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 P-Series

The P-Series is Webasto's Professional Chiller Series and is designed for mid-size up to super yachts and commercial boats. They cover a large range of cooling performances from 30,000 up to 572,000 BTU/h. All are equipped with 50 to 60 Hz compatible scroll-compressors and up to four compressors are mounted on a single tray. The P-Series is highly customizable with many options such as soft starts, anti-vibration mounts, CAN Bus control, enlarged condensers for operation under tropical conditions, single phase or three phase compressors. Ask Webasto to have your chiller system individually configured to your needs.

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

See page 102

BlueCool C-Series
C16 M to C40T

See page 104

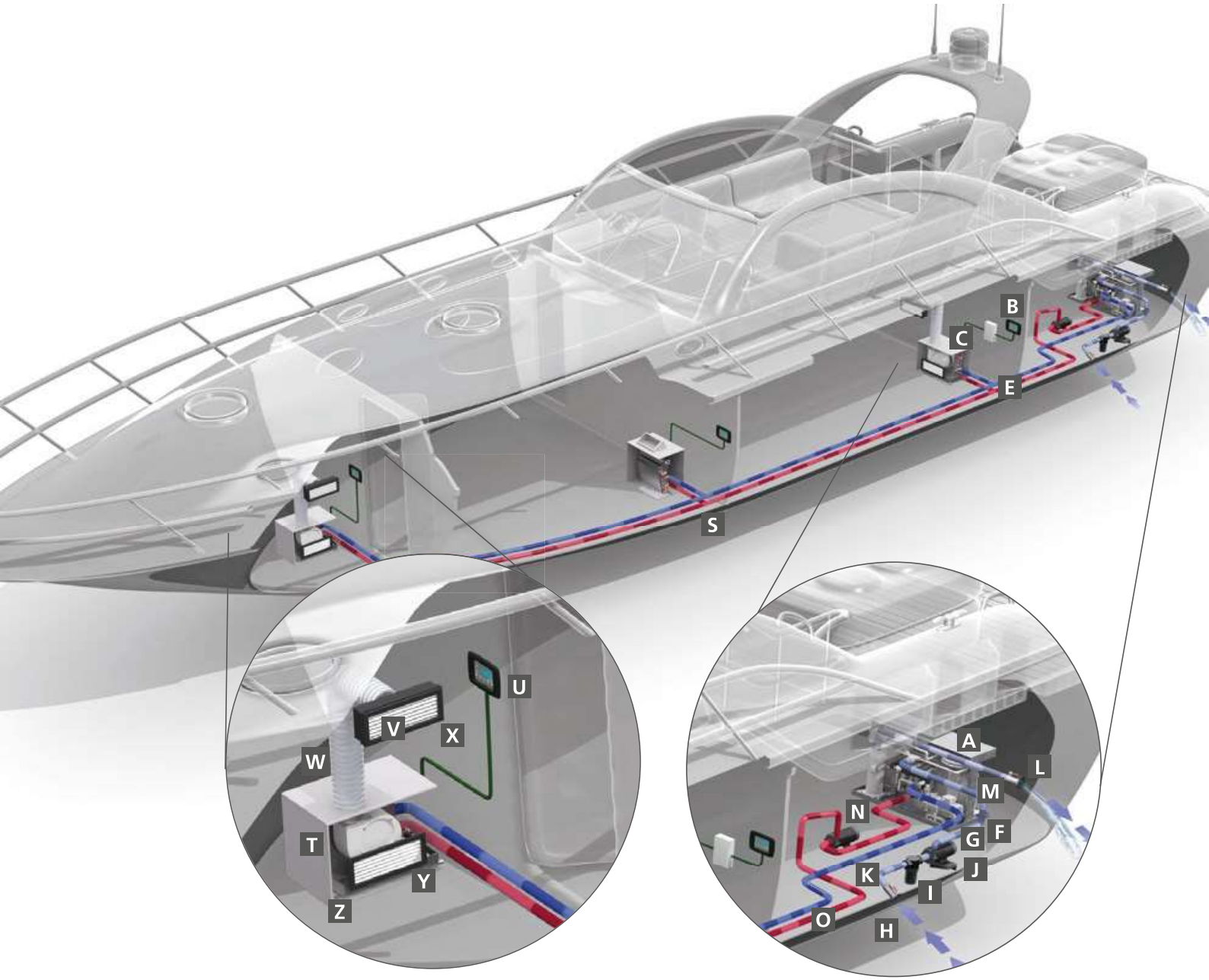
BlueCool P-Series
P30 M to P572 Q

See page 106

BlueCool V-PRO Series

See page 114

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

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 102 – 117

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

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

Control elements for V-, C- and P-Series

Please select the control elements for the core unit separately:

B MyTouch display See page 142

C Display cable See page 142

D Remote air temperature sensor See page 142

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 See page 160

F Vibration absorber kits See page 160

G Silent block kits See page 160

Sea water circuit

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

H Sea water inlet See page 158

I Sea water strainer See page 158

J Sea water pump See page 144

K Closing valve See page 158

L Overboard discharge See page 158

M Water hose See page 157

Chilled water circuit

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

N Circulation pump See page 144

O Piping or hosing system with insulation See page 154

P 3-way valve (optional) See page 157

Q Turn ball valve See page 157

R Expansion tank See page 157

S T-pieces See page 157

Cabin accessories necessary for each single cabin

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

T Air handler See page 126

U Cabin control (Control Panel, display cable, temperature sensor and control box) See page 142

