

**Cruisair**<sup>®</sup>

by Dometic GROUP



Specification Sheets for:

**Direct Expansion Air Conditioning**  
**Tempered Water Air Conditioning**  
**Controls & Accessories**  
**Eskimo Ice Fishbox Ice Systems**

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Now Available  
With R-410A

# Stowaway Turbo Self-Contained Series

## Powerful, Quiet & Compact With No Drain Pan Worries



Photo courtesy of Cruisers Yachts

STQ16K Stowaway Turbo shown with optional sound cover



**The Stowaway Turbo series completely revolutionized self-contained cooling and heating** with the newest innovations in marine air conditioning system design.

The rust-free molded composite drain pan has three drains for the rapid removal of condensate water.

An advanced cushioning system results in significantly quieter, virtually vibration-free operation. The enclosed blower motor eliminates overhang to provide easier installation.

The Turbo series was specifically engineered to harness and maximize the impressive performance of R-410A refrigerant. Used in the HVAC industry for more than 10 years, R-410A refrigerant is proven, reliable, and complies with all EPA standards and is accepted world wide.

### Easy-to-install sound cover provides up to 50% noise reduction



Make a quiet system even quieter. These compact, easy-to-install sound covers are available for all Stowaway Turbo models.

The cover fits over the compressor, providing a 3- to 5-dB noise reduction—which is about a 50% drop in what the human ear can perceive. Installation takes just minutes and all mounting hardware is included.

### Key Benefits

- Up to 27% more energy efficient.
- Up to 21% increased capacity.
- Compact design uses less space.
- Rust-free drain pan.
- Up to 85% less standing water in drain pan.
- Reduced noise and vibration with high-velocity blowers and mounts.
- Optional sound cover further reduces compressor noise by up to 50%.
- Engineered to maximize performance of R-410A, an environmentally safe refrigerant.

### Customer comment:

"There is very little noise coming from the compressor, and vibrations are practically non-existent. I highly recommend this unit."

— Bob Silverman, owner,  
305 Bayliner Express Cruiser

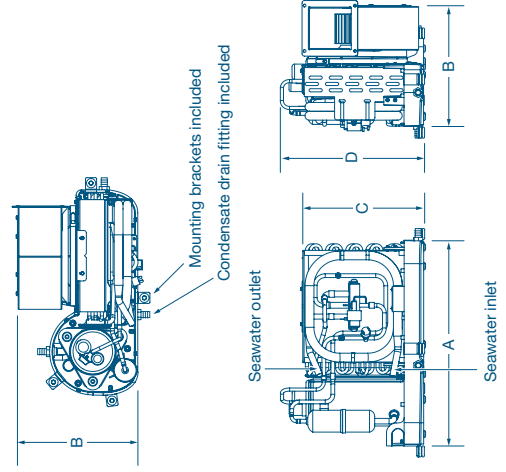
# Technical Specifications for Vector Turbo Series

Model <sup>(1)</sup>	STQ8K			STQ10K			STQ12K			STQ16K					
	6,000	8,000	10,000	115	230	240	115	230	240	115	230	240	115	230	240
Capacity (BTU/hr) <sup>(2)</sup>	115	230	240	115	230	240	115	230	240	115	230	240	115	230	240
Voltage (VAC)	60/1	60/1	50/1	60/1	60/1	50/1	60/1	60/1	50/1	60/1	60/1	50/1	60/1	60/1	50/1
Cycle (Hz)/Phase (Ph) <sup>(3)</sup>	4.60	2.20	2.70	5.50	3.10	3.20	6.70	3.30	2.90	8.70	4.00	3.30	10.40	5.10	4.60
Full Load Amps (FLA) cool	5.90	2.80	3.70	7.10	4.00	4.10	8.80	3.90	3.80	10.90	5.10	4.30	13.60	6.60	6.00
Full Load Amps (FLA) heat	0.80	0.36	0.36	1.31	0.70	0.83	1.14	0.61	0.48	1.14	0.61	0.48	1.61	0.78	0.56
Blower (FLA)	36.00	17.70	17.70	36.00	17.70	17.70	42.00	22.00	18.80	58.00	28.00	21.00	62.00	34.00	22.00
Locked Rotor Amps (Comp)	0.88	0.64	0.88	0.82	0.92	0.99	1.02	0.90	0.91	1.26	1.18	1.03	1.57	1.51	1.43
K.V.A. (Kilo-Volt-Amps)	20	11	10	21	11	11	27	16	14	34	18	14	42	20	20
Max. Circuit Breaker (Amps)	11	6	6	12	6	6	16	9	8	19	10	8	24	12	11
Min. Circuit Ampacity (Amps)	8.5/241	8.5/241	8.5/241	9.0/255	9.5/269	9.5/269	11.0/312	11.0/312	11.0/312	10.5/298	11.0/312	11.5/326	13.0/369	13.0/369	13.0/369
Refrigerant R-410A (oz/g)															
<b>Unit Dimensions (in/mm)<sup>(4)</sup></b>															
Height – Evaporator (C')	10.8/274	10.8/274	10.8/274	10.8/274	10.8/274	10.8/274	10.8/274	10.8/274	10.8/274	10.8/274	10.8/274	10.8/274	10.8/274	10.8/274	10.8/274
Height – Compressor (D')	11.1/282	11.1/282	11.1/282	11.1/282	11.1/282	11.1/282	11.1/282	11.1/282	11.1/282	11.1/282	11.1/282	11.1/282	11.1/282	11.1/282	11.1/282
Height – w/opt. Sound Cover	13.4/340	13.4/340	13.4/340	13.4/340	13.4/340	13.4/340	13.4/340	13.4/340	13.4/340	13.4/340	13.4/340	13.4/340	13.4/340	13.4/340	13.4/340
Width (A')	17.6/447	17.6/447	17.6/447	17.6/447	17.6/447	17.6/447	17.6/447	17.6/447	17.6/447	17.6/447	17.6/447	17.6/447	17.6/447	17.6/447	17.6/447
Depth (B')	10.7/272	10.7/272	10.7/272	10.7/272	10.7/272	10.7/272	10.7/272	10.7/272	10.7/272	10.7/272	10.7/272	10.7/272	10.7/272	10.7/272	10.7/272
Min. Duct Size Ø (in/mm)	4/102	4/102	4/102	4/102	4/102	4/102	4/102	4/102	4/102	4/102	4/102	4/102	4/102	4/102	4/102
Min. SA Grille (sq. in./sq. cm.)	32/206	32/206	32/206	32/206	32/206	32/206	32/206	32/206	32/206	32/206	32/206	32/206	32/206	32/206	32/206
Min. RA Grille (sq. in./sq. cm.)	64/413	64/413	64/413	64/413	64/413	64/413	64/413	64/413	64/413	64/413	64/413	64/413	64/413	64/413	64/413
Net Weight (lbs/kg)	43.4/19.7	43.4/19.7	43.4/19.7	46.7/21.2	46.7/21.2	46.7/21.2	49.6/22.5	49.6/22.5	49.6/22.5	53.0/24.0	53.0/24.0	53.0/24.0	59.6/27.0	59.6/27.0	59.6/27.0
Gross Weight (lbs/kg)	53.4/24.2	53.4/24.2	53.4/24.2	56.7/25.7	56.7/25.7	56.7/25.7	59.6/27.0	59.6/27.0	59.6/27.0	63.0/28.6	63.0/28.6	63.0/28.6	69.6/31.6	69.6/31.6	69.6/31.6

**Notes:**

- <sup>(1)</sup> Add a 'C' after the capacity designator for 230V units. Examples STQ8 = 115V, STQ8C=230V.
- <sup>(2)</sup> BTU and electrical data are based on a 45°F/7.2°C evaporator and 100°F/37.8°C condenser in cool mode, and a 45°F/7.2°C evaporator and 130°F/54.4°C condenser in heat.
- <sup>(3)</sup> 60Hz units must not operate at 50Hz and 50Hz units must not operate at 60Hz unless data plate states otherwise.
- <sup>(4)</sup> Electric box is remote mounted up to 34" (864 mm) away from compressor. Electrical box dimensions are 2.7" (69 mm) x 6.5" (165 mm) x 8.8" (224 mm).

† Refers to callouts shown in drawing below.



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 Europe & the Middle East: Call +44(0)870-330-6101  
 For all other areas visit our website to find your nearest distributor.



Dealer:

# Cuddy dc Air Conditioning Kits

## Easy & Affordable Cold Air for Smaller Cabins



Cuddy dc 3,500  
BTU/hr Kit



**The Dometic Cuddy dc is a compact 3,500 BTU/hr cool-only air conditioner designed to work with 12V power systems.** Energized by a dedicated bank of batteries and a dedicated power module (DPM), the Cuddy dc makes your small cabin a refuge from the heat and sun. Compact—about the size of a typical battery box—this low-profile unit easily fits beneath a V-berth or in a storage area below deck. The Cuddy dc uses R-134A, a globally accepted, environmentally safe refrigerant.

Your dedicated 12V DC battery bank powers the system via the Dometic DPM. Two ABYC-approved wires (sized properly for your unique installation) run from the dedicated battery bank to the DPM. Easy-to-use polarized plugs connect the DPM to the seawater pump and the Cuddy dc unit. Optional cables are available for longer runs if your setup requires more than the standard 4.5 ft. (1.37 m) cable included with the kit.

To operate the system, the Cuddy dc uses a simple two-knob mechanical control. Since it draws no power itself, the mechanical control maximizes runtime and efficiency. The Cuddy dc system (compressor, blower, and pump) draws about 29 amps of DC power under normal operating conditions. Supplemental DC power comes to you via engine power (if available) or via shore power through a battery charger.

### Key Benefits

- Designed for small cabins.
- Operates via simple 12V DC connections.
- Compact—about the size of a battery box.
- High-velocity blower with split capacitor for greater airflow.
- Stainless-steel chassis.
- Simple two-knob mechanical control maximizes efficiency and runtime.
- Minimal DC draw (about 29 DC amps total).
- No genset needed.
- Air distribution kits available.

# Technical Specifications for Cuddy dc Kits

Component	Capacity	Dimensions (in/mm)			Weight (lbs./kg.)	Refrigerant	Electrical (Compressor, Blower, and PML 150 Pump)
		Height	Width	Depth			
Cuddy dc Unit	3,500 BTU/hr	9.25/235	15.00/381	8.0/204	29.0/13.2	R-134A	~29 amps <sup>(1)</sup> (12V DC)
Dedicated Power Module (DPM)	N/A	5.13/130	10.00/254	2.67/68	3.0/1.3	—	
Control	N/A	5.50/140	3.25/83	2.75/70	—	—	
Seawater Pump	150 GPH	2.75/70	3.50/89	4.75/121	1.0/0.46	—	

Notes:  
<sup>(1)</sup> Actual load is dependent upon humidity, seawater temperature, battery condition, voltage, and electrical connections.

## Cuddy dc Kits & Accessories

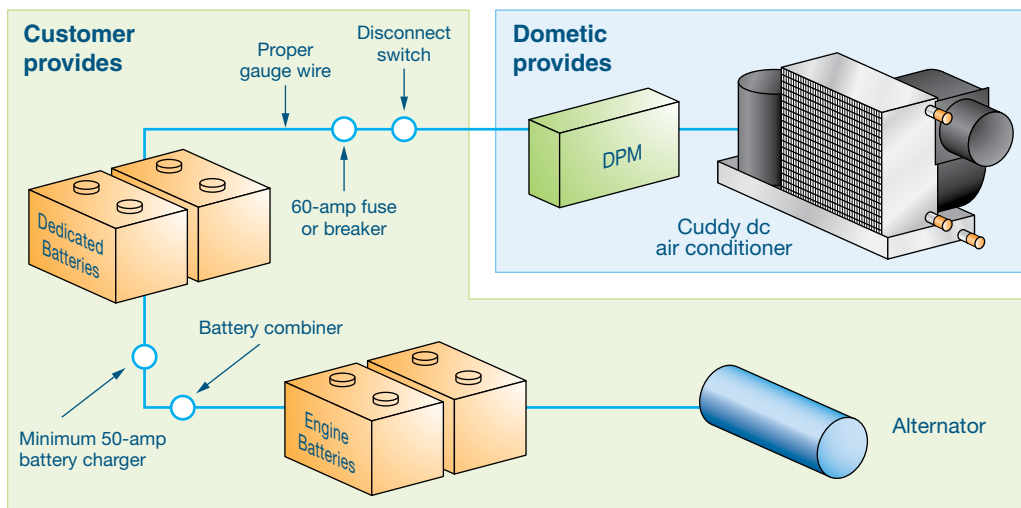
Cuddy dc – 12V DC system	Cooling-only unit, DPM, 150 GPH seawater pump, control, polarized plugs
Extension cable	DPM to Unit - 10' (3m)
Extension cable	DPM to Unit - 20' (6m)
Extension cable	PLM 250 to Unit - 10' (3m)
Air Distribution Kit – Black	3" discharge grille - black; 8" X 8" (204mm X 204mm) return grille; 10' (3m) of 3" duct
Air Distribution Kit – White	3" discharge grille - white; 8" X 8" (204mm X 204mm) return grille; 10' (3m) of 3" duct

### Dedicated Power Module

Our Cuddy dc kit includes a Dedicated Power Module (DPM) that has been Dometic-tested to handle the air conditioning load.

### Batteries & Battery Charger

You must provide the right type of batteries and the right type of battery charger. Use only Deep-Cycle AGM or Gel-Cell batteries. (Do not use Wet-Cell batteries.) The battery charger must be rated for the type of battery you use. The Cuddy dc requires a dedicated battery bank. To maximize run-time, we recommend using at least two batteries in the bank. (The more cells, the longer the runtime.) All batteries used must be of the same type (either all AGM or all Gel Cell), the same capacity, and the same age.



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Environmentally Responsible

Dealer:

# Keep Cool On Deck With The Breeze

## For Flybridge, Cockpit & On-Deck Installations



SXL16 self-contained model

**The Breeze delivers high-velocity cold air (or HOT!) onto the bridge, cockpit, or deck using an innovative horizontal compressor.** The 16,000 BTU/hr. self-contained package stands just eight inches (203 mm) high and is easily ducted to confined spaces like flybridge dashboards and consoles.

