# Instant Drain Systems

### **BlueCool A-Series**





Smart design: constant multi-directional slope.



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.

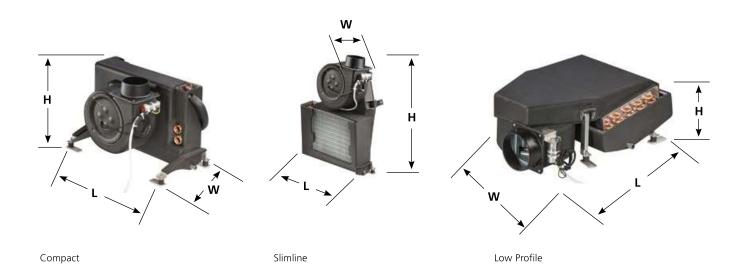
## **Cabin Controls**

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 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 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 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> With 2 m of air duct, one 90° bend, air outlet grille at 230 V, 50 Hz



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



Model Slimli			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 (-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 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 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 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



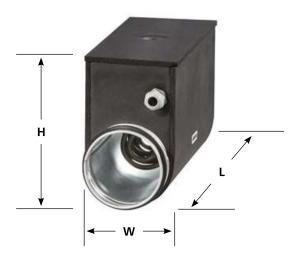
- Three possible shapes to cope with any installation demand: Compact, Slimline and Low profile
- Modular system with various options
- Innovative Webasto Instant Drain system for smart management of condensate
- High quality stainless steel condensate tray
- High performance with high cooling capacity 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

## Flectric Heat Module

Туре	EHM600W -100 mm -230 V -50/60 Hz	EHM900W -125 mm -230 V -50/60 Hz	EHM1200W -150 mm -230 V -50/60 Hz	EHM1800W -150 mm -230 V -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) to ensure full heat output	60	80	120	180
Weight (kg)	2.2	2.6	2.8	3

Compatibility	A4 Compact	A6 Compact, Slimline, Low Profile	A9 Compact, Slimline, Low Profile	Slimline,	A18 Compact, Slimline, 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

## Flow Control Valve



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

Valve with thermal actuator*	Kit Therm Valve Slimline/ Low profile A-Series with 90° elbow	Kit Therm Valve Compact 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

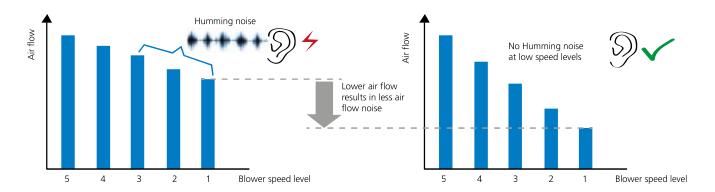
Ultimate Cabin Control – the 2 in 1 solution to provide very silent blower operation and to control a network of BlueCool A-Series air handlers.

## 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 My Touch user interface can control up to 15 Ultimate Cabin Control devices networked together in a "Master-Slave integration".



Master-Slave network

#### **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

# 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.	2510197A
		Order number
wantaman day	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.	2510198A
		Order number
0000	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.	WBCL151000C

## **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