V Supply air grille See page 150

W Air ducting See page 151

X Transition box See page 151

Y Return air grille See page 150

Z Water hoses for condensation drain See page 157

BlueCool V-Series
Variable Speed Chiller

V64 T and V77 T

V50 M
without electronic box

BlueCool V-Series
Variable Speed Chiller

Technical data

Type	BlueCool V-Series		
	V50 M	V64 T	V77 T
Order No.	WBCL1203001C	WBCL1203003B	WBCL1203002B
Cooling capacity* (BTU/h)	8,500 – 50,000	8,500 – 64,000	8,500 – 77,000
Cooling capacity* (kW)	2.5 – 14.6	2.5 – 18.7	2.5 – 22.6
Heating via reverse cycle integrated	yes	yes	yes
Voltage (V)	230 (-15%/+10%)	230 (-15%/+10%)	230 (-15%/+10%)
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	2.5
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 1"	32 1 1/4" F BST	32 1 1/4" F BST
Min. chilled water flow (l/min)	35	45	52
Seawater connection (mm), (Inch)	25 1" M BST	32 1 1/4" F BST	32 1 1/4" F BST
Min. seawater flow (l/min)	38	50	57
Dimensions unit L x D x H (mm), (Inch)	567 x 340 x 510 22.3 x 13.4 x 20.1	760 x 560 x 510 29.9 x 22.0 x 20.1	760 x 560 x 510 29.9 x 22.0 x 20.1
Dimensions unit incl. silent block L x D x H (mm), (Inch)	590 x 378 x 548 23.2 x 14.9 x 21.6	760 x 560 x 550 29.9 x 22.0 x 21.7	760 x 560 x 550 29.9 x 22.0 x 21.7
Dimension electronic box L x D x H (mm), (Inch)	560 x 190 x 465 22.0 x 7.5 x 18,3	560 x 190 x 465 22.0 x 7.5 x 18,3	560 x 190 x 465 22.0 x 7.5 x 18.3
Dimension chiller L x D x H (mm), (Inch)	607 x 530 x 510 23.9 x 20.8 x 20.1	760 x 750 x 510 29.9 x 29.5 x 20.1	760 x 750 x 510 29.9 x 29.5 x 20.1
Dimensions unit incl. silent block + box L x D x H (mm), (Inch)	620 x 570 x 548 24.4 x 22.4 x 21.6	760 x 750 x 550 29.9 x 29.5 x 21.7	760 x 750 x 550 29.9 x 29.5 x 21.7
Ambient temperature limit (°C)	60	60	60
Sound level unit (dB/A) (measured)	49.2	48.5	48.5
Refrigerant charge R410A (g)	875	875 + 770	875 + 770
Weight core unit (kg)	47	90	90
Weight electronic box (kg)	15	15	15
Min. sea water temp. heating (°C)	6	6	6
Max. sea water temp. cooling (°C)	35	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 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
- 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
- Preventive maintenance monitoring system
- Condensate free operation
- Easy installation and maintenance
- Low service and operation costs
- Integrates Webasto s BlueCool Expert diagnosis and set up tool
- Up to 3 ECO modes with 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

BlueCool C-Series
Ultra Compact Chiller

Technical data

Type	BlueCool C-Series				
	C16 M	C20 M	C27 M	C32 T	C40 T
Order numbers	WBCL1205001E	WBCL1205002D	WBCL1205003D	WBCL1207001E	WBCL1207002D
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**** 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) Chilled water connection (inch)	25 1	25 1	25 1	25 1	25 1
Minimal chilled water flow (l/min)	13	16	19	26	32
Recommended chilled water pump	WB500	WB500	WB1000	WB1000	WB1500
Seawater connection (mm) Seawater connection (inch)	19 3/4	19 3/4	19 3/4	19 3/4	25 1
Minimal seawater flow at 50 Hz (l/min)	14	17	21	28	34
Minimal seawater flow at 60 Hz (l/min)	17	20	25	34	41
Recommended seawater pump	WB500 /WB500G	WB500/WB500G	WB1000	WB1000	WB1500/WB1000G
Dimensions L x W x H (mm) Dimensions L x W x H (inch)	390 x 290 x 355 15.4 x 11.4 x 14.0	440 x 330 x 360 17.3 x 13.0 x 14.0	440 x 330 x 395 17.3 x 13.0 x 15.6	590 x 410 x 500 23.2 x 16.1 x 19.7	590 x 410 x 500 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

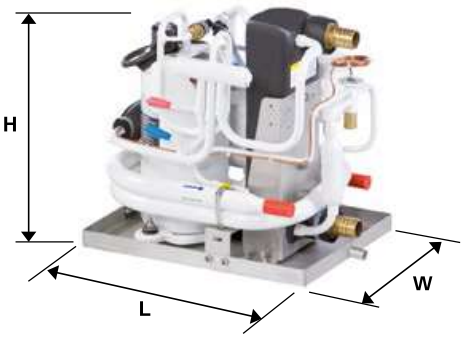
** Amperage values for core unit depend on compressor load. Max values at tropical conditions at 230 V/50 Hz