The Breeze air conditioning systems use R-410A, an environmentally safe refrigerant with exceptional thermodynamic properties that maximize system efficiency.

Also available is a 16,000 BTU/hr. evaporator connected to a remote condensing unit below decks.

All The Breeze systems are reverse-cycle, blowing warm air on chilly days, thereby extending your cruising season. All units are designed for easy, professional installation on new boats and older vessels.

The Breeze features an oversized four-row evaporator coil for excellent heat removal under low fan-speed conditions. A highly efficient blower reduces power consumption, and the blower flows to two outlets.

### Key Benefits

- Innovative horizontal compressor requires only 8 in. (203 mm) of height for installation.
- 16,000 BTU/hr. in a high-velocity unit.
- Highly-efficient dual blowers.
- Flybridge, cockpit and on-deck installations.
- Environmentally safe R-410A refrigerant.
- 304-grade stainless-steel drain pan for long service life.
- Stainless-steel condensate drains for excellent water removal.
- Condensate under evaporator to minimize sloshing and remove water rapidly.
- Remote electrical box with 5 ft. (1.52 m) harness.
- Special corrosion-resistant coating on blower and housing.
- Oversized four-row evaporator coil for excellent heat removal under low fan-speed conditions.

# Technical Specifications for R-410A The Breeze Systems

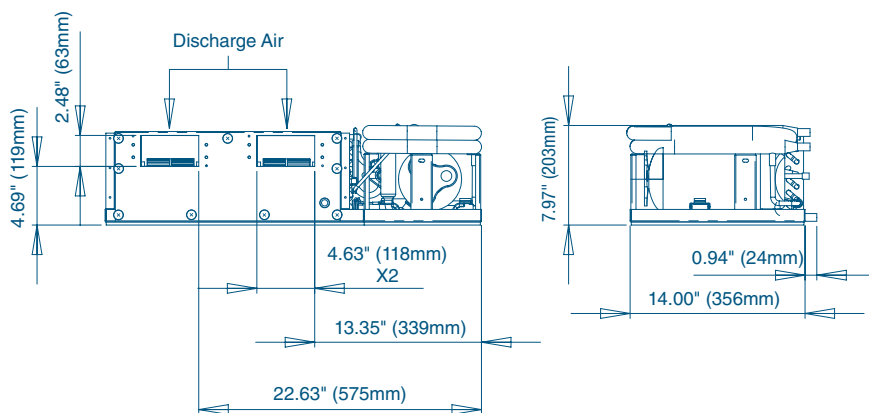
Unit Type	Self-Contained Units			Split Evaporator	
Capacity (BTU/hr.) <sup>(1)</sup>	16,000			16,000	
Model Number	SLQ16K	SLQ16C	SLQ16CK	EDLE16-115V	EDLE16-230V
Voltage (VAC)	115	230	240	115	230
Cycle (Hz)/Phase (Ph) <sup>(2)</sup>	60/1	60/1	50/1	60/1	60/1 & 50/1
Blower Amps	2.00	0.86	0.62	2.00	0.86 @ 230V/60Hz 0.62 @ 230V/50Hz
Full Load Amps (FLA) cool	11.0	4.7	4.5	N/A	
Full Load Amps (FLA) heat	14.2	6.2	5.8	N/A	
Locked Rotor Amps (Comp)	61	29	26	N/A	
K.V.A. (Kilo-Volt-Amps)	1.63	1.42	1.40	0.23	0.20
Max. Circuit Ampacity (Amps)	35	20	20	5	4
Min. Circuit Ampacity (Amps)	23	14	13	3	2
Refrigerant R-410A (oz/g)	16.0/454	15.0/425	15.5/439	N/A	N/A
Dimensions (in/mm)					
Height	8.00/203			7.40/188	
Width	30.25/768			22.25/566	
Depth	14.00/356			11.00/280	
Min. Duct Size Ø	7.0/178			7.0/178	
Min. SA Grille (sq. in./cm.)	80/516			80/516	
Min. RA Grille (sq. in./cm.)	160/1032			160/1032	
Net Weight (lbs/kg)	70/154			19/9	
Gross Weight (lbs/kg)	80/176			29/13	

<sup>(1)</sup> BTU and electrical data are based on a 45°F (7.2°C) evaporator and 100°F (37.8°C) condenser in cool mode, and a 45°F (7.2°C) evaporator and 130°F (54.4°C) condenser in heat mode.  
<sup>(2)</sup> Note: 60Hz units must not operate at 50Hz and 50Hz units must not operate at 60Hz unless data plate says otherwise.

### Available Custom Air Flow Accessories:

- #229000005 PLNM AMN RA VLD16/2@5" Side Discharge Plenum
- #229000006 PLNM AMN RA VLD16/2@5" Upward Discharge Plenum
- #229000007 PLNM AMN RA VLD16/2@5" Downward Discharge Plenum
- #228700089 Ring ABS trans 5"-OB Short Flange

### Dimensions for The Breeze Self-Contained



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Environmentally Responsible

Dealer:



# R-410A Stowaway Air Conditioning

## 18K & 27K BTU/hr Self-Contained Systems

Photo courtesy of Cruisers Yachts



SQUF27C shown

### The Stowaway series of self-contained marine air conditioners offers 18K and 27K BTU/hr of cooling and heating.

These high-capacity units were engineered to harness and maximize the impressive performance of environmentally safe R-410A refrigerant. Used in the HVAC industry for more than 10 years, R-410A refrigerant is proven and reliable, and complies with all EPA standards and is accepted worldwide.

All models offer direct expansion operation in a compact, low-profile unit, with a seawater-cooled condenser and choice of controls. Stowaway units are designed for installation under a settee or berth, in a locker or cabinet, or other convenient location.

Stowaway systems feature high-velocity (HV) blowers. All blowers are insulated to prevent secondary condensation, and are fully rotatable for flexibility during installation.

### Key Benefits

- Compact design reduces unit size by up to 25% of the original Vector Rotary's size.
- High-velocity, fully-insulated blowers.
- Fully rotatable blowers.
- Patented design increases cooling capacity and dehumidification.
- Unique compressor and reversing valve mounting reduces vibration.
- Electrical box installed on unit within footprint dimensions eliminates additional installation labor and space requirements.
- High-efficiency rotary (18K) and scroll (27K) compressors are quiet and more reliable.
- Condenser coil's cupronickel-encased copper shell provides maximum heat transfer and high corrosion resistance.
- Evaporator coil employs an enhanced fin design and rifled copper tubing to provide maximum capacity.

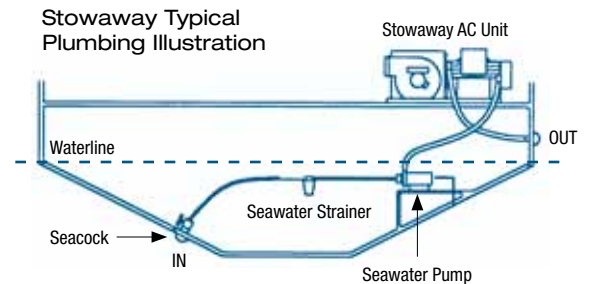
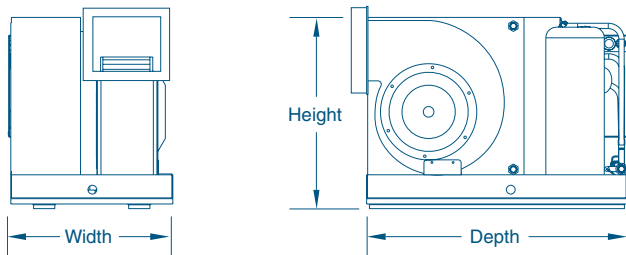
# Technical Specifications for R-410A Stowaway Self-Contained Series

Model <sup>(1)</sup>	SQUF18*/410A			SQUF27*/410A	
Capacity BTU/hr <sup>(2)</sup>	18,000			27,000	
Voltage (VAC)	115	208-230	220-240	208-230	220-240
Cycle (Hz)/Phase (Ph) <sup>(3)</sup>	60/1	60/1	50/1	60/1	50/1
Full Load Amps (FLA) Cool	11.1	6.1	5.5	7.9	9.0
Full Load Amps (FLA) Heat	15.1	8.0	6.8	11.1	12.6
Locked Rotor Amps (Comp)	66.0	32.0	26.0	58.3	61.0
Kilo-Volt-Amps (KVA)	1.8	1.9	1.6	2.6	3.1
Max. Circuit Breaker (Amps)	45.0	20.0	20.0	45.0	45.0
Min. Circuit Ampacity (Amps)	27.0	12.0	12.0	27.0	26.0
R-410A Refrigerant (oz/kg)	17.0/0.482		16.5/0.468	23.5/667.0	23.0/652.0
Height – Evaporator (in/mm)	14.00/356			18.00/457	
Height – Blower (in/mm) <sup>(4)</sup>	15.50/394			19.25/489	
Width (in/mm)	12.00/305			15.25/387	
Depth (in/mm)	21.00/533			24.75/629	
Motor Overhang (in/mm)	1.00/25 <sup>(5)</sup>			N/A	
Min. Duct Size Ø (in/mm)	7.00/178			8.00/203	
Min. Supply Grille (in <sup>2</sup> /cm <sup>2</sup> )	100.00/645			140.00/903	
Min. Return Grille (in <sup>2</sup> /cm <sup>2</sup> )	200.00/1290			240.00/1548	
Net Weight (lbs/kg)	63.8/28.9			120.0/54.4	
Gross Weight (lbs/kg)	73.0/33.1			130.0/58.9	

- Notes:
- <sup>(1)</sup> SQUF units indicate Q-Logic control; SXUF units come with SMXII control; SHUF units have a 3-knob mechanical control.
  - <sup>(2)</sup> BTU and electrical data are based on a 45°F/7.2°C evaporator and 100°F/37.8°C condenser in cool mode, and a 45°F/7.2°C evaporator and 130°F/54.4°C condenser in heat.
  - <sup>(3)</sup> 60Hz units must not operate at 50Hz and 50Hz units must not operate at 60Hz unless data plate states otherwise.
  - <sup>(4)</sup> Height with blower in the horizontal position. Overall height can be reduced by rotating blower downward.
  - <sup>(5)</sup> Motor is inside blower on HV units. However, allow 1.00"/25mm for blower ring flange on that side.

### Interpreting Model Numbers

S	Q	U	F	24	C
StowAway	Control Q: Q-Logic Control X: SMXII Control H: 3-knob Control	High-Efficiency "HV" Blower	Compact "F" Type	Capacity (x 1000 BTU/hr)	Power No Letter: 115V/60Hz C: 230V/60Hz CK: 240V/50Hz



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Environmentally  
Responsible

Dealer:

# Emerald Condenser 6K-16K Series

## Innovative Chassis Conquers Installation Challenges

Photo courtesy of Viking Yachts



EQ12 shown

**After listening to boat builders, global service teams and boat owners, Dometic engineers designed a totally innovative Emerald Condenser series to harness and maximize the impressive performance of R-410A refrigerant while meeting all international clean air standards.**

The increase in BTU capacity is due primarily to the improved refrigerant metering design. The bi-flow thermal expansion valve for cooling provides up to a 14% increase in system capacity, which, when combined with a separate metering system for heating, attains an increase of up to 10% in heating performance. The amperage reduction of up to 27% is due to the more efficient design of the rotary compressor and properly sized refrigerant components.

The Emerald Condenser has a minimized footprint. This compact design incorporates built-in isolation, two large drain connections and numerous mounting options for installation to a smooth deck, stringer or existing rack. The incorporated lifting handles and smooth bottom allows for easy lifting and quick placement of the unit. The molded composite no-rust drain pan is shaped to provide positive drainage even when the boat heaves and rolls. The amount of standing water in the drain pan is reduced by up to 85%, which is 8x times less than a typical drain pan.

The condensing unit provides quick and easy installation. The drain, seawater and refrigerant connections are conveniently located to conquer installation challenges thus reducing installation time by up to fifteen minutes. The electrical box can be easily removed and located up to 5 ft. (1.5 m) away, further reducing the size of the unit while making the system more accessible. The reversing valve, pressure switches and service ports are centrally located, high on the unit for access from any side.

### Key Benefits

- Up to 17.5% increase in BTU capacity.
- Up to 41% amperage reduction.
- Up to 32% reduced start-up amps.
- Up to 16% smaller.
- Up to 25% lighter.
- Up to 85% reduction in condensate in the drain pan.
- Up to 15 minutes faster to install.
- Square chassis for easy installation in tight locations.
- Three mounting options adapt to installation environments.
- Composite drain pan will not rust.
- Reconfigurable chassis allows optimal drain connection locations.
- Built-in refrigerant-line filter drier reduces installation time and protects compressor from moisture and contaminants.
- High-performance engineering maximizes the efficiency of R-410A refrigerant.
- Available in capacities ranging from 6K to 48K BTU/hr.

