 = 112, W = 130, stainless steel 3 mm, suitable for various installation options | •                | •                 |                |                   |               |                        | 1319936A     |
| 25                                      | Mounting bracket   |                  |                   |                |                   |               |                        |              |
|   | L = 46, W = 25   |                  |                   |                |                   |               |                        |              |
| 46 D 7                                  | Stainless steel, 10 pieces   | -                | •                 | •              | •                 |               | •                      | 1320264A     |
| 26                                      | Steel, zinc coated, 10 pieces  | •                |                   | •              | •                 |               | •                      | 1320232A     |
| <b>&gt;</b>                             | Mounting strip   |                  |                   |                |                   |               |                        |              |
| 25                                      | L = 100, W = 25, steel, zinc coated, 10 pieces   | •                | •                 | •              | •                 | •             | •                      | 9007918A     |
|   | Hose clip  |                  |                   |                |                   |               |                        |              |
|   | Steel, corrosion-resistant, bolt head with hexagon and cross-head slot                       |                  |                   |                |                   |               |                        |              |
|   | Di = 8, 20 pieces  |                  | •                 | -              | •                 | •             | •                      | 1320244A     |
| <b>D</b> :                              | Di = 9   | -                | •                 | -              | •                 | •             | •                      | 1320492A     |
| Di                                      | Di = 12, 20 pieces   | •                | •                 | -              | •                 | •             | •                      | 1320246A     |
| \                                       | Di = 14, 20 pieces   | •                | •                 | •              | •                 | •             | •                      | 1320245A     |
|   | Exhaust clamp  |                  |                   |                |                   |               |                        |              |
|   | W = 16, for flexible exhaust pipe, stainless steel   |                  |                   |                |                   |               |                        |              |
|   | Di 24 – 26 mm, with carriage bolt  | •                |                   | -              | •                 |               |                        | 1320165A     |
|   | Di 26 – 28 mm, nut, welded   |                  | •                 |                |                   |               |                        | 1320220A     |
|   | Hose clip  |                  |                   |                |                   |               |                        |              |
|   | W = 14.3, stainless steel  |                  |                   |                |                   |               |                        |              |
|   | Di 16 – 27 mm, 10 pieces   | -                | •                 | •              | •                 | •             | -                      | 9015918A     |
| 7 [ ]                                   | Di 23 – 35 mm, 20 pieces   | -                | •                 | •              | ٠                 | •             | •                      | 1320271A     |
| Di                                      | Di 60 – 80 mm  | •                | •                 | •              | •                 | •             | -                      | 9026066A     |
|   | Di 80 – 100 mm, 10 pieces  | -                | •                 | •              | ٠                 | •             | •                      | 9043258A     |
|   | Di 90 – 110 mm   |                  |                   | •              | •                 |               |                        | 1320085A     |

|              |   | Air Top 2000 STC | Air Top Evo 40/55 | Thermo Top Evo | Thermo Pro 50 Eco | Thermo Pro 90 | Thermo Top Pro 120/150 | Order number         |
|--------------|---|------------------|-------------------|----------------|-------------------|---------------|------------------------|----------------------|
| Di           | Pipe clamp  W = 13.5, Di = 39 42, steel, corrosion-resistant, with screw, for flexible exhaust pipe |                  |                   |                |                   | •             | •                      | 1320194A             |
| Di           | Fastening clamp  Di = 34, W = 20, chromed steel with rubber, 6.5 mm fastening hole, 10 pieces       | •                | •                 | •              | •                 | •             | •                      | 1320236A             |
| Di           | Fastening clamp  Di = 25, W = 15, chromed steel, 6.5 mm fastening hole, 10 pieces                   | •                | •                 | •              | •                 | •             | •                      | 9023007A             |
|              | Spacer bushing  |                  |                   |                |                   |               |                        |                      |
|              | Di = 8, Da = 20, aluminium  |                  |                   |                |                   |               |                        |                      |
|              | L=5   | •                |                   |                | -                 |               | •                      | 1320498A             |
| Di           | L = 8<br>L = 10   | •                |                   |                | •                 |               | •                      | 1320499A<br>1320496A |
|              | L = 15  | -                |                   | -              |                   |               | -                      | 1320090A             |
| Dà.          | L = 20  | •                | •                 | •              | -                 | -             | -                      | 1320088A             |
| Dà           | L = 30  |                  |                   | •              | -                 |               | •                      | 1320089A             |
| <i>x</i> -   | L = 40  | •                | •                 | •              | -                 | -             | •                      | 1319533A             |
|              | Spacer nut  |                  |                   |                |                   |               |                        |                      |
| <u>SW1</u> 7 | Steel, corrosion-resistant, SW = 17, M6   |                  |                   |                |                   |               |                        |                      |
|              | L = 20, 10 pieces   | -                | •                 | •              | •                 | •             | •                      | 1320241A             |
|              | L = 30  | •                | •                 | •              | •                 | •             | •                      | 1320083A             |
| M6 L         | L = 40  |                  |                   |                |                   |               |                        | 1319517A             |

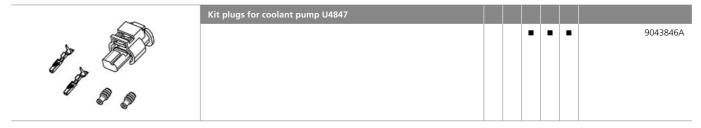
# **Mounting parts**

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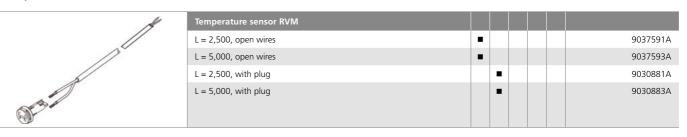
# **Electrical accessories**

| Air Top 2000 STC Air Top Evo 40/55 eThermo Top Eco 20 P/30 P Thermo Top Evo Thermo Pro 50 Eco Thermo Pro 50 Eco |
|---|
|---|

#### **Connector kits**



#### Components



Please refer to our separate heating product catalog for our full range of accessories.

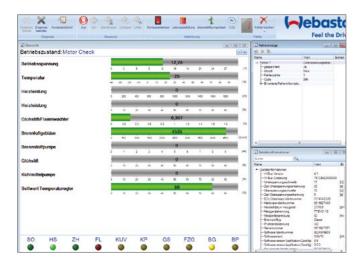
Please refer to our separate heating product catalog for our full range of accessories.

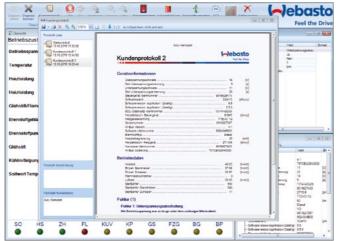
# **Maintenance and diagnostics**

# **Maintenance and diagnostics**

#### Heater diagnosis module

Webasto provides a complete set of diagnosis tools to service and repair its heaters. The diagnosis module includes a hardware unit and various connecting adaptors for each heater model. For more details and the latest diagnosis visit our dealer portal at: http://dealers.webasto.com









Please refer to our separate heating product catalog for our full range of accessories.

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# **Cooling products**

| BlueCool self-contained units  Product overview  Application concept  Application guidelines  BlueCool S-Series  BlueCool chiller systems  Product overview  Application concept  Application guidelines  BlueCool V-Series  1  BlueCool C-Series  1  BlueCool V-PRO Series  1  BlueCool fresh air makeup units  BlueCool air handlers | 8   |
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|  |     |

# Which is the right air-conditioning system for your boat?



Our large product portfolio from compact air-conditioning systems up to large chiller systems leaves no wish unfulfilled. With our wide power range we provide cooling capacities from 6,000 BTU/h up to 1,000,000 BTU/h.

#### **BlueCool self-contained units**



- Perfect solution for vessels with one to three cabins
- Very compact
- Easy to retrofit
- Extremely efficient

#### BlueCool chiller systems



- Large power range to fit any size of boat or superyacht
- Best in marine A/C: Ability to provide adequate cooling wherever it is needed
- Ideal basis for our integrated BlueComfort solutions

#### BlueCool air handlers



- Modular concept enables greatest possible flexibility
- Uses minimal space in cabins since air handlers are smaller than self-contained units
- Three construction forms
   Compact, Slimline and
   Low profile feature an especially compact, slim and flat design of the A-Series

# How to choose the right air-conditioner

The right cooling capacity

200

80,000

60.000

Example: You own a yacht and would like to aircondition a room of 5 m (length) x 5 m (width) x 2 m (height).

#### Step 1: Define the category of the cabin

Category 2

Determine the **category of the cabin**. We give an example for a cabin with an average glass area, for example a deck saloon.

#### **Step 2: Define the net volume**

40 m<sup>3</sup>

Determine the **net volume of the room** (5 m x 5 m x 2 m = 50 m<sup>3</sup>; subtract 20 % for furniture in the room; 50 m<sup>3</sup> - 10 m<sup>3</sup> = 40 m<sup>3</sup>; If you want to air condition the whole boat, please calculate the **sum of your rooms**.

#### **Step 3: Define your climate region**

Normal region

Determine the **climate region** where you spend most of your time. For example the Mediterrean Sea is a "normal region" in the climate category.

#### **Step 4: Identify your cooling requirements**

20,000 BTU/h

Result: You need an air conditioning system with a 20,000 BTU/h cooling capacity.

#### Step 5: Decide between a self-contained and chiller system

BlueCool S20

Depending on the demands you can decide on a **self-contained or chiller system** with a cooling capacity of 20,000 BTU/h.

| Step 1 |  | portiignts only, | eck (400 BTU/m³) | Category 1       |              |
|--------|--|------------------|------------------|------------------|--------------|
|        | Volume of the rooms                                | region           | a o i di         |                  | Step 3       |
|        | Volume of the rooms<br>L x W x H (m <sup>3</sup> ) | nermal           | cold             | hot              |              |
|        | 10   | 4,000            | 3,000            | 5,000            |              |
|        | 20   | 8,000            | 6,000            | 10,000           |              |
|        | 30   | 12,000           | 9,000            | 15,000           |              |
| Step 2 | 40   | 10,000           | 12,000           | 20,000           | Step 4       |
|        | 50   | 20,000           | 15,000           | 25,000           |              |
|        | 60   | 24,000           | 18,000           | 30,000           |              |
|        | 70   | 28,000           | 21,000           | 35,000           |              |
|        | 80   | 32,000           | 24,000           | 40,000           |              |
|        | 90   | 36,000<br>40,000 | 27,000<br>30,000 | 45,000<br>50,000 |              |
|        | 110  | 44,000           | 33,000           | 55,000           |              |
|        | 120  | 48,000           | 36,000           | 60,000           |              |
|        | 130  | 52,000           | 39,000           | 65,000           | For precise  |
|        | 140  | 56,000           | 42,000           | 70,000           |              |
|        | 150  | 60,000           | 45,000           | 75,000           | use our Ma   |
|        | 160  | 64,000           | 48,000           | 80,000           | calculation  |
|        | 170  | 68,000           | 51,000           | 85,000           | dealer porta |
|        | 180  | 72,000           | 54,000           | 90,000           |              |
|        | 190  | 76,000           | 57,000           | 95,000           | http://dea   |
|        | 200  | 80,000           | 60,000           | 100,000          |              |

For precise BTU calculations, please use our Marine specification and calculation tool, available on the dealer portal at http://dealers.webasto.com

|                                       | rahin(s) all      | Category 1<br>oortlights only<br>below deck (4 | /,<br>00 RTII/m³) |                                       | av<br>cabins partl |         |         |  |  |  |
|---------------------------------------|-------------------|--|-------------------|---------------------------------------|--------------------|---------|---------|--|--|--|
| Volume of the rooms<br>L x W x H (m³) | region:<br>normal | cold   | hot               | Volume of the rooms<br>L x W x H (m³) | region:<br>normal  | region: |         |  |  |  |
| 10                                    | 4,000             | 3,000  | 5,000             | 10                                    | 5,000              | 3,750   | 6,250   |  |  |  |
| 20                                    | 8,000             | 6,000  | 10,000            | 20                                    | 10,000             | 7,500   | 12,500  |  |  |  |
| 30                                    | 12,000            | 9,000  | 15,000            | 30                                    | 15,000             | 11,250  | 18,750  |  |  |  |
| 40                                    | 16,000            | 12,000   | 20,000            | 40                                    | 20,000             | 15,000  | 25,000  |  |  |  |
| 50                                    | 20,000            | 15,000   | 25,000            | 50                                    | 25,000             | 18,750  | 31,250  |  |  |  |
| 60                                    | 24,000            | 18,000   | 30,000            | 60                                    | 30,000             | 22,500  | 37,500  |  |  |  |
| 70                                    | 28,000            | 21,000   | 35,000            | 70                                    | 35,000             | 26,250  | 43,750  |  |  |  |
| 80                                    | 32,000            | 24,000   | 40,000            | 80                                    | 40,000             | 30,000  | 50,000  |  |  |  |
| 90                                    | 36,000            | 27,000   | 45,000            | 90                                    | 45,000             | 33,750  | 56,250  |  |  |  |
| 100                                   | 40,000            | 30,000   | 50,000            | 100                                   | 50,000             | 37,500  | 62,500  |  |  |  |
| 110                                   | 44,000            | 33,000   | 55,000            | 110                                   | 55,000             | 41,250  | 68,750  |  |  |  |
| 120                                   | 48,000            | 36,000   | 60,000            | 120                                   | 60,000             | 45,000  | 75,000  |  |  |  |
| 130                                   | 52,000            | 39,000   | 65,000            | 130                                   | 65,000             | 48,750  | 81,250  |  |  |  |
| 140                                   | 56,000            | 42,000   | 70,000            | 140                                   | 70,000             | 52,500  | 87,500  |  |  |  |
| 150                                   | 60,000            | 45,000   | 75,000            | 150                                   | 75,000             | 56,250  | 93,750  |  |  |  |
| 160                                   | 64,000            | 48,000   | 80,000            | 160                                   | 80,000             | 60,000  | 100,000 |  |  |  |
| 170                                   | 68,000            | 51,000   | 85,000            | 170                                   | 85,000             | 63,750  | 106,250 |  |  |  |
| 180                                   | 72,000            | 54,000   | 90,000            | 180                                   | 90,000             | 67,500  | 112,500 |  |  |  |
| 190                                   | 76,000            | 57,000   | 95,000            | 190                                   | 95,000             | 71,250  | 118,750 |  |  |  |

100,000

200

100,000

75,000

125,000

| ~                                     |                      | Category 3                      |                     |                                       |                           |                            |         |  |
|---------------------------------------|----------------------|---------------------------------|---------------------|---------------------------------------|---------------------------|----------------------------|---------|--|
|                                       | glass a<br>saloon ab | area above av<br>oove deck (600 | erage,<br>) BTU/m³) |                                       | very large<br>wheel house | saloon and<br>(750 BTU/m³) |         |  |
| Volume of the rooms<br>L x W x H (m³) | region:<br>normal    | cold                            | hot                 | Volume of the rooms<br>L x W x H (m³) | region:<br>normal         | cold                       | hot     |  |
| 10                                    | 6,000                | 4,500                           | 7,500               | 10                                    | 7,500                     | 5,625                      | 9,375   |  |
| 20                                    | 12,000               | 9,000                           | 15,000              | 20                                    | 15,000                    | 11,250                     | 18,750  |  |
| 30                                    | 18,000               | 13,500                          | 22,500              | 30                                    | 22,500                    | 16,875                     | 28,125  |  |
| 40                                    | 24,000               | 18,000                          | 30,000              | 40                                    | 30,000                    | 22,500                     | 37,500  |  |
| 50                                    | 30,000               | 22,500                          | 37,500              | 50                                    | 37,500                    | 28,125                     | 46,875  |  |
| 60                                    | 36,000               | 27,000                          | 45,000              | 60                                    | 45,000                    | 33,750                     | 56,250  |  |
| 70                                    | 42,000               | 31,500                          | 52,500              | 70                                    | 52,500                    | 39,375                     | 65,625  |  |
| 80                                    | 48,000               | 36,000                          | 60,000              | 80                                    | 60,000                    | 45,000                     | 75,000  |  |
| 90                                    | 54,000               | 40,500                          | 67,500              | 90                                    | 67,500                    | 50,625                     | 84,375  |  |
| 100                                   | 60,000               | 45,000                          | 75,000              | 100                                   | 75,000                    | 56,250                     | 93,750  |  |
| 110                                   | 66,000               | 49,500                          | 82,500              | 110                                   | 82,500                    | 61,875                     | 103,125 |  |
| 120                                   | 72,000               | 54,000                          | 90,000              | 120                                   | 90,000                    | 67,500                     | 112,500 |  |
| 130                                   | 78,000               | 58,500                          | 97,500              | 130                                   | 97,500                    | 73,125                     | 121,875 |  |
| 140                                   | 84,000               | 63,000                          | 105,000             | 140                                   | 105,000                   | 78,750                     | 131,250 |  |
| 150                                   | 90,000               | 67,500                          | 112,500             | 150                                   | 112,500                   | 84,375                     | 140,625 |  |
| 160                                   | 96,000               | 72,000                          | 120,000             | 160                                   | 120,000                   | 90,000                     | 150,000 |  |
| 170                                   | 102,000              | 76,500                          | 127,500             | 170                                   | 127,500                   | 95,625                     | 159,375 |  |
| 180                                   | 108,000              | 81,000                          | 135,000             | 180                                   | 135,000                   | 101,250                    | 168,750 |  |
| 190                                   | 114,000              | 85,500                          | 142,500             | 190                                   | 142,500                   | 106,875                    | 178,125 |  |
| 200                                   | 120,000              | 90,000                          | 150,000             | 200                                   | 150,000                   | 112,500                    | 187,500 |  |

For extreme climatic conditions such as the Persian Gulf with sea-water temperatures of 32 °C and air temperatures of 40 °C, you have to add 25 to 30 % onto the calculated figure. On BlueCool P-Series units it is also recommended that the condenser is increased in size.

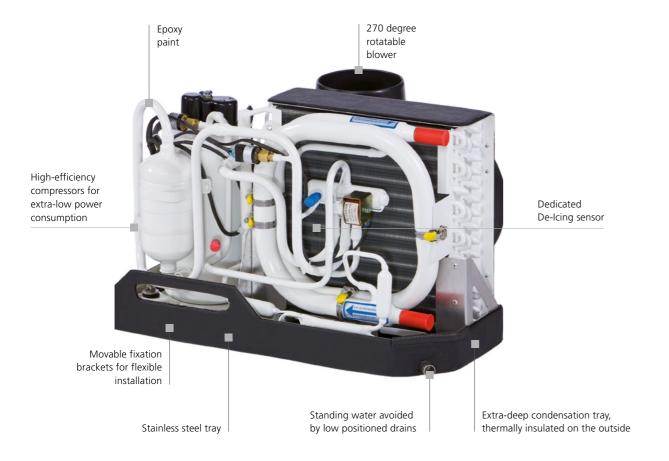
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# **BlueCool self-contained units**

# **BlueCool self-contained units**

## Product overview

#### **BlueCool S-Series**





BlueCool S-Series S6 – S27 230 V





BlueCool S-Series S6 – S16 115 V

See page 95

#### The BlueCool S-Series:

- Fully 50/60 Hz compatible (230 V)
- Suitable for worldwide usage
- Very high efficiency, using R410a refrigerant
- Continuous operation even under tropical conditions
- USB diagnosis for easy servicing and parameter setting
- Quiet operation
- Robust design
- Soft start devices available as an option
- Vibration absorber kits available as an option

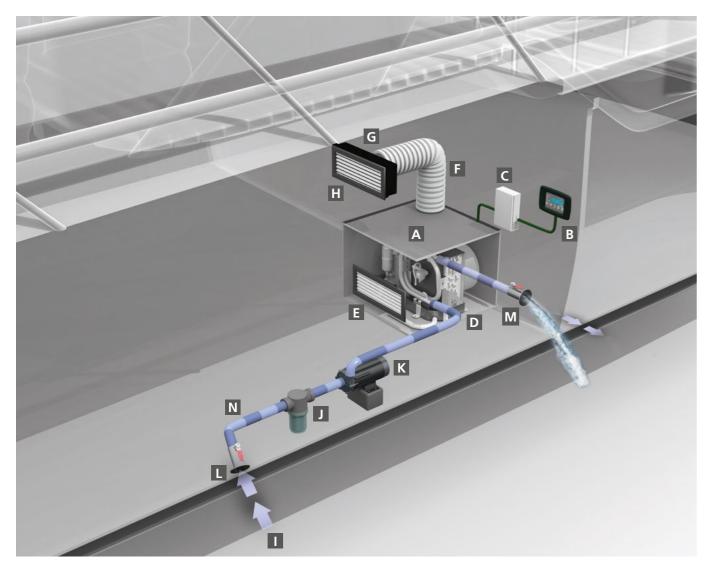


#### Self-contained air-conditioners:

- Stand alone unit
- Heating via reverse cycle integrated
- Extremely compact
- All components on one tray
- Lowest power consumption
- Including electronics, blower and controls
- Evaporator temperature control in real time mode

#### BlueCool self-contained units

# Application concept



Installation of a BlueCool self-contained unit is guite simple:

Each cabin has its own self-contained unit A providing cool air to this cabin. It is controlled by an air control unit B which is also located in this cabin. The generated heat is transferred into the sea via the sea water circuit I to N.

#### **BlueCool self-contained units**

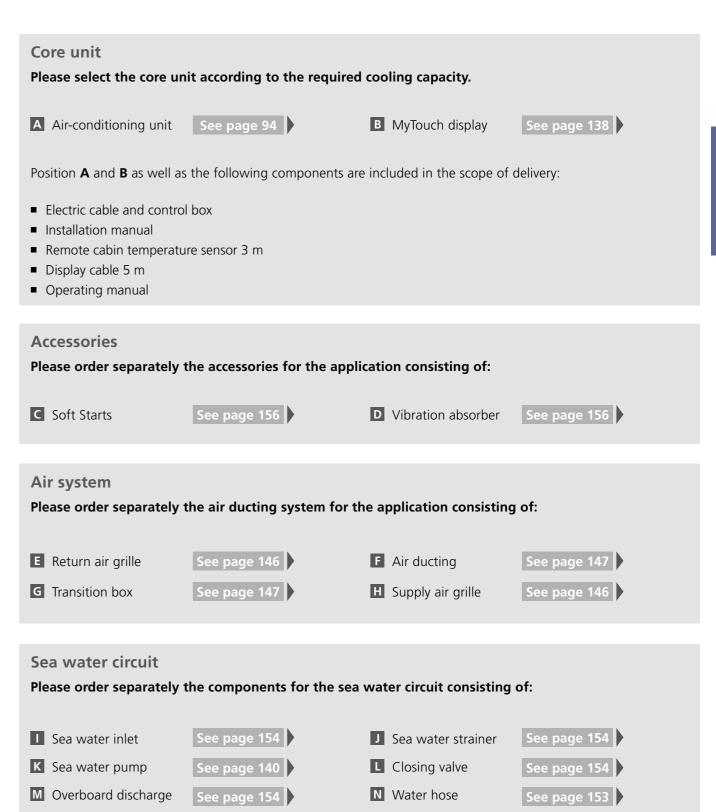
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Webasto BlueCool self-contained air-conditioning units have one hermetically encapsulated compressor. The refrigerant circuit includes not only the compressor but also a condenser, a throttle element (capillary tube) as well as an evaporator. Self-contained units are extremely compact. All components (compressor, condenser, evaporator and blower) required for cooling a cabin, a salon, a lounge or another room are mounted on a stainless steel tray. Webasto self-contained units are available in different power ratings. This means you are sure to find the ideal system for the specific needs of almost all room sizes requiring cooling in a yacht.