*** 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



Mono
C16 M – C27 M

BlueCool C-Series
Ultra Compact Chiller

Works with the MyTouch display

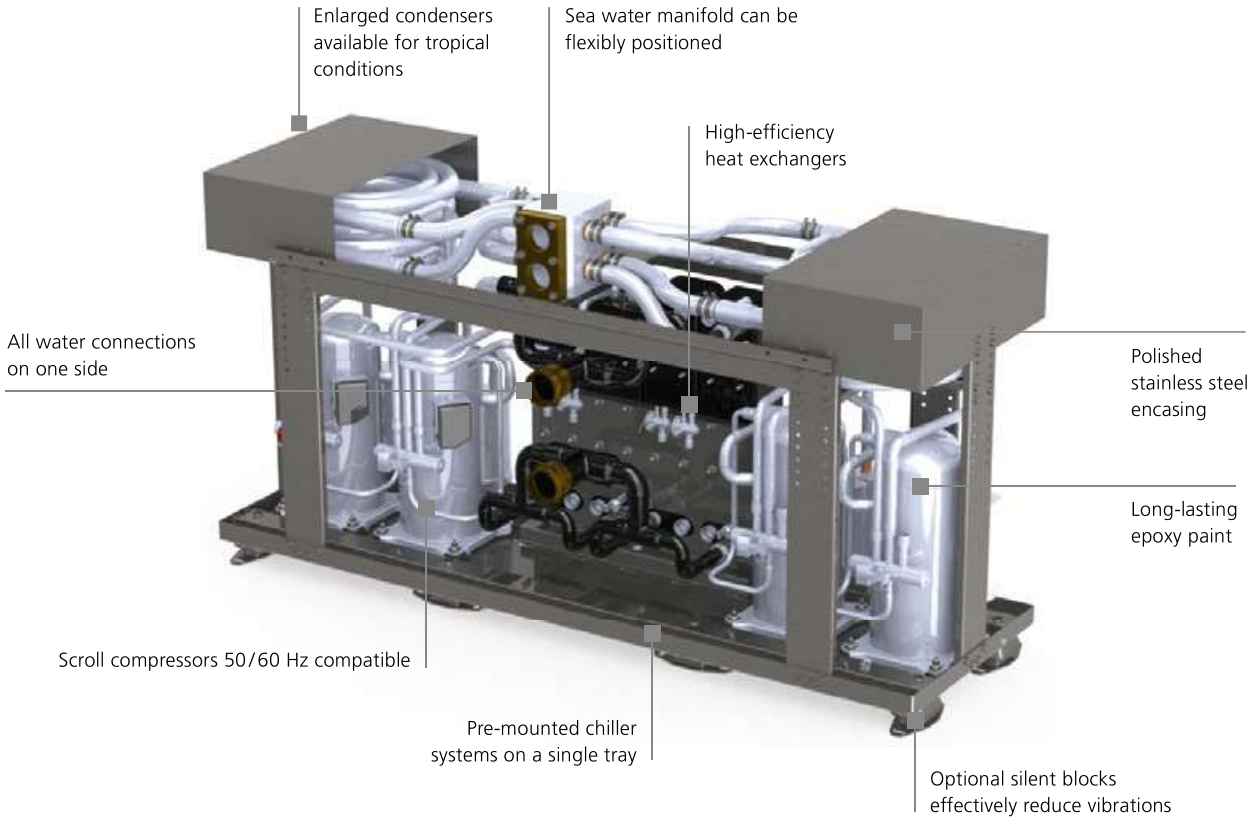
BlueCool MyTouch

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

BlueCool P-Series
Professional Chiller Series

BlueCool P-Series



Works with the MyTouch display

BlueCool MyTouch

The professional BlueCool P-Series:

- Professional chiller system for medium to large boats and super yachts
- Highly customizable chiller series with large range of 30,000 – 572,000 BTU/h to adapt to cooling demand
- Successor of our BlueCool Premium scroll compressor range for high reliability
- Multiple compressor units with independent cooling circuits for high availability
- Range extension with 8 new models
- Improved electronics – electronic box with easy access to components – PCB with increased circuit protection, also fulfilling highest EMC standards EN 60945 – the electronic box has been slightly enlarged so that softstarts can be easily integrated into this box
- BlueCool Expert tool for service, configuration, application tuning, diagnosis and system setup comes as a standard free of charge
- Optional CAN-Bus for integration into boats central monitoring systems
- Unique Thermostatic Advance Function for power output continuously adapted to cooling demand
- Redesigned trays for easier mounting of silent blocks to reduce vibrations
- Electrical systems can be upgraded to customer needs with PRO box or fulfilling MCA requirements

BlueCool P-Series
Configuration Options

Configure your chiller system in 6 main steps:

Product options for BlueCool P-Series
The BlueCool P-Series is highly customizable to the demands of shipyards and national legislation. In addition to a wide range of cooling capacities, many options can be selected to customize the chiller to your needs. For further options, please contact the sales support team at Webasto.

Option 1: Voltage
All P-Series chillers are available as 400 V/3-phase version. On most models 208 V/3-phase or 230 V/single phase is available as well.

Option 2: Cool only version
For regions where heating is not required some units are available as cool only version.

Option 3: Tropical version
For high sea water temperatures > 32 °C, a tropical chiller version with enlarged condensers shall be selected to avoid high pressure cut-outs. Option is highly recommended whenever the boat may travel in regions where sea water temperatures may be above 32 °C.

Option 4: Soft start
In order to reduce the amperage draw at compressor start a soft start may be chosen as an option.

- Soft start devices are reducing the amperage peak at compressor start up to 53 %
- Soft start models are available for 400 V 3-phase as well as 230 V single phase
- The peak reduction allows to better size the power generator and it frees capacities for other electrical consumers
- Light flickering is reduced
- Circuit breakers and cables sizes do not have to be oversized
- The soft starts fit into the standard electrical box if no further electrical accessories are chosen
- If the soft starts are selected during the chiller configuration process they come already installed and tested as part of the electronic box

BlueCool P-Series
Configuration Options

Option 5: Electrical upgrades

In the standard configuration, the chiller comes with a standard electrical box which allows to operate the chiller. Webasto offers a wide variety of electrical options which enhance the operation and service comfort or ease the electrical installation. Some options may be required to comply with national standards or requirements coming from the boat's classification society. Depending on the amounts of options chosen the larger PRO box or even a box compliant to MCA standards will be used. Each box will be individually configured to your needs.

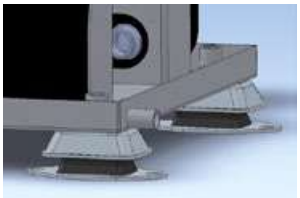
			
	Standard Box	**Pro Box**	**MCA Box**
Housing			
Material	Galvanized steel, expoxy painted	Mild steel, powder coated	Mild steel, powder coated
IP class	IP21	IP66/NEMA 4, 12, 13/IK 10	IP66/NEMA 4, 12, 13/IK 10
Color	White	RAL 7035	RAL 7035
Opening/closing	Screws	Locking mechanism	Locks with removable handle
Components included			
Chiller electronic card	■	■	■
Relays for compressors, chilled water and sea water pump	■	■	■
Terminal block connectors	■	■	■
Compressor Soft starts	□	□	□
Motor protective relays and circuit breakers for compressors and pumps	–	■	■
Circuit breaker for chiller electronic card	–	■	■
Only one power supply needed for entire unit	–	■	■
Halogen free cables	–	□	■
Cable harness length: 2 m	■	■	■
Increased cable harness length: 5 m/10 m/15 m	□	□	□
Chilled water pump: redundancy selector for two pumps	–	□	□
Sea water pump: redundancy selector for two pumps	–	□	□
Power ON lamp	–	□	■
Pilot lamps for pumps and/or compressors	–	□	■
Digital display integrated at the front door	–	□	□
Compressor running counter	–	□	□
Main switch	–	–	■
Emergency stop	–	–	■
Pushbutton to test pilot lamps	–	–	■
Door locking mechanism in open position	–	□	■
Ampere gauge	–	–	□

■ Standard □ Optional – Not available

Option 6: Silent blocks

Silent blocks may be mounted between the chiller unit and the hull of the boat to reduce structural born vibrations being transferred from the chiller unit into the boat.