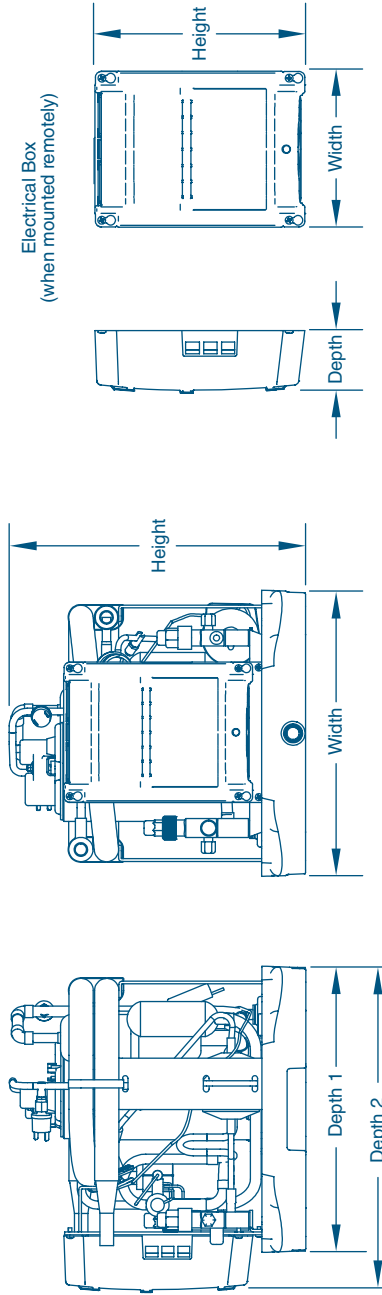
# Technical Specifications for Emerald Condenser 6K-16K Series

Model <sup>(1)</sup>	EQ6			EQ8			EQ10			EQ12			EQ16		
	115/60/1	230/60/1	240/50/1	115/60/1	230/60/1	240/50/1	115/60/1	230/60/1	240/50/1	115/60/1	230/60/1	240/50/1	115/60/1	230/60/1	240/50/1
Capacity (BTU/Hr)	6,000	8,000	10,000	10,000	12,000	16,000	12,000	16,000	20,000	24,000	30,000	12,000	16,000	20,000	24,000
Power (Volt/Hz/Ph)	3.8	1.8	2.4	4.2	2.4	2.4	5.6	2.6	2.4	2.4	2.8	3.4	8.8	4.3	4.0
Full Load Amps (FLA) – Cool	5.1	2.4	3.3	5.8	3.3	3.3	7.7	3.3	3.3	3.8	3.8	4.5	12.0	5.8	5.3
Full Load Amps (FLA) – Heat	36.0	17.7	17.7	36.0	17.7	17.7	42.0	22.0	18.8	21.0	21.0	28.0	62.0	34.0	22.0
Locked Rotor Amps	20.0	10.0	10.0	20.0	10.0	10.0	30.0	10.0	10.0	10.0	10.0	15.0	45.0	15.0	15.0
Max. Circuit Breaker (Amps)	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
Refrigerant Type	1.5/5.7	2.0/7.6	2.5/9.5	2.5/9.5	2.5/9.5	2.5/9.5	2.5/9.5	2.5/9.5	2.5/9.5	2.5/9.5	2.5/9.5	2.5/9.5	2.5/9.5	2.5/9.5	2.5/9.5
Seawater Flow (gpm/lpm)	Unit Dimensions (in/mm)														
Height	12.0/305	13.0/330	13.0/330	13.0/330	13.0/330	13.0/330	13.0/330	13.0/330	13.0/330	13.0/330	13.0/330	13.0/330	13.0/330	13.0/330	13.0/330
Width	13.3/338	13.3/338	13.3/338	13.3/338	13.3/338	13.3/338	13.3/338	13.3/338	13.3/338	13.3/338	13.3/338	13.3/338	13.3/338	13.3/338	13.3/338
Depth 1 <sup>2</sup>	15.1/384	15.1/384	15.1/384	15.1/384	15.1/384	15.1/384	15.1/384	15.1/384	15.1/384	15.1/384	15.1/384	15.1/384	15.1/384	15.1/384	15.1/384
Depth 2 (w/elec. box) <sup>3</sup>	Connections Ø														
Sea Water (in. and type)	5/8" hose clamp	5/8" hose clamp	5/8" hose clamp	5/8" hose clamp	5/8" hose clamp	5/8" hose clamp	5/8" hose clamp	5/8" hose clamp	5/8" hose clamp	5/8" hose clamp	5/8" hose clamp	5/8" hose clamp	5/8" hose clamp	5/8" hose clamp	5/8" hose clamp
Discharge	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
Suction	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Net Weight	43.0/19.5	43.0/19.5	43.0/19.5	43.0/19.5	43.0/19.5	43.0/19.5	43.0/19.5	43.0/19.5	43.0/19.5	43.0/19.5	43.0/19.5	43.0/19.5	43.0/19.5	43.0/19.5	43.0/19.5
Gross Weight	50.0/22.7	50.0/22.7	50.0/22.7	50.0/22.7	50.0/22.7	50.0/22.7	50.0/22.7	50.0/22.7	50.0/22.7	50.0/22.7	50.0/22.7	50.0/22.7	50.0/22.7	50.0/22.7	50.0/22.7
Weights (lbs./kg.)															

Notes:

- <sup>(1)</sup> EO models have a O-Logic control. For units with a mechanical control, replace the "Q" with "M", e.g. "EM16".
- <sup>(2)</sup> Actual unit depth when electrical box is mounted remotely.
- <sup>(3)</sup> Combined depth of unit and electrical box, as shown in the drawing below.

\* Please refer to spec sheet L-2702B for the Emerald Condenser 24K-48K Series.



Electrical Box Dimensions (in/mm)

Height	Width	Depth
8.75/222	6.50/165	2.63/67

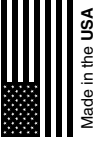
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L-2702A Rev. 20100604

Specifications and availability subject to change without notice.



Dealer:

# Emerald Condenser Multi-Ton Series

## Innovative Chassis Conquers Installation Challenges

**NEW!**



EQ30 shown

**After listening to boat builders, global service teams and boat owners, Dometic engineers designed a totally innovative Emerald Condenser series to harness and maximize the impressive performance of R-410A refrigerant while meeting all international clean air standards.**

The Emerald Condenser has a minimized footprint. This compact design incorporates built-in isolation, two large drain connections and numerous mounting options for installation to a smooth deck, stringer or existing rack. The incorporated lifting handles and smooth bottom allows for easy lifting and quick placement of the unit. The molded composite no-rust drain pan is shaped to provide positive drainage even when the boat heaves and rolls. The amount of standing water in the drain pan is reduced by up to 85%, which is 8x times less than a typical drain pan.

The condensing unit provides quick and easy installation. The drain, seawater and refrigerant connections are conveniently located to conquer installation challenges thus reducing installation time by up to fifteen minutes. The electrical box can be removed and located up to 5 ft. (1.5 m) away, further reducing the size of the unit while making the system more accessible. The reversing valve, pressure switches and service ports are centrally located, high on the unit for access from any side.

### Key Benefits

- Up to 85% reduction in condensate drainage.
- Up to 15 minutes faster to install.
- Reduced amps.
- Square chassis for easy installation in tight locations.
- Three mounting options adapt to installation environments.
- Composite drain pan will not rust.
- Built-in refrigerant-line filter drier reduces installation time and protects compressor from moisture and contaminants.
- High-performance engineering maximizes the efficiency of R-410A refrigerant.
- Available in 11 capacities from 6K to 72K BTUs/hr. (For 6K-16K data, please refer to specification sheet L-2702A.)

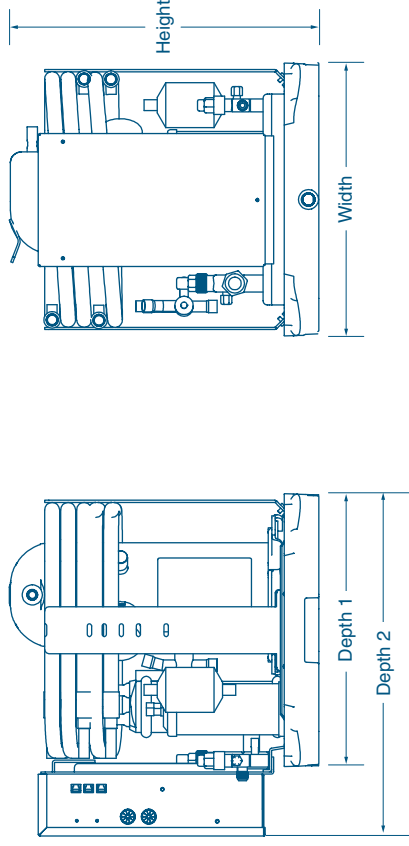
# Technical Specifications for Emerald Condenser Multi-Ton Series

Model <sup>(1)</sup>	E024				E030				E036				E048				E060				E072							
	230	240	240	230	230	240	240	230	230	240	240	230	230	240	240	230	230	240	240	230	230	240	240	230	230	240	240	230
Capacity (BTU/Hr) <sup>(2)</sup>	24,000				30,000				36,000				48,000				60,000				72,000							
Voltage (VAC)	60/1				60/3				60/3				60/3				60/3				60/3							
Cycle (Hz)/Phase (Ph) <sup>(3)</sup>	6.3				6.3				6.3				6.3				6.3				6.3							
Full Load Amps (FLA) – Cool	7.8				7.3				7.3				7.3				7.3				7.3							
Full Load Amps (FLA) – Heat	8.6				8.0				8.0				8.0				8.0				8.0							
Locked Rotor Amps (Comp)	43.0				48.0				48.0				48.0				48.0				48.0							
K.V.A. (Kilo-Volt-Amps)	1.79				2.06				2.06				2.06				2.06				2.06							
Max. Circuit Breaker (Amps)	30				32				32				32				32				32							
Min. Circuit Ampacity (Amps)	20				20				20				20				20				20							
Refrigerant R-410A (oz/g) <sup>(4)</sup>	42/1191				48/1361				56/1588				64/1814				70/1984				76/2155							
<b>Unit Dimensions (in/mm)</b>																												
Height	18.0/457				18.0/457				18.0/457				18.0/457				18.0/457				18.0/457				18.0/457			
Width	16.0/406				16.0/406				16.0/406				16.0/406				16.0/406				16.0/406				16.0/406			
Depth 1	16.0/406				16.0/406				16.0/406				16.0/406				16.0/406				16.0/406				16.0/406			
Depth 2 <sup>(5)</sup>	18.8/478				18.8/478				18.8/478				18.8/478				18.8/478				18.8/478				18.8/478			
<b>Connections</b> ∅																												
Refrigerant Line – Discharge	3/8"				3/8"				3/8"				3/8"				3/8"				3/8"				3/8"			
Refrigerant Line – Suction	5/8"				3/4"				3/4"				3/4"				3/4"				3/4"				3/4"			
<b>Estimated Weights</b>																												
Net Weight (lbs/kg)	110/50.0				115/52.3				120/54.5				135/61.4				150/68.2				165/75.0				170/77.3			
Gross Weight (lbs/kg)	125/56.8				130/59.1				135/61.4				150/68.2				165/75.0				170/77.3							

**Notes:**

- <sup>(1)</sup> EO units have a Q-Logic control. For units with a mechanical control, replace the "Q" with "M", e.g. "EM24".
- <sup>(2)</sup> BTU and electrical data are based on a 45°F/7.2°C evaporator and 100°F/37.8°C condenser in cool mode, and a 45°F/7.2°C evaporator and 130°F/54.4°C condenser in heat.
- <sup>(3)</sup> 60Hz units must not operate at 50Hz and 50Hz units must not operate at 60Hz unless data plate says otherwise.
- <sup>(4)</sup> Refrigerant charges shown are for R-410A.
- <sup>(5)</sup> Combined depth of unit and electrical box, as shown in the drawing below. For remote mounting, the electrical box dimensions are 13.25" high X 7.75" wide X 3.75" deep (337 mm X 197 mm X 95 mm).

\* Please refer to spec sheet L-2702A for the Emerald Condenser 6K-16K Series.



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Dealer:

**NEW!**

# TurboVap DX Evaporator Series

## Reduced Size, Noise & Amperage



TV12-230V shown



**Cruisair's TurboVap Series of direct expansion (DX) split-system evaporators is based on the revolutionary engineering advancements of the award-winning Turbo self-contained air conditioning system.** Featuring a rust-free molded composite drain pan, condensate water is rapidly removed at one of two easy-to-plumb drain locations. The pan also has innovatively designed anti-slosh ridges and "positive flow" channels to ensure condensate does not spill even in the roughest seas.

For improved installation ease and flexibility, the enclosed blower motor eliminates overhang and the blower can be rotated 270° with a single adjustment screw. The unit's unique inlet ring is designed to optimize air flow and ensure that the height of the unit does not increase when the blower rotates. The fully insulated, high-velocity blowers are quiet and efficient.

Experience better noise reduction with the TurboVap Series' built-in cushioning system which minimizes vibration to the deck. Additionally, the innovative mounting clips utilize vibration isolators.

TurboVap units can be paired with condensers that use either R-22 or R-417A refrigerants. See the Emerald Series of TurboVaps and condensers for a complete split system that uses R-410A refrigerant.

*Rust-free molded composite drain pan reduces standing water – 2 oz. (59 ml) vs. 16 oz. (473 ml) in ordinary pans. Innovatively engineered "positive flow" drain channels prevent the sloshing and spilling of condensate — even in the roughest seas.*



### Key Benefits

- Up to 28% reduced amperage.
- Up to 85% reduction of standing water in the drain pan.
- Up to 14% increase in cooling capacity.
- Up to 15% reduced weight.
- Up to 17% reduction in height.
- Up to 19% increased air flow CFM.
- Positive-flow, anti-slosh, rust-free drain pan ensures condensate does not spill.
- Installation time reduced by 15 minutes.
- Single screw for 270° blower rotation.
- No blower-motor overhang reduces depth.
- Vibration-isolation mounting system reduces noise.
- Available in 4K, 6K, 8K, 10K, 12K, and 16K BTU/hr capacities.
- 115V or 230V models.
- Pair with R-22 or R-417A condensing units.