#### BlueCool self-contained units

# Application guidelines

For a complete self-contained unit, please select the following:



# Self contained units

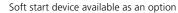
#### **Technical data**

|   | BlueCool S-Series 230 V |                    |                    |                    |                    |                    |                    |
|---|-------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Туре  | <b>S</b> 6              | 58                 | S10                | S13                | S16                | S20                | S27                |
| Order numbers   | WBCL120000C             | WBCL120001F        | WBCL120002F        | WBCL120003F        | WBCL120004G        | WBCL120005F        | WBCL120006G        |
| Cooling capacity* (BTU/h)                                       | 6,000                   | 8,000              | 10,000             | 13,000             | 16,000             | 20,000             | 27,000             |
| Cooling capacity* (kW)  | 1.8                     | 2.4                | 2.9                | 3.8                | 4.7                | 5.9                | 7.9                |
| Heating via reverse cycle integrated                            | yes                     | yes                | yes                | yes                | yes                | yes                | yes                |
| Voltage (V)   | 230<br>(-15%/+10%)      | 230<br>(-15%/+10%) | 230<br>(-15%/+10%) | 230<br>(-15%/+10%) | 230<br>(-15%/+10%) | 230<br>(-15%/+10%) | 230<br>(-15%/+10%) |
| Frequency (Hz)  | 50/60 (+-5%)            | 50/60 (+-5%)       | 50/60 (+-5%)       | 50/60 (+-5%)       | 50/60 (+-5%)       | 50/60 (+-5%)       | 50/60 (+-5%)       |
| Current draw running** (A) 50 Hz                                | 2 – 2,4                 | 2.4 – 3.5          | 2.6 – 4.0          | 3.6 – 6.3          | 4.9 – 7.1          | 5.9 – 8.9          | 7.0 – 10.5         |
| Current draw max. peak (A) 50 Hz                                | 14                      | 28                 | 27                 | 37                 | 54                 | 60                 | 77                 |
| Current draw RMS40**** (A) 50 Hz                                | 5                       | 17                 | 17                 | 22                 | 35                 | 39                 | 49                 |
| Current draw RMS300*** (A) 50 Hz                                | 3                       | 9                  | 9                  | 11                 | 19                 | 20                 | 32                 |
| Current draw max. peak with<br>Soft Start (A) 50 Hz             | 11                      | 12                 | 11                 | 13                 | 22                 | 23                 | 34                 |
| Current draw RMS40**** with<br>Soft Start (A) 50 Hz             | 4                       | 7                  | 7                  | 7                  | 12                 | 14                 | 19                 |
| Current draw RMS300*** with<br>Soft Start (A) 50 Hz             | 3                       | 5                  | 5                  | 5                  | 9                  | 10                 | 17                 |
| Locked rotor amperage LRA (A)                                   | 12                      | 19                 | 19                 | 24                 | 37                 | 43                 | 62                 |
| Max. circuit breaker (A)  | 16                      | 16                 | 16                 | 16                 | 16                 | 16                 | 20 (comp. only)    |
| Air flow (free blowing) (m³/h)<br>Air flow (free blowing) (cfm) | 275<br>162              | 275<br>162         | 400<br>235         | 500<br>294         | 625<br>368         | 625<br>368         | 2 x 550<br>2 x 324 |
| Seawater connection (mm) Seawater connection (inch)             | 19<br>3/4               | 19<br>3/4          | 19<br>3/4          | 19<br>3/4          | 19<br>3/4          | 19<br>3/4          | 19<br>3/4          |
| Min. seawater flow at 50 Hz (I/min)                             | 6                       | 8                  | 10                 | 12                 | 14                 | 17                 | 21                 |
| Min. seawater flow at 60 Hz (I/min)                             | 7,5                     | 10                 | 12                 | 14                 | 17                 | 20                 | 25                 |
| Recommended seawater pump +                                     | WB250                   | WB350              | WB350              | WB350/<br>WB500G   | WB500/<br>WB500G   | WB500/<br>WB500G   | WB1000/<br>WB1000G |
| Dimensions L x W x H (mm)                                       | 405 x 320 x 305         | 405 x 320 x 305    | 480 x 335 x 315    | 510 x 350 x 325    | 550 x 350 x 370    | 595 x 340 x 370    | 575 x 515 x 410    |
| Dimensions L x W x H (inch)                                     | 15.9 x 12.6 x 12.0      | 15.9 x 12.6 x 12.0 | 18.9 x 13.2 x 12.4 | 20.1 x 13.8 x 12.8 |                    |                    |                    |
| Blower connection (mm) Blower connection (inch)                 | 100                     | 100                | 100                | 125<br>5           | 125<br>5           | 125<br>5           | 2 x 125<br>2 x 5   |
| Weight (kg)   | 20                      | 20                 | 22                 | 27                 | 31                 | 34                 | 46                 |

**General note:** Values in this table given for 50 Hz only. 60 Hz data available on request.

- \* BTU/h are based on  $7\,^{\circ}\text{C}$  evaporating temperature and  $38\,^{\circ}\text{C}$  condensing temperature
- \*\* Amperage values for core unit depend on compressor load. Max values at tropical conditions at 230 V/50 Hz
- \*\*\* Starting amperage RMS (Root Mean Square) for core unit for first 300 ms
- \*\*\*\* Starting amperage RMS (Root Mean Square) for core unit for first 40 ms
- + Recommendation only. Pump size shall be adapted to application constraints in order to always ensure minimal sea water flow.







BlueCool Expert, Display and Temperature Sensor access from outside

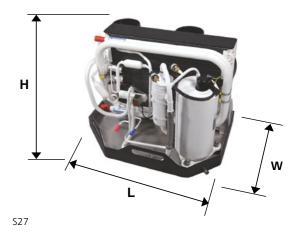
#### Technical data

**BlueCool S-Series** 

|   | BlueCool S-Series 115 V               |                                       |                                       |                                       |                                      |
|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|
| Туре  | <b>S</b> 6                            | <b>S8</b>                             | S10                                   | S13                                   | S16                                  |
| Order No.   | 2510139C                              | 2510140C                              | 2510141C                              | 2510142C                              | 2510142C                             |
| Cooling capacity* (BTU/h)   | 6,000                                 | 8,000                                 | 10,000                                | 13,000                                | 16,000                               |
| Cooling capacity* (kW)  | 1.8                                   | 2.4                                   | 2.9                                   | 3.8                                   | 4.7                                  |
| Heating via reverse cycle integrated                              | Yes                                   | Yes                                   | Yes                                   | Yes                                   | Yes                                  |
| Voltage (V)   | 115 (-15%/+10%)                       | 115 (-15%/+10%)                       | 115 (-15%/+10%)                       | 115 (-15%/+10%)                       | 115 (-15%/+10%)                      |
| Frequency (Hz)  | 60 (+-5%)                             | 60 (+-5%)                             | 60 (+-5%)                             | 60 (+-5%)                             | 60 (+-5%)                            |
| Current draw running** (A) 60 Hz                                  | 3.6 – 5.5                             | 4.5 – 6.1                             | 5.6 – 7.9                             | 7.6 – 11                              | 8.0 – 15.7                           |
| Current draw max. peak (A) 60 Hz                                  | 39                                    | 54                                    | 55                                    | 70                                    | 89                                   |
| Current draw RMS40**** (A) 60 Hz                                  | 25                                    | 35                                    | 36                                    | 47                                    | 59                                   |
| Current draw RMS300*** (A) 60 Hz                                  | 19                                    | 20                                    | 21                                    | 30                                    | 35                                   |
| Locked Rotor Amperage LRA (A)                                     | 27                                    | 34                                    | 37                                    | 57                                    | 70                                   |
| Max. circuit breaker (A)  | 16                                    | 16                                    | 16                                    | 16                                    | 25 (compressor only)                 |
| Air flow (free blowing) (m³/h)<br>Air flow (free blowing) (cfm/h) | 275<br>162                            | 275<br>162                            | 350<br>206                            | 430<br>253                            | 650<br>382                           |
| Seawater connection (mm) Seawater connection (inch)               | 19<br>3/4                             | 19<br>3/4                             | 19<br>3/4                             | 19<br>3/4                             | 19<br>3/4                            |
| Minimal Seawater flow (I/min) 60 Hz                               | 6                                     | 8                                     | 10                                    | 12                                    | 14                                   |
| Recommended seawater pump<br>60 Hz +                              | WB250                                 | WB350                                 | WB350                                 | WB350<br>WB500G                       | WB500<br>WB500G                      |
| Dimensions L x W x H (mm) Dimensions L x W x H (inch)             | 405 x 320 x 300<br>15.9 x 12.6 x 11.8 | 405 x 320 x 305<br>15.9 x 12.6 x 12.0 | 480 x 335 x 315<br>18.9 x 13.2 x 12.4 | 510 x 345 x 325<br>20.1 x 13.6 x 12.8 | 550 x 340 x 370<br>21.7 x 13.4x 14.6 |
| Blower connection (mm)<br>Blower connection (inch)                | 100<br>4                              | 100<br>4                              | 100<br>4                              | 125<br>5                              | 125<br>5                             |
| Weight (kg)   | 18                                    | 18                                    | 20                                    | 25                                    | 29                                   |

- \* BTU/h are based on 7°C evaporating temperature and 38°C condensing temperature
- \*\* values for core unit depend on compressor load. Max values at tropical conditions at 115 V/60 Hz
- \*\*\* Starting amperage RMS (Root Mean Square) for core unit for first 300 ms
- \*\*\*\* Starting amperage RMS (Root Mean Square) for core unit for first 40 ms
- + Recommendation only. Pump size shall be adapted to application constraints in order to always ensure minimal sea water flow.





S6 – S20

04

# D

# BlueCool chiller systems

#### **BlueCool V-Series**

The V-Series is offering variable speed compressor technology to the marine market. This innovative technology with inverter driven compressors allows to modulate the cooling output in a wide range but also eliminates the starting peak which permits to downsize the generator. Additionally it has an advanced control system with new comfort features, it automatically adapts to 50/60 Hz and to hot sea water conditions.

#### **BlueCool C-Series**

The C-Series stands for standardized chiller units for small to medium boats. The range goes from 16,000 BTU/h to 108,000 BTU/h. Those chillers are the ideal solution for those who demand a high quality product with a short delivery time. The units come in 230 V 50/60 Hz voltage. Customization options are soft starts as well as vibration dampers.

#### **BlueCool V-PRO Series**

The V-PRO Series is the new variable speed chiller system to build large chilled water systems with 400 V 3-ph power supply. This chiller system consists of four different modular chiller units which may be flexibly combined to provide up to 1 Mio. BTU/h. The V-PRO system comes with a number of intelligent functions and optional accessories to match your demands.

# Chiller systems are now compatible with the new MyTouch display BlueCool MyTouch

# BlueCool chiller systems

#### Product overview



BlueCool V-Series V50 M, V64 T, V77 T





BlueCool C-Series C16 M to C40T

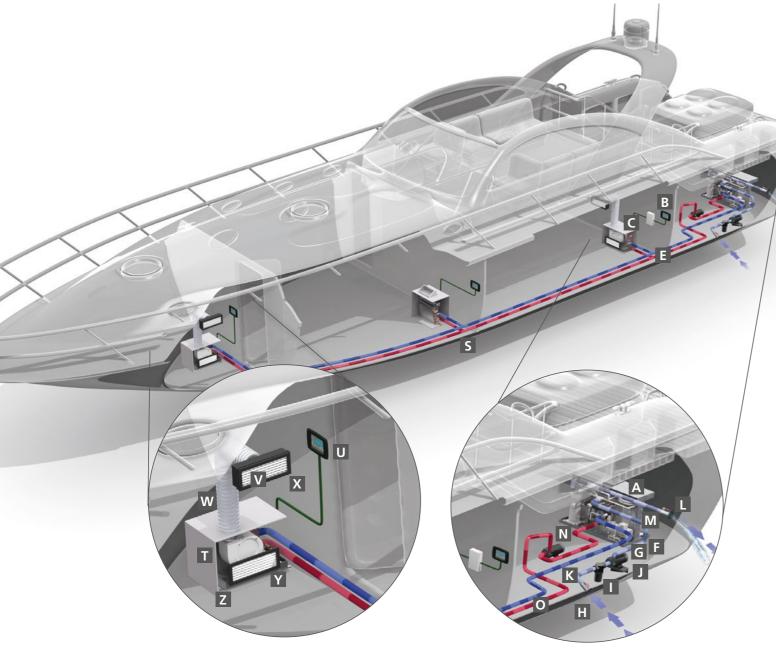




BlueCool V-PRO Series V-PRO 60M to V-PRO 180M See page 104

# BlueCool chiller systems

# Application concept



For larger boats with several cabins a chiller system is the best choice. The chiller A/C unit A is typically placed in the engine room providing chilled water/glycol to all cabins via the chilled water circuit N to S. In each cabin one or several air handlers T are fitted depending on cooling capacity and space requirements. The Digital Control Panel B controls the A/C system itself. For each cabin one Control Panel U is needed to individually control the air handler in this cabin. As a result you get full temperature control in each cabin providing maximum comfort on board

#### Chiller air-conditioning systems

Whenever three or more independent volumes in a yacht need to be air-conditioned, it becomes worth considering a central chiller system. To distribute cooling capacity over several independently operating air handlers from one single central cooling unit, the most flexible and simple solution is to install a chilled water circulation system between the central unit and the air handlers. This mixed water/glycol circuit is maintained at approx. +4°C. All Webasto chiller units are equipped with high efficiency multi-plate heat exchangers.

# BlueCool chiller systems

# Application guidelines V- and C-Series

For a complete chiller system, please select the following:

#### Core unit

Please select the core unit according to the required cooling capacity, the available voltage and whether cool only or heating via reverse cycle is needed.

A Air-conditioning unit See page 101–102

Position **A** as well as the following components are included in the scope of delivery:

- Electric cable and control box
- Installation manual
- Operating manual

**B** MyTouch display

#### Control elements for V- and C-Series

Please select the control elements for the core unit separately:

See page 138

C Display cable See page 138

Remote air temperature sensor See page 139

For V-PRO Series the MyTouch display and display cable are already included in the scope of delivery.

#### **Accessories for V- and C-Series**

Please order separately the accessories for the V- and C-Series core unit:

E Soft Starts F Vibration absorber kits

G Silent block kits

See page 156

#### Sea water circuit

Please order separately the components for the sea water circuit consisting of:

See page 154 H Sea water inlet

See page 140 J Sea water pump

K Closing valve

I Sea water strainer

See page 154

M Water hose

See page 153

See page 150

See page 154

#### Chilled water circuit

L Overboard discharge

Please add the required components for the chilled water circuit consisting of:

See page 140 N Circulation pump

See page 153 P 3-way valve (optional) Q Turn ball valve See page 153

See page 153

See page 154

O Piping or hosing system with insulation

R Expansion tank

See page 153

#### Cabin accessories necessary for each single cabin

Please add for every single cabin the following components and accessories:

T Air handler

condensation drain

V Supply air grille

W Air ducting X Transition box Z Water hoses for

**S** T-pieces

U Cabin control (Control Panel, display cable, temperature sensor and control box)

Y Return air grille

See page 138

# Variable speed chiller





V64 T and V77 T



V50 M without electronic box

# **BlueCool V-Series**

# Variable speed chiller

#### **Technical data**

|   | BlueCool V-Series   |                         |                       |  |  |
|---|---------------------|-------------------------|-----------------------|--|--|
| Туре  | V50 M               | V64 T                   | V77 T                 |  |  |
| Order No.   | 2510598A            | 2510597A                | 2510596               |  |  |
| Cooling capacity* (BTU/h)                                       | 8,500 – 50,000      | 8,500 – 64,000          | 8,500 – 77,0          |  |  |
| Cooling capacity* (kW)  | 2.5 – 14.6          | 2.5 – 18.7              | 2.5 – 22              |  |  |
| Heating via reverse cycle integrated                            | yes                 | yes                     | )                     |  |  |
| Voltage (V)   | 230 (-15%/+10%)     | 230 (-15%/+10%)         | 230 (-15%/+109        |  |  |
| Frequency ++ (Hz)   | 50/60 (+-5%)        | 50/60 (+-5%)            | 50/60 (+-5            |  |  |
| Current draw running** (A)                                      | 2.5 – 19 (max. 21)* | 2.5 – 27.8 (max. 29.8)* | 2.5 – 30.5 (max. 32.5 |  |  |
| Current draw Start (A)  | 2.5                 | 2.5                     | 2                     |  |  |
| Current draw Eco 1 Mode (A)                                     | 2.5 – 10 (max. 14)* | 2.5 – 19 (max. 21)*     | 2.5 – 19 (max. 21     |  |  |
| Current draw Eco 2 Mode (A)                                     | 2.5 – 6 (max. 8)*   | 2.5 – 10 (max. 14)*     | 2.5 – 10 (max. 14     |  |  |
| Current draw Eco 3 Mode (A)                                     | _                   | 2.5 – 6 (max. 8)*       | 2.5 – 6 (max. 8       |  |  |
| Chilled water connection (mm), (Inch)                           | 25                  | 32                      |                       |  |  |
|   | 1"                  | 1 1/4" F BST            | 1 1/4" F B            |  |  |
| Min. chilled water flow (I/min)                                 | 35                  | 45                      |                       |  |  |
| Seawater connection (mm), (Inch)                                | 25                  | 32                      |                       |  |  |
|   | 1" M BST            | 1 1/4" F BST            | 1 1/4" F B            |  |  |
| Min. seawater flow (I/min)                                      | 38                  | 50                      |                       |  |  |
| Dimensions unit L x D x H (mm), (Inch)                          | 567 x 340 x 510     | 760 x 560 x 510         | 760 x 560 x 5         |  |  |
|   | 22.3 x 13.4 x 20.1  | 29.9 x 22.0 x 20.1      | 29.9 x 22.0 x 20      |  |  |
| Dimensions unit incl. silent block L x D x H (mm), (Inch)       | 590 x 378 x 548     | 760 x 560 x 550         | 760 x 560 x 5         |  |  |
|   | 23.2 x 14.9 x 21.6  | 29.9 x 22.0 x 21.7      | 29.9 x 22.0 x 21      |  |  |
| Dimension electronic box L x D x H (mm), (Inch)                 | 560 x 190 x 465     | 560 x 190 x 465         | 560 x 190 x 4         |  |  |
|   | 22.0 x 7.5 x 18,3   | 22.0 x 7.5 x 18,3       | 22.0 x 7.5 x 18       |  |  |
| Dimension chiller L x D x H (mm), (Inch)                        | 607 x 530 x 510     | 760 x 750 x 510         | 760 x 750 x 5         |  |  |
|   | 23.9 x 20.8 x 20.1  | 29.9 x 29.5 x 20.1      | 29.9 x 29.5 x 20      |  |  |
| Dimensions unit incl. silent block + box L x D x H (mm), (Inch) | 620 x 570 x 548     | 760 x 750 x 550         | 760 x 750 x 5         |  |  |
|   | 24.4 x 22.4 x 21.6  | 29.9 x 29.5 x 21.7      | 29.9 x 29.5 x 21      |  |  |
| Ambient temperature limit (°C)                                  | 60                  | 60                      |                       |  |  |
| Sound level unit (dB/A) (measured)                              | 49.2                | 48.5                    | 48                    |  |  |
| Refrigerant charge R410A (g)                                    | 875                 | 875 + 770               | 875 + 7               |  |  |
| Weight core unit (kg)   | 47                  | 90                      |                       |  |  |
| Weight electronic box (kg)                                      | 15                  | 15                      |                       |  |  |
| Min. sea water temp. heating (°C)                               | 6                   | 6                       |                       |  |  |
| Max. sea water temp. cooling (°C)                               | 35                  | 35                      |                       |  |  |

- \* Based on 7 °C evaporating temperature and 38 °C condensing temperature
- $^{**}$  Amperage values for core unit depend on compressor load. Max values at tropical conditions at 230 V/50 Hz
- ++ BlueCool V-Series systems are tested and approved by Webasto for 50/60 Hz operation

#### Works with the MyTouch display



BlueCool MyTouch

#### The BlueCool V-Series:

- V64 T and V77 T with innovative Preventive maintenance hybrid control logic
- Large power modulation range: 8,500 up to 77,000 BTU
- Unique hybrid concept reduces output by 89% during part load operation.
- Variable speed BLDC compressors controlled by inverter technology Up to 3 ECO modes with Zero electrical starting peak
- Super quiet operation with little noise variations and sound cover housing
- High system availability via dynamic control of HP/LP boundary conditions

- Light and compact
- monitoring system
- Condensate free operation
- Easy installation and maintenance
- Low service and operation costs
- Integrates Webasto s BlueCool Expert diagnosis and set up tool
- adjustable amperage draw
- 230 V 50 Hz or 240 V 60 Hz compatible for worldwide application
- MyTouch as standard user interface with clear text display

# Ultra compact chiller

#### **Technical data**

|  |                    |                    | BlueCool C-Series  |                    |                    |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|
| Туре   | C16 M              | C20 M              | C27 M              | C32 T              | C40 T              |
| Order numbers  | WBCL1205001F       | WBCL1205002E       | WBCL1205003E       | WBCL1207001F       | WBCL1207002E       |
| Cooling capacity* (BTU/h)                              | 16,000             | 20,000             | 27,000             | 32,000             | 40,000             |
| Cooling capacity* (kW)                                 | 4.7                | 5.9                | 7.9                | 9.4                | 11.7               |
| Heating via reverse cycle integrated                   | yes                | yes                | yes                | yes                | yes                |
| Voltage (V)  | 230 (-15%/+10%)    | 230 (-15%/+10%)    | 230 (-15%/+10%)    | 230 (-15%/+10%)    | 230 (-15%/+10%)    |
| Frequency ++ (Hz)                                      | 50/60 (+-5%)       | 50/60 (+-5%)       | 50/60 (+-5%)       | 50/60 (+-5%)       | 50/60 (+-5%)       |
| Current draw running** (A)                             | 4.4 – 6.0          | 6.9 – 8.0          | 8.6 – 9.2          | 8.8 – 12.0         | 13.8 – 16.0        |
| Current draw start max. peak (A) 50 Hz                 | 54                 | 60                 | 77                 | 60                 | 68                 |
| Current draw RMS40**** (A) 50 Hz                       | 35                 | 39                 | 49                 | 41                 | 47                 |
| Current draw RMS300*** (A) 50 Hz                       | 19                 | 20                 | 32                 | 25                 | 28                 |
| Current draw start max. peak with soft start (A) 50 Hz | 22                 | 22                 | 34                 | 28                 | 30                 |
| Current draw RMS40****<br>with soft start (A) 50 Hz    | 12                 | 14                 | 18                 | 18                 | 22                 |
| Current draw RMS300 with soft start (A) 50 Hz          | 9                  | 10                 | 17                 | 15                 | 18                 |
| Locked rotor amperage LRA (A) (comp. only)             | 37                 | 43                 | 54                 | 37                 | 43                 |
| Max. circuit breaker (A)                               | 16                 | 16                 | 20                 | 2 x 16             | 2 x 16             |
| Chilled water connection (mm)                          | 25                 | 25                 | 25                 | 25                 | 25                 |
| Chilled water connection (inch)                        | 1                  | 1                  | 1                  | 1                  | 1                  |
| Minimal chilled water flow (I/min)                     | 13                 | 16                 | 19                 | 26                 | 32                 |
| Recommended chilled water pump                         | WB500              | WB500              | WB1000             | WB1000             | WB1500             |
| Seawater connection (mm) Seawater connection (inch)    | 19<br>3/4          | 19<br>3/4          | 19<br>3/4          | 19<br>3/4          | 25<br>1            |
| Minimal seawater flow at 50 Hz (I/min)                 | 14                 | 17                 | 21                 | 28                 | 34                 |
| Minimal seawater flow at 60 Hz (I/min)                 | 17                 | 20                 | 25                 | 34                 | 41                 |
| Recommended seawater pump                              | WB500/WB500G       | WB500/WB500G       | WB1000             | WB1000             | WB1500/WB1000G     |
| Dimensions L x W x H (mm)                              | 390 x 290 x 355    | 440 x 330 x 360    | 440 x 330 x 395    | 590 x 410 x 500    | 590 x 410 x 500    |
| Dimensions L x W x H (inch)                            | 15.4 x 11.4 x 14.0 | 17.3 x 13.0 x 14.0 | 17.3 x 13.0 x 15.6 | 23.2 x 16.1 x 19.7 | 23.2 x 16.1 x 19.7 |
| Weight (kg)  | 34                 | 37                 | 45                 | 65                 | 70                 |
| Min. sea water temp. heating (°C)                      | 6                  | 6                  | 6                  | 6                  | 6                  |
| Max. sea water temp. cooling (°C)                      | 35                 | 35                 | 35                 | 35                 | 35                 |

General note: Values in this table given for 50 Hz only. 60 Hz data available on request.

- BTU/h are based on 7 °C evaporating temperature and 38 °C condensing temperature
- \*\* Amperage values for core unit depend on compressor load. Max values at tropical conditions at 230 V/50 Hz
- \*\*\* Starting amperage RMS (Root Mean Square) for core unit for first 300 ms
- \*\*\*\* Starting amperage RMS (Root Mean Square) for core unit for first 40 ms
- Recommendation only. Pump size shall be adapted to application constraints in order to always ensure minimal sea water flow.
- ++ BlueCool C-Series systems are tested and approved by Webasto for 50/60 Hz operation



C16 M – C27 M

## **BlueCool C-Series**

# Ultra compact chiller



#### Works with the MyTouch display



The BlueCool C-Series:

- Improved performance and up to 15 % higher efficiency
- Continuous cooling capacity even in tropical conditions
- Even more compact design
- Improved electronics for easy installation and diagnosis via USB cable
- Optional CAN-Bus for optimized adaptation toboat systems
- Compressor noise is reduced by up to 25 %
- Easy sea water and chilled water connections at one side
- Strong stainless steel tray and condensate drain
- High quality Epoxy paint protection
- Vibration absorber and Silent block available as an option
- Soft start devices available as an option

# Professional variable speed chiller series













#### Intuitive and powerful user interface

The full color touch-screen user interface which comes with each unit allows full operation, system set-up and parametrization of the A/C unit. Vital system information is available at a glance. For full redundancy, each user interface can show the data of each individual unit as well as overall system data. Customers will enjoy the ease of use, also thanks to full text explanations in multiple languages.

#### **BlueCool V-PRO Series**

# Professional variable speed chiller series



#### Four models – two sizes – ONE system

Four modular units of 60, 90, 130 or 180 kBTU/h, providing up to 1 Mio. BTU/h of system cooling capacity.

#### High system availability

Fully autonomous units continue operation. Redundancy at its best.

#### **Water flow monitoring**

Integrated Flow monitoring system of sea and chilled water circuit to ensure safe and reliable operation.

#### **Outstanding corrosion & erosion resistance**

Titanium sea water heat exchanger for outstanding corrosion resistance.

#### Variable speed technology for best efficiency

Highest cooling performance with high efficiency inverter, variable speed scroll compressor and energy saving ECO modes.

#### **Unified hydraulic connection**

Layout of hydraulic connection is identical for all four models.

#### **Powerful user interface**

Full color touch-screen display. Fully redundant, each shows overall system data. Multiple languages.

#### **Combination of autonomous units**

Simple network cable immediately creates overall system control.

## BlueCool V-PRO chiller systems

# Application guidelines

For a complete chiller system, please select the following:

#### **Core unit**

Please select the V-PRO units according to the required cooling capacity and the level of redundancy required. Up to 6 units with different cooling capacities can be combined.

V-PRO unit

See page 109

The chiller unit as well as the following components are included in the scope of delivery:

- Integrated chiller electronics incl. MyTouch display
- Installation manual
- Operating manual

#### Electronic control box for V-PRO unit

Please order separately one of the control boxes for the V-PRO units. Minimum requirement is the pump control box.

V-PRO Electronic box

See page 111

Each control box includes the pump control functions. Only one box out of three types to be selected.

#### Rack for V-PRO unit

Please add one of the racks available for V-PRO. Each rack can be used with any and different cooling capacities.