- The silent blocks very effectively reduce vibrations into the hull of the boat by up to 50 %
- Silent blocks are mounted below the base plate of the A/C unit
- High performance damping elements specially designed for the vibration frequency and the weight of each unit
- Marine grade with corrosion resistant materials
- Integrated rip-off protection
- If the silent blocks are selected during the chiller configuration process they come already mounted onto the A/C unit
- Please ask for the specific height increase of your unit as the silent block type varies with the size of the units



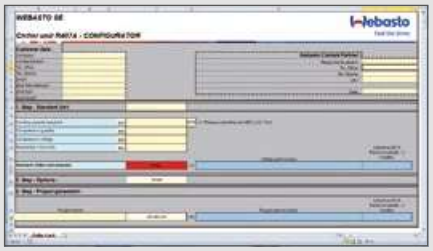
BlueCool P-Series
Project Assistance and Support

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

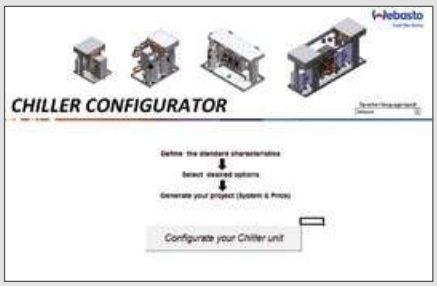
- Precisely calculate the cooling and heating demand for each cabin depending on boat characteristics, performance requirements and usage conditions
- Determine the fresh air requirements of larger boats
- Select your bill of material from the entire product portfolio
- Summarize technical data of the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



Chiller configurator tool

This tool is used by Webasto to

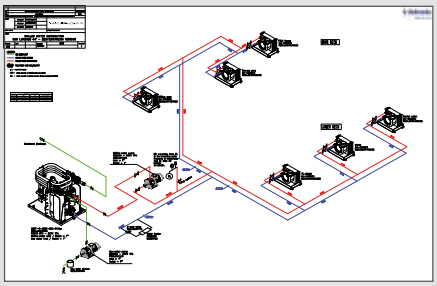
- Select the available options for a chiller unit, see Options 1, 2, 3, 6 on previous pages
- Select the available electrical options, see Options 4 and 5 on previous pages As a result your chiller and electronic box will receive an individual part number which is uniquely used for your project.



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

BlueCool P-Series

Professional Chiller Series

	BlueCool P-Series Mono chiller										
Type	**P30 M**	**P36 M**	**P42 M**	**P48 M**	**P60 M**	**P72 M**	**P84 M**	**P96 M**	**P112 M**	**P126 M**	**P143 M**
Cooling capacity* (BTU/h)	30,000	36,000	42,000	48,000	60,000	72,000	84,000	96,000	112,000	126,000	143,000
Cooling capacity* (kW)	8.7	10.5	12.3	14	17.6	21.1	24.6	28.1	32.8	36.9	41.8
Frequency (Hz)*****	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Current draw running** (A) for 230 V 1-phase	6.8	8	9.4	12	–	–	–	–	–	–	–
Current draw running** (A) for 400 V 3-phase	2.9	3.5	4.1	5.1	5.9	6.5	8.4	10	11	12	13
Current draw running** (A) for 208 V 3-phase	5.0	6.1	6.9	8.5	–	13	24	–	–	–	–
Current draw running FLA**** (A) for 230 V 1-phase	15	17	23	24	–	–	–	–	–	–	–
Current draw running FLA**** (A) for 400 V 3-phase	5.1	5.6	7	10	11	12	15	16	17	20	22
Current draw running FLA**** (A) for 208 V 3-phase	10	11	14	19	25	27	25	–	–	–	–
Locked Rotor Amperage LRA (A) for Single compressor 230 V 1-phase	61	76	100	114	–	–	–	–	–	–	–
Locked Rotor Amperage LRA (A) for Single compressor 400 V 3-phase	32	40	46	50	59	74	101	95	111	118	118
Locked Rotor Amperage LRA (A) for Single compressor 208 V 3-phase	70	83	95	98	139	172	179	–	–	–	–
Min. chilled water flow (l/min)	25	30	33	38	50	60	66	76	88	104	117
Min. seawater flow (l/min)	19	22	27	30	38	46	56	64	68	82	93
Recommended seawater pump+	WB1000	WB1000	WB1000 WB1500	WB1000 WB1500	WB1500	WB2500G WB3000G	WB2500G WB3000G	WB2500G WB3000G	WB3000G WB3500	WB3000G WB3500	WB3000G WB3500
Dimensions (L x W x H) (mm)	425 x 506 x 547	425 x 506 x 547	425 x 506 x 547	425 x 506 x 547	560 x 610 x 602	560 x 610 x 727	560 x 610 x 727	560 x 615 x 727	560 x 811 x 727	560 x 811 x 827	560 x 845 x 827
Dimensions (L x W x H) (inch)	16.7 x 19.9 x 21.5	16.7 x 19.9 x 21.5	16.7 x 19.9 x 21.5	16.7 x 19.9 x 21.5	22 x 24 x 23.7	22 x 24 x 28.6	22 x 24 x 28.6	22 x 24.2 x 28.6	22 x 31.9 x 28.6	22 x 31.9 x 32.6	22 x 33.3 x 32.6
Dimensions (L x W x H) (mm) tropical	425 x 506 x 547	425 x 506 x 547	425 x 506 x 547	425 x 506 x 547	560 x 610 x 602	560 x 610 x 727	560 x 610 x 727	560 x 615 x 727	560 x 811 x 727	560 x 811 x 827	560 x 845 x 827
Dimensions (L x W x H) (inch) tropical	16.7 x 19.9 x 21.5	16.7 x 19.9 x 21.5	16.7 x 19.9 x 21.5	16.7 x 19.9 x 21.5	22 x 24 x 23.7	22 x 24 x 28.6	22 x 24 x 28.6	22 x 24.2 x 28.6	22 x 31.9 x 28.6	22 x 31.9 x 32.6	22 x 33.3 x 32.6
Weight (kg)	55	66	68	70	75	80	85	90	100	110	125
Available options											
230 V/1-phase	□	□	□	□	–	–	–	–	–	–	–
208 V/3-phase	□	□	□	□	□	□	□	–	–	–	–
Reverse Cycle Heating	■	■	■	■	■	■	■	■	■	■	■
Cool Only version	–	–	–	–	–	–	–	–	–	–	–
Tropicalized version	□	■	□	■	□	■	□	□	□	■	□
Soft Start 400 V/230 V/208 V	□/□/–	□/□/–	□/□/–	□/–/–	□/–/–	□/–/–	□/–/–	□/–/–	□/–/–	□/–/–	□/–/–
Upgrade box/MCA Box	□	□	□	□	□	□	□	□	□	□	□
Silent Block	□	□	□	□	□	□	□	□	□	□	□

General note: Values in this table given for 50 Hz only. 60 Hz data available on request. ■ Standard □ Optional – Not available

* BTU/h are based on 7 °C evaporating temperature and 38 °C condensing temperature.

** Amperage values for core unit at nominal conditions at 50 Hz.

**** FLA (Full Load Amperage) is the current draw at maximum conditions.

\+ Recommendation only. Pump size shall be adapted to application constraints in order to always ensure minimal sea water flow.

++ BlueCool P-Series systems are tested and approved by Webasto for 50/60 Hz operation.