ISO 9001:2008

L-2695A Rev. 20090904

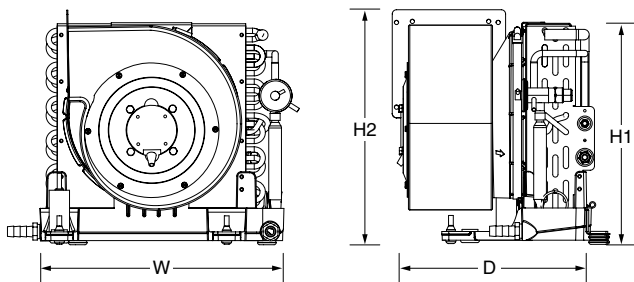
**Cruisair**<sup>®</sup>  
by Dometic GROUP

# Technical Specifications for TurboVap DX Evaporators

Model <sup>(1)</sup>	TV4		TV6		TV8		TV10		TV12		TV16	
Capacity BTU/hr	4,000		6,000		8,000		10,000		12,000		16,000	
Voltage (VAC) @ 50-60Hz/1 Ph	115	230	115	230	115	230	115	230	115	230	115	230
Full Load Amps Blower (FLA)	0.8	0.41	0.8	0.41	1.56	0.83	1.14	0.61	1.14	0.61	1.61	0.78
K.V.A. (Kilo-Volt-Amps)	0.09	0.09	0.09	0.09	0.18	0.19	0.13	0.14	0.13	0.14	0.19	0.18
Suggested Circuit Breaker (Amps)	2.0	1.0	2.0	1.0	4.0	2.0	3.0	1.0	3.0	1.0	4.0	2.0
<b>Unit Dimensions (in/mm)</b>												
Height – Evaporator (H1)	10.8/274		10.8/274		10.8/274		12.6/320		12.6/320		13.0/330	
Height – Blower (H2) <sup>(2)</sup>	10.2/259		10.2/259		11.4/290		12.4/315		12.4/315		13.6/345	
Width	12.3/312		12.3/312		12.3/312		14.3/363		14.3/363		14.3/363	
Depth	9.5/241		9.5/241		9.4/239		10.4/264		10.4/264		11.6/295	
Min. Duct Size Ø	4.0/102		4.0/102		5.0/127		6.0/152		6.0/152		7.0/178	
Min. Supply Air Grille (sq. in./cm.)	32/206		32/206		48/310		60/387		70/452		81/523	
Min. Return Air Grille (sq. in./cm.)	64/413		64/413		80/516		110/710		130/839		160/1032	
Net Weight (lbs./kg.)	10.5/4.8		11.0/5.0		14.0/6.4		17.5/7.9		17.5/7.9		20.5/9.3	
Gross Weight (lbs./kg.)	18.5/8.4		19.0/8.6		22.0/10.0		25.5/11.6		25.5/11.6		28.5/12.9	

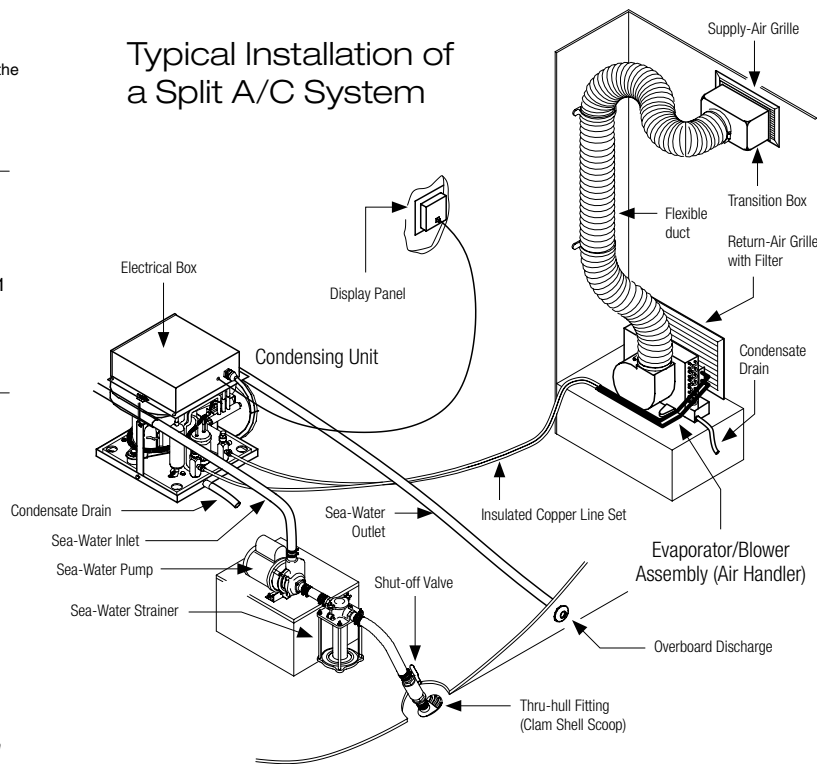
**Notes:**

- <sup>(1)</sup> End all model numbers with a '115V' or '230V' depending on the selected voltage.
- <sup>(2)</sup> Add 2.0"/51mm to the height dimension to allow for the duct ring (not included) when the blower is installed in the vertical position.



TurboVap 12K unit shown with optional lineset extensions.

## Typical Installation of a Split A/C System



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Environmentally Responsible

Dealer:



**NEW!**

# Emerald TurboVap DX Series

## Reduced Size, Noise & Amperage



TVE12-230V shown



**The Emerald TurboVap series of split-system evaporators incorporates revolutionary design features with mechanical engineering that maximizes the effectiveness of R-410A, an environmentally safe refrigerant.**

Emerald TurboVaps are easy to install. For ideal positioning, the high-velocity blower can rotate up to 270 degrees with a single adjustment screw. The enclosed motor means no blower-motor overhang for a compact design.

Since evaporators are usually positioned in or near cabins, noise is always a concern. The Emerald TurboVap uses a vibration-isolation mounting system to minimize noise, so the evaporator runs more quietly. The fully insulated, high-velocity blowers are quiet and efficient.

Excellent condensate drainage is achieved with a unique positive-flow, anti-slosh, composite drain pan that is rust-free. Condensate water is rapidly removed at one of two easy-to-plumb drain locations.

The Emerald TurboVap Series was designed to operate as a system with the Emerald Condenser Series. Both of these split-system components were engineered to harness and maximize the superior thermodynamic properties of the environmentally safe R-410A refrigerant.

The Emerald TurboVap is available in six capacities ranging from 4,000 to 16,000 BTU/hr.

*Rust-free molded composite drain pan reduces standing water – 2 oz. (59 ml) vs. 16 oz. (473 ml) in ordinary pans. Innovatively engineered “positive flow” drain channels prevent the sloshing and spilling of condensate — even in the roughest seas.*



### Key Benefits

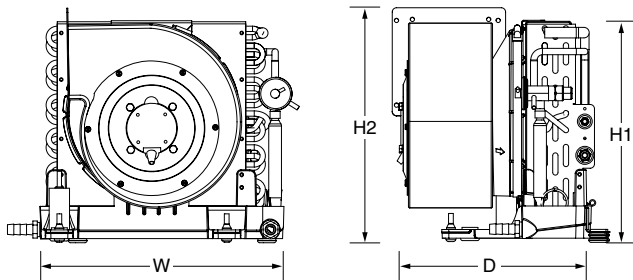
- Up to 28% reduced amperage.
- Up to 85% reduction of standing water in the drain pan.
- Up to 14% increase in cooling capacity.
- Up to 15% reduced weight.
- Up to 17% reduction in height.
- Up to 19% increased air flow CFM.
- Positive-flow, anti-slosh, rust-free drain pan ensures condensate does not spill.
- Installation time reduced by 15 minutes.
- Single screw for 270° blower rotation.
- No blower-motor overhang reduces depth.
- Vibration-isolation mounting system reduces noise.
- Pair it with an Emerald Condenser for maximum performance.
- Available in 4K, 6K, 8K, 10K, 12K, and 16K BTU/hr capacities.
- 115V or 230V models.
- Engineered to maximize thermodynamic properties of R-410A, an environmentally safe refrigerant.

# Technical Specifications for Emerald TurboVap DX Evaporators

Model <sup>(1)</sup>	TVE4		TVE6		TVE8		TVE10		TVE12		TVE16	
Capacity BTU/hr	4,000		6,000		8,000		10,000		12,000		16,000	
Voltage (VAC) @ 50-60Hz/1 Ph	115	230	115	230	115	230	115	230	115	230	115	230
Full Load Amps Blower (FLA)	0.8	0.41	0.8	0.41	1.56	0.83	1.14	0.61	1.14	0.61	1.61	0.78
K.V.A. (Kilo-Volt-Amps)	0.09	0.09	0.09	0.09	0.18	0.19	0.13	0.14	0.13	0.14	0.19	0.18
Suggested Circuit Breaker (Amps)	2.0	1.0	2.0	1.0	4.0	2.0	3.0	1.0	3.0	1.0	4.0	2.0
<b>Unit Dimensions (in/mm)</b>												
Height – Evaporator (H1)	10.8/274		10.8/274		10.8/274		12.6/320		12.6/320		13.0/330	
Height – Blower (H2) <sup>(2)</sup>	10.2/259		10.2/259		11.4/290		12.4/315		12.4/315		13.6/345	
Width	12.3/312		12.3/312		12.3/312		14.3/363		14.3/363		14.3/363	
Depth	9.5/241		9.5/241		9.4/239		10.4/264		10.4/264		11.6/295	
Min. Duct Size Ø	4.0/102		4.0/102		5.0/127		6.0/152		6.0/152		7.0/178	
Min. Supply Air Grille (sq. in./cm.)	32/206		32/206		48/310		60/387		70/452		81/523	
Min. Return Air Grille (sq. in./cm.)	64/413		64/413		80/516		110/710		130/839		160/1032	
Net Weight (lbs./kg.)	10.5/4.8		11.0/5.0		14.0/6.4		17.5/7.9		17.5/7.9		20.5/9.3	
Gross Weight (lbs./kg.)	18.5/8.4		19.0/8.6		22.0/10.0		25.5/11.6		25.5/11.6		28.5/12.9	

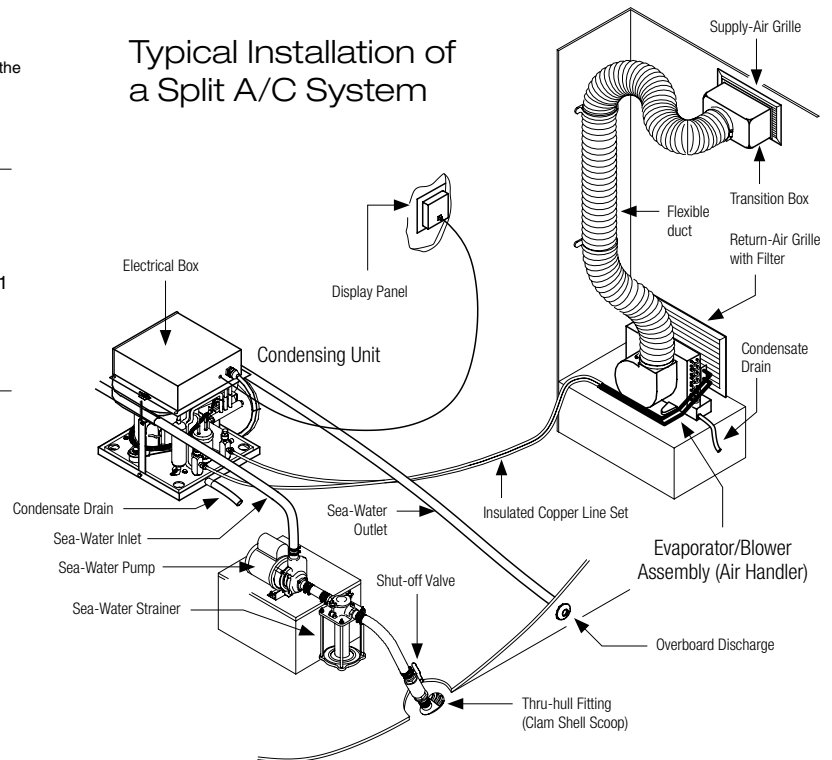
**Notes:**

- <sup>(1)</sup> End all model numbers with a '115V' or '230V' depending on the selected voltage.
- <sup>(2)</sup> Add 2.0"/51mm to the height dimension to allow for the duct ring (not included) when the blower is installed in the vertical position.



*Emerald 12K unit shown with optional lineset extensions.*

## Typical Installation of a Split A/C System



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# R Type Condensing Units

## 5K to 16K BTU/hr Capacity Range



RX12 condensing unit shown



**R Type remote condensing units are the next generation of seawater-cooled, reverse-cycle heat pumps for cooling and heating in marine applications.** Small R Type units are available in capacities from 5,000 to 16,000 BTU/hr.

These condensing units can be installed with up to two Cruisair cooling units, where the total capacity is equal to the condensing unit capacity. In the cooling mode, full performance is available in seawater up to 90°F (32°C). In reverse-cycle heating, they will provide heat in seawater as low as 40°F (4.4°C).

R Type condensers have a number of improvements over the original "F" type condensing units. A one-piece chassis/pan has a smaller footprint, with two 1/2" FPT drain connections. New hold-down brackets secure all four corners and allow for easier installation and removal. The one-piece electrical box with 3' (0.9m) cable can be remotely mounted. (RN models have a secondary box). Additional service ports have been added for ease of charging and servicing. The R type unit is designed as a drop-in for the older F and J type with few modifications.

Type R models are designed for installation in the vessel's engine room or other mechanical space. It is not affected by moisture, normal vibration, or ambient temperatures up to 140°F (60°C). No ventilation is required.

Three different models are available, depending on what type of control is desired. "R" use the SA3 3-knob rotary switch assembly, "RX" is controlled by the SMX II microprocessor, and "RN" uses the SMX Net. SMX models include the respective SMX II or SMX Net power/logic boards. In addition, an SMXir or the new SMXht keypad/

### Key Benefits

- Redesigned R Type unit is lighter in weight than F type.
- Service ports on refrigerant lines and base valves.
- Rubber isolation mounts on compressors.
- Condensate pan with front and rear drains.
- Corner mounting brackets designed for easy install.
- High pressure switch (SMX models also includes low pressure switch).
- Electrical box can be remotely mounted up to 3' (0.9 m) from unit.
- Available with "green-gas" R-417A refrigerant.
- An additional vibration isolation kit is available.
- Ignition protected.

display, a CXP connecting cable, and a TSEP temperature sensor must be purchased separately. If networking RN units, CNP network cables are also needed.

A seawater cooling system, with pump, scoop type through-hull, seacock, strainer, and overboard discharge, is also required.

Every R type unit is fully tested and pre-charged at the factory with R-22 refrigerant or R-417A "green gas". (All 50Hz "CK" models come standard with R-417A.) Installation and final

charging of the system must be performed by a certified technician.