V-PRO Rack

See page 113

If chiller units shall be installed into a rack, choose the required rack system out of 7 options to stack units side by side or on top of each other. Silent blocks are already included in scope of delivery.

#### Manifold for V-PRO unit

Please add one of the manifolds available for V-PRO. Predesigned manifolds allow the combination of V-PRO units with different cooling capacities.

V-PRO Manifold

See page 112

Add preconfigured manifold sets to simplify hydraulic connections. Those are equipped with ball valves for each sea and chilled water connection to ensure easy service of chiller units.

#### **Accessories for BlueCool V-PRO**

Please order separately the accessories for the V-PRO Series core unit:

V-PRO Silent block kit. Single V-PRO units that are not combined with a rack system can be supplemented with silent blocks.

See page 156

#### Sea water circuit

Please order separately the components for the sea water circuit consisting of:

Sea water inlet

See page 154

Sea water strainer

Sea water pump

Closing valve

Overboard discharge

See page 154

Water hose

#### Chilled water circuit

Water hoses for

condensation drain

Please add the required components for the chilled water circuit consisting of:

Circulation pump

See page 140

Piping or hosing system with insulation

See page 150

Expansion tank

Turn ball valve

See page 153

T-pieces

See page 153

See page 153

#### Cabin accessories necessary for each single cabin

Please add for every single cabin the following components and accessories:

See page 153

Air handler

See page 120

Cabin control (control panel, display cable, temperature sensor and control box)

Air ducting

See page 147

Transition box

See page 147

Cabin control (control panel, display cable, temperature sensor and control box)

Return air grille

See page 138

See page 154

See page 154

See page 153

See page 146

# Professional variable speed chiller series

# NEW



- Mono variable speed compressor units for building large systems up to 1,080,000 BTU/h
- Four modular units with 60, 90, 130 and 180 kBTU/h available
- Individual system with up to 6 units in one stack
- Combination of different capacities in one stack
- Individual accessories like manifold and rack available
- Modular concept allows fast availability
- Easy service and maintenance
- 400 V (50 Hz) 460 V (60 Hz) 3-phase+N system
- Integrated electronics
- Customized Master Control Box available to meet additional requirements of customers or classification societies for larger vessels e.g. Lloyd, DNVGL

## **BlueCool V-PRO Series**

## Technical data



|   |                                       | BlueCool V-                           | PRO Series                            |                                       |
|---|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
|   | V-PRO 60M                             | V-PRO 90M                             | V-PRO 130M                            | V-PRO 180M                            |
| Order No.   | 2510228A                              | 2510229A                              | 2510230A                              | 2510231A                              |
| Cooling capacity* (BTU/h)                                 | 15,000 – 60,000                       | 22,500 – 90,000                       | 19,500 – 130,000                      | 27,000 – 180,000                      |
| Cooling capacity* (kW)                                    | 4.4 – 17.6                            | 6.6 – 26.4                            | 5.7 – 38.1                            | 7.9 – 52.8                            |
| Heating via reverse cycle integrated                      | yes                                   | yes                                   | yes                                   | yes                                   |
| Voltage (V)   | 360 – 480 (+-10%)                     | 360 – 480 (+-10%)                     | 360 – 480 (+-10%)                     | 360 – 480 (+-10%)                     |
| Phase   | 3-ph + N                              | 3-ph + N                              | 3-ph + N                              | 3-ph + N                              |
| Frequency ++ (Hz)   | 50/60 (+-5%)                          | 50/60 (+-5%)                          | 50/60 (+-5%)                          | 50/60 (+-5%)                          |
| Current draw running** (A)                                | 1.5 – 7.5 (max. 10)                   | 2.9 – 15.5 (max. 18.5)                | 4.0 – 20 (max. 23)                    | 4.6 – 23 (max. 25)                    |
| Current draw Eco 1 Mode (A)                               | 1.5 – 5.5 (max. 6.3)                  | 2.9 – 10.7 (max. 11.3)                | 4.0 – 13.6 (max. 14.9)                | 4.6 – 16.8 (max. 18)                  |
| Current draw Eco 2 Mode (A)                               | 1.5 – 3.9 (max. 4.8)                  | 2.9 – 7.6 (max. 8.3)                  | 4.0 – 9.1 (max. 10.4)                 | 4.6 – 11.6 (max. 12.5)                |
| Current draw Eco 3 Mode (A)                               | 1.5 – 2.9 (max 3.8)                   | 2.9 – 5.7 (max. 6.5)                  | 4.0 – 7.1 (max. 8.4)                  | 4.6 – 9 (max. 10)                     |
| Chilled water connection (mm),<br>(Inch)                  | 32<br>1 1/4"                          | 32<br>1 1/4"                          | 32<br>1 1/4"                          | 32<br>1 1/4"                          |
| Min. chilled water flow (I/min)                           | 64                                    | 95                                    | 125                                   | 160                                   |
| Seawater connection (mm),<br>(Inch)                       | 32<br>1 1/4"                          | 32<br>1 1/4"                          | 32<br>1 1/4"                          | 32<br>1 1/4"                          |
| Min. seawater flow (I/min)                                | 60                                    | 92                                    | 120                                   | 150                                   |
| Dimensions unit L x D x H (mm),<br>(Inch)                 | 630 x 410 x 650<br>24.8 x 16.1 x 25.6 | 630 x 410 x 650<br>24.8 x 16.1 x 25.6 | 830 x 410 x 650<br>32.7 x 16.1 x 25.6 | 830 x 410 x 650<br>32.7 x 16.1 x 25.6 |
| Dimensions unit incl. silent block L x D x H (mm), (Inch) | 653 x 470 x 700<br>25.7 x 18.5 x 27.6 | 653 x 470 x 700<br>25.7 x 18.5 x 27.6 | 853 x 470 x 700<br>33.6 x 18.5 x 27.6 | 853 x 470 x 700<br>33.6 x 18.5 x 27.6 |
| Ambient temperature limit (°C)                            | 70                                    | 70                                    | 70                                    | 70                                    |
| Weight core unit (kg)                                     | 89                                    | 97                                    | 120                                   | 136                                   |
| Min. sea water temp. heating (°C)                         | 5                                     | 5                                     | 5                                     | 5                                     |
| Max. sea water temp. cooling (°C)                         | 40                                    | 40                                    | 40                                    | 40                                    |

<sup>\*</sup> BTU/h are based on 7°C/12°C chilled water temperature and 30°C/35°C sea water temperature.

<sup>\*\*</sup> Amperage values for core unit at nominal conditions at 50 Hz.

<sup>++</sup> BlueCool V-PRO Series are tested and approved for 50/60 Hz operation.

# Electronic control box options

# NEW

| Туре  | Pump<br>Control Box | Remote<br>Connection Box | Master<br>Control Box |       |       |
|---|---------------------|--------------------------|-----------------------|-------|-------|
| Number of V-PRO modules   | 1 – 6               | 1 – 6                    | 1 – 2                 | 3 – 4 | 5 – 6 |
| Вох   |                     |                          |                       |       |       |
| ABS plastic   |                     | -                        | -                     | _     | _     |
| Steel, painted  | -                   |                          |                       |       |       |
| Wall mounted box  | -                   |                          |                       |       |       |
| Door locking mechanism in open position                                   | -                   | _                        |                       |       |       |
| Featues electronic box  |                     |                          |                       |       |       |
| V-PRO Chiller electronic card   | -                   |                          |                       |       |       |
| MyTouch display integrated at the front                                   | -                   |                          |                       |       |       |
| Pilot lamp for pumps  | -                   | _                        |                       |       |       |
| Relay for chilled water and sea water pump                                |                     |                          |                       |       |       |
| ON/OFF button   | _                   |                          |                       |       |       |
| Power ON lamp   | -                   |                          |                       |       |       |
| Only one power supply needed for entire unit                              | -                   | -                        |                       |       |       |
| Emergency stop  | -                   | _                        |                       |       |       |
| Chilled water pump: redundancy selector for two pumps                     | -                   | -                        |                       |       |       |
| Sea water pump:<br>redundancy selector for two pumps                      | -                   | -                        |                       |       |       |
| Motor protection switch for pumps   | -                   | _                        |                       |       |       |
| Main isolator switch  | -                   | _                        |                       |       |       |
| Ability to connect system to 400 V 3-ph power supply without neutral wire | -                   | _                        |                       |       |       |
| Power supply indicator 400 V  | -                   | -                        |                       |       |       |
| Power supply indicator 230 V from transformer                             | -                   | -                        |                       |       |       |
| Circuit breaker V-Pro modules   | -                   | -                        |                       |       |       |
| Circuit breaker pumps   | -                   | -                        |                       |       |       |
| Circuit breaker for chiller electronic card                               | -                   | -                        |                       |       |       |
| Halogen free cables   | -                   |                          |                       |       |       |
| Rail-Mount terminal blocks  | -                   |                          |                       |       |       |
| Suitable to connect BlueCool CAN bus module                               | -                   |                          |                       |       |       |

## **BlueCool V-PRO Series**

# Electronic control box options

**Pump control box** for installation of pump relays at remote place, e.g. near the pumps. Easy connection to one of the chiller units via a display/network cable with RJ45 connector.

**Remote connection box** to monitor and control your V-PRO system from any place on board. It features an additional MyTouch display providing an easy system overview. It contains pump relays, 3 programmable relay outputs and an electronic card with USB interface to connect the BlueCool Expert Tool. Installation possible at remote places to enable central access and operation of the complete system.

**Master control box** combines functionality of pump control and remote connection box plus providing central power supply with power indicator, central ON/OFF and emergency stop, circuit breaker for V-PRO units, PCB and pump selector switch. It also features a transformer which allows to use a central power supply of 400 V 3-ph without neutral wire.

| Туре                                    | V-PRO control boxes  | Order number |
|---|--|--------------|
| V-PRO Pump Control Box                  | External pump control box for easy remote connection via network cable   | 2510581A     |
| V-PRO Remote Connection Box             | Connect and control your V-PRO system from any place on board.  With additional MyTouch display, PCB with 3 relay output, relays for chilled and sea water pump, USB connector.                | 2510699A     |
| V-PRO Master Control Box                | Central power supply with power indicator, central ON/OFF and emergency stop, circuit breakers for V-PRO units, PCB and pump selector switch, relays for two sea water and chilled water pumps |              |
| V-PRO Master Control Box Mono-Twin      | For 1 or 2 V-PRO units   | 2113266A     |
| V-PRO Master Control Box Triple Quattro | For 3 – 4 V-PRO units  | 2113267A     |
| V-PRO Master Control Box Quinta-Hexa    | For 5 – 6 V-PRO units  | 2113268A     |

# Manifolds

| Manifold single unit |   | Order number |
|----------------------|---|--------------|
|                      | Manifold V-PRO 1-100<br>Manifold for single unit V-PRO 60M or V-PRO 90M   | 2510456A     |
|                      | Manifold V-PRO 1-200<br>Manifold for single unit V-PRO 130M or V-PRO 180M   | 2510450A     |
| Manifold two units   |   | Order number |
|                      | Manifold V-PRO 2-110 Manifold for 2 units – combination of two units V-PRO 60M or V-PRO 90M   | 2510472B     |
|                      | Manifold V-PRO 2-210 Manifold for 2 units – combination of one unit V-PRO 60M or V-PRO 90M with one unit V-PRO 130M or V-PRO 180M     | 2510478B     |
|                      | Manifold V-PRO 2-220 Manifold for 2 units – combination of one unit V-PRO 130M or V-PRO 180M with one unit V-PRO 130 M or V-PRO 180M  | 2510466B     |
| Manifold three units |   | Order number |
|                      | Manifold V-PRO 3-221 Manifold for 3 units – combination of one unit V-PRO 130M or V-PRO180 M with two units V-PRO130 M or V-PRO 180 M | 2510484B     |
|                      | Manifold V-PRO 3-222<br>Manifold for 3 units – combination of three units V-PRO 130M<br>or V-PRO 180M                                 | 2510490B     |

All manifolds include ABS connectors to the unit, ABS ball valves and ABS chillled and sea water connectors in combination with marine grade EPDM flexible hoses for maximum tolerance compensation.

# **BlueCool V-PRO Series**

Rack



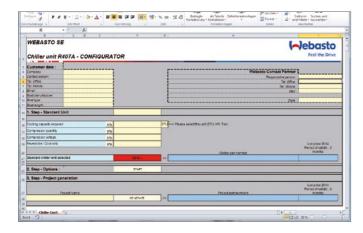
| Number of units | Rack system V-PRO<br>in line   | Item description           | Order number |
|-----------------|--|----------------------------|--------------|
| 2               | form — ands  | Rack 2 x V-PRO 2-1 in line | 2510525A     |
| 3               | Some and a some and a some a s | Rack 3 x V-PRO 3-1 in line | 2510526A     |

| Number of units | Rack system V-PRO<br>on top  | Item description          | Order number |
|-----------------|--|---------------------------|--------------|
| 2               | Town - code and the code and th | Rack 2 x V-PRO 1-2 on top | 2510527A     |
|                 | Source — sodie —   |                           |              |
| 3               | Amora — order and  | Rack 4 x V-PRO 2-2 on top | 2510528A     |
|                 | Thous - ooks and   |                           |              |
| 4               | None - and and   | Rack 4 x V-PRO 2-2 on top | 2510528A     |
|                 | Stores — code and  |                           |              |
| 5               | Tomo - and and   | Rack 6 x V-PRO 3-2 on top | 2510529A     |
|                 | Tomo - note and  |                           |              |
| 6               |  | Rack 6 x V-PRO 3-2 on top | 2510529A     |
|                 | Amount — order and   |                           |              |

# BlueCool chiller systems

# Project assistance and support

A chiller system always needs to be customized to each boat in order to meet the demands of shipyards, owners, classification societies and national legislation. We support you in this process with our expertise and the tools we have developed for this.



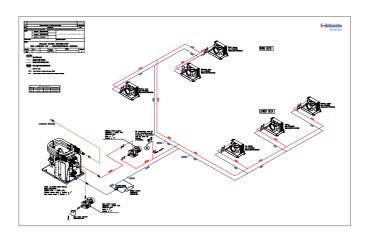
#### Specification and quotation tool

This tool should be used for all A/C projects to

- Precisely calculate the cooling and heating demand for each cabin depending on boat characteristics, performance requirements and usage conditions
- Determine the fresh air requirements of larger boats
- Select your bill of material from the entire product portfolio
- Summarize technical data of the chosen key components. As a result the chiller and air handlers are correctly sized to the individual demand of each boat.

# BlueCool chiller systems

# Project assistance and support



#### **Engineering support**

Our project engineers support you in various phases of a project delivering to you

- A/C system concepts
- Piping diagrams
- Electrical wiring schematics
- On-site support to understand and determine the optimal A/C configuration



#### Installation and commissioning support

Our project engineers can support you on demand during the installation and commissioning phase of your project with

- Technical support to answer your questions
- On-site support and audit
- Check of your installation
- Support during system commissioning

# Fresh air makeup units

#### Fresh air systems

BlueCool F-Series fresh air systems are the ideal complement to your central chiller system. Fresh outside air is filtered and cooled before it is brought into the cabin at the ideal comfort temperature. Stale air is extracted and transported to the outside. A sophisticated control concept of cooling and heating ensures the ideal condition of temperature and humidity.



The BlueCool F-2000 Fresh Air can also be used as a large, silent air handler in combination with the Cabin Control Kit A-Series.

#### ■ Higher air flow

3 variants for 500 up to 2,000 m<sup>3</sup>/h fresh air and extract air. All units are operating with high efficiency EC-blower with high back pressure resistance.

#### ■ High cooling capacity

Increased cooling capacity by up to 75 % compared to previous fresh air system. Cooling capacity with up to 84 kBTU/h. Ideal solution for larger yachts.

- Compact design
- Standardized and compact design.
- High efficiency air filters

Equipped with standard air filter of category G3. High grade F7 filter available for easy exchange.

■ Improved climate control logic

Constant supply air temperatures with integrated solenoid proportional valve and up to 20 kBTU/h staged electrical heating. Acoustics – optimized components for use in particularly noise-critical applications.

#### **BlueCool F-Series**

# Fresh air systems



#### Control elements for BlueCool F-Series (FreshAir)

Please select the control elements for the core unit separately:

Control Box F-Series F500-F2000

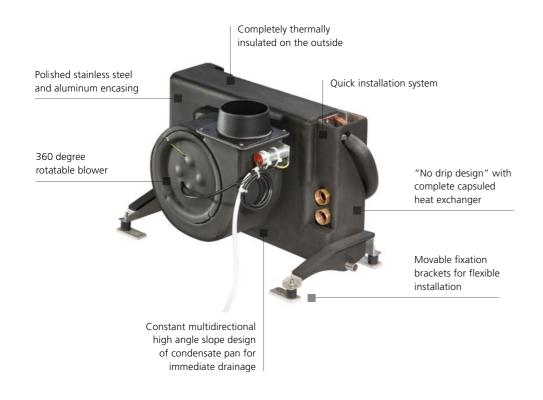
See page 138

#### Technical data

|  |                    | BlueCool Fresh Air and Extract |                    |                    |                    |                    |
|--|--------------------|--------------------------------|--------------------|--------------------|--------------------|--------------------|
|  | F500 FreshAir      | F1000 FreshAir                 | F2000 FreshAir     | F500 Extract       | F1000 Extract      | F2000 Extract      |
| Part No.   | 2510265A           | 2510266A                       | 2510267A           | 2510268A           | 2510269A           | 2510270A           |
| Air flow (300 Pa) (m³/h)   | 500                | 1,000                          | 2000               | 500                | 1,000              | 2,000              |
| Air flow (300 Pa) (cfm)  | 294                | 588                            | 1,177              | 294                | 588                | 1,177              |
| Cooling capacity (kBTU/h)  | 21                 | 42                             | 84                 | _                  | -                  | _                  |
| Cooling capacity (kW)  | 6.0                | 12.0                           | 25.0               | -                  | -                  | _                  |
| Heating capacity 'chilled' water (kBTU/h)                                | 21                 | 42                             | 84                 | _                  | -                  | -                  |
| Heating capacity 'chilled' water (kW)                                    | 6.0                | 12.0                           | 25.0               | -                  | -                  | -                  |
| Heating capacity electric (kBTU/h)                                       | 5.0                | 10.0                           | 20.0               | -                  | -                  | -                  |
| Heating capacity electric (kW)   | 1.5                | 3                              | 6                  | -                  | -                  | _                  |
| Heating capacity total (kBTU/h)  | 26                 | 52                             | 104                | -                  | -                  | _                  |
| Heating capacity total (kW)  | 7.5                | 15                             | 31                 | -                  | -                  | _                  |
| Voltage (V)  | 230                | 230                            | 230                | 230                | 230                | 230                |
| Frequency (Hz)   | 50/60              | 50/60                          | 50/60              | 50/60              | 50/60              | 50/60              |
| Current draw cooling (A)<br>50 + 60 Hz max.                              | 9.1                | 16.8                           | 32.5               | -                  | -                  | -                  |
| Current draw heating (A)<br>50 + 60 Hz max. ('chilled' water + electric) | 9.1                | 16.8                           | 32.5               | -                  | -                  | _                  |
| Current blower (A)   | 0.8                | 1.4                            | 2,7                | 0.8                | 1.4                | 2.7                |
| Power consumption heating (kW)   | 2.1                | 3.9                            | 7.5                | -                  | -                  | _                  |
| Power consumption cooling (kW)   | 2.1                | 3.9                            | 7.5                | -                  | -                  | _                  |
| Chilled water connection (mm)  | DN20               | DN25                           | DN32               | -                  | -                  | _                  |
| Chilled water connection (Inch)  | 3/4                | 1                              | 1 1/4              | -                  | -                  | _                  |
| Minimum chilled water flow (I/min)                                       | 18                 | 37                             | 73                 | -                  | -                  | _                  |
| Dimensions L x H x W (mm)  | 720 x 400 x 500    | 760 x 550 x 650                | 930 x 700 x 750    | 320 x 320 x 320    | 450 x 450 x 450    | 600 x 600 x 600    |
| Dimensions Lx H x W (inch)   | 28.3 x 15.7 x 19.7 | 29.9 x 21.7 x 25.6             | 36.6 x 27.6 x 29.5 | 12.6 x 12.6 x 12.6 | 17.7 x 17.7 x 17.7 | 23.6 x 23.6 x 23.6 |
| Discharge connection diameter (mm)                                       | 150                | 2x 150                         | 315                | 150                | 200                | 315                |
| Discharge connection diameter (inch)                                     | 6                  | 7.5                            | 12.5               | 6                  | 7.5                | 12.5               |
| Suction connection diameter (mm)   | 150                | 200                            | 315                | 150                | 200                | 315                |
| Suction connection diameter (inch)                                       | 6                  | 8                              | 12.5               | 6                  | 8                  | 12.5               |
| Weight Unit (kg)   | 42                 | 65                             | 110                | 25                 | 35                 | 60                 |
| Weight electrical box (kg)   | 7                  | 7                              | 7                  | -                  | -                  | -                  |

# Instant Drain systems

#### **BlueCool A-Series**









Extra high condensate pan walls for Low profile models.

- Exclusive Instant Drain condensate management system
- Constant multidirectional high angle slope design of condensate pan for immediate drainage
- Anti splash condensate management
- "No drip design" with complete capsuled heat exchanger through additional side plates and improved insulation

#### Air handlers: BlueCool A-Series

# Modular system to fit any demand

Webasto offers a range of air handlers to fit any demand on capacity or space limitations. The modular concept makes the A-Series adaptable to individual requirements and the exclusive Webasto Instant Drain condensate management system ensures immediate drainage. Accessories like the Ultimate Cabin Control, MyTouch display, electric heat modules or flow control valves can fine-tune your applications.



#### **BlueCool A-Series**

One or more air handler(s) in each cabin are fitted to generate the required cooling capacities individually in each room. Webasto provides an completely new designed air handler portfolio in 3 different layouts with a performance range from 4,000 – 36,000 BTU/h to suit all sizes and space requirements of your boat.



#### EHM - Electric heat module

The electric heat module EHM ensures cabin heating independent from chiller operation. It is easily installed in-line into the air duct of the A-Series air handlers and provides 600 – 1,800 W capacity to enable heating in selective cabins while chiller is in cooling mode.





#### **Flow Control Valve**

The flow control valve allows the chilled water to bypass the heat exchanger of the A-Series when needed. The comfort on boards is increased while directing the chilled water only to those cabins with cooling/heating demand. Continuous blower operation is possible to reduce noise variations in cabins.





#### Cabin controls

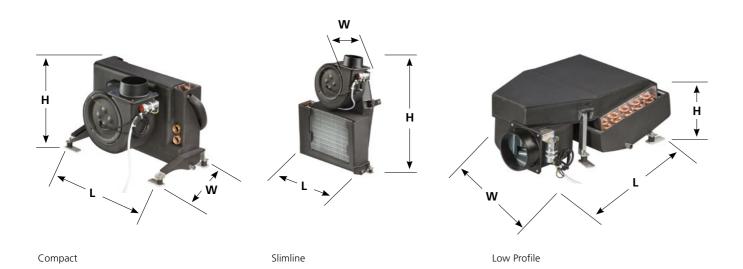
Choose between Ultimate Cabin Control with Ultra silent blower operation and master-slave integration or Standard Cabin Control. Both available as complete kits with all necessary components.