	BlueCool P-Series Twin chiller				
Type	**P60 T**	**P72 T**	**P84 T**	**P96 T**	**P120 T**
Cooling capacity* (BTU/h)	60,000	72,000	84,000	96,000	120,000
Cooling capacity* (kW)	17.6	21.1	24.6	28.1	35.2
Frequency (Hz)	50/60	50/60	50/60	50/60	50/60
Current draw running** (A) for 230 V 1-phase	14	16	19	25	–
Current draw running** (A) for 400 V 3-phase	5.8	7.1	8.1	10	12
Current draw running** (A) for 208 V 3-phase	10	12	14	17	33
Current draw running FLA**** (A) for 230 V 1-phase	30	35	46	47	–
Current draw running FLA**** (A) for 400 V 3-phase	10	11	14	20	22
Current draw running FLA**** (A) for 208 V 3-phase	20	22	27	37	50
Locked Rotor Amperage LRA (A) for Single compressor 230 V 1-phase	61	76	100	114	–
Locked Rotor Amperage LRA (A) for Single compressor 400 V 3-phase	32	40	46	50	59
Locked Rotor Amperage LRA (A) for Single compressor 208 V 3-phase	70	83	95	98	139
Min. chilled water flow (l/min)	50	60	66	76	100
Min. seawater flow (l/min)	38	46	56	64	80
Recommended seawater pump+	WB1500 WB2000	WB2500G WB3000G	WB2500G WB3000G	WB2500G WB3000G	WB3000G WB3500
Dimensions (L x W x H) (mm)	560 x 660 x 600	560 x 694 x 625	560 x 694 x 625	560 x 683 x 675	560 x 790 x 675
Dimensions (L x W x H) (inch)	22 x 26 x 23.6	22 x 27.3 x 24.6	22 x 27.3 x 24.6	22 x 26.9 x 26.6	22 x 31.1 x 26.6
Dimensions (L x W x H) (mm) tropical	560 x 660 x 625	560 x 694 x 625	560 x 694 x 625	560 x 683 x 675	560 x 790 x 725
Dimensions (L x W x H) (inch) tropical	22 x 26 x 24.6	22 x 27.3 x 24.6	22 x 27.3 x 24.6	22 x 26.9 x 26.6	22 x 31.1 x 28.5
Weight (kg)	90	95	100	130	160
Available options					
230 V/1-phase	□	□	□	□	–
208 V/3-phase	□	□	□	□	□
Reverse Cycle Heating	■	■	■	■	■
Cool Only version	–	–	–	–	–
Tropicalized version	□	■	□	■	○
Soft Start 400 V/230 V/208 V	□/□/–	□/□/–	□/□/–	□/–/–	□/–/–
Upgrade box/MCA Box	□	□	□	□	□
Silent Block	□	□	□	□	□

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 at nominal conditions at 50 Hz.
**** FLA (Full Load Amperage) is the current draw at maximum conditions.
\+ Recommendation only. Pump size shall be adapted to application constraints in order to always ensure minimal sea water flow.
++ BlueCool P-Series systems are tested and approved by Webasto for 50/60 Hz operation.

■ Standard □ Optional – Not available

The BlueCool P-Series:

- Wide product range for medium and large size boats
- Scroll compressors for heavy duty applications
- Low starting surge through staged compressor starts
- 208 V, 230 V and 400 V systems available
- Many customization options with different electronics, tropical versions, vibration dampingand many other features
- Fully independent refrigerant circuits in multiple compressor units provide high system availability
- Power output continuously adapted to cooling demand
- Very robust stainless steel design for heavy duty use

BlueCool P-Series
Professional Chiller Series

	BlueCool P-Series Triple chiller				
Type	**P126 R**	**P144 R**	**P180 R**	**P216 R**	**P252 R**
Cooling capacity* (BTU/h)	126,000	144,000	180,000	216,000	252,000
Cooling capacity* (kW)	37	42.2	52.8	63.3	73.8
Frequency (Hz)	50/60	50/60	50/60	50/60	50/60
Current draw running** (A) for 230 V 1-phase	28	37	–	–	–
Current draw running** (A) for 400 V 3-phase	12	15	18	20	25
Current draw running** (A) for 208 V 3-phase	21	26	50	38	72
Current draw running FLA **** (A) for 230 V 1-phase	69	71	–	–	–
Current draw running FLA **** (A) for 400 V 3-phase	21	30	33	36.3	45
Current draw running FLA **** (A) for 208 V 3-phase	40	56	75	81	76
Locked Rotor Amperage LRA (A) for Single compressor 230 V 1-phase	100	114	–	–	–
Locked Rotor Amperage LRA (A) for Single compressor 400 V 3-phase	46	50	59	74	101
Locked Rotor Amperage LRA (A) for Single compressor 208 V 3-phase	95	98	139	172	179
Min. chilled water flow (l/min)	104	115	138	158	180
Min. seawater flow (l/min)	82	92	106	125	145
Recommended seawater pump+	WB3000G WB3500	WB3000G WB3500	WB5500	WB5500	WB5500
Dimensions (L x W x H) (mm)	640 x 1,250 x 765	640 x 1,250 x 765	640 x 1,250 x 765	640 x 1,250 x 840	640 x 1,250 x 840
Dimensions (L x W x H) (inch)	25.2 x 49.2 x 30.1	25.2 x 49.2 x 30.1	25.2 x 49.2 x 30.1	25.2 x 49.2 x 33.1	25.2 x 49.2 x 33.1
Dimensions (L x W x H) (mm) tropical	640 x 1,250 x 765	640 x 1,250 x 765	640 x 1,250 x 840	640 x 1,250 x 840	640 x 1,250 x 840
Dimensions (L x W x H) (inch) tropical	25.2 x 49.2 x 30.1	25.2 x 49.2 x 30.1	25.2 x 49.2 x 33.1	25.2 x 49.2 x 33.1	25.2 x 49.2 x 33.1
Weight (kg)	180	190	210	250	260
Available options					
230 V/1-phase	☐	☐	–	–	–
208 V/3-phase	☐	☐	☐	☐	☐
Reverse Cycle Heating	■	■	■	■	■
Cool Only version	☐	☐	☐	☐	☐
Tropicalized version	☐	■	☐	■	☐
Soft Start 400 V/230 V/208 V	☐ / ☐ / –	☐ / – / –	☐ / – / –	☐ / – / –	☐ / – / –
Upgrade box/MCA Box	☐	☐	☐	☐	☐
Silent Block	☐	☐	☐	☐	☐

General note: Values in this table given for 50 Hz only. 60 Hz data available on request. ■ Standard ☐ Optional – Not available

* BTU/h are based on 7 °C evaporating temperature and 38 °C condensing temperature.