## Technical Specifications for R Type Condensing Units

Model	Capacity (BTU/hr)	Power <sup>(1)</sup> Voltz/Hz/Ph	Full Load Amps		LRA <sup>(2)</sup>	MCB <sup>(3)</sup>	Connections (Male Flare)		Seawater Flow Rate (gpm/lpm) <sup>1</sup>	Refrigerant	Weight <sup>(4)</sup> (lbs/kg)
			Cool	Heat			Discharge	Suction			
R, RX, RN5	5,000	115/60/1	5.0	6.2	28.0	15A	1/4"	3/8"	1.7/6	R-417A	48/21.8
R, RX, RN7	7,000	115/60/1	6.2	7.7	34.0	20A	1/4"	3/8"	2.3/9	R-417A	50/22.7
R, RX, RN7C		230/60/1	3.3	4.0	20.0	10A					
R, RX, RN7CK		220-240/50/1	3.0	3.7	16.0	10A					
R, RX, RN10	10,000	115/60/1	8.0	10.2	47.0	30A	1/4"	3/8"	3.3/13	R-417A	60/27.3
R, RX, RN10C		230/60/1	4.3	5.5	28.0	15A					
R, RX, RN10CK		220-240/50/1	4.6	5.6	26.3	15A					
R, RX, RN12	12,000	115/60/1	8.4	11.0	50.0	30A	1/4"	3/8"	4.0/15	R-417A	62/28.2
R, RX, RN12C		230/60/1	5.4	6.6	34.0	15A					
R, RX, RN12CK		220-240/50/1	5.4	6.4	31.0	15A					
R, RX, RN16	16,000	115/60/1	11.4	13.5	75.0	40A	1/4"	1/2"	5.3/20	R-417A	63/28.6
R, RX, RN16C		230/60/1	6.2	7.3	36.0	20A					
R, RX, RN16CK		220-240/50/1	5.0	6.0	35.0	20A					

**Notes:**

<sup>(1)</sup> 115V, 230V, and 440V 60 Hz equipment can be operated at 100V, 200V, or 380V respectively, in a 50Hz environment. In such a 50Hz environment, performance will decrease by 17%. Full rated capacity can be obtained by specifying Cruisair "CK" equipment.

<sup>(2)</sup> LRA – Locked Rotor Amps

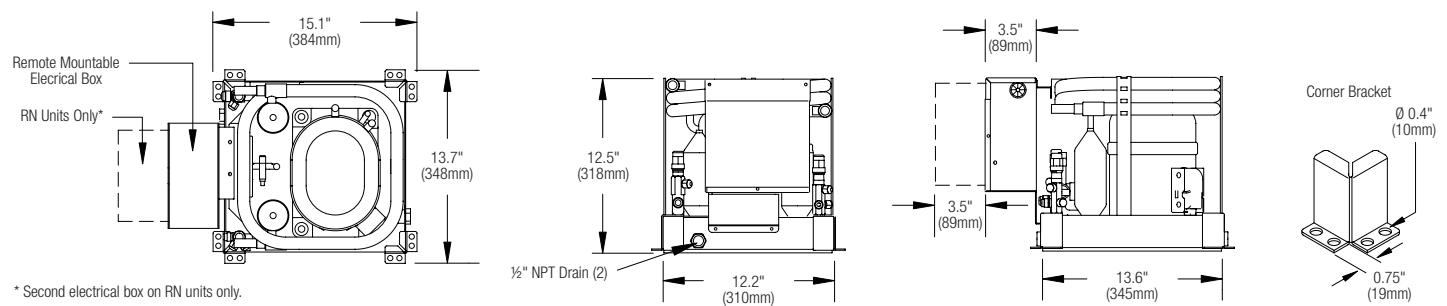
<sup>(3)</sup> MCB – Maximum Circuit Breaker

<sup>(4)</sup> Weights shown are units only. Shipping weights will be approximately 6 lbs. (2.7 kg) more.

• Compressor starting current will vary with voltage and is approximately 3-4 times the full-load amps.

**Interpreting Model Numbers**

RX	10	CK	417
Type of Control R: Rotary knob RX: SMX II RN: SMX Net	Capacity X 1,000 BTU/hr	AC Power Blank: 100/115V, 50/60Hz C: 200/230V, 50/60Hz CK: 220-240V, 50Hz only	Refrigerant Blank: R22 417: R-417A



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# R Type Condensing Units

## 20K to 48K BTU/hr Capacity Range



Photo courtesy of Cruisers Yachts



RX24 condensing unit shown

**Available in capacities from 20,000 to 48,000 BTU/hr, Type R remote condensing units represent the next generation of seawater-cooled, reverse-cycle heat pumps for cooling and heating in marine applications.**

Models up to 36,000 BTU/hr use reciprocating compressors, while the 48K units use scroll compressors.

These condensing units can be installed with up to two Cruisair cooling units, where the total cooling unit capacity is equal to the condensing unit capacity. Some applications may allow three cooling units on one condenser; contact the Cruisair Applications department for assistance in design, prior to installation. In the cooling mode, full performance is available in seawater up to 90°F (32°C). In reverse-cycle heating, the unit will provide heat in seawater as low as 40°F (4.4°C).

The high-efficiency compressors deliver full capacity at lower amperages. The newly designed, one-piece electrical box with 3' (0.9 m) cable can be remote mounted simply by removing one screw (RN models have a secondary box). Additional service ports allow ease of charging and servicing. The one-piece chassis/pan has two drain locations, and hold-down brackets secure all four corners, allowing easier installation and removal. The Type R condenser is designed as a drop-in for the older F type, with few modifications.

R type units are designed for installation in the vessel's engine room or other mechanical space. The unit is not affected by moisture, normal vibration, or ambient temperatures up to 140°F (60°C). No ventilation is required.

Three different series of Type R units are available, depending on what type of control is desired. Standard R units utilize the SA3 3-knob rotary switch assembly, RX units are controlled by the SMX II microprocessor, and RN models use SMX Net microprocessors. The SMX units include the respective SMX II or SMX Net power/logic boards. In addition, an SMXir or the new SMXht keypad/display, a CXP connecting cable, and a TSEP temperature sensor must be purchased separately. If networking RN units, CNP network cables are also needed.

Type R condensing units are available for a variety of power systems. Please refer to the technical specifications on back of this sheet. Note that the 380-460V units will require a single-phase control circuit power feed (115V or 230V). Three-phase units are not ignition

### Key Benefits

- Higher efficiency compressors at lower amperages.
- Redesigned R type unit is lighter in weight.
- Service ports on refrigerant lines and base valves.
- Rubber isolation mounts on compressors.
- Condensate pan with front and rear drains.
- Corner mounting brackets designed for easy install.
- High and low pressure switches.
- Three different control options:
  - R series uses a 3-knob rotary switch assembly.
  - RX series includes an SMX II power/logic board and uses the new SMXht, SMXir or SMX II keypad/displays.
  - RN series includes an SMX Net power/logic module.
- Electrical box can be remotely mounted to deck or bulkhead up to 3' (0.9 m) from unit.
- Seawater coil manifolds are optional.
- Heavy-duty vibration isolators are available.

(Continued on reverse side)

protected and must not be installed in an area where flammable vapors may be present. A seawater cooling system, with pump, scoop type through-hull, seacock, strainer, and overboard discharge, is also required.

Every Type R unit is fully tested and pre-charged at the factory. Installation and final charging of the system must be performed by a certified technician.

### Technical Specifications for R Type Condensing Units

Model	Capacity (BTU/hr)	Power Voltz/Hz/Ph	FLA Cool	FLA Heat	LRA	Weight (lb/kg)	Refrig.		Pump (gpm/lpm)
							Dis.	Sct.	
R, RN, RX20C R, RN, RX20CK R, RN, RX20ECK	20,000	230/60/1 220/50/1 380/50/3	6.0 5.3 2.7	7.2 6.6 3.2	48 55 24	95/43.1	3/8"	1/2"	6.7/25
R, RN, RX24C R, RN, RX24CK R, RN, RX24D(C) R, RN, RX24ECK	24,000	230/60/1 220/50/1 230/60/3 380/50/3	7.0 6.9 5.4 2.8	8.5 8.5 6.4 3.3	60 55 48 30	100/45.4	3/8"	1/2"	8.0/30
R, RN, RX30C R, RN, RX30CK R, RN, RX30D(C) R, RN, RX30E(C) R, RN, RX30ECK	30,000	230/60/1 220/50/1 230/60/3 460/60/3 380/50/3	7.7 8.7 5.8 2.8 3.5	9.6 10.6 6.6 3.3 4.2	61 69 58 30 38	110/49.9	3/8"	3/4"	10.0/38
R, RN, RX36C R, RN, RX36CK R, RN, RX36D(C) R, RN, RX36E(C) R, RN, RX36ECK	36,000	230/60/1 220/50/1 230/60/3 460/60/3 380/50/3	9.8 9.8 7.2 3.5 4.0	12.3 12.5 8.5 4.0 4.8	82 76 78 36 42	115/52.2	3/8"	3/4"	12.0/45
R, RN, RX48RC R, RN, RX48RCK R, RN, RX48D(C) R, RN, RX48E(C) R, RN, RX48ECK	48,000	230/60/1 220/50/1 230/60/3 460/60/3 380/50/3	12.4 13.5 8.6 4.3 5.0	17.2 17.6 11.1 5.6 6.5	109 114 88 44 50	120/54.4	3/8"	3/4"	16.0/61

**Notes:**

- All models have the same dimensions; see illustration below.
- All models have 5/8" cooling water connections directly to the condenser coil(s). Seawater manifolds are optional.
- Refer to the Compressor Electrical Power Specs chart below for nominal ratings and exceptional ranges.
- Compressor starting current will vary with voltage and is approximately 3-4 times the full-load amps (FLA).
- Models 20-36K use reciprocating compressors; 48K units have scroll compressors.

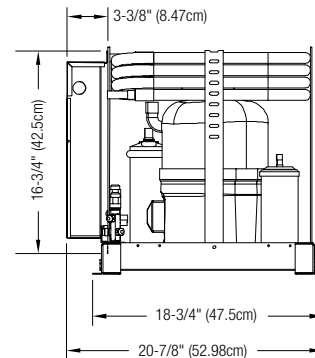
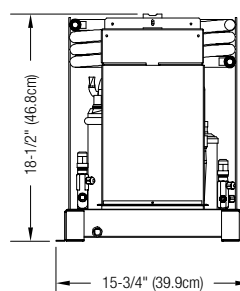
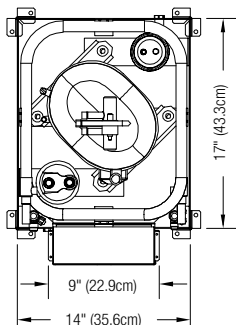
**Interpreting Model Numbers**

RX	30	D	C	K
Type of Control R: Rotary Knob RN: SMX Net RX: SMX II	Capacity X 1,000 BTU/hr	Compressor Voltage C: 230V, 1 phase D: 230V, 3 phase E: 460V, 3 phase	Control Voltage (3 phase units only) Blank: 115V, 1 phase C: 230V, 1 phase	Operating Frequency Blank: 60Hz K: 50Hz only

Compressor Electrical Power Specs	
Nominal Rating	Acceptable Range
230/60/1	208-240/60/1 & 200/50/1
220/50/1	220-240/50/1
230/60/3	208-230/60/3 & 190-220/50/3
220/50/3	200-220/50/3
460/60/3	440-480V/60/3 & 380-420/50/3
380/50/3	380-420/50/3

Some 60Hz equipment can be operated in a 50Hz environment. However, performance will be decreased by approximately 17%. Fully rated 50Hz capacity may be obtained by specifying Cruisair "CK" equipment.

NOTE: Drain fittings extend 1/4" (0.6cm) from front and back of pan.



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Dealer:

# EBE Series R-410A Evaporators

## High-Efficiency Units for Split Air Conditioners



EBE18-230V

**Cruisair's compact EBE split evaporators are draw-through, ductable cooling units with reverse-cycle heating.** Featuring a rotatable, high-efficiency permanent split capacitor (PSC) blower in which the motor is concealed, EBE series evaporators are available in capacities from 6K to 36K BTU/hr. EBHE units have electric heat.

The EBE Series was designed for installation low in a closet, cabinet, or other enclosed space, with discharge air ducted to one or more grilles high in the cabin. EBE units can be used with a combination of plenums and flexible duct, or built-in ductwork may be used. If you are using built-in ductwork, a flexible transition between the blower and duct should be installed.

Vibration-isolation mounting is built into each EBE unit to reduce noise and vibration. The PSC blower is supported by a sturdy aluminum bracket with isolation grommets to reduce possible vibration. The blower's internal motor housing reduces the overall unit depth for easier installation and promotes quieter operation.

The drain pan and blower housing are covered with insulating foam which reduces noise and secondary condensation.

The "positive flow" drain pan has an anti-slosh, antifungal foam lining. Two 1/2 in. (13 mm) drains are located on the blower side of the drain pan.

Cruisair EBE evaporators can be controlled using the SMXht or SMXir keypad displays operating on the SMXII or SMXNet control systems, or using the Qht or Q3 keypad displays operating on the Q-Logic control system. A mechanical rotary-knob switch assembly is also available.

### Key Benefits

- Compact ductable cooling or heating units.
- Rotatable, variable speed blower.
- Insulated condensate pan with anti-slosh, antifungal foam lining.
- High-efficiency blower.
- Environmentally safe R-410A refrigerant.
- Air filter included.
- "Positive Flow" water displacing condensate pan.
- Electric heat available on EBHE models.
- High efficiency evaporator coil.
- Larger blower inlet for increased air flow across coil.
- Blower bracket with vibration isolation grommets installed.
- Increased metal thickness on structural parts for strength.
- Thermal expansion valve for optimal performance over a range of conditions.