# Modular air handler systems



| Model                                     | Compact         |                  |                  |                  |                    |                  |                    |
|---|-----------------|------------------|------------------|------------------|--------------------|------------------|--------------------|
|   | A4 Compact      | A6 Compact       | A9 Compact       | A12 Compact      | A18 Compact        | A24 Compact      | A36 Compact        |
| Order numbers                             | WBCL1209009A    | WBCL1209010A     | WBCL1209011A     | WBCL1209012A     | WBCL1209013A       | WBCL1209014A     | WBCL1209015A       |
| Capacity (BTU/h) **                       | 4,000           | 6,000            | 9,000            | 12,000           | 18,000             | 24,000           | 36,000             |
| Capacity (kW) **                          | 1.2             | 1.9              | 2.8              | 3.6              | 5.6                | 7.2              | 10.7               |
| Voltage (V)                               | 230 (-15%/+10%) | 230 (-15%/+10%)  | 230 (-15%/+10%)  | 230 (-15%/+10%)  | 230 (-15%/+10%)    | 230 (-15%/+10%)  | 230 (-15%/+10%)    |
| Frequency (Hz)                            | 50/60 (+-5%)    | 50/60 (+-5%)     | 50/60 (+-5%)     | 50/60 (+-5%)     | 50/60 (+-5%)       | 50/60 (+-5%)     | 50/60 (+-5%)       |
| Air flow (m³/h) *                         | 230             | 380              | 420              | 560              | 750                | 1120             | 1550               |
| Air flow (cfm) *                          | 135             | 224              | 247              | 330              | 441                | 659              | 912                |
| Ø Blower connection (mm)                  | 100 (round)     | 125 (round)      | 125 (round)      | 150 (oval)       | 150 (oval)         | 2 x 150 (oval)   | 2 x 150 (oval)     |
| Ø Blower connection (inch)                | 4 (round)       | 5 (round)        | 5 (round)        | 6 (oval)         | 6 (oval)           | 2 x 6 (oval)     | 2 x 6 (oval)       |
| Weight (kg)                               | 6               | 7                | 9                | 10               | 12                 | 16               | 21                 |
| Weight (lbs)                              | 13.2            | 15.4             | 18.7             | 22               | 26.5               | 35.3             | 46.3               |
| Current draw running (A)                  | 0.6             | 0.5              | 0.6              | 0.7              | 1                  | 1.3              | 2.1                |
| Ø Chilled water connection                | 3/4''           | 3/4''            | 3/4''            | 3/4''            | 3/4''              | 3/4''            | 3/4''              |
| Dimensions H x W x L (mm)                 | 287 x 249 x 381 | 287 x 280 x 411  | 312 x 291 x 456  | 312 x 279 x 491  | 362 x 281 x 581    | 362 x 301 x 636  | 487 x 302 x 701    |
| Dimensions H x W x L (inch)               | 11.3 x 9.8 x 15 | 11.3 x 11 x 16.2 | 12.3 x 11.5 x 18 | 12.3 x 11 x 19.3 | 14.3 x 11.1 x 22.9 | 14.3 x 11.9 x 25 | 19.2 x 11.9 x 27.6 |
| Dimensions with valve<br>H x W x L (mm)   | 287 x 249 x 381 | 287 x 280 x 411  | 312 x 291 x 456  | 312 x 279 x 491  | 362 x 281 x 581    | 362 x 301 x 636  | 487 x 302 x 701    |
| Dimensions with valve<br>H x W x L (inch) | 11.3 x 9.8 x 15 | 11.3 x 11 x 16.2 | 12.3 x 11.5 x 18 | 12.3 x 11 x 19.3 | 14.3 x 11.1 x 22.9 | 14.3 x 11.9 x 25 | 19.2 x 11.9 x 27.6 |
| Minimum chilled<br>water flow (I/min)     | 4               | 7                | 10               | 9                | 13                 | 21               | 31                 |
| Number of blowers                         | 1               | 1                | 1                | 1                | 1                  | 2                | 2                  |
| Max. ambient temperature (°C)             | 50              | 50               | 50               | 50               | 50                 | 50               | 50                 |
| Pressure loss chilled water (bar)         | 0.07            | 0.12             | 0.15             | 0.14             | 0.16               | 0.13             | 0.34               |
| Number of condensate drains               | 2               | 2                | 2                | 2                | 2                  | 2                | 2                  |
| Ø Condensate drain (mm)                   | 16              | 16               | 16               | 16               | 16                 | 16               | 16                 |

 $<sup>^{\</sup>star}$  With 2 m of air duct, one 90° bend, air outlet grille at 230 V, 50 Hz



| Model                                     |                    | Slim               | ıline              |                    | Low profile        |                    |                    |                    |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|   | A6 Slimline        | A9 Slimline        | A12 Slimline       | A18 Slimline       | A6 Low profile     | A9 Low profile     | A12 Low profile    | A18 Low profile    |
| Order numbers                             | WBCL1209001A       | WBCL1209002A       | WBCL1209003A       | WBCL1209004A       | WBCL1209005A       | WBCL1209006A       | WBCL1209007A       | WBCL1209008A       |
| Capacity (BTU/h) **                       | 6,000              | 9,000              | 12,000             | 18,000             | 6,000              | 9,000              | 12,000             | 18,000             |
| Capacity (kW) **                          | 1.9                | 2.8                | 3.6                | 5.6                | 1.9                | 2.8                | 3.6                | 5.6                |
| Voltage (V)                               | 230<br>(-15%/+10%) |
| Frequency (Hz)                            | 50/60 (+-5%)       | 50/60 (+-5%)       | 50/60 (+-5%)       | 50/60 (+-5%)       | 50/60 (+-5%)       | 50/60 (+-5%)       | 50/60 (+-5%)       | 50/60 (+-5%)       |
| Air flow (m³/h) *                         | 380                | 420                | 560                | 750                | 380                | 420                | 560                | 750                |
| Air flow (cfm) *                          | 224                | 247                | 330                | 441                | 224                | 247                | 330                | 441                |
| Ø Blower connection (mm)                  | 125 (round)        | 125 (round)        | 150 (oval)         | 150 (oval)         | 125 (round)        | 125 (round)        | 150 (oval)         | 150 (oval)         |
| Ø Blower connection (inch)                | 5 (round)          | 5 (round)          | 6 (oval)           | 6 (oval)           | 5 (round)          | 5 (round)          | 6 (oval)           | 6 (oval)           |
| Weight (kg)                               | 7                  | 9                  | 10                 | 12                 | 10                 | 11                 | 13                 | 16                 |
| Weight (lbs)                              | 15.4               | 19.8               | 22                 | 26.5               | 21.6               | 24.3               | 28.7               | 35.3               |
| Current draw running (A)                  | 0.5                | 0.6                | 0.7                | 1.1                | 0.5                | 0.6                | 0.7                | 1.1                |
| Ø Chilled water connection                | 3/4''              | 3/4''              | 3/4''              | 3/4''              | 3/4''              | 3/4''              | 3/4''              | 3/4''              |
| Dimensions H x W x L (mm)                 | 588 x 217 x 411    | 611 x 217 x 456    | 619 x 217 x 494    | 666 x 218 x 581    | 205 x 437 x 582    | 205 x 482 x 606    | 205 x 516 x 614    | 205 x 599 x 661    |
| Dimensions H x W x L (inch)               | 23.1 x 8.5 x 16.2  | 24.1 x 8.5 x 18    | 24.4 x 8.5 x 19.4  | 26.2 x 8.6 x 22.9  | 8.1 x 17.2 x 22.9  | 8.1 x 19 x 23.9    | 8.1 x 20.3 x 24.2  | 8.1 x 23.6 x 26    |
| Dimensions with valve<br>H x W x L (mm)   | 588 x 217 x 479    | 611 x 217 x 524    | 619 x 217 x 559    | 666 x 218 x 649    | 205 x 487 x 582    | 205 x 532 x 606    | 205 x 567 x 614    | 230 x 657 x 661    |
| Dimensions with valve<br>H x W x L (inch) | 23.1 x 8.5 x 18.9  | 24.1 x 8.5 x 20.6  | 24.4 x 8.5 x 22    | 26.2 x 8.6 x 25.6  | 8.1 x 19.2 x 22.9  | 8.1 x 20.9 x 23.9  | 8.1 x 22.3 x 24.2  | 9.1 x 25.9 x 26    |
| Minimum chilled<br>water flow (I/min)     | 7                  | 10                 | 9                  | 13                 | 7                  | 10                 | 9                  | 13                 |
| Number of blowers                         | 1                  | 1                  | 1                  | 1                  | 1                  | 1                  | 1                  | 1                  |
| Max. ambient temperature (°C)             | 50                 | 50                 | 50                 | 50                 | 50                 | 50                 | 50                 | 50                 |
| Pressure loss chilled water (bar)         | 0.12               | 0.15               | 0.14               | 0.16               | 0.12               | 0.15               | 0.14               | 0.16               |
| Number of condensate drains               | 2                  | 2                  | 2                  | 2                  | 2                  | 2                  | 2                  | 2                  |
| Ø Condensate drain (mm)                   | 16                 | 16                 | 16                 | 16                 | 16                 | 16                 | 16                 | 16                 |

# The MyTouch display is included in the A-Series Cabin Control Kit



- Three possible shapes to cope with any installation demand: Compact, Slimline and Low profile
- Modular system with various options
- Innovative Webasto Instant Drain system for smart management of condensate
- High quality stainless steel condensate tray
- High performance with high cooling capacity and high air flow
- Super Silent with
- flexible vibration isolation mounts
- larger ducts to reduce noise from air speed
- Oversized heat exchanger tested under tropical conditions
- Rotatable blower

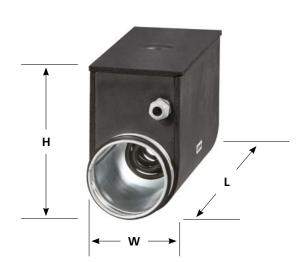
<sup>\*\*</sup> Intake air of 32 °C/47 % rh, water inlet temperature of 5 °C and at 230 V, 50 Hz

#### Electric heat module

| Туре   | EHM600W<br>-100 mm<br>-230 V<br>-50/60 Hz | EHM900W<br>-125 mm<br>-230 V<br>-50/60 Hz | EHM1200W<br>-150 mm<br>-230 V<br>-50/60 Hz | EHM1800W<br>-150 mm<br>-230 V<br>-50/60 Hz |
|--|---|---|--|--|
| Order numbers                                      | WBCL1209100B                              | WBCL1209101B                              | WBCL1209102B                               | WBCL1209103B                               |
| Capacity (W)                                       | 600                                       | 900                                       | 1,200                                      | 1,800                                      |
| Dimensions (L x W x H) (mm)                        | 370 x 100 x 170                           | 370 x 125 x 195                           | 370 x 150 x 220                            | 370 x 150 x 220                            |
| Dimensions (L x W x H) (inch)                      | 14.6 x 3.9 x 6.7                          | 14.6 x 4.9 x 7.7                          | 14.6 x 5.9 x 8.7                           | 14.6 x 5.9 x 8.7                           |
| Ø Hose connection (mm)                             | 100                                       | 125                                       | 150  | 150  |
| Ø Hose connection (inch)                           | 4   | 5   | 6  | 6  |
| Voltage (V)  | 230 (-15%/+10%)                           | 230 (-15%/+10%)                           | 230 (-15%/+10%)                            | 230 (-15%/+10%)                            |
| Frequency (Hz)                                     | 50/60 (+-5%)                              | 50/60 (+-5%)                              | 50/60 (+-5%)                               | 50/60 (+-5%)                               |
| Current draw running (A)                           | 3   | 4   | 5  | 8  |
| Max. supply air temperature (°C)                   | 40  | 40  | 40   | 40   |
| Cut off temperature safety switch (°C)             | 60  | 60  | 60   | 60   |
| Pressure loss air (Pa)                             | 60  | 60  | 60   | 60   |
| Min. air flow (m³/h)<br>to ensure full heat output | 60  | 80  | 120  | 180  |
| Weight (kg)  | 2.2                                       | 2.6                                       | 2.8  | 3  |

| Compatibility | A4 Compact | A6 Compact,<br>Slimline,<br>Low Profile | A9 Compact,<br>Slimline,<br>Low Profile | Slimline, | A18 Compact,<br>Slimline,<br>Low Profile | A24 Compact | A36 Compact |
|---------------|------------|---|---|-----------|--|-------------|-------------|
| EHM600W       |            |   |   |           |  |             |             |
| EHM900W       | _          |   |   | _         |  | -           |             |
| EHM1200W      | -          | -                                       | -                                       |           |  |             |             |
| EHM1800W      | -          | -                                       | -                                       | -         |  | -           |             |

■ Standard application, check on minimum airflow in technical data. 
☐ Only for secondary ducts with smaller diameter, check on minimum airflow in technical data.



EHM – Electric heat module

- Electric heat modules ensure cabin heating independent of chiller operation
- They are easily installed in-line into air duct of the A-Series air handlers
- EHM is directly connected to A-Series electronics so no separate controls are needed
- EHM further increase the comfort on board by:
- enabling heating in selective cabins while chiller is in cooling mode
- enable heating while chiller is switched off
- increasing the heat output of air handlers if extra high heat demand is needed
- EHM can easily be retrofitted to existing A-Series
- EHM is preinsulated to prevent condensation on the outside. It also comes with 2 stainless steel mounting brackets for wall mounting
- When using EHM a flow control valve also needs to be fitted

#### **BlueCool A-Series**

# Flow control valve



| Valve with motor actuator | Kit Motor valve Slimline /<br>Low profile<br>A-Series with 90° elbow | Kit Motor valve Compact<br>A-Series |
|---------------------------|--|-------------------------------------|
| Order numbers             | WBCL151004B  | WBCL151003B                         |

| Valve with thermal actuator* | Kit Therm valve Slimline /<br>Low profile<br>A-Series with 90° elbow | Kit Therm valve Compact<br>A-Series |
|------------------------------|--|-------------------------------------|
| Order numbers                | 2510181A   | 2510182A                            |

<sup>\*</sup> Valves with thermal actuator are suitable for A-Series model from A4 up to A18. Due to their longer activation time they are not suitable to be operated in permanent blower mode.



Flow control valve for Slimline and Low profile



Flow control valve for Compact

- The flow control valve acts as a 3/2-way valve allowing the chilled water to bypass the heat exchanger of the A-Series when needed
- Easy screw connection to all A-Series units, no soldering needed
- Easy electrical connection to A-Series electronics
- 90° elbows in the Slimline/Low profile kit enable an extra flat installation
- The flow control further increases the comfort on board by:
- directing the chilled water only to those cabins with cooling/heating demand
- prevent inadvertent heating when air handler is switched off
- no chimney effect
- prevents condensate build-up and thus mold on heat exchangers of air handlers which are switched off
- continuous blower operation is possible thus reducing noise variations in cabins
- Valve needs to be fitted if EHM is installed to prevent simultaneous heating and cooling

# Ultimate cabin control – ultra silent blower operation

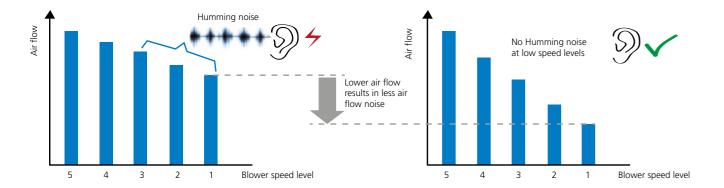
Ultimate cabin control – the 2 in 1 solution to provide very silent blower operation and to control a network of BlueCool A-Series air handlers.

# 1. High performance Silencer Standard cabin control: Phase-cutting principle

The standard cabin control kit uses the phase-cutting principle with triacs to control the blower motor speed. This chops the incoming sine wave and thus creates electrical bursts which hit the blower motor and cause mechanical noises such as humming and vibration, particularly in low blower speed levels.

#### Ultimate cabin control: PWM for blower speed control

The Ultimate cabin control uses pulse width modulation (PWM) to operate the AC-driven blower motor. With such fast pulses in a frequency of 10 to 16 kHz the amperage reaching the blower motor is very smooth and thus does not cause any humming noise or vibrations in low blower speeds. It also allows to run the blower in very low speed levels to marginalize air flow noise. The Ultimate cabin control can be used with all BlueCool A-Series air handlers.



#### 2. Control of a network of air handlers via "Master-Slave integration"

One Ultimate cabin control box is already capable to control several air handlers with a max. total amperage of 3.15 A. For larger cabins requiring more air handlers, one single BlueCool MyTouch user interface can control up to 15 Ultimate cabin control devices networked together in a "Master-Slave integration".



#### **Ultimate cabin control**

- Ultra silent blower operation due to PWM control
- Innovative Master-Slave integration allows to connect multiple units together
- Individually adjustable 5-step fan speed
- Compatible to all BlueCool A-Series air handlers
- Meets the highest EMC requirements of IEC/EN 60945
- One MyTouch display can operate all connected cabin controls

#### **BlueCool A-Series**

# Cabin control kits



|   | Cabin controls for BlueCool A-Series   | Order number |
|---|--|--------------|
|   | Ultimate cabin control kit  Kit includes: Electrical box with controller card, MyTouch display with Webasto cover plate, display cable 5 m, air temperature sensor 3 m. Max. switching current 3.15 A.  Will be the "Master" unit in a Master-Slave configuration. | 2510197B     |
|   |  | Order number |
| minimum de la constante de la | Ultimate cabin control  Includes: Electrical box with controller card. Max. switching current 3.15 A.  Shall be configured as "Slave" unit in a Master-Slave configuration.  | 2510198B     |
|   |  | Order number |
|   | Cabin control kit A-Series  Includes: Electrical box with controller card, MyTouch display with Webasto cover plate, display cable 5 m, air temperature sensor 3 m. Max. switching current 2 x 3.15 A.   | WBCL151000D  |

#### **Cabin control for BlueCool A-Series**

- Complete kits available including all necessary components
- Pre-configured for all BlueCool A-Series
- Integrates Webasto s BlueCool Expert Tool diagnosis and set up tool
- MyTouch as standard user interface with clear text display
- Optional CAN-Bus for optimized adaptations to boat systems



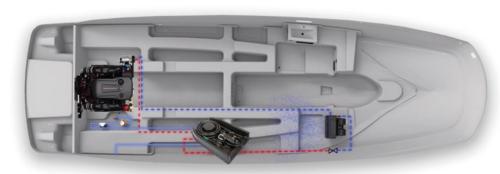
# Engine powered cooling & heating system

| Breeze overview | 128 |
|-----------------|-----|
| Breeze kits     | 129 |

# **Breeze by Webasto**

# Engine powered cooling and heating system















Sea Water

Breeze

#### **Breeze by Webasto**

Specifically designed for the marine industry, the Breeze provides ambient cooling and heating for many scenarios ondemand with a simple on/off button and three fan speeds. The consumer can easily select the option to install the Breeze during the boat building process. Thanks to its small overall footprint and 12 VDC power supply no additional generators or expensive installation addons are needed. For workboats, Breeze is a perfect heating and cooling system as the boat engine is running anyhow. The integration of the Breeze allows enthusiasts of leisure boats to extend their time on the water, providing a blast of cold air during the stufling summer heat and warming their passengers after a dip in the water when the temperatures start to decline later in the season.

#### **Product features**

- Extends season
- Provides valuable comfort benefits to the boat builder and owner
- Engine mounted and belt driven compressor

Evaporator

- 12 VDC system does not require a generator
- Operates as long as boat engine is running
- Compact design
- Cost effective
- Easy to use, simple on/off button and three fan speeds

# **Breeze by Webasto**

# Engine powered cooling and heating system

#### **Kit Cool only**

#### Technical data

| Description                                      | Qty. | Performance   | Dimensions                                 | Weight           | V/Amps       | Order number |
|--|------|---|--|------------------|--------------|--------------|
| Condenser compressor kit*                        | 1    | From 8,000 – 30,000<br>BTU/h (700 – 4,500 rpm)<br>Max. permissable speed =<br>6,000 rpm | 632 x 412 x 118 mm<br>24.9 x 16.2 x 4.6 in | 25.5 kg/56.2 lbs | 12 VDC/3.7 A | 5013643A     |
| Evaporator kit Glasgow                           | 1    | Up to 21,000 BTU/h<br>of cooling  | 400 x 360 x 165 mm<br>15.7 x 14.2 x 6.5 in | 6 kg/13.2 lbs    | 12 VDC/15 A  | 6232262A     |
| Seawater kit 3/4"                                | 1    | _   | _  | 4.04 kg/8.9 lbs  | _            | 5013617A     |
| Sea water pump kit SPX<br>12 V                   | 1    | 15 L/min – 4 GPM @<br>90kPa   | 170 x 113 x 82 mm<br>6.7 x 4.4 x 3.2 lbs   | 2.8 kg/6.2 lbs   | 12 VDC/10 A  | 5013360A     |
| Diffuser 3 outlets                               | 1    | -   | 395 x 58 x 105 mm<br>15.6 x 2.3 x 4.1 in   | 0.16 kg/0.35 lbs | -            | 62U003AA151  |
| Diffuser 4 outlets                               | 1    | -   | 395 x 58 x 105 mm<br>15.6 x 2.3 x 4.1 in   | 0.16 kg/0.35 lbs | -            | 62U003AA019  |
| AC hoses and fittings kit –<br>Breeze by Webasto | 1    | -   | _  | -                | -            | 6231123A     |
| Wiring kit AC only –<br>Breeze by Webasto        | 1    | -   | _  | -                | -            | 5013636A     |

<sup>\*</sup> Compressor kit suitable for Volvo Penta M gasoline engines. Compressor mounting bracket to be provided by engine or boat manufacturer.

#### Kit Cool + Heat

#### **Technical data**

| Description                                      | Qty. | Performance  | Dimensions                                 | Weight           | V/Amps       | Order number |
|--|------|--|--|------------------|--------------|--------------|
| Condenser compressor kit*                        | 1    | From 8,000 – 30,000<br>BTU/h (700 – 4,500 rpm)<br>Max permissable speed =<br>6,000 rpm | 632 x 412 x 118 mm<br>24.9 x 16.2 x 4.6 in | 25.5 kg/56.2 lbs | 12 VDC/3.7 A | 5013643A     |
| Evaporator kit Oslo 12 V                         | 1    | Up to 21,000 BTU/h of<br>cooling and<br>29,000 BTU/h of heating                        | 400 x 360 x 165 mm<br>15.7 x 14.2 x 6.5 in | 6.6 kg/14.8 lbs  | 12 VDC/15 A  | 6232259A     |
| Wiring kit HVAC Neo2                             | 1    | -  | -  | 4.05 kg/8.9 lbs  | _            | 5013637A     |
| Seawater kit 3/4"                                | 1    | -  | -  | 4.04 kg/8.9 lbs  | -            | 5013617A     |
| Sea water pump kit SPX<br>12 V                   | 1    | 15 L/min – 4 GPM @<br>90kPa  | 170 x 113 x 82 mm<br>6.7 x 4.4 x 3.2 lbs   | 2.8 kg/6.2 lbs   | 12 VDC/10 A  | 5013360A     |
| Diffuser 3 outlets                               | 1    | -  | 395 x 58 x 105 mm<br>15.6 x 2.3 x 4.1 in   | 0.16 kg/0.35 lbs | -            | 62U003AA151  |
| Diffuser 4 outlets                               | 1    | -  | 395 x 58 x 105 mm<br>15.6 x 2.3 x 4.1 in   | 0.16 kg/0.35 lbs | -            | 62U003AA019  |
| AC hoses and fittings kit –<br>Breeze by Webasto | 1    | -  | -  | -                | -            | 6231123A     |

<sup>\*</sup> Compressor kit suitable for Volvo Penta M gasoline engines. Compressor mounting bracket to be provided by engine or boat manufacturer



# Accessories for cooling systems

| BlueCool Connect                       | 132 |
|--|-----|
| Air-conditioning control elements      | 136 |
| Self priming pumps                     | 140 |
| Pumps                                  | 14  |
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| Air system                             | 14! |
| Water system                           | 150 |
| Accessories for S-, V-, and C-Series   | 156 |
| BlueCool Expert Tool                   | 15  |
|  |     |

#### **BlueCool Connect**

# One device gets all connections done

# NEW

Whenever there is a demand for remote operation and servicing the BlueCool Connect will be the best choice. Checking onboard temperatures and settings, modifying system parameters or collecting a status report and sending it onshore remotely. The BlueCool Connect offers the same functions as if you would be on the spot, but with the comfort of doing it from anywhere in the world with many internet devices available.

1. Toggle for units/groups

Visible when one or more groups

have been created

2. Expand/collapse controls

Opens / closes cabin settings displays

**3. Timer** Settin

Setting the timer

4. Blower control

Set blower speed or auto setting

5. Blower setting

See current blower setting

6. Temperature control

Set cabin temperature

7. Temperature setting

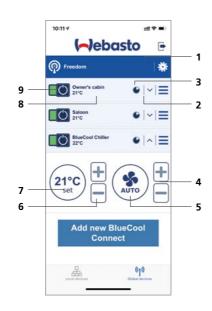
8. Actual cabin temperature

See temperature set value

**9. On/off for units/groups** One click

See actual cabin temperature
One click operation of multiple

BlueCool Units







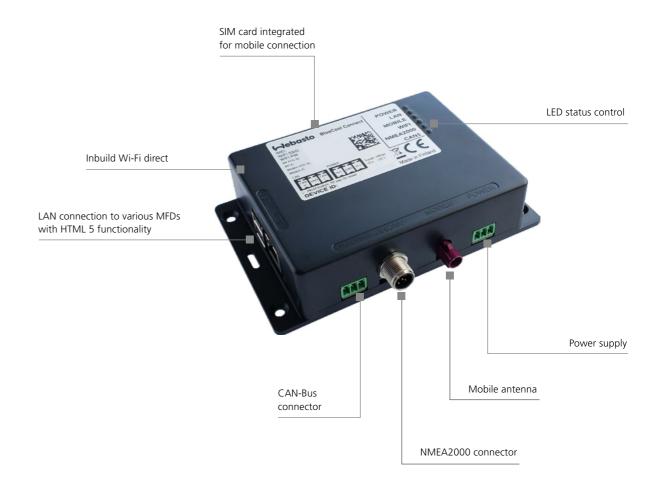


#### Key benefits at a glance:

- Accessible from anywhere in the world
- Use any device like Smartphone,
   Tablet or Computer
- Central monitoring via your Multi-Functional-Display e.g. Garmin, Raymarine, Simrad, Lowrance and B & G displays with HTML5 functionality
- Remote condition monitoring system
- NMEA 2000 interface
- Use of handheld, portable equipment to monitor A/C equipment periodically
- Collect data and send it onshore remotely

# **BlueCool Connect**

# One device gets all connections done



#### Technical data

|                             | BlueCool Connect           |
|-----------------------------|----------------------------|
| Operating voltage range (V) | 9 – 33                     |
| Power consumption (W)       | 13.5                       |
| Input                       | CAN (SAE J1939)            |
| Output                      | Wi-Fi Direct               |
|                             | Mobile (Telephone) Network |
|                             | NMEA 2000                  |
|                             | LAN – Ethernet             |
| Dimensions (L x B x H) (mm) | 140 x 104.9 x 33.8         |
| Weight (kg)                 | 0.34                       |
| Operating temperature (°C)  | -40 to +80                 |

135

#### **BlueCool Connect**

# One device gets all connections done

# **NEW**

One device gets all connections done. Mobile network, Multifunctional Displays, NMEA2000, WiFi. BlueCool Connect turns connectivity into a child's play.