** Amperage values for core unit at nominal conditions at 50 Hz.

**** FLA (Full Load Amperage) is the current draw at maximum conditions.

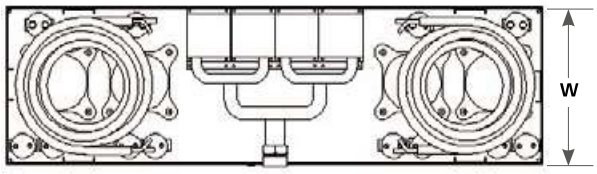
\+ Recommendation only. Pump size shall be adapted to application constraints in order to always ensure minimal sea water flow.

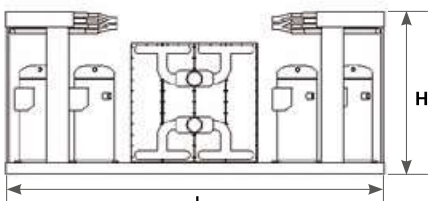
++ BlueCool P-Series systems are tested and approved by Webasto for 50/60 Hz operation.

Webasto engineers can quote custom manufactured chiller systems upon request. Please contact us for a tailored solution to fit your individual needs.

	BlueCool P-Series Quattro chiller										
Type	**P120 Q**	**P144 Q**	**P168 Q**	**P192 Q**	**P240 Q**	**P288 Q**	**P336 Q**	**P384 Q**	**P448 Q**	**P504 Q**	**P572 Q**
Cooling capacity* (BTU/h)	120,000	144,000	168,000	192,000	240,000	288,000	336,000	384,000	448,000	504,000	572,000
Cooling capacity* (kW)	35	42.2	49.2	56.2	70	85	99	112	132	148	168
Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Current draw running** (A) for 230 V 1-phase	27	32	38	49	–	–	–	–	–	–	–
Current draw running** (A) for 400 V 3-phase	12	14	16	21	23	26	34	40	43	49	53
Current draw running** (A) for 208 V 3-phase	20	24	28	34	66	51	95	–	–	–	–
Current draw running FLA**** (A) for 230 V 1-phase	59	69	92	94	–	–	–	–	–	–	–
Current draw running FLA **** (A) for 400 V 3-phase	20	22	28	40	44	48	60	64	67	78	89
Current draw running FLA **** (A) for 208 V 3-phase	41	44	54	74	100	108	100	–	–	–	–
Locked Rotor Amperage LRA (A) for Single compressor 230 V 1-phase	61	76	100	114	–	–	–	–	–	–	–
Locked Rotor Amperage LRA (A) for Single compressor 400 V 3-phase	32	40	46	50	59	74	101	95	111	118	118
Locked Rotor Amperage LRA (A) for Single compressor 208 V 3-phase	70	83	95	98	139	172	179	–	–	–	–
Min. chilled water flow (l/min)	100	115	132	161	175	220	245	275	310	360	420
Min. seawater flow (l/min)	80	92	100	115	140	162	180	200	240	270	325
Recommended seawater pump+	WB3000G WB3500	WB5500	WB55500	WB5500	WB5500	WB5500 WB7400	WB5500 WB7400	WB7400	WB7400 WB9800	WB7400 WB9800	WB7400 WB9800
Dimensions (L x W x H) (mm)	1,390 x 560 x 640	1,390 x 560 x 665	1,715 x 560 x 850	1,715 x 560 x 850	1,715 x 560 x 850	1,715 x 560 x 850	1,715 x 560 x 850	2,030 x 635 x 843	2,030 x 635 x 918	2,030 x 635 x 1,067	2,030 x 635 x 1,068
Dimensions (L x W x H) (inch)	54.7 x 22 x 25.2	54.7 x 22 x 26.2	67.5 x 22 x 33.5	67.5 x 22 x 33.5	67.5 x 22 x 33.5	67.5 x 22 x 33.5	67.5 x 22 x 33.5	79.9 x 25 x 33.2	79.9 x 25 x 36.1	79.9 x 25 x 42	79.9 x 25 x 42
Dimensions (L x W x H) (mm) tropical	1,390 x 560 x 665	1,390 x 560 x 665	1,715 x 560 x 850	1,715 x 560 x 850	1,715 x 560 x 850	1,715 x 560 x 850	1,715 x 560 x 850	2,030 x 635 x 843	2,030 x 635 x 1,068	2,030 x 635 x 1,068	2,030 x 635 x 1,068
Dimensions (L x W x H) (inch) tropical	54.7 x 22 x 26.2	54.7 x 22 x 26.2	67.5 x 22 x 33.5	67.5 x 22 x 33.5	67.5 x 22 x 33.5	67.5 x 22 x 33.5	67.5 x 22 x 33.5	79.9 x 25 x 33.2	79.9 x 25 x 42	79.9 x 25 x 42	79.9 x 25 x 42
Weight (kg)	190	210	285	307	339	350	350	450	670	670	725
Available options											
230 V/1-phase	□	□	□	□	–	–	–	–	–	–	–
208 V/3-phase	□	□	□	□	□	□	□	–	–	–	–
Reverse Cycle Heating	■	■	■	■	■	■	■	■	■	■	■
Cool Only version	□	□	□	–	□	□	□	□	□	□	□
Tropicalized version	□	■	□	■	□	■	□	□	□	■	□
Soft Start 400 V/230 V/208 V	□/□/–	□/□/–	□/□/–	□/–/–	□/–/–	□/–/–	□/–/–	□/–/–	□/–/–	□/–/–	□/–/–
Upgrade box/MCA Box	□	□	□	□	□	□	□	■	■	■	■
Silent Block	□	□	□	□	□	□	□	□	□	□	□

■ Standard □ Optional – Not available





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 at nominal conditions at 50 Hz

**** FLA (Full Load Amperage) is the current draw at maximum conditions

\+ Recommendation only. Pump size shall be adapted to application constraints in order to always ensure minimal sea water flow.

++ BlueCool P-Series systems are tested and approved by Webasto for 50/60 Hz operation.

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.