# Technical Specifications for EBE Series Evaporators

Model	Capacity (BTU/hr)	Voltage (50/60Hz)	Blower Amps	Air Flow (cfm/m <sup>3</sup> h)	Elec. Heat (kW/Amps)	Dimensions (in/mm)				Weight (lb/kg)
						Height 1 <sup>(1)</sup>	Height 2 <sup>(2)</sup>	Width	Depth	
<b>With Electric Heat</b>										
EBHE6-1kW-230V	6,000	230	0.98	233/395.91	1.0/4.35	11.25/286	12.50/318	13.75/350	12.00/305	14.00/6.35
EBHE8-1kW-230V	8,000	230	0.98	266/451.99	1.0/4.35	11.25/286	12.50/318	13.75/350	12.00/305	14.00/6.35
EBHE10-1.5kW-230V	10,000	230	0.66	333/565.83	1.5/6.52	12.50/318	13.50/343	14.25/362	13.75/349	22.00/9.98
EBHE12-2kW-230V	12,000	230	0.56	400/697.68	2.0/8.70	12.50/318	13.50/343	14.25/362	14.50/368	23.00/10.43
EBHE16-3kW-230V	16,000	230	1.15	533/905.67	3.0/13.04	13.50/343	15.50/394	16.00/406	14.75/375	30.00/13.61
<b>Without Electric Heat</b>										
EBE18-230V	18,000	230	1.13	540/917.47	N/A	13.63/346	15.13/384	16.00/406	14.00/356	32.00/14.51
EBE24-230V	24,000	230	1.62	800/1359.40	N/A	16.50/419	17.00/432	20.00/508	14.50/368	36.00/16.33
EBE30-230V	30,000	230	4.0	1000/1699.20	N/A	20.50/521	22.00/559	20.75/527	15.00/381	43.00/19.50
EBE36-230V	36,000	230	4.0	1200/2039.00	N/A	20.50/521	22.25/565	20.75/527	17.75/451	42.00/19.05

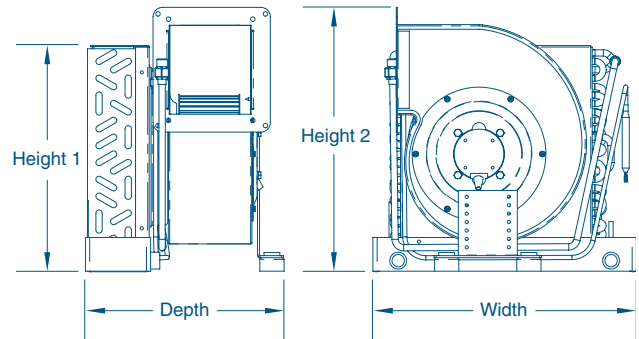
Notes:

<sup>(1)</sup> Height from base to top of evaporator coil.

<sup>(2)</sup> Height from base to top of blower flange.

Interpreting Model Numbers						
E	B	H	E	X	XkW	230V
Evaporator	High-Efficiency Blower	Electric Heat	R-410A Refrigerant	x1,000 BTU/hr	Kilowatts of Electric Heat	Voltage

Capacity (BTU/hr.)	Minimum Grille Sizes (sq. in/cm)		Minimum Duct (in/mm)
	Return	Discharge	
6,000	64/413	32/206	4/102
8,000	89/574	47/303	5/127
10,000	100/645	60/387	6/152
12,000	130/839	70/452	6/152
16,000	160/1032	80/516	7/178
18,000	200/1290	100/645	8/203
24,000	240/1548	140/903	8/203
30,000	350/2258	170/1097	10/254
36,000	360/2323	196/1265	10/254



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# REU Series DX Evaporators

## With High-Efficiency Blowers



REU16 Evaporator shown

**Cruisair's REU Series evaporators are draw-through, ductable cooling units with rotatable, variable-speed blowers.** Featuring high-efficiency blowers, REU series units are available in capacities from 7K to 36K BTU/hr. Electric heat is standard on RHEU models (7K to 16K BTU/hr.). REU units can be used with Cruisair R-22 or R-417A condensers.

The REU Series was designed for installation low in a closet, cabinet, or other enclosed space, with discharge air ducted to one or more grilles high in the cabin. One or two evaporators can be used with a single Cruisair type condensing unit of matched capacity. Please contact the Cruisair Applications department for assistance in design prior to installation.

REU units can be used with a combination of plenums and flexible duct, or built-in ductwork may be used. The included hose adapter is used to connect flexible duct to the blower outlet. If you are using built-in ductwork, a flexible transition between the blower and duct should be installed.

Vibration-isolation mounting is built into each unit to simplify installation. The blower is supported by a sturdy aluminum bracket with isolation grommets to reduce possible vibration. The blower performs favorably in higher static pressure conditions. The internal motor housing results in a narrower unit and promotes quieter operation.

The condensate pan, blower housing, and all other metal surfaces over which air passes are covered with insulating foam which reduces noise and secondary condensation.

### Key Benefits

- Compact ductable cooling or heating unit.
- Rotatable, variable speed blower.
- Insulated condensate pan with anti-slosh, antifungal foam lining.
- High-efficiency blower.
- Air filter included.
- "Positive Flow" drain pan.
- High-efficiency evaporator coil.
- Larger blower inlet for increased air flow across coil.
- Single piece shroud and coil enclosure.
- Hose adapter included.
- Blower bracket with vibration isolation grommets installed.
- Increased metal thickness on structural parts for strength.
- For use with water-cooled and air-cooled condensers. Air-cooled product line is limited to models 7K-16K.

*Continued on reverse side*

The "positive flow" condensate drain pan has an anti-slosh, antifungal foam lining. Cruisair REU evaporators can be controlled using the SMXht or SMXir keypad displays operating on the SMXII or SMXNet control systems, or using the Qht or

Q3 keypad displays operating on the Q-Logic control system. A mechanical rotary-knob switch assembly is also available.

## Technical Specifications for REU Series DX Evaporators

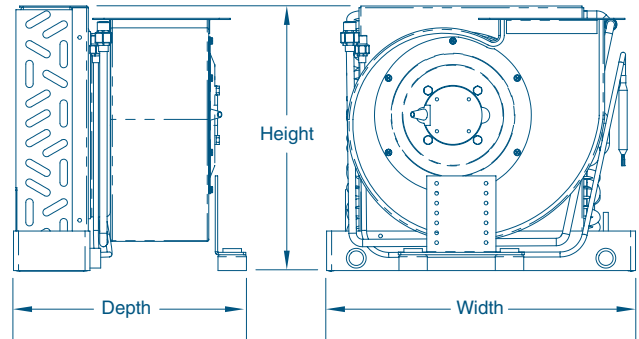
Model	Capacity (BTU/hr)	Voltage (50/60Hz)	Blower Amps	Air Flow (cfm/m <sup>3</sup> h)	Electric Heat (kW/Amps)	Dimensions (in/mm)			Weight (lb/kg)
						Height <sup>(1)</sup>	Width	Depth	
RHEU7 RHEU7C	7,000	115 230	1.74 0.98	233/395.91	1.0/8.70 1.0/4.35	11.25/286	13.75/350	12.00/305	14.00/6.35
RHEU8 RHEU8C	8,000	115 230	1.74 0.98	266/451.99	1.0/8.70 1.0/4.35	11.25/286	13.75/350	12.00/305	14.00/6.35
RHEU10 RHEU10C	10,000	115 230	1.32 0.66	333/565.83	1.5/13.04 1.5/6.52	12.50/318 <sup>(2)</sup>	14.25/362	13.75/349	22.00/9.98
RHEU12 RHEU12C	12,000	115 230	1.12 0.56	400/697.68	2.0/17.39 2.0/8.70	12.50/318 <sup>(2)</sup>	14.25/362	14.50/368	23.00/10.43
RHEU16 RHEU16C	16,000	115 230	2.52 1.15	533/905.67	2.0/17.39 3.0/13.04	13.50/343	16.00/406	14.75/375	30.00/13.61
RHEU24C <sup>(3)</sup> RHEU24C	24,000	230	1.64	800/1359.40	2.0/8.70 3.0/13.04	18.75/476	19.75/502	15.50/394	40.00/18.14
REU20C	20,000	230	1.64	667/1133.40	N/A	18.75/476	19.75/502	12.75/324	35.00/15.88
REU24C	24,000	230	1.64	800/1359.40	N/A	18.75/476	19.75/502	12.75/324	35.00/15.88
REU30C	30,000	230	3.05	1000/1699.20	N/A	20.50/521	20.75/527	15.00/381	43.00/19.50
RE36 RE36C	36,000	115 230	8.00 4.00	1200/2039.00	N/A	20.50/521	20.75/527	17.75/451	42.00/19.05

**Notes:**

- <sup>(1)</sup> Heights shown do not include blower rings.
- <sup>(2)</sup> With blower in vertical position, actual height is 13.00 in. (330 mm) — not including blower ring.
- <sup>(3)</sup> RHEU24C models are identical except for the variation in built-in electric heat.
- Hose adapter height = 2.09 in. (53 mm) additional to height of blower outlet

Interpreting Model Numbers					
R	H	E	U	X	C
Remote (Split)	No H: No Heat H: Elec. Heat	Evaporator	PSC internal blower motor	x1,000 BTU/hr	No C: 115V C: 230V

Capacity (BTU/hr.)	Minimum Grille Sizes (sq. in/cm)		Minimum Duct (in/mm)
	Return	Discharge	
7,000	80/516	45/290	5/127
8,000	89/574	47/303	5/127
10,000	100/645	60/387	6/152
12,000	130/839	70/452	6/152
16,000	160/1032	80/516	7/178
20,000	200/1290	110/710	9/229
24,000	240/1548	140/903	9/229
30,000	350/2258	170/1097	10/254
36,000	360/2323	196/1265	10/254



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Environmentally Responsible

Dealer:

# EBLE Low-Profile Split Evaporators

## Dual-Blower Units for Height-Restrictive Spaces



EBLEP16 with blowers in horizontal position

EBLEP16 with blowers in vertical position

EBLE24

### Cruisair's EBLE low profile, dual-blower series of ductable cooling/heating units are available in a wide range of capacities and configurations.

Available in capacities from 12K to 36K BTU/hr., EBLE units are designed for installations where there is limited vertical space, such as beneath a seat or bunk, or in overhead spaces.

Standard EBLE units consist of a low-profile evaporator coil mounted on a deep condensate pan, with two high-efficiency permanent split capacitor (PSC) blowers drawing air across the coil. Refrigerant line connections and a metering device are also included. Refrigerant connections are male flare fittings.

The variable-speed blower motor is internal to the blower wheel, which results in less noise and reduced unit depth for easier installation.

The drain pan, blower housing and all transitional metal surfaces are covered with insulating foam to prevent secondary condensation and reduce noise. The drain pan is lined with anti-slosh, antifungal foam, and the blowers can be rotated for discharge in different directions.

EBLEP models are designed for overhead installations, and include an insulated return air plenum to collect air from a ceiling mounted grille.

EBHLE units have integrated electric heat strips to provide heat when the seawater is too cold for adequate reverse-cycle heating. All Cruisair auxiliary heaters use a 2-stage thermal protection system to prevent dangerous overheating in case airflow is lost. The first cutout is an automatic reset switch, and the second stage is a manual reset control. Other safety features include high-temperature insulation on the interior surfaces and

(Continued on reverse side)

### Key Benefits

- Low-profile, twin-blower, ductable cooling/heating unit.
- 12,000 - 36,000 Btu/hr .
- 115V and 230V, 50/60 Hz models.
- Environmentally safe R-410A refrigerant.
- Rotatable, variable speed blowers.
- Condensate drain pan with anti-slosh, antifungal foam.
- Foam insulated metal surfaces.
- Electric heat available on EBHLE models.
- Return air plenum on EBULP models.
- High-efficiency PSC blowers.
- Integrated auxiliary heat.
- Thermal expansion valve for optimal performance over a range of conditions.

high temperature wiring.

The cooling/heating unit can be installed with a combination of plenums, and flexible or built-in duct-work to convey discharge air to one or more outlets. Hose adapters are required to connect to flexible duct.

Cruisair EBLE evaporators can be controlled using the SMXht or SMXir keypad displays operating on the SMXII or SMXNet control

systems, or using the Qht or Q3 keypad displays operating on the Q-Logic control system. A mechanical rotary-knob switch assembly is also available.

## Technical Specifications for EBLE Series Low-Profile Evaporators

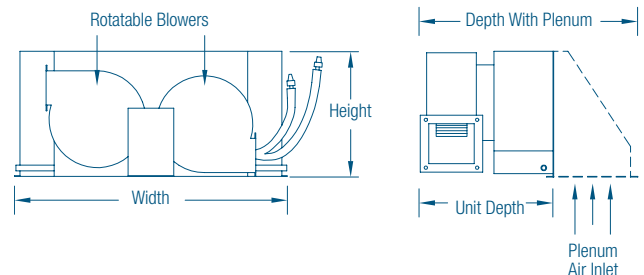
Model	Capacity (BTU/hr)	Voltage	Blower Amps	Electric Heater (kW/Amps)	Dimensions (in/mm)			Weight (lb/kg)
					Height <sup>(1)</sup>	Width	Depth	
<b>Without Plenum or Electric Heat</b>								
EBLE12-115V	12,000	115	2.4	N/A	11.25/286	24.00/610	13.50/343	30/13.6
EBLE12-230V	12,000	230	1.2	N/A	11.25/286	24.00/610	13.50/343	30/13.6
EBLE16-115V	16,000	115	2.4	N/A	11.25/286	24.00/610	13.50/343	30/13.6
EBLE16-230V	16,000	230	1.2	N/A	11.25/286	24.00/610	13.50/343	30/13.6
EBLE24-230V	24,000	230	2.8	N/A	12.50/318	27.50/699	14.00/356	40/18.1
EBLE30-230V	30,000	230	3.6	N/A	13.00/330	37.50/953	14.00/356	46/20.9
EBLE36-230V	36,000	230	3.6	N/A	13.00/330	37.50/953	14.00/356	46/20.9
<b>With Plenum, Without Electric Heat</b>								
EBLEP16-115V	16,000	115	2.4	N/A	11.25/286	24.25/616	21.00/533	36/16.3
EBLEP16-230V	16,000	230	1.2	N/A	11.25/286	24.25/616	21.00/533	36/16.3
EBLEP24-230V	24,000	230	2.8	N/A	12.50/318	27.75/701	22.75/578	44/20.0
<b>Without Plenum, With Electric Heat</b>								
EBHLE16-115V	16,000	115	2.4	2.0/17.40	11.25/286	20.50/521	16.00/406	36/16.3
EBHLE16-230V	16,000	230	1.2	2.0/8.70	11.25/286	20.50/521	16.00/406	36/16.3
EBHLE24-230V	24,000	230	2.8	2.0/8.70	12.50/318	27.50/699	17.00/432	46/20.9
<b>With Plenum &amp; Electric Heat</b>								
EBHLEP16-115V	16,000	115	2.4	2.0/17.40	11.25/286	24.25/616	23.75/603	40/18.1
EBHLEP16-230V	16,000	230	1.2	2.0/8.70	11.25/286	24.25/616	23.75/603	40/18.1
EBHLEP24-230V	24,000	230	2.8	2.0/8.70	12.50/318	27.75/701	26.50/673	50/22.7

Notes:

(1) Heights shown for blowers in horizontal position.