#### Easy operation of all BlueCool Series via smart phone:

- Easy access via BlueCool Connect app
- Inbuild SIM automatically connects to mobile network in EU, USA and Canada
- Additional Ethernet connector to hook up into boats internet connection
- All connected A/C units can be accessed and controlled individually
- Multiple users can be set up to access the A/C systems
- Works even locally WiFi-based when no mobile network is available
- Access all your BlueCool devices with your smart phone from anywhere in the world

#### Integration into all Garmin, Raymarine, Simrad, Lowrance and B&G displays with HTML5 functionality:

- Ethernet connection for easy MFD integration
- Using your existing MFD to control all A/C systems
- Integrated BlueCool webserver displaying Webasto screens
- Single operation via MFD, smart phone, MyTouch display or everything connected in parallel

#### Remote control center for all operations and diagnosis:

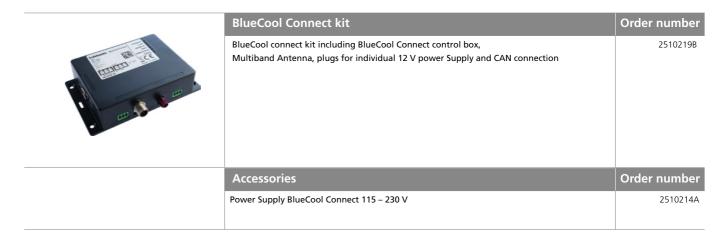
- Worldwide access to all connected A/C units via tablet/notebook
- Complete BlueCool Expert Tool functionality via remote connection
- Remote software updates
- Easy parameters read out and changing
- Remote troubleshooting
- Back-up and upload of application-specific presets
- Save individual presets or load standard presets
- Real-time system monitoring
- Access to data logs
- All relevant data are stored for easy review
- Check function of all components and connected accessories

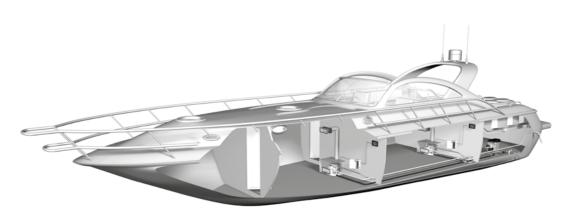
#### NMEA2000 interface allows integration into Multi Functional Displays:

■ Key commands allow to control and monitor the A/C system via the NMEA2000 bus

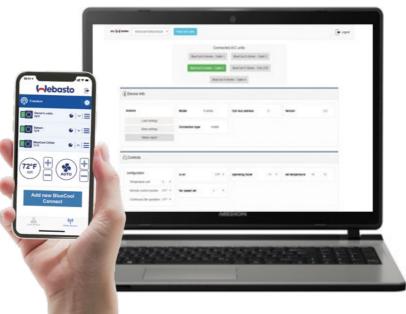
#### **BlueCool Connect**

# One device gets all connections done









# BlueCool Connect for all BlueCool Series

- Easy operation of all BlueCool Series via smart phone
- Integration into your MFD
- Remote control center for all operations and diagnosis.

# **Air-conditioning control elements**

# BlueCool MyTouch

# **Air-conditioning control elements**BlueCool MyTouch



The BlueCool MyTouch display is the standard display for all BlueCool A/C Series and is part of a complete electronic control system including the A/C controller card and connecting cables/sensors.







3 different software designs and Webasto cover plate

- Standard display for all BlueCool A/C units
- Full color, high resolution, interactive touch display
- Individual customizable Multi Design Touch Display with 3 different user designs
- Intuitive icons and menus
- 3 different menu levels
- Easy intuitive operation for end customer
- Advanced settings for crew member
- Complete parameter access for technician with clear text message

#### Customizable to many cover plate systems like

- Vimar Eikon
- Vimar Eikon EVO
- Vimar Plana
- Btcino Axolute

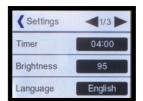




Easy temperature selection with actual cabin temperature (left) and adjustable target temperature (right)



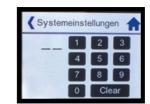
Failure codes show up in clear text



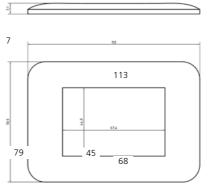
Easy navigation through display settings menu with clear text in 10 languages



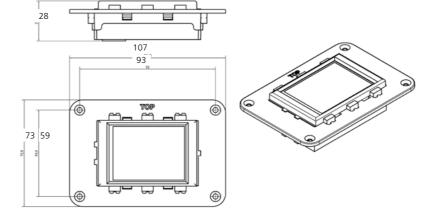
Individual picture can be uploaded to be used as Stand-by screen



System settings menu is code protected to prevent unwanted changes







# **Air-conditioning control elements**

# Electronic controls

| (2) (2) (3) | MyTouch Display  | SlueCool S-Series | BlueCool C-, V-, P-Series | BlueCool A-Series | BlueCool F-Series | Order number<br>WBCL151002C |
|-------------|--|-------------------|---------------------------|-------------------|-------------------|-----------------------------|
| Was a l     | Cabin control kit A-Series Includes: electrical box with controller card, MyTouch display with Webasto cover plate, display cable 5 m, remote air temperature sensor 3 m, max. switching current: 2 x 3.15 A   |                   |                           | •*                | •**               | WBCL151000D                 |
|             | Ultimate cabin control kit Includes: electrical box with controller card, MyTouch display with Webasto cover plate, display cable 5 m, remote air temperature sensor 3 m, max. switching current: 3.15 A Will be the "Master" unit in a Master-Slave configuration |                   |                           | •*                |                   | 2510197B                    |
|             | Ultimate cabin control Includes: Electrical box with controller card, max. switching current: 3.15 A Shall be configured as "Slave" unit in a Master-Slave configuration   |                   |                           | •                 |                   | 2510198B                    |
|             | Control box F-Series F500-F2000 Kit includes: Electrical box with controller card, MyTouch display with Webasto cover plate, display cable 5 m   |                   |                           |                   | •                 | 2510288B                    |
|             | Display cable MyTouch 5 m  | ✓                 | •                         | 0                 | 0                 | WBCL151001A                 |
|             | Display cable MyTouch 10 m   | 0                 | •                         | 0                 | 0                 | WBCL151005A                 |
| A           | Can also be used to create the "Master-Slave" network between Ultimate cabin control units   |                   |                           |                   |                   |                             |
| Annaceria   | Coupling for display cable MyTouch Used to extend MyTouch display cables   | 0                 | 0                         | 0                 | 0                 | WBCL151006A                 |

# **Air-conditioning control elements**

# Electronic controls

|  |   | BlueCool S-Series | BlueCool C-, V-, P-Series | BlueCool A-Series | BlueCool F-Series | Order number |
|--|---|-------------------|---------------------------|-------------------|-------------------|--------------|
|  | Remote air temperature sensor with 3 m cable  | <b>√</b>          | •**                       |                   | 0                 | WBCL000813C  |
|  | Remote air temperature sensor with 6 m cable  | 0                 | •**                       | 0                 | 0                 | WBCL000810C  |
| f  | Remote air temperature sensor with 12 m cable | 0                 | •**                       | 0                 | 0                 | WBCL000812C  |
| A STATE OF THE PARTY OF THE PAR | BlueCool CAN-Bus module                       | 0                 | 0                         | 0                 | 0                 | WBCL1203091B |
|  | Relay box for 2 units – one pump – 230 V      | 0                 | 0                         |                   |                   | WBCL001127C  |
|  | Relay box for 3 units – one pump – 230 V      | 0                 | 0                         |                   |                   | WBCL001128C  |
|  | Relay box for 4 units – one pump – 230 V      | 0                 | 0                         |                   |                   | WBCL001129C  |
|  | Relay box for 2 units – one pump – 115 V      | 0                 | 0                         |                   |                   | WBCL001182C  |
|  | Relay box for 3 units – one pump – 115 V      | 0                 | 0                         |                   |                   | WBCL001183C  |

<sup>✓</sup> Already included in scope of delivery 

■ Mandatory accessory 

O Optional accessory

<sup>\*</sup> A-Series air handler may also be connected to chiller control directly. In this case no cabin control kit is needed.

<sup>\*\*</sup> Required if chiller shall run in automatic mode or if air handlers are connected to the chiller electronics.

<sup>\*\*\*</sup> The BlueCool F-2000 Fresh Air can also be installed as a large and silent air handler in combination with the Cabin Control Kit A-Series. (Not for FreshAir application)

# **Self-priming pumps**

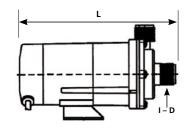
| Model          | Dimensions<br>L x W x H                      | Max.<br>output           | Running power consumption   | Connection<br>in, out | Weight             | Order<br>number<br>115 V** | Order<br>number<br>230 V | Order<br>number<br>400 V |
|----------------|--|--------------------------|-----------------------------|-----------------------|--------------------|----------------------------|--------------------------|--------------------------|
| Self-priming b | ronze pumps 50/0                             | 60 Hz                    |                             |                       |                    |                            |                          |                          |
| WB500G         | 254 x 120 x 185 mm<br>10,0 x 4,7 x 7,3 inch  | 18 (I/min)<br>4.7 (gpm)  | 250 W<br>1.2 amps (230 V)   | G 1/2" F<br>G 1/2" F  | 6.2 kg             | WBCL001306A                | WBCL001305A              | -                        |
| WB1000G        | 260 x 120 x 143 mm<br>10.3 x 4.8 x 5.7 inch  | 60 (I/min)<br>15.8 (gpm) | 370 W<br>1.7 amps (230 V)   | G 3/4" F<br>G 3/4" F  | 6.5 kg<br>14.4 lbs | WBCL001307A                | WBCL001092A              | -                        |
| WB3800G        | 410 x 215 x 230 mm<br>16.1 x 8.5 x 9.1 inch  | 120 (I/min)              | 1200 W<br>5.8 amps (230 V)  | G 1 1/4" F            | 21 kg              | -                          | WBCL001094A              | -                        |
| Self-priming p | umps 50 Hz                                   |                          |                             |                       |                    |                            |                          |                          |
| WB8000*        | 592 x 215 x 302 mm<br>23.4 x 8.5 x 11.9 inch | 500 (I/min)<br>132 (gpm) | 1,600 W<br>2.9 amps (400 V) | G 2" F<br>G 2" F      | 19 kg<br>41.9 lbs  | -                          | -                        | WBCL001164A              |
| WB10500*       | 592 x 215 x 302 mm<br>23.4 x 8.5 x 11.9 inch | 667 (I/min)<br>176 (gpm) | 3,000 W<br>5.3 amps (400 V) | G 2" F<br>G 2" F      | 21 kg<br>46.3 lbs  | -                          | -                        | WBCL001165A              |

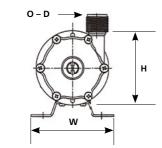
- $\bullet$  Contains straight hose nipple 5/8", 16 mm and 90° adaptor for hose nipple.
- $\ensuremath{^{\star}}$  Can only be used for sea water cooling, not for chilled water circulation.
- \*\* All 115 V pumps 60 Hz only.

For a stable operation of A/C systems it is essential to have a robust sea water flow in order to cool the condenser and avoid high pressure cut outs of the A/C unit. The sea water pump has to provide this water flow through the A/C unit.

As soon as a significant amount of air is being sucked into the sea water circuit most standard circulation pumps do not have the technical capability to evacuate these air bubbles once they enter into the pump chamber. As a result, the sea water flow stops and the A/C system will shut off. Easy priming pumps do have this capability to evacuate these air bubbles from the pump chamber thus ensuring a continuous A/C operation. Therefore they are the best choice for all those boats and applications where there is a certain risk that air bubbles might enter via the through hull fitting.

Please note that even though the sea water intake fitting is mounted below the sea water line it may happen during heeling, high boat speed or during reversing the boat that air is being sucked into the sea water intake. For such applications it is highly recommended to use self-priming sea water pumps instead of standard circulation pumps. The pump models WB500G, WB1000G and WB3800G have to be pre-filled before the first start-up and after long downtimes.









Model WB500G/1000G/2800G



Model WB8000/10500

# **Pumps**

| Model     | Dimensions<br>L x W x H                         | Max.<br>output*            | Running power consumption                     | Connection in, out       | Weight             | Order<br>number<br>115 V** | Order<br>number<br>230 V | Order<br>number<br>400 V |
|-----------|---|----------------------------|---|--------------------------|--------------------|----------------------------|--------------------------|--------------------------|
| Magneti   | c drive pumps 50                                | /60 Hz                     |   |                          |                    |                            |                          |                          |
| WB250     | 180 x 95 x 109 mm<br>7.1 x 3.7 x 4.3 inch       | 16 (I/min)<br>4.2 (gpm)    | 26 W, 0.36 amps (115 V)<br>0.18 Amps (230 V)  | Ø 14 mm<br>Ø 14 mm       | 1.6 kg<br>3.3 lbs  | WBCL001301                 | WBCL001104A              |                          |
| WB350     | 209 x 106 x 105 mm<br>8.2 x 4.2 x 4.2 inch      | 27 (I/min)<br>7.1 (gpm)    | 40 W, 0.48 Amps (115 V)<br>0.24 Amps (230 V)  | Ø 18 mm<br>Ø 17 mm       | 2 kg<br>4.4 lbs    | WBCL001302A                | WBCL001105A              |                          |
| WB500     | 248 x 120 x 130 mm<br>9.8 x 4.8 x 5.2 inch      | 32 (I/min)<br>8.4 (gpm)    | 60 W<br>0.4 Amps (230 V)                      | G 3/4" M<br>G 3/4" M     | 3.5 kg<br>7.8 lbs  | 2510180A                   | WBCL001101A              |                          |
| WB1000    | 250 x 120 x 130 mm<br>9.9 x 4.8 x 5.2 inch      | 45 (I/min)<br>11.8 (gpm)   | 90 W, 1 Amps (115 V)<br>0.52 Amps (230 V)     | G 3/4" M<br>G 3/4" M     | 3.9 kg<br>8.6 lbs  | WBCL001303A                | WBCL001106A              |                          |
| WB1500    | 258 x 130 x 155 mm<br>10.2 x 5.2 x 6.1 inch     | 86 (I/min)<br>22.7 (gpm)   | 235 W<br>1.21 Amps (230 V)                    | G1" M<br>G1" M           | 6 kg<br>13.2 lbs   | WBCL001304                 | WBCL001107A              |                          |
| WB2000    | 322 x 156 x 175 mm<br>12.7 x 6.2 x 6.9 inch     | 115 (I/min)<br>30.3 (gpm)  | 345 W<br>1.93 Amps (230 V)                    | G 1" M<br>G 1" M         | 8,5 kg<br>18.8 lbs | -                          | WBCL001108A              |                          |
| Magneti   | c drive pumps 50                                | /60 Hz                     |   |                          |                    |                            |                          |                          |
| WB3500    | 423.5 x 149 x 210 mm<br>16.7 x 5.9 x 8.3 inch   | 280 (I/min)<br>74 (gpm)    | 370 W, 2.4 Amps (230 V)<br>1.1 Amps (400 V)   | G 1 1/2" M<br>1 1/2" M   | 14 kg<br>30,9 lbs  | -                          | WBCL001109A              | WBCL001111               |
| WB5500    | 473 x 160 x 249 mm<br>18.9 x 6.3 x 9.8 inch     | 320 (I/min)<br>84.6 (gpm)  | 750 W, 3.3 Amps (230 V)<br>1.8 Amps (400 V)   | G 1 1/2" M<br>1 1/2" M   | 22 kg<br>48.5 lbs  | -                          | WBCL001110A              | WBCL001112               |
| WB7400    | 478.5 x 260 x 274 mm<br>20.1 x 10.3 x 10.8 inch | 450 (I/min)<br>118.8 (gpm) | 1,500 W, 7.1 Amps (230 V)<br>3.1 Amps (400 V) | G 2" M<br>G 1 1/2" M     | 25 kg<br>55.2 lbs  | -                          | WBCL010121A              | WBCL00113                |
| WB9800    | 478.5 x 260 x 274 mm<br>22.1 x 10.3 x 10.8 inch | 520 (I/min)<br>137.4 (gpm) | 2,200 W<br>4.5 Amps (400 V)                   | G 2" M<br>G 1 1/2" M     | 32 kg<br>70.5 lbs  | -                          | -                        | WBCL001139/              |
| Bronze p  | oumps 50/60 Hz                                  |                            |   |                          |                    |                            | ,                        |                          |
| WB2500G   | 305 x 170 x 195 mm<br>12 x 6.7 x 7.7 inch       | 80 (I/min)<br>21.1 (gpm)   | 550 W<br>2.5 Amps (230 V)                     | G 1" F<br>G 1" F         | 13 kg<br>28.6 lbs  | -                          | 2510271A                 |                          |
| WB3000G   | 303 x 174 x 181 mm<br>11.9 x 6.9 x 7.2 inch     | 125 (I/min)<br>33 (gpm)    | 1,100 W, 4.9 Amps (230 V)<br>2.8 Amps (400 V) | G 1" F<br>G 1" F         | 10 kg<br>22.1 lbs  | -                          | WBCL001171A              | WBCL001172               |
| WB5500G   | 327 x 157 x 210 mm<br>12.9 x 6.2 x 8.3 inch     | 275 (I/min)<br>72.6 (gpm)  | 1,500 W, 6.7 Amps (230 V)<br>4.5 Amps (400 V) | G 1 1/2" F<br>G 1 1/2" F | 19 kg<br>41.9 lbs  | -                          | 2510272A                 | 2510273/                 |
| WB 7800   | 479 x 240 x 292                                 | 480 (I/min)                | 11.5 amps (230 V)<br>6.6 amps (400 V)         | DN 50, DN 32             | 36.5               |                            | _                        |                          |
| WB12800   | 479 x 240 x 292                                 | 800 (I/min)                | 9.6 amps (400 V)                              | DN 65, DN 40             | 53.4               | _                          | _                        | 2510861                  |
| Cast iron | n pumps 50/60 Hz                                | ***                        |   |                          |                    |                            |                          |                          |
| WB12600   | 475 x 240 x 292                                 | 550 (I/min)                | 9.6 Amps (400 V)                              | DN 65, DN 40             | 48.2               | -                          | -                        | 2510860                  |
| WB21600   | 528 x 265 x 340                                 | 1350 (I/min)               | 14.3 Amps (400 V)                             | DN 65, DN 50             | 68                 |                            |                          | 2510863                  |
| WB20800   | 528 x 272 x 340                                 | 1350 (I/min)               | 7.5 kW (400 V)                                | DN 65, DN 50             | 70                 | -                          | _                        | 2510862                  |

<sup>\*</sup> Effective water output varies with back pressure. Please respect the pump curves on the next pages in order to ensure the minimum water flows required for your applications.

Note: F = Female thread in inch M = Male thread in inch

- \*\* All 115 V pumps 60 Hz only.
- \*\*\* Suitable for chilled water circuit only.



WB250 to WB1000



WB1500 to WB2000





WB3500 to WB9800

WB2500G to WB5500G

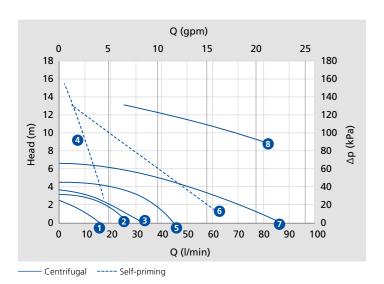
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Model WB200

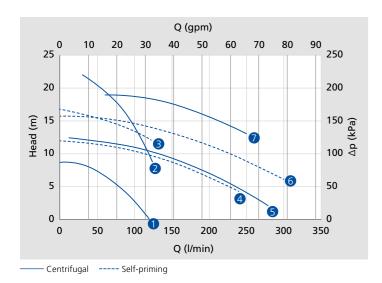
# **Pumps**

# **Pumps**

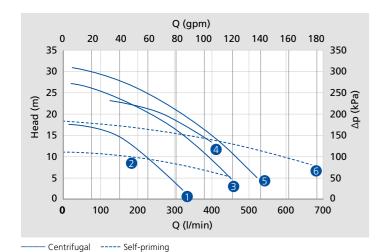
#### 50 Hz water pump curves



| Graphic 1 |   | 50 Hz up to 100 I/min |
|-----------|---|-----------------------|
|           | 1 | WB250                 |
|           | 2 | WB350                 |
|           | 3 | WB500                 |
|           | 4 | WB500G                |
|           | 5 | WB1000                |
|           | 6 | WB1000G               |
|           | 7 | WB1500                |
|           | 8 | WB2500G               |

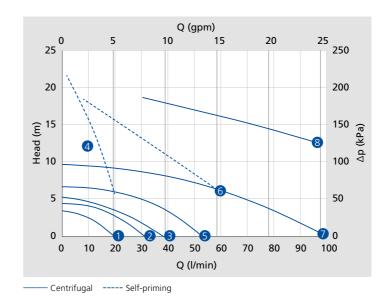


| Graphic 2 |   | 50 Hz up to 300 l/min |
|-----------|---|-----------------------|
|           | 1 | WB2000                |
| 2         | 2 | WB3000G               |
| :         | 3 | WB3800G               |
| 4         | 4 | WB4000                |
|           | 5 | WB3500                |
| •         | 6 | WB5600                |
|           | 7 | WB5500G               |

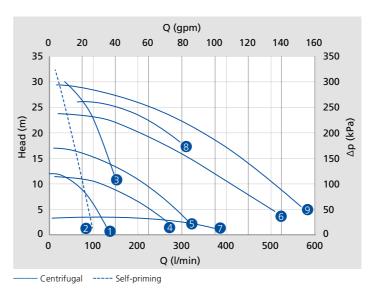


| 50 Hz up to 700 l/min |
|-----------------------|
| WB5500                |
| WB8000                |
| WB7400                |
| WB7500                |
| WB9800                |
| WB10500               |
|                       |

#### 60 Hz water pump curves



| Graphic 4 | 60 Hz up to 100 l/min |
|-----------|-----------------------|
| 1         | WB250                 |
| 2         | WB350                 |
| 3         | WB500                 |
| 4         | WB500G                |
| 5         | WB1000                |
| 6         | WB1000G               |
| 7         | WB1500                |
| 8         | WB2500G               |



| Graphic 5 |   | 60 Hz up to 700 l/min |
|-----------|---|-----------------------|
|           | 1 | WB2000                |
|           | 2 | WB2800G               |
|           | 3 | WB3000G               |
|           | 4 | WB3500                |
|           | 5 | WB5500                |
|           | 6 | WB7400                |
|           | 7 | WB7500                |
|           | 8 | WB5500G               |
|           | 9 | WB9800                |
|           |   |                       |

- The Head (m) stated in the pump curves (Graphic 1 5) represents the equivalent pressure drop between inlet and outlet of the pump. This pressure drop equals the total back pressure of the sea water system from sea water entry to overboard discharge. Please do not confuse it with the position of the pump position below the water line.
- Depending on pressure drop the effective water flow through the pump and thus the sea water system varies significantly.
- Always ensure that the minimum sea water flow through the A/C unit is respected. It should be measured during each commissioning of the sytem.
- Operating the pumps outside the limits of the pump curves may result in motor overload or cavitation.
   These cases are excluded from Webasto warranty.

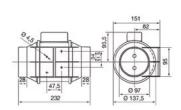
# Blowers modules and air flow regulators

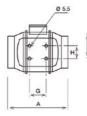
# Ultimate cabin control – ultra silent blower operation

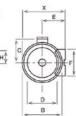
#### Inline blower modules

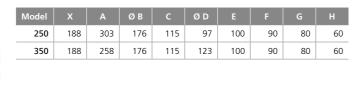
- Provide fresh air to or extract air from the cabins
- Special fan design provides a high air flow at low noise
- Low electrical power consumption
- Removable engine body allows easy maintenance
- Speed controllable motor, two speed, Class B, IP44











Model 160

Model 250 & 350

| Model            | Speed<br>level | Speed<br>(r.p.m.) | Electrical<br>power<br>consump-<br>tion | Air flow<br>at free<br>discharge | Maximum operating temperature | Sound<br>pressure<br>level*<br>(dB(A)) | Power supply | Ø Duct | Weight  | Order<br>number |
|------------------|----------------|-------------------|---|----------------------------------|-------------------------------|--|--------------|--------|---------|-----------------|
| Inline extractor | II             | 2,500             | 20 W                                    | 180 m³/h, 106 cfm                | 40                            | 24                                     | ~230 V       | 100 mm | 1.4 kg  | WBCL010152A     |
| blower 160       | I              | 2,200             | 12 W                                    | 140 m³/h, 82 cfm                 | 40                            | 21                                     | 50 Hz        | 4 inch | 3.1 lbs |                 |
| Inline extractor | II             | 2,200             | 24 W                                    | 240 m³/h, 141 cfm                | 40                            | 31                                     | ~230 V       | 100 mm | 2.0 kg  | WBCL010157A     |
| blower 250       | I              | 1,850             | 18 W                                    | 180 m³/h, 106 cfm                | 40                            | 26                                     | 50 Hz        | 4 inch | 4.4 lbs |                 |
| Inline extractor | II             | 2,250             | 30 W                                    | 360 m³/h, 212 cfm                | 40                            | 33                                     | ~230 V       | 125 mm | 2.0 kg  | WBCL010158A     |
| blower 350       | I              | 1,900             | 22 W                                    | 280 m³/h, 165 cfm                | 40                            | 28                                     | 50 Hz        | 5 inch | 4.4 lbs |                 |
| Inline extractor | II             | 2,500             | 50 W                                    | 580 m³/h, 341 cfm                | 60                            | 33                                     | ~230 V       | 150 mm | 2.7 kg  | WBCL010229A     |
| blower 500       | I              | 1,900             | 44 W                                    | 430 m³/h, 253 cfm                | 60                            | 29                                     | 50 Hz        | 6 inch | 5.9 lbs |                 |

<sup>\*</sup> Sound pressure level radiated at 3 meters at free air conditions with rigid ducts at the inlet and at the outlet.