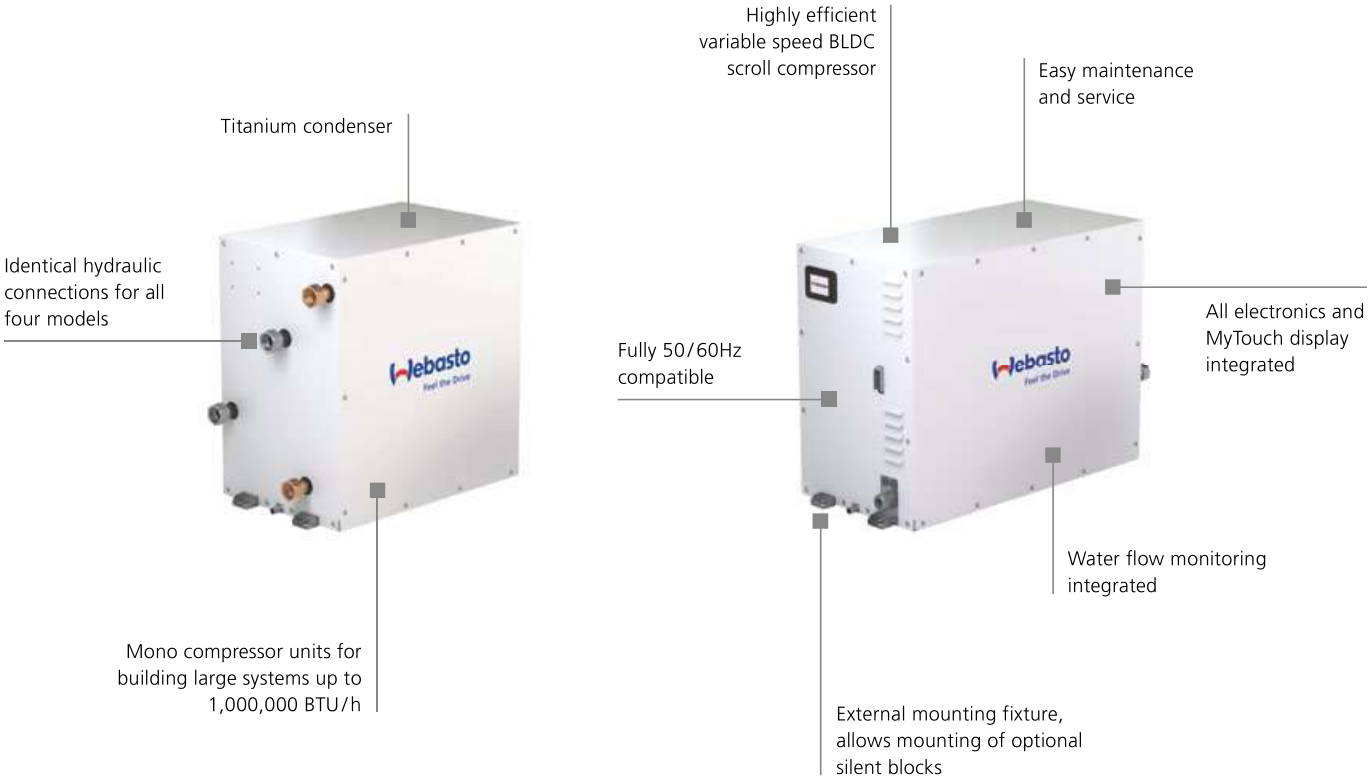
Powerful user interface
Full color touch-screen display. Fully redundant, each shows overall system data. Multiple languages.

Combination of autonomous units
Simple network cable immediately creates overall system control.

BlueCool V-PRO Series

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
Controls

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
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), (Inch)	32 1 1/4"	32 1 1/4"	32 1 1/4"	32 1 1/4"
Min. chilled water flow (l/min)	64	95	125	160
Seawater connection (mm), (Inch)	32 1 1/4"	32 1 1/4"	32 1 1/4"	32 1 1/4"
Min. seawater flow (l/min)	60	92	120	150
Dimensions unit L x D x H (mm), (Inch)	630 x 410 x 650 24.8 x 16.1 x 25.6	630 x 410 x 650 24.8 x 16.1 x 25.6	830 x 410 x 650 32.7 x 16.1 x 25.6	830 x 410 x 650 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 25.7 x 18.5 x 27.6	653 x 470 x 700 25.7 x 18.5 x 27.6	853 x 470 x 700 33.6 x 18.5 x 27.6	853 x 470 x 700 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

* BTU/h are based on 7 °C / 12 °C chilled water temperature and 30 °C / 35 °C sea water temperature.
** Amperage values for core unit at nominal conditions at 50 Hz.
++ BlueCool V-PRO Series are tested and approved for 50/60 Hz operation.

BlueCool V-PRO Series
Configuration Options

The modular design allows customers to combine several units to larger A/C systems reaching cooling capacities between 60 and 1,080 kBTU/h which covers boats between 10 and 80 m of length. The design allows to group them horizontally or vertically in order to match any cooling demand or available installation space on board.

Step 1: Choose the required number and capacity of V-PRO chiller units to achieve required cooling demand for your system.

Step 2: Add one of the Electronic boxes to the system to suit your needs. The minimum required box is the Pump Control Box. Alternatively the Remote Connection Box or one of the Master Control Boxes may be chosen.

Step 3: If the 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.

Step 4: Add preconfigured manifold sets to simplify hydraulic connections. Those are equipped with balve valves for each sea and chilled water connection to ensure easy exchange of complete units.

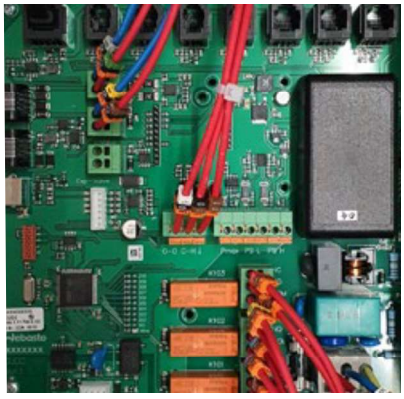
BlueCool V-PRO Series
Electronic Control Box Options

NEW

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.