Interpreting Model Numbers							
E	B	H	L	E	P	X	-230V
Evaporator	High-Efficiency Blower	No H: No Elec. Heat H: Elec. Heat	Low-Profile	R-410A Refrigerant	No P: No Plenum P: Plenum	x1,000 BTU/hr	Voltage

Capacity (BTU/hr)	Return Air Grille Area (sq. in/cm)	Supply Air Grille Area (sq. in/cm)	Minimum Duct Size (in/mm)	Ref. Line Sizes (in/mm)	
				Discharge	Suction
12,000	130/838.8	70/451.6	6/152	0.25/6	0.38/10
16,000	160/1,032.3	80/516.2	7/178	0.25/6	0.50/13
24,000	240/1,548.5	140/903.3	8/203	0.38/10	0.63/16
30,000	350/2,258.2	170/1,096.8	9/229	0.38/10	0.75/19
36,000	360/2,322.7	196/1,264.6	10/254	0.38/10	0.75/19



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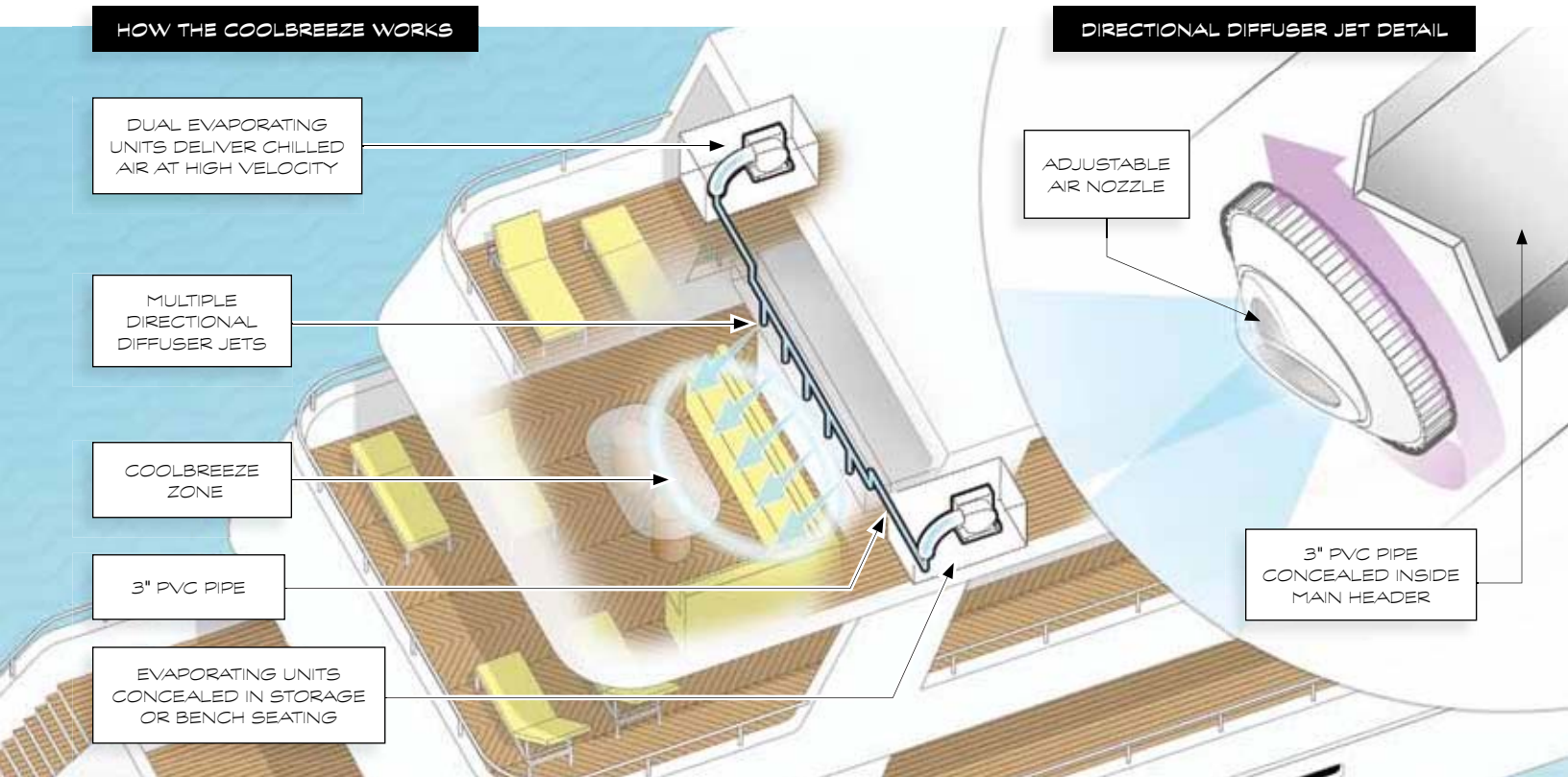
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Dealer:

# CoolBreeze

## You're Cool On Deck With Jets of Chilled Air



**CoolBreeze provides an efficient, compact solution for generating cool air outside the living space by cooling the *people*, not the area.** Enhance your enjoyment of outdoor dining areas, lounge areas, and sport-fishing decks while CoolBreeze's directional jets blow chilled air right on you.

To maintain your yacht's aesthetic appeal, CoolBreeze uses rigid, small-diameter ducts that are easily hidden. The only visible parts of the system are the one-inch

### Key Benefits

- Use outdoor areas previously too hot to enjoy.
- Highly efficient system cools people instead of area.
- Operates automatically based on ambient outdoor temperature.
- Unobtrusive installation maintains yacht's aesthetic appeal.
- Easily incorporated during boat building.
- Can be retrofitted into existing boats.
- Uses environmentally safe R-417A refrigerant.



Directional diffuser jets

RSC12C condensing unit, electrical/control box, and (2) SCE6C evaporator units shown

directional jets that concentrate the chilled air into high-velocity streams that cool the people at whom they are aimed.

**Operation is totally automatic based on two temperature set points you select.** In the first stage, when the temperature rises to the lower set point, the system powers up only the blowers to cool passengers with the jetted movement of ambient air. When the temperature rises to the higher set point, the compressor powers up and chills the air blown onto the passengers.

**The system runs until the temperature drops,** then CoolBreeze powers off in the reverse of these two stages: When the temperature drops below the higher set point, the system switches to blower-only mode and then off when the temperature drops below the lower set point.

**A single on/off switch powers the system.** If powered on, the system is dormant until triggered by temperature. If powered off, the system does not operate regardless of temperature.

CoolBreeze provides a worry-free way to keep cool in the mid-day sun while knowing it will turn itself off in the coolness of the evening.

CoolBreeze is designed to perform in and cool high-temperature ambient air. It uses R-417A, an environmentally safe refrigerant approved by the EPA.

## Technical Specifications for CoolBreeze

Model	RSC12C-417	RSC12-417	SCE6C	SCE6
Capacity (BTU/hr)	12,000	12,000	6,000	6,000
Capacity (Kcal/hr)	3024	3024	1512	1512
Power (Volt, Hz, Ph)	200/230, 50/60, 1	100/115, 50/60, 1	200/230, 50/60, 1	100/115, 50/60, 1
Full Load Amperage - Cool	5.4	8.4	0.98	1.74
Locked Rotor Amperage	34	50	n/a	n/a
Refrigerant type	R-417A	R-417A	per cond unit	per cond unit
Sea Water Connection	5/8" hose	5/8" hose	N/A	N/A
Return Grille Sizing (sq. in./sq. cm.)	N/A	N/A	130/839	130/839
Min. Nozzle Size (sq. in./sq. cm.)	N/A	N/A	2.65/17.1	2.65/17.1
Max. Nozzle Size (sq. in./sq. cm.)	N/A	N/A	6.14/39.6	6.14/39.6
Min. Air Velocity Per Nozzle <sup>(1)</sup> (feet per second/meters per second)	N/A	N/A	1,772/540.1	1,772/540.1
Max. Air Velocity Per Nozzle <sup>(1)</sup> (feet per second/meters per second)	N/A	N/A	2,186/666.3	2,186/666.3
<b>Dimensions (+/- 0.5 in. or 13mm)</b>				
Height (in/mm)	12.5/318	12.5/318	14.0/355	14.0/355
Width (in/mm)	12.2/310	12.2/310	15.5/394	15.5/394
Depth (in/mm)	15.1/384	15.1/384	10.0/254	10.0/254
<b>Estimated Weight (+/- 10%)</b>				
Net weight (lbs/kg)	62/28.2	62/28.2	18/8.16	18/8.16
Ship weight (lbs/kg)	68/30.9	68/30.9	24/10.9	24/10.9

Rigid Duct Options	Port Leg	Starboard Leg	Header	Reservoir <sup>(2)</sup>
3" Legs X 3" Header	3" (76.2mm)	3" (76.2mm)	3" (76.2mm)	N/A
3" Legs X 3" Reservoir <sup>(2)</sup>	3" (76.2mm)	3" (76.2mm)	N/A	See note <sup>(2)</sup>

Notes:  
<sup>(1)</sup> Velocity readings were taken approximately 8"-10" (203mm-254mm) away from the tip of the nozzles.  
<sup>(2)</sup> "Reservoir" refers to an enclosed area at least 8" X 8" (64 sq. in. or 413 sq. cm.). The two legs will pressurize this area and the nozzles will connect directly to the base of the reservoir. The use of a reservoir (where applicable), will reduce installation time and increase air velocity.

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Dealer:

# RM Modulating Condensing Units

## Capable of Cooling Up to 5 Zones



RM30 condensing unit shown



**The new RM model remote modulating condensing units are the next generation of direct-expansion, cooling only air conditioning units designed to run multiple cooling units (evaporators) with up to five independent zones.** Models are available in capacities of 24, 30 & 42,000 BTU/Hr. Total cooling unit capacity should be within 15% of the condensing unit capacity.

The new RM model has a number of improvements. Higher efficiency compressors deliver full capacity even under heavy loads. The newly designed, one-piece electrical box with 3' (0.9 m) cable can be remote mounted simply by removing one screw. Additional service ports have been added for ease of charging and servicing. The one-piece chassis/pan has two new drain locations. New style hold-down brackets secure all four corners and allow for easier installation and removal.

The RM assembly consists of a scroll compressor, cupronickel condenser, and service/base valves, all mounted on a newly designed condensate drain pan. Custom designed components that protect the compressor when operating at full and partial loads include: high and low pressure switches, large capacity receiver and accumulator, hot gas bypass valve, and a thermal expansion de-superheat valve. The bypass valve senses low suction pressure when cooling units are shut off, and allows refrigerant to bypass back into the compressor. The de-superheat valve evaporates refrigerant into the compressor when superheat is too high.

An electrical control and relay box is mounted on the chassis, but can be remote mounted on a 3' (0.9 m) harness for easy access. It includes control triggers, time delay, power relay, and start and run capacitors with a solid state relay for single-phase units, or a contactor for three-phase compressors.

It is designed to be installed in the engine room or other mechanical space, and is not adversely affected by moisture, vibration, or ambient temperatures up to 140°F (60°C). No ventilation is required.

(Continued on reverse side)

### Key Benefits

- Redesigned RM type unit is lighter in weight.
- Up to five independent cooling units on one condenser.
- Model RM is compatible with all cabin controls.
- Service ports on refrigerant lines and base valves.
- Rubber isolation mounts on compressors.
- Condensate pan with front and rear drains.
- Corner mounting brackets designed for easy install.
- Electrical box includes power relay and time delay, and may be remotely mounted up to 3' (0.9 m) from unit.
- High efficiency scroll compressors.
- High and low pressure switches.
- Hot gas bypass and de-superheat valves.
- Seawater coil manifolds are optional.
- Heavy-duty vibration isolators are available.
- Cool only.

Copper tubing is used to carry refrigerant between the condensing unit and the cooling units, which are located in the living spaces. Refrigerant manifolds (models DD and SD) are available to aid in installation.

Each cooling unit has a separate control, either SMX series or 3-knob. These controls operate independently to maintain room temperature. The RM condensing unit runs when any room control calls for cooling, and shuts off when all zone setpoints are satisfied.

Units are available for a variety of power systems. Please refer to the

technical specifications on back of this sheet. Note that the 380-460V units will require a single-phase control circuit power feed (115V or 230V). Three-phase units are not ignition protected and must not be installed in an area where flammable vapors may be present.

A seawater cooling system, with pump, scoop type through-hull, seacock, strainer, and overboard discharge, is also required.

RM condensing units are pre-charged at the factory. Installation and final charging of the system must be performed by a certified technician using EPA approved equipment.