## Air flow regulators

- Independent regulation of desired fresh-/extract air flow
- Eliminates the influence of alternating back pressure, caused by e.g. blocked air filters
- Continuous air flow ensures high comfort inside the cabin
- No electrical or pneumatic wiring
- Direct insertion into the air duct, which allows an easy application



| Model                  | Ø D of ducting  | Air flow limit     | Order number |
|------------------------|-----------------|--------------------|--------------|
| Air Flow Regulator 15  | 80 mm, 3.1 inch | 15 m³/h, 8.5 cfm   | WBCL005243   |
| Air Flow Regulator 30  | 80 mm, 3.1 inch | 30 m³/h, 17.5 cfm  | WBCL005244   |
| Air Flow Regulator 45  | 80 mm, 3.1 inch | 45 m³/h, 26.5 cfm  | WBCL005245   |
| Air Flow Regulator 60  | 80 mm, 3.1 inch | 60 m³/h, 35 cfm    | WBCL005246   |
| Air Flow Regulator 90  | 100 mm, 4 inch  | 90 m³/h, 53 cfm    | WBCL005247   |
| Air Flow Regulator 120 | 125 mm, 5 inch  | 120 m³/h, 70.5 cfm | WBCL005248   |
| Air Flow Regulator 160 | 125 mm, 5 inch  | 160 m³/h, 94 cfm   | WBCL005249   |

# Air system

# Functioning principles

## Minimum air grille sections

To obtain acceptable noise levels at maximal blower speed levels the requirements for grille and ducts sections should be observed. The size of the transition box behind the supply air-grille is also important.

| Capacity<br>BlueCool<br>A/C component | Duct size<br>S-Series<br>(mm) | Duct size<br>A-Series<br>(mm) | Supply air grill (cm²) | Recommended supply air grill (") | Return air grill<br>(cm²) | Recommended<br>return air grill<br>(") |
|---------------------------------------|-------------------------------|-------------------------------|------------------------|----------------------------------|---------------------------|--|
| 4,000 BTU/h                           | _                             | 100                           | 150                    | 8 x 4                            | 325                       | 12 x 5                                 |
| 6,000 BTU/h                           | -                             | 125                           | 190                    | 10 x 4                           | 490                       | 11 x 8                                 |
| 8,000 – 10,000 BTU/h                  | 100 – 125                     | 125                           | 235                    | 12 x 4                           | 490                       | 11 x 8                                 |
| 12,000 – 13,000 BTU/h                 | 125 – 150                     | 150                           | 250                    | 10 x 5                           | 550                       | 14 x 7                                 |
| 16,000 – 20,000 BTU/h                 | 125 – 150                     | 150                           | 390                    | 12 x 6                           | 800                       | 14 x 10                                |
| 24,000 BTU/h                          | -                             | 2 x 150                       | 2 x 250                | 2 x 10 x 5                       | 1,000                     | 14 x 12                                |
| 27,000 BTU/h                          | 2 x 150                       | -                             | 650                    | 2 x 12 x 6                       | 1,600                     | 2 x 14 x 10                            |
| 36,000 BTU/h                          | _                             | 2 x 150                       | 2 x 380                | 2 x 12 x 6                       | 1,600                     | 2 x 14 x 10                            |

#### **Blower outlets**

90° turns with flexible ducts directly from blower outlets should be avoided at all costs as they introduce severe restrictions in the air-flow. All WB blowers (except on 24,000 BTU/h models) can be rotated through 45° steps to obtain a straight-line outlet from the blower. This facility should be used whenever possible.

## Return grille offset

It should be avoided to place a return air grille directly opposite the finned coil surface of an air handler, because this will allow propagation of direct blowermotor noise through the grille. The grille should be offsetted to chicane the return air to the coil inlet. Direct noise propagation will be reduced in a significant manner.

## **Duct type**

To avoid accidental crushing, flexible air-ducts should be of high quality with sufficiently strong steel spiral reinforcement. Spiral type ducts should be extended to their maximum length for the best interior smoothness. For very long duct sections smooth bore ducts (in PVC for example) should be preferred. This offers better smoothness than flexible spiral type ducting and hence reduces internal friction. For very short lengths non-insulated ducts can be used. For greater lengths it is advisable to use insulated type ducts to avoid condensation on the outside of the air-ducts.

## Big luxury yacht

In general requirements for megayachts and big luxury vessels are even more stringent than the table here above. These special requirements can be obtained from Webasto on request.

# Air system

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| Air grille*   | Model                       | L1 (mm) | L2 (mm) | W1 (mm) | W2 (mm) | Order number |
|---|-----------------------------|---------|---------|---------|---------|--------------|
| L2  | 8 x 4 TS (supply air)       | 202     | 230     | 100     | 128     | WBCL004000XA |
| L1  | 10 x 4 TS                   | 252     | 281     | 100     | 128     | WBCL004001XA |
|   | 12 x 4 TS                   | 304     | 332     | 100     | 128     | WBCL004002XA |
| W2 W2   | 10 x 5 TS                   | 252     | 281     | 125     | 152     | WBCL004018XA |
| <u> </u>  | 12 x 5 TS                   | 304     | 332     | 125     | 152     | WBCL004004XA |
|   | 12 x 6 TS                   | 304     | 332     | 152     | 179     |              |
| Wedge type supply air grille*   | Model                       | L1 (mm) | L2 (mm) | W1 (mm) | W2 (mm) | Order number |
|   | 10 x 5 WGT (supply air)     | -       | 280     | -       | 150     | WBCL004023XA |
| Air grille, closeable*  | Model                       | L1 (mm) | L2 (mm) | W1 (mm) | W2 (mm) | Order number |
| L2  | 8 x 4 TSC (supply air)      | 202     | 230     | 100     | 128     | WBCL004005XA |
|   | 10 x 4 TSC                  | 252     | 281     | 100     | 128     | WBCL004019XA |
| -W2   | 12 x 4 TSC                  | 304     | 332     | 100     | 128     | WBCL004006XA |
| <u> </u>  | 10 x 5 TSC                  | 252     | 281     | 125     | 152     | WBCL004022XA |
|   | 12 x 5 TSC                  | 304     | 332     | 125     | 152     | WBCL004025XA |
| Air grille with filter*   | Model                       | L1 (mm) | L2 (mm) | W1 (mm) | W2 (mm) | Order number |
| L2  | 12 x 5 TR (return air)      | 304     | 332     | 125     | 152     | WBCL004020XA |
|   | 11 x 8 TR                   | 280     | 306     | 204     | 230     | WBCL004017XA |
|   | 14 x 7 TR                   | 177     | 205     | 355     | 381     | WBCL004007XA |
| - M2  | 12 x 10 TR                  | 304     | 332     | 254     | 281     | WBCL004021XA |
|   | 14 x 10 TR                  | 354     | 382     | 254     | 281     | WBCL004008XA |
|   | 14 x 12 TR                  | 354     | 382     | 304     | 332     | WBCL004009XA |
| Air grille (ABS)  | Model                       | L1 (mm) | L2 (mm) | W1 (mm) | W2 (mm) | Order number |
| L2  | 10 x 4 PS (ABS, supply air) | 242     | 280     | 92      | 128     | WBCL004030A  |
| T T   | 12 x 4 PS                   | 292     | 332     | 92      | 128     | WBCL004031A  |
| W1-   | 10 x 5 PS                   | 242     | 280     | 115     | 152     | WBCL004032A  |
| 1   | 10 x 6 PS                   | 242     | 280     | 138     | 174     | WBCL004033A  |
| Air grille (ABS) with filter  | Model                       | L1 (mm) | L2 (mm) | W1 (mm) | W2 (mm) | Order number |
| L2  | 10 x 8 PR (ABS, return air) | 242     | 281     | 190     | 232     | WBCL004076A  |
| T   | 10 x 10 PR                  | 242     | 281     | 242     | 281     | WBCL004077A  |
| 7   | 12 x 12 PR                  | 292     | 332     | 292     | 332     | WBCL004078A  |
| - W7  | 14 x 10 PR                  | 342     | 382     | 242     | 281     | WBCL004080A  |
|   | 14 x 12 PR                  | 342     | 382     | 292     | 332     | WBCL004081A  |
| Air grille ALU black supply   | Model                       | L1 (mm) | L2 (mm) | W1 (mm) | W2 (mm) | Order number |
|   | 8 x 4                       | 200     | 229     | 98      | 127     | 2510203A     |
| <u> </u>  | 10 x 4                      | 251     | 279     | 98      | 127     | 2510204A     |
|   | 10 x 5                      | 251     | 279     | 124     | 152     | 2510205A     |
| M.V.2 → M.V.2 | 12 x 4                      | 302     | 330     | 98      | 127     | 2510206A     |
| <u>·</u>  | 12 x 6                      | 302     | 330     | 149     | 178     | 2510207A     |
| Air grille ALU black return   | Model                       | L1 (mm) | L2 (mm) | W1 (mm) | W2 (mm) | Order number |
| L1 —  | 11 x 8                      | 276     | 305     | 200     | 229     | 2510208A     |
|   | 12 x 5                      | 302     | 330     | 124     | 152     | 2510209A     |
| <u></u>   | 12 x 4                      | 302     | 330     | 98      | 127     | 2510210A     |
|   | 12 x 6                      | 302     | 330     | 149     | 178     | 2510211A     |
| <u> </u>  | 12 x 10                     | 302     | 330     | 251     | 279     | 2510212A     |
| <u> </u>  | 14 x 7                      | 352     | 381     | 175     | 203     | 2510213A     |

<sup>\*</sup> Note: All teak grilles can be supplied in other wood qualities on demand. Please see table listing the special suffixes to the chosen grille item code in accordance with the wood type preference.

In order to customise the wooden air grilles, please choose from the following wood options: Example: WBCL0040040A = Teak air grille 12 x 5  $\frac{12 \times 10^{-100}}{12 \times 10^{-100}}$  WBCL0040042A = Mahogany air grille 12 x 5

| Suffix | Wood type | Decription         |
|--------|-----------|--------------------|
| 0      | Teak      | Asian Teak         |
| 1      | Cherry    | American Cherry    |
| 2      | Mahogany  | Honduran Mahogany  |
| 4      | Oak       | American white Oak |

Note: Teak versions on stock. Other wood options may have longer lead times or extra shipping costs.

# Air system

| T-piece (inside, D2 direct to A/C unit)         | Model         | D1/D2/D3 (mm) | L x H (mm) |        | Order number        |
|---|---------------|---------------|------------|--------|---------------------|
|   | 100/100 F/100 | 100/100 F/100 | 220 x 185  | -      | WBCL001549A         |
| DI DO N   | 100/125 F/100 | 125/100 F/100 | 220 x 185  | -      | WBCL001560A         |
| D2 (in  | 125/125 F/100 | 125/125 F/100 | 220 x 185  | -      | WBCL001550A         |
| ,   | 125/125 F/125 | 125/125 F/125 | 220 x 185  | -      | WBCL001555A         |
| T-piece (outside, D2 connected to hose)         | Model         | D1/D2/D3 (mm) | L x H (mm) |        | Order number        |
|   | 100/100 M/100 | 100/100 M/100 | 220 x 185  | _      | WBCL001551A         |
| DI DI H   | 100/125 M/100 | 100/125 M/100 | 220 x 185  | -      | WBCL001552A         |
| D2 (in  |               |               |            |        |                     |
| Y-piece (inside, D2 direct to A/C unit)         | Model         | D1/D2/D3 (mm) | L x H (mm) |        | Order number        |
| 01 2 4 01                                       | 100/125 F/100 | 100/125 F/100 | 269 x 213  | -      | WBCL001576A         |
|   | 100/125 F/125 | 100/125 F/125 | 269 x 213  | -      | WBCL001577A         |
| Y I   |               |               |            |        |                     |
| Y-piece (outside, D2 connected to hose)         | Model         | D1/D2/D3 (mm) | L x H (mm) |        | Order number        |
| L .   | 100/100 M/100 | 100/110 M/100 | 250 x 200  | -      | WBCL001578A         |
| ***   | 100/125 M/100 | 100/125 M/100 | 269 x 213  | -      | WBCL001574A         |
| Υ "   | 100/125 M/125 | 100/125 M/125 | 269 x 213  | -      | WBCL001575/         |
| 02  | 125/150 M/125 | 125/150 M/125 | 280 x 220  | -      | WBCL001580          |
|   | 150/150 M/150 | 150/150 M/150 | 280 x 220  |        | WBCL001581          |
| Hose adapter                                    | Model         | D1/D2/D3 (mm) | L x H (mm) |        | Order number        |
|   | 3" x 4"       | 106 x 70      | 106 x 70   | -      | WBCL001579 <i>£</i> |
| 90 degree elbow-piece, D2 connected to A/C unit | Model         | D1/D2 (mm)    | L x H (mm) |        | Order number        |
| <u> </u>  | 100 M/100 F   | 100 M/100 F   | 173 x 172  | -      | WBCL001572A         |
| 01 ×  | 125 M/125 F   | 125 M/125 F   | 194 x 198  | -      | WBCL001573          |
|   |               |               |            |        |                     |
| 90 degree elbow-piece, D2 connected to hose     | Model         | D1/D2 (mm)    | L x H (mm) |        | Order number        |
|   | 100 M/100 M   | 100 M/100 M   | 170 x 170  | -      | WBCL001570A         |
| Ot ×  | 125 M/125 M   | 125 M/125 M   | 195 x 195  | -      | WBCL001571A         |
| 02  |               |               |            |        |                     |
| Standard transition box                         | Model         |               | L x H (mm) | W (mm) | Order number        |
| 3000  | 8 x 4"        | -             | 252 x 130  | 150    | WBCL001501          |
| н   | 10 x 4"       | -             | 304 x 130  | 150    | WBCL001502A         |
|   | 12 x 4"       | _             | 352 x 130  | 150    | WBCL001503          |
| -   | 12 x 5"       | -             | 352 x 130  | 180    | WBCL001505A         |
|   | 10 x 5"       | -             | 304 x 130  | 180    | WBCL001506          |
|   | 12 x 6"       | -             | 352 x 130  | 200    | WBCL001507          |
|   | 10 x 6"       | _             | 304 x 130  | 200    | WBCL001508          |

F = Female M = Male

<sup>\*</sup> Equivalent diameter of air ducting in mm

# Air system

| Standard hose rings                             | Model                  | D (mm)                   |                        | W (mm)  | Order number               |
|---|------------------------|--------------------------|------------------------|---------|----------------------------|
|   | HR4 – 100              | 100                      | -                      | 134     | WBCL002502                 |
| D   | HR5 – 125              | 125                      | _                      | 150     | WBCL002503                 |
|   | HR6 – 150              | 150                      | _                      | 170     | WBCL002504A                |
|   | HR7 – 178              | 175                      | -                      | 200     | WBCL002509A                |
| Oval hose rings                                 | Model                  | D x W2 (mm)              | L x H (mm)             | W1 (mm) | Order number               |
|   | HO4 – 100*             | 120 x 55                 | 170                    | 100     | WBCL002505A                |
| w2  | HO5 – 125*             | 150 x 65                 | 195                    | 110     | WBCL002506A                |
| wı  | HO6 – 150*             | 180 x 72                 | 228                    | 120     | WBCL002507A                |
| - L   | HO7 – 175*             | 200 x 84                 | 255                    | 140     | WBCL002508A                |
| Transition box, round entry                     | Model                  | D (mm)                   | L x H (mm)             | W (mm)  | Order number               |
|   | 8 x 4LN/100*           | 100                      | 250 x 130              | 150     | WBCL001520A                |
| D) H  | 10 x 4LN/100*          | 100                      | 305 x 130              | 150     | WBCL001521A                |
| W   | 12 x 4LN/100*          | 100                      | 360 x 130              | 150     | WBCL001522A                |
| -   | 10 x 5LN/125*          | 125                      | 304 x 130              | 180     | WBCL001523A                |
| Transition box, lateral oval entry              | Model                  | D x W2 (mm)              | L x H (mm)             | W (mm)  | Order number               |
|   | 8 x 4LT/OV100*         | 120 x 55                 | 250 x 130              | 155     | WBCL001510A                |
| n D   | 10 x 4LT/OV100*        | 120 x 55                 | 305 x 130              | 155     | WBCL001530A                |
| W2  | 10 x 4LT/OV125*        | 150 x 65                 | 305 x 130              | 155     | WBCL001529A                |
| W   | 12 x 4LT/OV125*        | 150 x 65                 | 305 x 130              | 180     | WBCL001528A                |
|   |                        |                          |                        |         |                            |
| Transition box, back oval entry                 | Model                  | D x W2 (mm)              | L x H (mm)             | W (mm)  | Order number               |
|   | 8 x 4AR/OV100*         | 120 x 55                 | 250 x 180              | 155     | WBCL001524A                |
| D   | 10 x 4AR/OV100*        | 120 x 55                 | 305 x 180              | 155     | WBCL001525A                |
| ( ) W2  | 10 x 4AR/OV125*        | 150 x 65                 | 305 x 180              | 155     | WBCL001531A                |
|   | 10 x 5AR/OV125*        | 150 x 65                 | 305 x 180              | 180     | WBCL001526A                |
|   | 10 x 6AR/OV125*        | 150 x 65                 | 305 x 180              | 205     | WBCL001533A                |
| V   |                        | D (D4 (D2 ( )            | 1 116                  |         |                            |
| Y-piece   | Model                  | D/D1/D2 (mm)             | L x H (mm)             |         | Order number               |
| <b>←→</b> D1                                    | YAS100                 | 100/100/100              | 320 x 255              | -       | WBCL001562A                |
| A p2  | YAS125<br>YAS100/80/80 | 125/125/125<br>100/80/80 | 360 x 300<br>380 x 300 | -       | WBCL001563A<br>WBCL001548A |
| <u>¥</u> 52                                     | 123100700700           | 100/00/00                | 300 x 300              |         | WDCLOOTS40A                |
| No.   |                        |                          |                        |         |                            |
| <b>←→</b> D                                     |                        |                          |                        |         |                            |
| Webasto EasyDuct – Insulated flexible air ducts | Model (mm)             | D (mm)                   | L (m)                  |         | Order number               |
|   | 80                     | IN = 80; A = 90          | L = 6                  | -       | 2510605A                   |
|   | 102                    | IN = 102; A = 112        | L = 6                  | -       | 2510606A                   |
|   | 127                    | IN = 127; A = 137        | L = 6                  | -       | 2510607A                   |
|   | 152                    | IN = 152; A = 162        | L = 6                  | -       | 2510608A                   |
|   |                        |                          |                        |         |                            |
|   |                        |                          |                        |         |                            |
|   |                        |                          |                        |         |                            |
| Standard flexible air ducts                     | Model (mm)             | D (mm)                   | L (m)                  |         | Order number               |
|   | Cflex 102              | 102                      | 10                     | -       | WBCL001804B                |
|   | Cflex 127              | 127                      | 10                     | -       | WBCL001805B                |
|   | Cflex 150              | 152                      | 10                     | -       | WBCL001806B                |
|   |                        |                          |                        |         |                            |
|   |                        |                          |                        |         |                            |

# Air system

| Insulated flexible air ducts                                     | Model         | D (mm) | L (m) |   | Order number |
|--|---------------|--------|-------|---|--------------|
|  | CflexIso 102  | 102    | 10    | - | WBCL001807B  |
| Well from  | Cflexiso 127  | 127    | 10    | - | WBCL001808B  |
| D  | CflexIso 152  | 152    | 10    | - | WBCL001809B  |
| Tubular hose insulation  | Model         | D (mm) | L (m) |   | Order number |
|  | Isosleeve 102 | 102    | 10    | - | WBCL001810   |
|  | Isosleeve 127 | 127    | 10    | - | WBCL001811   |
| D  | Isosleeve 152 | 152    | 10    | - | WBCL001812   |
| Extra silent insulated air ducts                                 |               | D (mm) | L (m) |   | Order number |
|  | -             | 102    | 10    | - | WBCL010155A  |
| high-temperature resistance up to 80° C                          | -             | 127    | 10    | - | WBCL010156A  |
| special noise reducing inner layer internal spiral reinforcement | -             | 160    | 10    | - | WBCL010206B  |

| Oval ducts | Description             | Model (mm)   | L (m) | Order number |
|------------|-------------------------|--------------|-------|--------------|
|            | Oval duct (1)           | 100 x 40     | 3     | WBCL007100   |
|            | Oval duct (1)           | 200 x 60     | 3     | WBCL007106   |
| (1)        | Elbow 90° (2)           | 100 x 40     | _     | WBCL007105   |
|            | Elbow 90° (2)           | 200 x 60     | -     | WBCL007108   |
|            | Elbow 90° – flat (3)    | 100 x 40     | _     | WBCL007104   |
| (2)        | Elbow 90° – flat (3)    | 200 x 60     | -     | WBCL007111   |
| (5)        | Junction oval/round (4) | 100 x 40/100 | -     | WBCL007102A  |
| (3)        | Junction oval/round (4) | 100 x 40/80  | -     | WBCL007117   |
|            | Junction oval/round (4) | 200 x 60/125 | -     | WBCL007109   |
|            | Junction oval/round (5) | 100 x 40/100 | -     | WBCL007103A  |
| (7)        | Junction oval/round (5) | 200 x 60/125 | -     | WBCL007110   |
|            | Junction oval (6)       | 100 x 40     | -     | WBCL007101   |
| (10)       | Junction oval (6)       | 200 x 60     | -     | WBCL007107   |
| (9)        | Reduction (7)           | 200 to 100   | -     | WBCL007112   |
|            | Oval t (8)              | 200 x 60     | -     | WBCL007114   |
|            | Adapter oval/round (9)  | 200 x 60/125 | -     | WBCL007115   |
|            | Oval/round t (10)       | 200 x 60/125 | -     | WBCL007116   |

<sup>\*</sup> Equivalent diameter of air ducting in mm.

# **Webasto Easy Pipe**

# The solution to reduce installation time and save costs

## **Benefits**

- Easy assembly process, reliable application
- Pipes have pre-mounted insulation providing significant saving on installation time for boat builders
- Huge range of compatible quick-fitting components

# **Specifications**

- Pipe material is high-quality polybutylene with a temperature range of -30 °C up to 90 °C at 6 bar
- Pipe insulation is high-quality closed cell polyethylen (PE-LD) with a temperature range of -30 °C to 95 °C and a lambda value of 0.0334 W/(m · K)
- O-ring sealed push fittings with stainless steel lockring
- Sold in rolls to be cut to length

| Webasto Easy Pipe  | Chilled water pipes (mm)  | Model (mm)   | Packaging (m)      | Order number |
|--|---|--------------|--------------------|--------------|
|  | d22/D48   | 22           | 25                 | 6241037A     |
| tear-resistant outer liner high-quality flexible poly-butylene pipe heavy-duty 13 mm dosed cell insulation   | d28/D54   | 28           | 25                 | 6241038A     |
| Water System   | Description   | Model (mm)   | Packaging (m)      | Order number |
|  | Hep <sub>2</sub> O PB Barrier Pipe  | 15           | L = 50             | WBCL010300B  |
|  | Hep <sub>2</sub> O PB Barrier Pipe  | 22           | L = 50             | WBCL010301B  |
| The state of the s | Hep <sub>2</sub> O PB Barrier Pipe  | 28           | L = 25             | WBCL010302B  |
|  | Description   | Model (mm)   | Packaging (pieces) | Order number |
|  | Hep <sub>2</sub> O Straight Connector 15  | 15           | 10                 | WBCL010307B  |
|  | Hep <sub>2</sub> O Straight Connector 22  | 22           | 10                 | WBCL010308B  |
| ()   | Hep <sub>2</sub> O Straight Connector 28  | 28           | 10                 | WBCL010309B  |
|  | Hep₃O PB Elbow 90° 15   | 15           | 10                 | WBCL010325B  |
| A  | Hep,O PB Elbow 90° 22   | 22           | 10                 | WBCL010326B  |
|  | Hep <sub>2</sub> O PB Elbow 90° GY 28   | 28           | 10                 | WBCL010327B  |
|  | Hep,O PB Tee 90° 15   | 15 x 15 x 15 | 10                 | WBCL010337B  |
|  | Hep <sub>2</sub> O PB Tee 90° 22  | 22 x 22 x 22 | 10                 | WBCL010338B  |
|  | Hep <sub>2</sub> O PB Tee 90° GY 28   | 28 x 28 x 28 | 10                 | WBCL010342B  |
|  | Hep <sub>2</sub> O PB Tee 90° 22 x 22 x 15  | 22 x 22 x 15 | 5                  | WBCL010339B  |
|  | Hep <sub>2</sub> O PB Tee 90° 22 x 15 x 22  | 22 x 15 x 22 | 5                  | WBCL010340B  |
|  | Hep <sub>2</sub> O PB Tee 90° 22 x 15 x 15  | 22 x 15 x 15 | 5                  | WBCL010341B  |
| (1)  | Hep <sub>2</sub> O PB Tee 90° 28 x 15   | 28 x 15 x 28 | 5                  | WBCL010343B  |
|  | Hep <sub>2</sub> O PB Tee 90° 28 x 28 x 22  | 28 x 28 x 22 | 5                  | WBCL010344B  |
|  | Hep <sub>2</sub> O PB Tee 90° 28 x 22 x 28  | 28 x 22 x 28 | 5                  | WBCL010345B  |
|  | Hep <sub>2</sub> O Pb Tee Reduced Both Ends   | W 22 x 15    | -                  | WBCL010700A  |
|  | Hep <sub>2</sub> O Pb Tee Reduced Both Ends   | W 28 x 15    | -                  | WBCL010701A  |
|  | Hep <sub>2</sub> O Hepkey Plus 15   | _            | -                  | WBCL010702A  |
|  | Hep <sub>2</sub> O Hepkey Plus 22   | -            | -                  | WBCL010703A  |
|  | Hep <sub>2</sub> O Hepkey Plus 28   | -            | -                  | WBCL010704A  |
| Property of the state of the st | Hep <sub>2</sub> O Silicone Lubricant Spray 400 ml<br>Aerosol Can Hep <sub>2</sub> O Fittings | -            | -                  | WBCL010705A  |