BlueCool V-PRO Series
Electronic Box

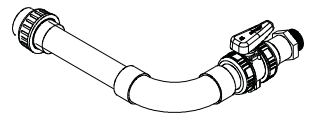
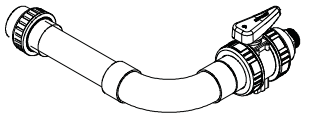
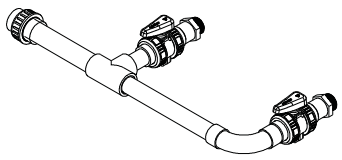
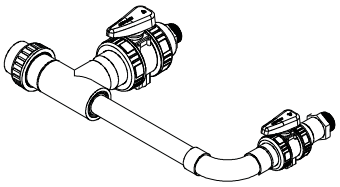
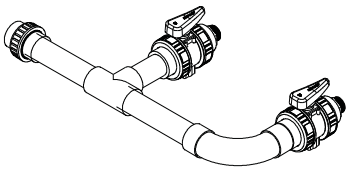
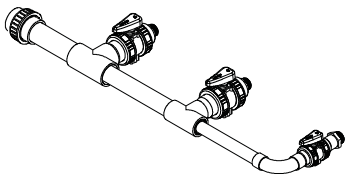
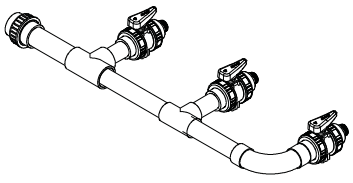
Type	Pump Control Box	Remote Connection Box	Master Control Box		
Number of V-PRO modules	1 – 6	1 – 6	1 – 2	3 – 4	5 – 6
Box					
ABS plastic	■	–	–	–	–
Steel, painted	–	■	■	■	■
Wall mounted box	–	■	■	■	■
Door locking mechanism in open position	–	–	■	■	■
Featues Electronic Box					
V-PRO Chiller electronic 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: 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 Box

NEW

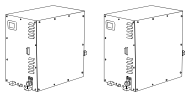
Type	V-PRO Control Boxes	Order number
V-PRO Pump Control Box	External pump Control box for easy remote connection via network cable	2510581A
V-PRO Remote Connection Box	Connect and Control your V-PRO system from any place on board. With additional MyTouch display, PCB with 3 relay output, relays for 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

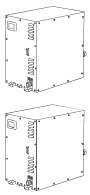
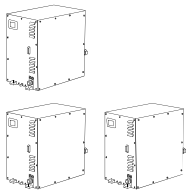
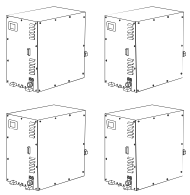
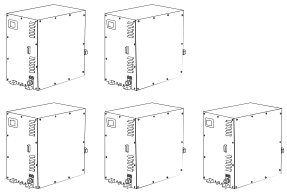
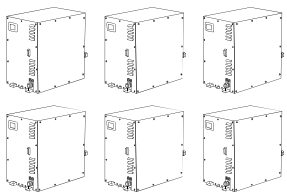
BlueCool V-PRO Series
Manifolds

Manifold Single Unit		Order number
	Manifold V-PRO 1-100* Manifold for single unit V-PRO60 M or V-PRO 90 M – 4 Connector V-PRO 1 1/4“ – 4 Ball valves 1 1/4“ – 4 Pipe (65 – 385 mm) – 4 Pipe Bend Chilled water and sea water circuit 1 1/4“ – 4 Connector Chilled water and sea water circuit 1 1/4“	2510456A
	Manifold V-PRO 1-200* Manifold for single unit V-PRO130 M or V-PRO 180 M –- 4 Connector V-PRO 1 1/4“ – 4 Ball valves 2“ – 4 Pipe (79 – 399 mm) – 4 Pipe Bend chilled water and sea water circuit 2“ – 4 Connector Chilled water and sea water circuit 2“	2510450A
Manifold Two Units		**Order number**
	Manifold V-PRO 2-110* Manifold for 2 units – combination of one unit V-PRO 60M or V-PRO90 M with one unit V-PRO 60 M or V-PRO 90M – 8 Connector V-PRO 1 1/4“ – 8 Ball valves 1 1/4“ – 4 Pipe (344 mm) – 4 Pipe (65 – 385 mm) – 4 Pipe Bend Chilled water and sea water circuit 1 1/4“ – 4 Connector Chilled water and sea water circuit 2“	2510472A
	Manifold V-PRO 2-210* Manifold for 2 units – combination of one unit V-PRO 60M or V-PRO90 M with one unit V-PRO130 M or V-PRO 180 M – 8 Connector V-PRO 1 1/4“ – 4 ball valves 1 1/4“ – 4 Ball valves 2“ – 4 Pipe 2“ (79 – 399 mm) – 4 Pipe 1 1/4“ (331 mm) – 4 Pipe Bend Chilled water and sea water circuit 1 1/4“ – 4 Connector Chilled water and sea water circuit 2“	2510478A
	Manifold V-PRO 2-220* Manifold for 2 units – combination of one unit V-PRO 130M or V-PRO180 M with one unit V-PRO130 M or V-PRO 180 M – 8 Connector V-PRO 1 1/4“ – 8 Ball valves 2“ – 4 Pipe 2“ (79 – 399 mm) – 4 Pipe 2“ (296 mm) – 4 Pipe Bend Chilled water and sea water circuit 2“ – 4 Connector Chilled water and sea water circuit 2“	2510466A
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 – 12 Connector V-PRO 1 1/4“ – 4 Ball valves 1 1/4“ – 8 Ball valves 2“ – 4 Pipe 1 1/4“ (331 mm) – 4 Pipe 2“ (377 mm) – 4 Pipe 2 1/2“ (90 – 410 mm) – 4 T-piece 2“ – 4 T-piece 2 1/2“ – 4 Pipe Bend Chilled water and sea water circuit 1 1/4“ – 4 Connector Chilled water and sea water circuit 2“	2510484A
	Manifold V-PRO 3-222* Manifold for 3 units – combination of three units V-PRO130 M or V-PRO 180 M – 12 Connector V-PRO 1 1/4“ – 12 Ball valves 2“ – 4 Pipe 2“ (270 mm) – 4 Pipe 2“ (296 mm) – 4 Pipe 2“ (377 mm) – 4 Pipe 2 1/2“ (90 – 410 mm) – 4 T-piece 2“ – 4 T-piece 2 1/2“ – 4 Pipe Bend Chilled water and sea water circuit 2“ – 4 Connector Chilled water and sea water circuit 2“	2510490A

* Please use adhesives for thermoplastic piping systems according to EN 14814 or similar. Adhesives are not included in scope of delivery.

BlueCool V-PRO Series
Rack

Number of units	Rack system V-PRO in line	Item description	Order number
2		Rack 2 x V-PRO 2-1 in line	2510525A
3		Rack 3 x V-PRO 3-1 in line	2510526A

Number of units	Rack system V-PRO on top	Item description	Order number
2		Rack 2 x V-PRO 1-2 on top	2510527A
3		Rack 4 x V-PRO 2-2 on top	2510528A
4		Rack 4 x V-PRO 2-2 on top	2510528A
5		Rack 6 x V-PRO 3-2 on top	2510529A
6		Rack 6 x V-PRO 3-2 on top	2510529A