# Water system

# Functioning principals

|   | Description  | Model/www  | Dockowin w fair and | Ouden marken |
|---|--|------------|---------------------|--------------|
|   | Description  | Model (mm) | Packaging (pieces)  | Order number |
|   | Hep <sub>2</sub> O reducer 22 x 15 S/SP              |            | 10                  | WBCL010379B  |
|   | Hep <sub>2</sub> O reducer 28 x 22 S/SP              | 28 x 22    | 10                  | WBCL010380B  |
|   | Hep <sub>2</sub> O Straight Tap Connector 15 x 1/2"  | 15 x 1/2"  | 10                  | WBCL010316B  |
|   | Hep <sub>2</sub> O Straight Tap Connector 15 x 3/4"  | 15 x 3/4"  | 5                   | WBCL010317B  |
|   | Hep <sub>2</sub> O Straight Tap Connector 22 x 3/4"  | 22 x 3/4"  | 5                   | WBCL010318B  |
|   | Hep <sub>2</sub> O Bent Tap Connector 15 x 1/2"      | 15 x 1/2"  | 10                  | WBCL010328B  |
|   | Hep <sub>2</sub> O Brass Female Adapt 15 x 1/2"      | 15 x 1/2"  | 10                  | WBCL010310B  |
|   | Hep <sub>2</sub> O Brass Female Adapt 22 x 3/4"      | 22 x 3/4"  | 10                  | WBCL010312B  |
|   | Hep <sub>2</sub> O Brass Female Adapt 28 x 1"        | 28 x 1"    | 10                  | WBCL010314B  |
|   | Hep <sub>2</sub> O Brass Male Adapt 15 x 1/2"        | 15 x 1/2"  | 10                  | WBCL010311B  |
|   | Hep <sub>2</sub> O Brass Male Adapt 22 x 3/4"        | 22 x 3/4"  | 10                  | WBCL010313B  |
|   | Hep <sub>2</sub> O Brass Male Adapt 28 x 1"          | 28 x 1"    | 10                  | WBCL010315B  |
|   | Hep <sub>2</sub> O Brass Spgt Adapt 15 x 1/2" Female | 15 x 1/2"  | 10                  | WBCL010319B  |
|   | Hep <sub>2</sub> O Brass Spgt Adapt 22 x 3/4" Female | 22 x 3/4"  | 10                  | WBCL010321B  |
| A | Hep <sub>2</sub> O Brass Spgt Adapt 28 x 1" Female   | 28 x 1"    | 10                  | WBCL010323B  |
|   | Hep,O Brass Spgt Adapt 15 x 1/2" Male                | 15 x 1/2"  | 10                  | WBCL010320B  |
|   | Hep <sub>2</sub> O Brass Spgt Adapt 22 x 3/4" Male   | 22 x 3/4"  | 10                  | WBCL010322B  |
|   | Hep <sub>2</sub> O Brass Spgt Adapt 28 x 1" Male     | 28 x 1"    | 10                  | WBCL010324B  |
|   | Hep <sub>2</sub> O Brass Ball Valve 15               | 15         | 5                   | WBCL010353B  |
|   | Hep <sub>2</sub> O Brass Ball Valve 22               | 22         | 5                   | WBCL010354B  |
|   |  |            |                     |              |
|   | Hep <sub>2</sub> O Shut off valve Hot/Cold 15        | 15         | 5                   | WBCL010375B  |

# Water system

|       | Description   | Model (mm) | Packaging (pieces) | Order number |
|-------|---|------------|--------------------|--------------|
|       | Hep <sub>2</sub> O Cold Forming Bend Fixture 15     | 15         | 5                  | WBCL010335B  |
|       | Hep <sub>2</sub> O Cold Forming Bend Fixture 22     | 22         | 5                  | WBCL010336B  |
|       |   |            |                    |              |
|       | Hep <sub>2</sub> O Pipe Support Sleeve 15           | 15         | 10                 | WBCL010362B  |
|       | Hep <sub>2</sub> O Pipe Support Sleeve 22           | 22         | 10                 | WBCL010364B  |
| 0     | Hep <sub>2</sub> O Pipe Support Sleeve 28           | 28         | 5                  | WBCL010366B  |
| 2 2 2 | Hep <sub>2</sub> O Pipe cutter 10 – 28 Standard     | -          | 1                  | WBCL010373B  |
|       | Hep <sub>2</sub> O Pipe cutter 10 – 28 Professional | -          | 1                  | WBCL010374B  |

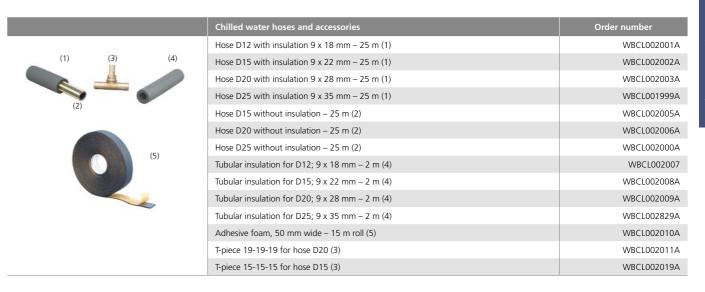
# Important note:

ALL Hep<sub>2</sub>O FITTINGS ARE PRE-LUBRICATED – NO ADDITIONAL LUBRICATION REQUIRED.

If the fitting is demounted and remade, the use of Hep<sub>2</sub>O Silicone Lubricant Spray (HX200) is recommended. HX200 is the only lubricant recommended for use with Hep<sub>2</sub>O.

# Water system

|         | Expansion tank   | Order number   |
|---------|--|--|
| (1) (2) | Model 8 liter (1)  | WBCL002031C  |
| (1)     | Automatic air bleeder (2) for chiller circuits, 3/8" = 15 mm   | WBCL002035A  |
|         |  |  |
|         | TA Hydronics flow regulators   | Order number   |
|         | Model STAD-15 – diameter 15 mm (5/8")  | WBCL002100B  |
|         | Model STAD-20 – diameter 20 mm (3/4")  | WBCL002101B  |
| *       | Model STAD-25 – diameter 25 mm (1")  | WBCL002102B  |
|         |  |  |
|         |  |  |
|         | 3-way valve  | Order number   |
|         | 3-way valve 3-way motorized valve DN20-G3/4"   | Order number<br>2510335A   |
|         |  |  |
|         | 3-way motorized valve DN20-G3/4"   | 2510335A   |
|         | 3-way motorized valve DN20-G3/4"  3-way motorized valve DN25-G1"   | 2510335A<br>2510336A   |
|         | 3-way motorized valve DN20-G3/4"  3-way motorized valve DN25-G1"   | 2510335A<br>2510336A   |
|         | 3-way motorized valve DN20-G3/4" 3-way motorized valve DN25-G1" 3-way motorized valve DN32-G11/4"  | 2510335A<br>2510336A<br>2510338A   |
|         | 3-way motorized valve DN20-G3/4" 3-way motorized valve DN32-G11" 3-way motorized valve DN32-G11/4"  Turn ball valve  | 2510335A<br>2510336A<br>2510338A<br>Order number                               |
|         | 3-way motorized valve DN20-G3/4" 3-way motorized valve DN25-G1" 3-way motorized valve DN32-G11/4"  Turn ball valve 1/4 Turn ball valve – diameter 12 mm  | 2510335A<br>2510336A<br>2510338A<br>Order number<br>WBCL002015A                |
|         | 3-way motorized valve DN20-G3/4" 3-way motorized valve DN25-G1" 3-way motorized valve DN32-G11/4"  Turn ball valve  1/4 Turn ball valve – diameter 12 mm  1/4 Turn ball valve – diameter 15 mm | 2510335A<br>2510336A<br>2510338A<br>Order number<br>WBCL002015A<br>WBCL002016A |



| Pipe insulation closed, foam | d (mm) | D (mm) | Length (m) | pc./box | for ABS: | Min. Order | Order number |
|------------------------------|--------|--------|------------|---------|----------|------------|--------------|
|                              | 28     | 54     | 2          | 78      | DN25     | 10         | WBCL002830   |
|                              | 35     | 60     | 2          | 58      | DN32     | 10         | WBCL002831   |
| thickness: 13 mm             |        |        |            |         |          |            |              |

# Water system



# Water system

| Air bleeder t-piece for chilled water system   | Order number |
|--|--------------|
| Model 1000S (for pump WB1000):<br>t-piece 3/4", diameter shut-off valve outlet<br>1/2" – 16 mm       | WBCL001121A  |
| Model 2000S (for pumps WB1500 – 2500):<br>t-piece 1", diameter shut-off valve outlet<br>3/4" – 20 mm | WBCL001122A  |
| Air bleeder for seawater pumps   | Order number |
| Model 350R (for pumps WB250 and WB350):<br>t-piece 3/4", diameter supply and outlet<br>1/2" – 16 mm  | WBCL001118A  |
| Model 1000R (for pump WB1000):<br>t-piece 3/4", diameter supply and outlet<br>3/4" – 20 mm           | WBCL001119A  |
| Model 2000R (for pumps WB1500 – 2500):<br>t-piece 1", diameter supply and outlet<br>3/4" – 20 mm     | WBCL001120A  |

# **Accessories**



- Reduction of electrical starting peak up to 70 %
- For all BlueCool single-phase compressors
- Fully 50/60 Hz compatible for worldwide application
- Self-adjusting software adapts to compressor type and frequency input
- Monitors supply voltage and protects against low voltage and locked rotor
- Easy to install and to retrofit in BlueCool electrical boxes

## **BlueCool Soft Start**

| Description  | Order number |
|--|--------------|
| BlueCool Soft Start 5,000 – 13,000 BTU/h, 230 V, single-phase, 50 – 60 Hz  | WBCL050931B  |
| BlueCool Soft Start 16,000 – 20,000 BTU/h, 230 V, single-phase, 50 – 60 Hz | WBCL050932B  |
| BlueCool Soft Start 24,000 – 42,000 BTU/h, 230 V, single-phase, 50 – 60 Hz | WBCL050933B  |



- Reduction of starting peak up to 53 %
- Fully 50/60 Hz compatible for worldwide application
- Two soft start models cover 3-phase scroll compressors from 21 143 kBTU/h
- Self-adjusting software, soft start automatically adapts to compressor
- Monitors supply voltage and protects against overvoltage, overcurrent and locked rotor
- Rated operational voltage: 340 440 VACrms, 50/60 Hz

Soft Start 3-phase, 400 V

| Description   | Order number |
|---|--------------|
| Soft Start 21 – 96 kBTU, 400 V, 3-phase, 50 – 60 Hz   | WBCL050945A  |
| Soft Start 112 – 143 kBTU, 400 V, 3-phase, 50 – 60 Hz | WBCL050946A  |



- Reduction of 50 % of vibrations transmitted to the hull
- High performance damping elements specially designed for the vibration frequency and the weight of each unit
- All absorbers can easily be retrofitted and mounted below the condensate tray. One complete kit with all necessary parts is supplied
- The height of the unit will be increased by only 14 mm

| RlueCool | vibration | absorber | kits  |
|----------|-----------|----------|-------|
| DIUCCOOL | vibiation | absolbei | VI C2 |

| Description                                    | Order number |
|--|--------------|
| Vibration absorber kit S-Series; S6, S8, S10   | WBCL120075A  |
| Vibration absorber kit S-Series; S13 – S27     | WBCL120076A  |
| Vibration absorber kit C-Series; C16 M – C27 M | WBCL120078A  |



- Solution for C-Series with Twin, Triple and Quattro compressors as well as for the V50 M
- One complete kit with all necessary parts is supplied

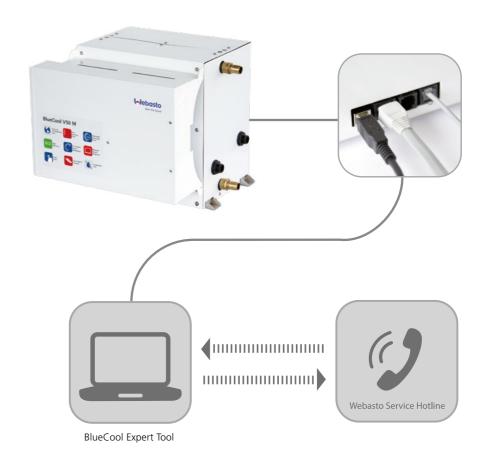
## **BlueCool Silent block kits**

| Description   | Order number |
|---|--------------|
| Silent blocks for C32 T, C40 T, C55 T, V50 M, V64 T and V77 T | WBCL1207041A |
| Silent blocks for C81 R and C108 Q                            | WBCL1207042A |
| Silent block kit V-PRO single unit                            | 2510786B     |

# **BlueCool Expert Tool**

# Service software for A/C systems

- Free Webasto service software suitable for all BlueCool air-conditioning units and systems. Your best companion for easy parameterizing and servicing of the A/C system.
- Plug-and-play USB connection to the A/C unit
- Standard USB connection
- Remote troubleshooting
- Remote access via internet
- Easy parameter setting
  - All parameters at one sight
- Back-up and upload of application-specific presets
- Save individual presets or load standard presets
- Real-time system monitoring
- Check all data of system while operating
- Access to data logs
- All relevant data are stored for easy review
- Activation/test of A/C system components
  - Check function of all components and connected accessories

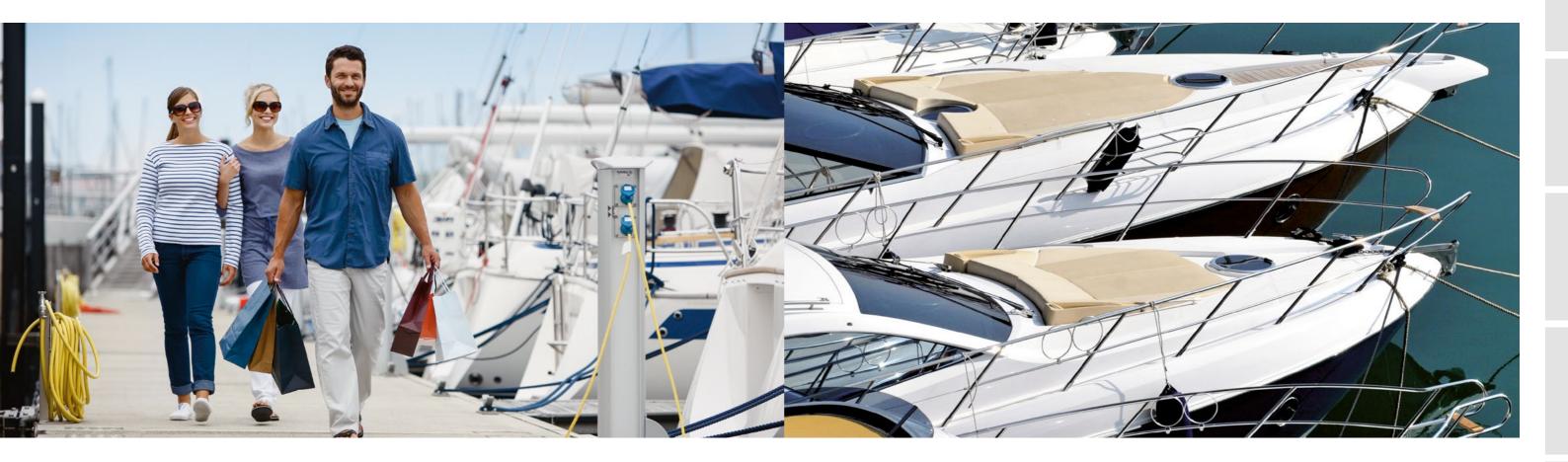




# Integrated solutions

| Integrated solutions   |     |  |  |
|------------------------|-----|--|--|
| BlueComfort Premium    | 160 |  |  |
| Application concept    | 162 |  |  |
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# **Integrated solutions**

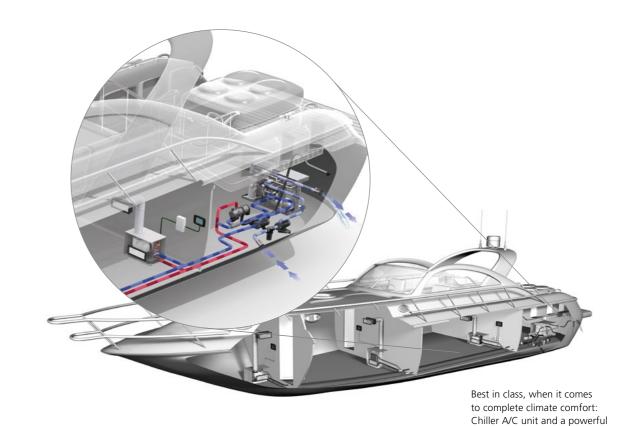


Webasto BlueComfort solutions combine an air-conditioning unit and a water heating unit into one integrated system. This allows yacht owners and sailors to expand the boating season as people can chose between heating and cooling at the push of a button.

Most air-conditioning systems have a reverse cycle function to enable heating with the A/C system. However, this requires mild sea water temperatures for efficient heating. Below 6 °C sea water temperature the heat cycle becomes inefficient. Along with this the expense and inconvenience of having to run generators and consuming battery power to supply heat over night can be removed. To gain total autonomy from environmental conditions, an integrated water heater is the perfect solution.

## **BlueComfort Premium**

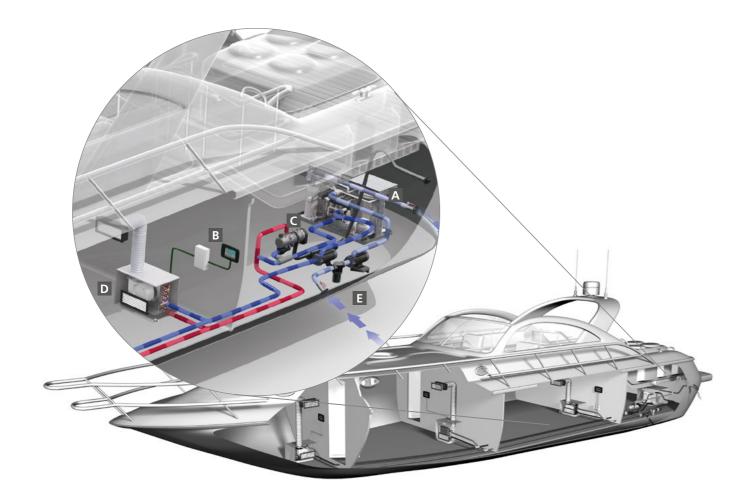
- Integration of a chiller A/C unit and a diesel-operated water heater into one system
- Comfort like at home in any weather condition
- Modular concept allowing multiple configurations
- Full range of solutions for any size of boat



water heater.

# **BlueComfort Premium**

# Application concept



- A Chiller A/C unit
- B Cabin control
- **C** Heater
- D Air handler
- **E** Sea water pump

# **BlueComfort Premium**

# Application guidelines

For a complete BlueComfort Premium system, please combine the following:

#### 1. Chiller air-conditioner Please select the core unit according to the required cooling capacity, the available voltage and whether cool only or heating via reverse cycle is needed. ■ Air-conditioning unit See page 101-109 Position A as well as the following components are included in the scope of delivery: ■ Electric cable and control box ■ Operating manual ■ Installation manual Control elements for core unit Please select the control elements for the core unit separately: ■ MyTouch Display See page 138 ■ Display cable ■ Remote air temperature sensor Sea water circuit Please order separately the components for the sea water circuit consisting of: ■ Sea water inlet See page 154 ■ Sea water strainer See page 154 ■ Sea water pump See page 140 ■ Closing valve ■ Overboard discharge ■ Water hose See page 153 **Chilled water circuit** Please add the required components for the chilled water circuit consisting of: See page 150 ■ Circulation pump See page 140 ■ Piping or hosing system ■ 3-way valve (optional) See page 153 with insulation ■ Turn ball valve See page 153 See page 153 ■ Expansion tank Cabin accessories necessary for each single cabin Please add for every single cabin the following components and accessories: ■ Cabin control (Air control, ■ Air handler See page 120 See page 138 See page 146 ■ Supply air grille display cable, temperature See page 147 ■ Air ducting sensor and control box) ■ Transition box See page 147 ■ Return air grille See page 146 ■ Water hoses for condensation drain See page 153

## 2. Water heater

Select the right heater according to the table below or more accurately as a result of the calculation in the specification tool.

| 1 | Chiller air-conditioning cooling capacity |                   |        |       |        |        |        |        |           |        |          |            |        |  |  |        |
|---|---|-------------------|--------|-------|--------|--------|--------|--------|-----------|--------|----------|------------|--------|--|--|--------|
| 1 | BTU/h                                     |                   | 12,000 |       | 24,000 | 32,000 |        | 32,000 |           | 40,000 | 48,000   |            | 48,000 |  |  | 60,000 |
|   | kW  |                   | 3.5    |       |        | 9.3    |        |        | 14.0      |        |          | 17.6       |        |  |  |        |
|   |   | Thermo Pro 50 Eco |        | O Eco |        |        |        | Thern  | no Top Pr | o 120  |          | <b>-</b>   |        |  |  |        |
|   |   |                   |        |       |        | Thermo | Pro 90 |        |           |        | Thermo T | op Pro 150 |        |  |  |        |
|   |   |                   |        |       |        |        |        |        |           |        |          |            |        |  |  |        |

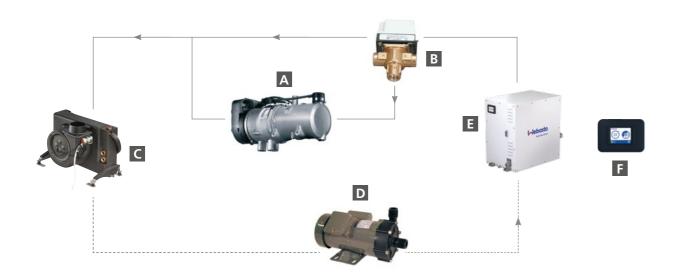
# **BlueComfort Premium**

# Basic integration

In a BlueComfort Premium system an A/C unit and a diesel-operated water heater are integrated into one system. The use of a water heater ensures full heating performance even at cooler sea water temperatures where the reverse cycle operation comes to its limits. In this integrated system the same water piping, air handlers, air ducting and cabin temperature control modules are used for both heating and A/C operation. For user friendliness, the main system is controlled via one control panel while each cabin has an individual temperature and blower speed control. The BlueComfort Premium system offers two integration options: the "Basic" and the "DeLuxe" integration depending on comfort requirements.

# **Basic integration**

The Basic integration is simply **integrating a water heater with a 3-way valve into the chilled water system.**The valve ensures that no cold water is running through the heater which would cause condensation. Both, the heater and the 3-way motor valve are controlled by the A/C electronic control. A special heater with a lower temperature setting or additional thermostats are needed in order to limit the water temperature to 60 °C.

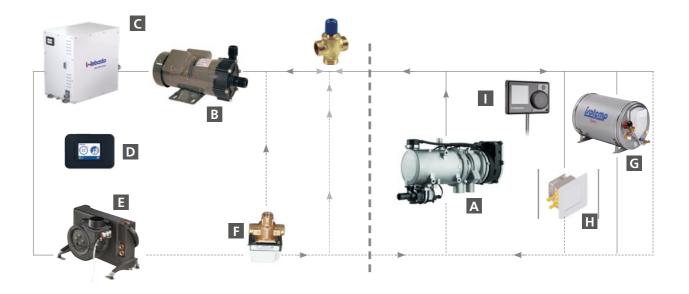


| Α | Water heater     | Produces hot (60 °C) water when system switches to heating |
|---|------------------|--|
| В | 3-way valve      | Switches between cooling or heating loop                   |
| C | Air handler      | Warms up or cools down returning air                       |
| D | Water pump       | Circulates the water                                       |
| Ε | A/C chiller unit | Cools down the water when system switches to cooling       |
| F | Chiller control  | Controls the complete A/C system and the water heater      |
|   |                  | Starts the compressor when cooling is necessary            |
|   |                  | Starts the heater when heating is necessary                |

# **BlueComfort Premium**

# DeLuxe integration

The DeLuxe integration has all the features of the Basic integration but additionally allows the integration of a water boiler as well as further fan blowers or radiators into the system. It therefore provides the highest comfort in heating and sanitary water supply. The mixing valve limits the water temperature in the A/C loop to 60 °C. A summer/winter switch allows heating of the boiler in summer while the A/C system is cooling the cabins at the same time.



| Α | Water heater             | Produces hot (approx. 80 °C) water when system switches to heating  |
|---|--------------------------|---|
| В | Water pump               | Circulates the water  |
| C | A/C chiller unit         | Cools down the water when system switches to cooling  |
| D | Chiller control          | Controls the complete A/C system and the water heater<br>Starts the compressor when cooling is necessary<br>Starts the heater when heating is necessary |
| Ε | Air handler              | Warms up or cools down returning air  |
| F | 3-way valve              | Switches between cooling or heating loop  |
| G | Water boiler             | Heats up the sanitary water   |
| Н | Blowers or radiators     | can optionally be used in areas with extra high heating demand (e. g. windscreen for demisting)   |
| 1 | Summer/<br>Winter switch | Allows separate boiler operation in summer mode   |

For a perfect integration Webasto recommends Isotemp double coil boilers. For more Information visit: indelwebastomarine.com



# **Roof & shading solutions**

| Webasto marine roofs           | 166 |
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# Webasto marine roofs



Webasto offers a wide range of roof solutions, whether you are looking for a standard roof size with easy installation or a more customizable platform for your individual needs. As our customer you will additionally benefit from our technological leadership and knowledge brought over from our experience in the automotive sunroof industry.

# Standard and customizable roof solutions

# Comfortable ready-to-go-platforms

These are very economical solutions for more light and fresh air on board with a robust and proven construction. Our pre-mounted solution includes all necessary hardware allowing super quick and easy installation.

## The BlueSky range

Besides the electrical operated BlueSky, Webasto is also offering a manual version as well. The manual version is available in 2 sizes and offers the same quality and design features as the electrical operated version.

The electrical operated version is also available with a tempered glass panel and can be perfectly integrated in the design of the boat.

# A roof solution for every boat

# Roof references

## The BlueSky



Innovative light weight sliding roof

The BlueSky sunroofs are designed for smaller boats and are now available in a number of variants. A choice can be made in terms of operation, dimension and panel type. The robust manual mechanism features a ventilation position and can be locked in any slide position.

- 2 sizes
- Electrical or manual operation
- Modern acrylic panel or flush glass panel
- High end interior finish
- Watertight sealing
- Robust and proven construction

## The 20-Series



Economical and robust roof for more light on board

A very economical manual or electrical sliding roof for more light and fresh air on board. The roof is fully tested and pre-assembled including all necessary hardware allowing quick and easy installation.

- Standard roof with large opening
- Watertight sealing
- Robust and proven construction
- Manual or electrical operation
- Stepless locking system

# A roof solution for every boat

# Roof references

## The 40-Series



Standard electric marine sliding sunroof

This roof platform offers a sleek, low profile design to be able to fit in smaller boats. The roof is electrical operated, extremely quiet, and is delivered fully assembled, tested and ready to be installed.

- Attractive design with safety glass
- Watertight sealing
- Fast and simple installation
- Robust and quality-tested design
- Optional fixed glass panel for panoramic views

## The 50-Series



Exclusivity made affordable

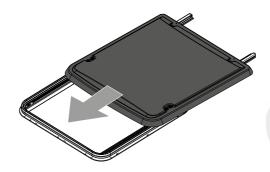
This standard roof is designed to be used in most of all Leisure boats up to 24 meters. From Cabin Cruisers to Sport Fishing to Fast Adventure boats. The perfect inside finish maximizes the look through opening while the standard Dark Grey glass reduces the Solar heat transfer by 89 %.

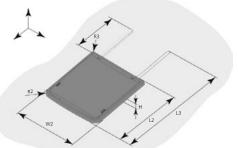
- Standard with Dark Grey Glass and Motor cover
- Extremely robust for use in faster boats
- Attractive dimensions and shape
- Triple Black Product finish
- Optional fixed glass panel for panoramic view



# BlueSky – unique sliding hatch

The BlueSky sunroofs are designed for smaller boats and are now available in several variants. A choice can be made in terms of operation, dimension and panel type.





## **Electric operation**

Thanks to the electrical operation the hatch is easy to use and the panel can be locked in any desired position. The tilting an sliding mechanism in combination with the seal ensures full water tightness.

## Manual operation

Besides of the electrical operated BlueSky also a manual version is available. The manual version offers the same quality and design features as the electrical operated version. This version is a good alternative in those cases where a more economical solution is desired.

## Acrylic panel

The acrylic panel is made from two acrylic shells with a screen print resulting in a modern design, light weight and improved insulation. This construction is unique in the marine industry.

## Glass panel

Besides of the acrylic panel the electrical operated BlueSky can also be offered with a 6 mm grey tinted glass panel. This variant is the top end of the range and offers a flush integration in the boat design.

## **Cut-out size**

Besides of the cut-out dimension 770 x 720 the BlueSky roof is now also available in a smaller size, 500 x 500. This variant is available in combination with manual operation and acrylic panel only. The styling of the product is similar to the 770 x 720 variant.

## Black finish

Following the market trend, the BlueSky roofs are available in all black finish. This creates a more modern look and is in line with the black window pillars and frames.

# **Technical specifications**

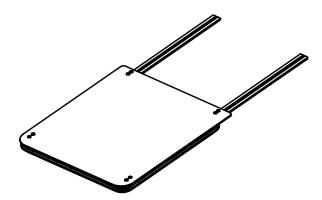
| BlueSky range                     |                          |                              |                              |                              |  |
|-----------------------------------|--------------------------|------------------------------|------------------------------|------------------------------|--|
| Description                       | Electric L770 W720 glass | Electric L770 W720 acrylic   | Manual L770 W720 acrylic     | Manual L500 W500 acrylic     |  |
| Frame material                    | Aluminium                | Aluminium                    | Aluminium                    | Aluminium                    |  |
| Panel material                    | 6 mm glass               | 2 x 3 mm acrylic/grey tinted | 2 x 3 mm acrylic/grey tinted | 2 x 3 mm acrylic/grey tinted |  |
| Sliding rail material             | Aluminium                | Aluminium                    | Aluminium                    | Aluminium                    |  |
| Overall dimensions (L3 x W2) (mm) | 1,462 x 777              | 1,490 x 810                  | 1,490 x 810                  | 944 x 590                    |  |
| Cut-out length (L1) (mm)          | 770                      | 770                          | 770                          | 500                          |  |
| Cut-out width (W1)                | 720                      | 720                          | 720                          | 500                          |  |
| Corner radius (FRC, RCR) (mm)     | 65                       | 65                           | 65                           | 65                           |  |
| Operation mode                    | Electrical 12 VDC        | Electrical 12 VDC            | Manual                       | Manual                       |  |
| Opening dimension (L x W) (mm)    | 508 x 642                | 483 x 642                    | 456 x 684                    | 192 x 464                    |  |
| Weight (kg)                       | approx. 19               | approx. 14                   | approx. 11                   | approx. 8                    |  |
| Partnumbers                       | 3398857A – black finish  | 3398587A – black finish      | 3398817A – black finish      | 3398818A – black finish      |  |

# **20-Series specifications**

# One fits all

# **Select options**

- Sunblind/flyscreen
- Also electrical version available



# **Technical specifications**

|                               | 20-Series Manual 20-Series Electric |  |  |  |  |
|-------------------------------|-------------------------------------|--|--|--|--|
| Frame material                | Alun                                | Aluminum                               |  |  |  |
| Panel material                | 8 mm tempered saf                   | 8 mm tempered safety glass/grey tinted |  |  |  |
| Sliding rail material         | Alun                                | Aluminum                               |  |  |  |
| Overall dimensions (mm)       | 1,995                               | 1,995 x 1,010                          |  |  |  |
| Cut-out length (L1) (mm)      | 1,                                  | 1,010                                  |  |  |  |
| Cut-out width (W1) (mm)       | 9                                   | 955                                    |  |  |  |
| Corner radius (FRC, RCR) (mm) | 8                                   | 80                                     |  |  |  |
| Operation mode                | Manual, stepless locking Electrical |  |  |  |  |
| Opening dimension (mm)        | 800 x 800                           | 720 x 800                              |  |  |  |
| Weight (kg)                   | approx. 40 approx. 41               |  |  |  |  |

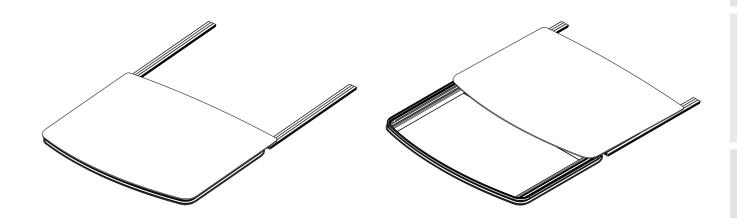
Technical specifications are subject to change without prior notice.

# **40-Series specifications**

# A perfect fit

# **Select options**

- Fixed panel
- Sunblind/flyscreen
- Motor cover



# **Technical specifications**

|                               | 40-Series                                      |
|-------------------------------|--|
| Frame material                | Aluminum                                       |
| Panel material                | 8 mm tempered safety glass/grey tinted         |
| Sliding rail material         | Aluminum                                       |
| Overall dimensions (mm)       | 1,665 x 1,379 (1,865 x 1,379 with fixed panel) |
| Cut-out length (L1) (mm)      | 915  |
| Cut-out width (W1) (mm)       | 1,320  |
| Corner radius (FRC, RCR) (mm) | 80   |
| Cross radius (R2) (mm)        | 7,620  |
| Front radius (R3) (mm)        | 2,032  |
| Operation mode                | Electrical 12 V DC                             |
| Opening dimension (mm)        | 624 x 1,172                                    |
| Weight (kg)                   | approx. 45                                     |

Technical specifications are subject to change without prior notice.

# **50-Series specifications**

# Exclusivity made affordable

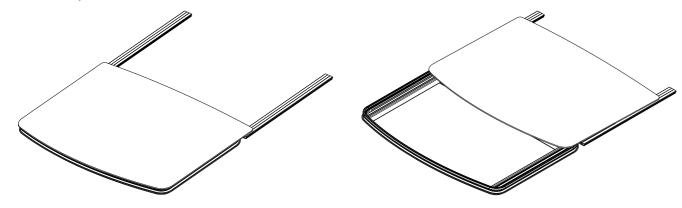
# **NEW**

This standard roof is designed to be used in most of all Leisure boats up to 24 meters. From Cabin Cruisers to Sport Fishing to Fast Adventure boats. The perfect inside finish maximizes the look through opening while the standard Dark Grey glass reduces the Solar heat transfer by 89 %.

- Standard with Dark Grey Glass and Motor cover
- Extremely robust for use in faster boats
- Attractive dimensions and shape
- Triple Black Product finish
- Optional fixed glass panel for panoramic view

## **Select options**

- Fixed panel
- Sunblind/flyscreen



## **Technical specifications**

|                               | 50-Series   |
|-------------------------------|---|
| Frame material                | Aluminum  |
| Panel material                | 8 mm tempered safety glass/dark grey tinted + Aluminium |
| Sliding rail material         | Aluminum  |
| Motor cover material          | Aluminum  |
| Overall dimensions L x W (mm) | 1,905 x 1,655 (1,995 x 1,655 with fixed panel)          |
| Cut-out length (L1) (mm)      | 1,050   |
| Cut-out width (W1) (mm)       | 1,600   |
| Corner radius (FRC, RCR) (mm) | Front = Mitred, Rear = 80                               |
| Cross radius (R2) (mm)        | 9,237   |
| Front radius (R3) (mm)        | 2,032   |
| Operation mode                | Electrical 12 V DC                                      |
| Opening dimension (mm)        | 640 x 1,450   |
| Weight (kg)                   | approx. 60  |

Technical specifications are subject to change without prior notice.



Instead of evolving the 40-Series into a larger version, Webasto developed the completely new 50-Series. Major objectives of the development team were to come up with a solution that fits most modern leisure boats and the way these boats are used (social entertaining, higher speeds, increased convenience onboard). This result can clearly be noticed by its attractive dimensions, the perfect inside finish maximizing the look through opening and the robust design with glued glass panel eliminating the fixation bolts. The Triple Black finish gives the roof a contemporary look and will contribute to the overall style of many boats.

Supporting sustainability targets and reduction of carbon footprint, Dark Grey glass, also known as Privacy glass, has become the standard. This type of glass offers great benefits. Compared to traditional grey tinted glass, the direct Solar Energy entering the cabin through the glass is reduced by 89%. Furthermore, the UV radiation is fully blocked, protecting occupants and furnishing from sun damage.

## **Features and Benefits**

- Standard with Glass panel and Motor cover for high end appearance
- Dark Grey glass for minimal Solar Energy transmission and full UV block
- Extremely robust, designed and validated for all boat models including fast boats
- Attractive dimensions and shape to fit in majority of all boat models
- Stylish motor cover reducing installation time and maximizing look through opening
- Triple Black product finish in line with latest design trends
- Smart design of the glass support frame without visible screws through gluing
- Sleek packaging, no impact on head space also in combination with blind/flyscreen
- Optional fixed glass panel for full panoramic view
- Optional Seapleat blind and fly screen for complete finish

#### What els

Like any other Webasto marine roof, the 50-Series has;

- Automotive kinematics and drive system ensuring smooth operation
- A watertight seal all around the main frame
- Is fully assembled for plug and play installation
- All units are released after an End of Line test
- 3 year warranty
- Meets the ISO12216 standard, category A

- Select roof type:
  - Top mount
  - Flush integrated
- Define dimensions:
  - Length
  - Width
  - Curvature
- Select panel design:
  - Acrylic
  - Glass
  - Sandwich
- Select frame finish:
  - Anodizing
  - Powder coating
- Select options:
  - Motor cover ■ Fixed panel
  - Sunblind/flyscreen

  - 24 V DC (12 V DC is standard)



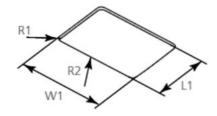
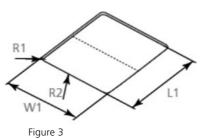


Figure 2



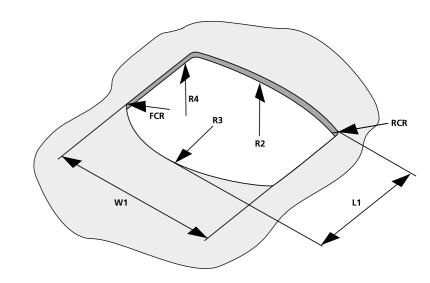
# **Technical specifications**

Figure 1

| Maximum cut-out size dimensions for our customized roofs |   | Max. lenght<br>L1 (mm) | Max. width<br>W1 (mm) | Corner curvature<br>R1 (mm) | Min. cross<br>curvature<br>R2 (mm) |
|--|---|------------------------|-----------------------|-----------------------------|------------------------------------|
| Figure 1   | Roof without cross beam                                 | 1,100                  | 1,100                 | 80                          | 7,500                              |
| Figure 2   | Roof with cross beam in sliding direction               | 1,100                  | 1,800                 | 80                          | 7,500                              |
| Figure 3   | Roof with cross beam perpendicular to sliding direction | 1,500                  | 1,100                 | 80                          | 7,500                              |

# 5 steps to customize your roof

- Select panel design:
  - Glass
  - GRP
  - Sandwich
- Select roof shape:
  - Square
  - D-shape
- Define dimensions:
  - Length
  - Width
  - Curvatures
- Select design:
  - Glass color
  - Frame color
- Select options:
  - Fixed panel
  - Sunblind/flyscreen
  - 24 V DC (12 V DC is standard)



# **Technical specifications**

| Dimension code | Description           | Glass            | GRP              | Sandwich         |
|----------------|-----------------------|------------------|------------------|------------------|
| W1             | Maximum width         | 2,750            | 2,750            | 2,750            |
| L1             | Maximum length        | 1,900            | 2,400            | 1,900            |
| R2             | Minimum cross radius  | 7,500            | 7,500            | 7,500            |
| R3             | Minimum front radius  | 2,500            | 2,500            | 2,500            |
| R4             | Minimum length radius | N.A.             | 5,000            | N.A.             |
| FCR            | Front corner radius   | Mitred or R = 80 | Mitred or R = 80 | Mitred or R = 80 |
| RCR            | Rear corner radius    | Mitred or R = 80 | Mitred or R = 80 | Mitred or R = 80 |

Remark: All dimensions are in mm

Maximum dimension of glass and GRP panel is defined by maximum weight of 80/100 kg Glass panel and Sandwich panel only have a cross radius (single bended) Glass panel and Sandwich panel have fixed radius of: 7,500; 10,000; 15,000; 30,000 mm



# Elegant pleated blinds ideally suited to large sunroofs and roof windows

- Structure designed to support fabric across the frame
- Optional curved frame
- Fabric in white or ivory
- Low profile hardware in white or ivory
- Supplied flat-packed, ready for assembly
- Onboard privacy and comfort
- Cabin light and temperature control
- Reduce UV damage and glare

# **SEAPLEAT Roof XL fabric options**

# **Technical specifications**

| Pleat type | Light transmission | Colours |
|------------|--------------------|---------|
| Plissé     | Flyscreen          |         |
| Honeycomb  | Privacy            |         |
| Honeycomb  | Blackout           |         |

## Minimum and maximum dimensions

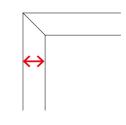
# **Technical specifications**

|                              | Manual    |          |  |  |
|------------------------------|-----------|----------|--|--|
|                              | Width (X) | Drop (Y) |  |  |
| Minimum (mm)                 | 600       | 600      |  |  |
| Maximum (mm)                 | 2,400     | 2,800    |  |  |
| Minimum<br>curve radius (mm) | 7,500     |          |  |  |

# **SEAPLEAT Roof XL hardware options**



# Discreet low profile design





36 mm

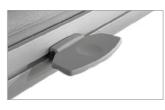
Frame width: 31.5 mm

# **SEAPLEAT Roof XL handle options**









Articulated handle hinges up and down

Fixed handle

# **Marine shading solutions**

Folding Shade 2500/3500

# Perfect shelter for sunny days on the water



Benefiting from over 15 years of experience in marine roof systems, Webasto is offering their newly developed Marine Shading Solutions Range. With the Folding Shade & Telescopic Shade System, Webasto provides the perfect shelter for sunny days on the water.

The systems are designed for the use above the cockpit, rear deck or fly bridge and can be operated with the touch of a button. Thanks to the smart and straight forward designs the products are easy to customize ensuring a perfect match with the styling of the boat.





# **Technical highlights Folding Shade:**

- For application above cockpit, rear deck or fly bridge
- Smart & customizable design to perfectly match the style of the boat
- Easy to use, operation of the system by the touch of a button
- Folding Shade 2500: sliding and folding
- Folding Shade 3500: sliding and folding
- Based on automotive kinematics and drive systems
- Tension & locking system for tensioning the fabric
- Self-adjusting cross beam fixation to cope with installation tolerances

# Marine shading solutions

Folding Shade 2500/3500

## **Technical data**

| General                     | Folding Shade 2500  | Folding Shade 3500  |
|-----------------------------|---|---|
| Description                 |   |   |
| Operation                   | Electric with rocker switch   | Electric with rocker switch   |
| Operation voltage           | 12 VDC  | 12 VDC  |
| Installation method         | Installation method rails, cross beam & fabric are screwed and mounted from the top.  Drive system screwed from the bottom. | Installation method rails, cross beam & fabric are screwed and mounted from the top.  Drive system screwed from the bottom. |
| Materials used              | Materials used rails and crossed beams are aluminium, anodized. Sliders are plastic and stainless steel.                    | Materials used rails and crossed beams are aluminium, anodized. Sliders are plastic and stainless steel.                    |
| Fabric material outside     | Sunbrella, type: Plus, different colors possible  | Sunbrella, type: Plus, different colors possible  |
| Fabric material inside      | Dickson, type: Velum, different colors possible   | N.A.  |
| Allowable temperature (°C)  | -10 to +75  | -10 to +75  |
| Dimensions                  |   |   |
| L1 Length (mm)              | Maximum outside dimension is: 2,750   | Maximum outside dimension is: 5,000   |
| W1 Width (mm)               | Maximum outside dimension is: 2,500   | Maximum outside dimension is: 3,500   |
| Longitudinal curvature (mm) | Minimal 20,000 to Straight  | Minimal 20,000 to Straight  |
| Cross curvature (mm)        | Minimal 10,000 to 25,000  | Minimal 10,000 to 25,000  |
| Remark                      | Remark curvature combination between longitudinal and cross direction to be evaluated per application                       | Remark curvature combination between longitudinal and cross direction to be evaluated per application                       |





Folding Shade 2500

# Marine shading solutions

# Telescopic Shade 2500



# Extend your time on the water

Developed to keep you protected from the sun and extend your day on the water, the Webasto Telescopic Shade is the newest addition to Webasto's impressive, market-leading marine roof line up.

Our electric-powered retractable sunshade creates the perfect canopy for passengers, while ensuring a smooth and robust operation that can be enjoyed both while anchored or motoring. It can also be installed in tandem with one of our other roof systems. The Telescopic Shade system is an excellent solution for creating additional on-board comfort.

For an optimal fit on the boat, the Telescopic Shade can be ordered to specific dimensions up to a fabric width of 8 feet (2,500 mm). There are also four trend fabric colors to choose from, with additional colors available.

The overall design, in combination with the high-gloss polished stainlesssteel tubes and Marine-grade material, makes this a true marne solution.

## **Product features:**

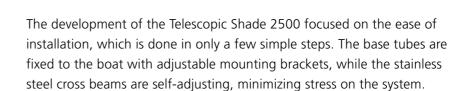
- Fully retractable and customizable widths up to 8 feet (2,500 mm)
- Self adjusting within 5 mm
- Marine-grade stainless steel tubing
- High-quality, eco-friendly shade fabric
- Easy installation
- Easily retrofitted or integrated by boat builders
- Options for any style or size boat (with an overhead structure)
- Patent pending

# Marine shading solutions

# Telescopic Shade 2500

#### Technical data

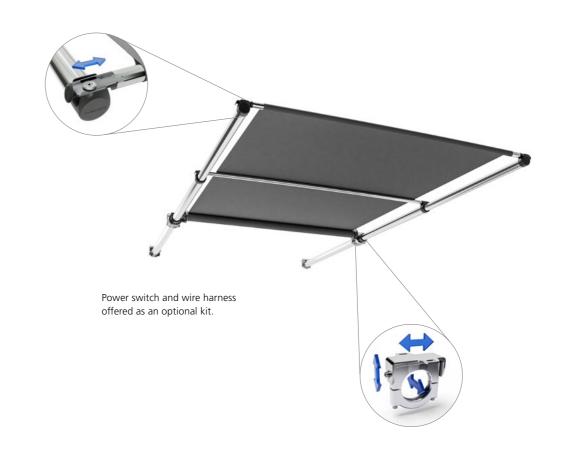
|                                    | Telescopic Shade 2500                             |
|------------------------------------|---|
| Telescope and cross beams material | High gloss polished stainless steel               |
| Fabric material                    | Marine grade, Glen Raven/Dickson infinity         |
| Fixation brackets material         | (High gloss polished) cast stainless steel        |
| Plastic covers                     | High grade UV-resistant PA6                       |
| Maximum system dimensions (W x L)  | 110 in x 140 in (2,800 mm x 3,560 mm)             |
| Maximum fabric dimensions (W x L)  | 98 in x 78.7 in (2,500 mm x 2,000 mm)             |
| Telescope tube diameters           | 1.9 in/2.3 in/2.7 in (50 mm/60 mm/70 mm)          |
| Cross beam diameter                | 1.2 in (30 mm)                                    |
| Cross beam adjustment (mm)         | Self adjusting, Y, +/-5                           |
| Fixation bracket adjustment (mm)   | Adjustable, X,Y,Z, +/-5                           |
| Drive system                       | Tube drive, 12 VDC                                |
| Spring system                      | Stainless steel gas spring with extra oil chamber |
| Weight                             | 110 lbs (50 kg)                                   |





# High-quality, eco-friendly shade fabric

- UV-, fade- and tear-resistant
- Optimal durability among extreme conditions
- Dry-quick material resists mold
- Easy to clean
- Four fabric colors options (additional color options available)





# **Nomenclature**

In order to define descriptive technical abbreviations for our air-conditioner and our air handler units, Webasto introduced a special nomenclature for the price list.

# Air-conditioning units nomenclature

# Air-conditioning model abbreviations:

C = Chiller (BlueCool C-Series)

Example: C55T-R-230V-REV-R410A = Chiller 55,000 Twin Rotary compresssor 230 V reversible refrigerant R410A

| C        | 55           | Т    | -R          | -230 V  | -REV                | -R410A      |
|----------|--------------|------|-------------|---------|---------------------|-------------|
| C-Series | 55,000 BTU/h | Twin | Rotary comp | Voltage | REV = reverse cycle | refrigerant |

S = Self-Contained (BlueCool S-Series)

Example: S6-R-230V-REV-R410a = Self-Contained 6,000 230 V reversible

| S             | 6           | -R                | -230 V  | -REV                | -R410A      |
|---------------|-------------|-------------------|---------|---------------------|-------------|
| Selfcontained | 6,000 BTU/h | Rotary compressor | Voltage | REV = reverse cycle | refrigerant |

V-PRO = Professional variable speed chiller series (BlueCool V-PRO Series)

Example: V-PRO60M -400V-REV-R410a = V-PRO-Series Chiller 60,000 Mono 400 V reversible refrigerant R410A

| V-PRO | 60           | M    | -400 V  | -REV                | -R410A      |
|-------|--------------|------|---------|---------------------|-------------|
| V-PRO | 60,000 BTU/h | Mono | Voltage | REV = reverse cycle | refrigerant |

# A = Air handler (BlueCool A-Series)

Example: A12 Compact -230V -50/60Hz = A-Series Air handler Compact type 12,000 kBTU/h 230 V; 50 Hz and 60 Hz

| Α        | 12           | Compact      | -230 V  | -50/60 Hz |
|----------|--------------|--------------|---------|-----------|
| A-Series | 12,000 BTU/h | Compact type | Voltage | Frequency |

# Webasto subsidiaries and representatives

# Webasto subsidiaries and representatives

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# **Specifications**

ECE **Economic Commission for Europe EMC** Electromagnetic compatibility

HDD Heavy Duty Design

HTM Heating time management

**Abbreviations** 

ΙK Installation kit SOD Scope of delivery

#### Units of measurement

D Diameter (mm) Da Outer diameter (mm) Di Inner diameter (mm) Н Height (mm) Kilogram kg Length (mm) m Meter Millimeter Radius (mm) SW Wrench size (mm) W Width (mm)

#### **Electrical units**

Ampere Α kW Kilowatt

Revolutions per minute rpm

V Volt W Watt

## **Materials and fuels**

APK Aluminium paper plastic

**EPDM** Ethylene propylene terpolymer rubber

Fatty acid methyl ester (fuel) **FAME** 

Aluminium foil and aluminium coated glass fabric GA-A GA2-A Aluminium and aluminium coated glass fabric Hard aluminium – plastic – aluminium H-M-A

PA Polyamide

PAK Paper - aluminium - plastic

PAPK Paper – aluminium – paper – plastic

TPE Thermoplastic elastomer

VOME-

resistant: Resistant against various diesel-like fuels; B7, B10, XTL, etc.



# Notes



As a global innovative systems partner to the mobility industry, Webasto is one of the 100 largest suppliers to the automotive sector worldwide. In development, manufacturing and sales, the company focuses on roof systems on the one hand and on vehicle electrification on the other hand. The product range includes, openable and fixed panoramic roofs, electric high-voltage heaters and batteries, as well as thermo management solutions. Among the customers of Webasto are manufacturers of passenger cars, commercial vehicles, and boats, as well as dealers and end customers. In 2022, the Group generated sales of over 4 billion euros and employed about 16,800 people at more than 50 locations. The headquarters of the company, which was founded in 1901, is located in Stockdorf near Munich (Germany). For more information, please visit www.webasto-group.com