## Technical Specifications for RM Modulating Condensing Units

Model	Capacity (BTU/hr)	Power Voltz/Hz/Ph	FLA	LRA	Weight (lb/kg)	Refrig.		Pump (gpm/lpm)
						Dis.	Sct.	
RM24C RM24CK RM24D(C) RM24E(C) RM24ECK	24,000	230/60/1 220/50/1 230/60/3 460/60/3 380/50/3	8.0 7.9 5.5 2.9 3.2	67 74 55 27 32	90/40.1	3/8"	1/2"	8.0/30
RM30C RM30CK RM30D(C) RM30E(C) RM30ECK	30,000	230/60/1 220/50/1 230/60/3 460/60/3 380/50/3	11.6 9.4 6.5 3.3 3.7	84 82 63 31 40	110/49.9	3/8"	3/4"	10.0/30
RM42C RM42CK RM42D(C) RM42E(C) RM42ECK	42,000	230/60/1 220/50/1 230/60/3 460/60/3 380/50/3	12.4 13.5 8.6 4.3 5.0	109 114 88 44 50	120/54.4	3/8"	3/4"	14.0/53

**Notes:**

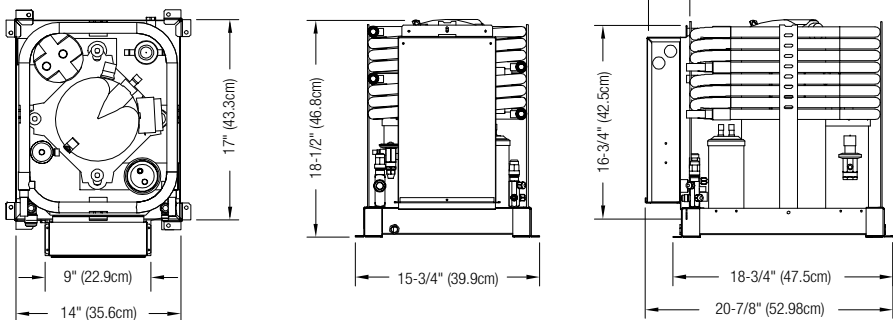
- All models have the same dimensions; see illustration below.
- All models have 5/8" cooling water connections directly to the condenser coil(s). Seawater manifolds are optional.
- Refer to the Compressor Electrical Power Specs chart below for nominal ratings and exceptional ranges.
- Compressor starting current will vary with voltage and is approximately 3-4 times the full-load amps (FLA).

**Interpreting Model Numbers**

R	M	42	C	K
Condensing Unit	Modulating System	Capacity X 1,000 BTU/hr	Control Voltage (3 phase units only) Blank: 115V, 1 phase C: 230V, 1 phase	Operating Frequency Blank: 60Hz K: 50Hz only

Compressor Electrical Power Specs	
Nominal Rating	Acceptable Range
230/60/1	208-240/60/1 & 200/50/1
220/50/1	220-240/50/1
230/60/3	208-230/60/3 & 190-220/50/3
220/50/3	200-220/50/3
460/60/3	440-480V/60/3 & 380-420/50/3
380/50/3	380-420/50/3

NOTE: Drain fittings extend 1/4" (0.6cm) from front and back of pan.



Some 60Hz equipment can be operated in a 50Hz environment. However, performance will be decreased by approximately 17%. Fully rated 50Hz capacity may be obtained by specifying Cruisair "CK" equipment.

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Environmentally Responsible

Dealer:



# Modulating DX Evaporators

## EMB & EHMB Series

Photo courtesy of Cruisers Yachts



EHMB12C cooling/  
heating unit

**Cruisair modulating DX evaporators are ductable cooling only (EMB) or cooling with electric heating (EHMB) units with built-in refrigerant solenoid valves and high-efficiency blowers.** Cruisair modulating air conditioning systems allow up to five independent temperature-controlled zones on one RM type modulating condensing unit (see spec sheet L-2366).

EMB and EHMB units are designed to be installed low in a closet or cabinet, with discharge air ducted to grilles high in the cabin. Units are available in capacities from 4,000 to 16,000 Btu/hr. EMB models are cool only while EHMB feature electric heat with high-temperature insulation to meet ABYC requirements.

All metal surfaces over which air passes are covered with insulating foam to reduce secondary condensation and noise. The condensate pan has an anti-slosh, antifungal foam lining and rubber mounting feet for noise and vibration control as well as easy installation.

The high-efficiency blower can be rotated so the air can be discharged in different directions. The permanent split capacitor (PSC) motor is internal to the blower wheel and housing, which results in a quiet unit with excellent performance and speed control, especially when used with a Cruisair SMX series control.

An electrical junction box is included with the unit, and has a 3' (1 m) wire harness so it can be mounted in an accessible location.

EMB and EHMB cooling units can be controlled locally with a mechanical switch assembly, SMX II microprocessor†, or the new Q-Logic with Qht or Q3 display.

Remote monitoring via the central boat monitoring system or Cruisair's Gateway network is possible with the Q-Logic control system and optional CAN-bus adapter board.

### Key Benefits

- Cooling unit for use with Modulating Systems.
- Integrated refrigerant solenoid valves.
- Rotatable blower with high-efficiency internal PSC motor.
- Deep condensate pan is insulated and includes anti-slosh, antifungal foam lining.
- Includes air filter and isolation mounting feet.
- Available in cooling only (EMB) or with electric heat (EHMB).
- Mechanical switch, SMX II, or Q-Logic local climate controls.
- Remote monitoring via central boat monitoring system or Gateway network.\*

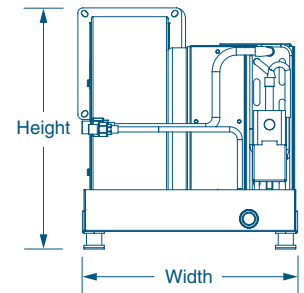
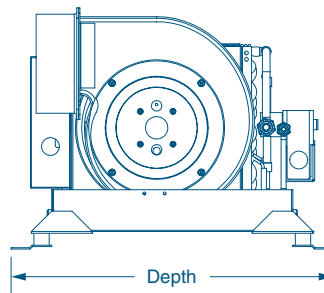
\* Requires Q-Logic control with optional CAN-bus adapter. Gateway network requires a PC running Internet Explorer.

## Technical Specifications for EMB & EHMB Cooling/Heating Units

Model	Capacity (BTU/hr)	Voltage	Blower Amps	Electric Heater (kW/Amps)	Dimensions (in/mm)			Weight (lb/kg)	Air Flow (cfm/cmh)
					Height	Width	Depth		
EMB4C EHMB4C	4,000	230	0.6	N/A 1.0/4.2	10.00/255	10.80/275	13.80/352	17/7.7 20/9.1	200/335
EMB6C EHMB6C	6,000	230	0.6	N/A 1.0/4.2	12.25/311	11.50/292	15.75/400	19/8.6 22/10.0	200/335
EMB8C EHMB8C	8,000	230	0.6	N/A 1.0/4.2	12.25/311	11.50/292	15.75/400	19/8.6 22/10.0	200/335
EMB10C EHMB10C	10,000	230	0.7	N/A 1.5/6.2	13.25/337	13.00/330	17.00/432	24/10.9 28/12.7	300/500
EMB12C EHMB12C	12,000	230	0.7	N/A 2.0/8.3	13.25/337	13.00/330	17.00/432	24/10.9 28/12.7	400/670
EMB16C EHMB16C	16,000	230	0.9	N/A 2.0/8.3	17.13/435	14.50/368	19.00/483	26/11.8 30/13.6	530/900

### Interpreting Model Numbers

E	H	M	B	12	C
Evaporator	No Letter: No Heat H: Electric Heat	Modulating System	Blower	Capacity X 1,000 BTU/hr	C: 230V



## Recommended Grille & Duct Sizes

Capacity (BTU/hr)	Return Air Grille (sq in/cm)	Supply Air Grille (sq in/cm)	Minimum Duct Size (in/mm)
4,000	64/410	32/210	4/100
6,000	70/452	35/226	5/125
8,000	89/574	47/303	5/125
10,000	100/650	60/390	6/150
12,000	130/780	70/455	6/150
16,000	160/935	80/520	7/175

## Refrigerant Line Sizes

Capacity (BTU/hr)	Discharge	Suction
4-12K	1/4"	3/8"
16K	1/4"	1/2"

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Environmentally Responsible

Dealer:

# Modular MTC Series

## The Next Generation of Chillers



MTC72DC

### The MTC Series provides installation flexibility, reliability, maximum performance, and accessibility for easy maintenance and repair.

These reverse-cycle modules are available in capacities of 24,000-120,000 BTU/Hr (2 to 10 tons). Two or more modules can be staged to achieve higher capacities.

MTC units have extremely large heat exchangers that make it possible to achieve loop water temperatures of 40° F (4.4° C) in cooling, and 120° F (49° C) in heating. This also allows for reverse-cycle heating effectiveness in seawater temperatures as low as 38° F (3.5° C), eliminating the need for separate fossil fuel or electric water heaters in most applications.

MTCs have two sub-modules, identical in dimensions, which allow a sub-module to be rotated to achieve more convenient water connection locations or compressor access. The sub modules can even be separated for remote mounting when space is limited. Sub-module changes can be handled in the field, or special ordered from the factory.

All units have built-in protection devices, including: high- and low-pressure switches, loop-water flow switch, loop-water strainer, hot-gas bypass valve, and loop-water freeze sensor. A wire harness with polarized plug is included for easy electrical connections.

### Key Benefits

- Modular design for installation flexibility.
- Reverse-cycle heating and cooling.
- Scroll compressors standard.
- Dual sub-modules allow more convenient water connections or separation for remote mounting when space is limited.
- Removable seawater manifolds allow cleaning of condenser tubing.
- Integrated loop-water strainer and flow switch.
- Oversized heat exchangers for loop temperatures of 40° F (4.4° C) in cooling and 120° F (49° C) in heating.
- Thermal expansion valves optimize performance over a wide range of conditions.
- Hot-gas bypass valve maintains heating performance in cold seawater and helps prevent water freezing in the heat exchanger.
- 24,000 to 120,000 BTU/hr (2-10 tons).
- Uses environmentally safe R-407C refrigerant.

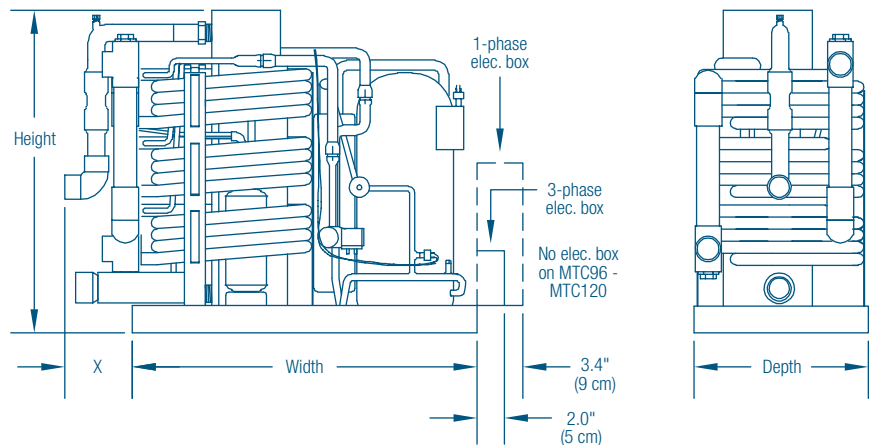
# Technical Specifications for MTC Modular Chiller Series

Model	Capacity BTU/hr (Kcal/hr) <sup>(1)</sup>	Volts/Hz/Ph <sup>(2) (3)</sup>	Full Load Amps Cool	Full Load Amps Heat	Locked Rotor Amps	Dimensions (in/mm) <sup>(4)</sup>				Connections (in)		Weight (lb/kg) <sup>(4)</sup>
						Height	Width	Depth	X	SW	CW	
MTC24C	24,000 (6,048)	230/60/1	7.2	9.8	59	17.0/432	25.3/643	12.8/325	5.0/127	5/8 HB	1 FPT	145/66
MTC24CK		220/50/1	7.5	10.4	56							155/70
MTC24DC		230/60/3	5.3	6.9	55							155/70
MTC24EC		460/60/3	2.7	3.5	27							155/70
MTC30C	30,000 (7,560)	230/60/1	9.5	12.8	84	17.0/432	25.3/643	12.8/325	5.0/127	3/4 FPT	1 FPT	160/73
MTC30CK		220/50/1	9.5	13.1	75							160/73
MTC30DC		230/60/3	6.5	8.3	63							160/73
MTC30EC		460/60/3	3.3	4.4	31							160/73
MTC36C	36,000 (9,072)	230/60/1	12.1	15.9	100	23.5/597	25.3/643	12.8/325	5.0/127	1 FPT	1 FPT	195/89
MTC36CK		220/50/1	11.1	15.2	97							190/86
MTC36DC		230/60/3	7.6	9.7	77							190/86
MTC36EC		460/60/3	3.8	4.9	39							190/86
MTC48C	48,000 (12,096)	230/60/1	13.7	19.5	137	23.5/597	25.1/638	12.7/323	5.0/127	1 FPT	1 FPT	215/98
MTC48CK		220/50/1	15.4	21.7	150							215/98
MTC48DC		230/60/3	9.9	12.7	91							215/98
MTC48EC		460/60/3	4.7	6.3	50							215/98
MTC48ECK	380/50/3	7.1	8.7	59	220/100							
MTC60C	60,000 (15,120)	230/60/1	18.2	25.3	169	23.5/597	25.1/638	12.7/323	5.0/127	1 FPT	1.25 FPT	230/105
MTC60DC		230/60/3	13.3	16.7	128							220/100
MTC60EC		460/60/3	6.7	8.4	63							220/100
MTC60ECK		380/50/3	6.8	8.9	67							225/102
MTC66ECK	66,000 (16,631)	380/50/3	8.7	10.9	91	23.5/597	25.1/638	12.7/323	5.0/127	1 FPT	1.25 FPT	240/109
MTC72DC	72,000 (18,144)	230/60/3	14.0	18.4	156	23.5/597	25.1/638	12.7/323	5.0/127	1 FPT	1.25 FPT	240/109
MTC72EC		460/60/3	7.0	9.2	75							240/109
MTC96DC	96,000 (24,192)	230/60/3	20.2	25.6	195	26.8/681	33.0/838	16.6/422	6.0/152	1.25 FPT	1.5 FPT	350/159
MTC96EC		460/60/3	10.0	12.6	95							350/159
MTC96ECK		380/50/3	12.5	15.9	125							360/164
MTC120DC	120,000 (30,239)	230/60/3	25.6	32.5	239	26.8/681	33.0/838	16.6/422	6.0/152	1.25 FPT	1.5 FPT	365/166
MTC120EC		460/60/3	12.9	16.3	125							365/166
MTC120ECK		380/50/3	13.9	17.9	110							380/173

Nominal Rating	Acceptable Range
230/60/1	208-240/60/1
220/50/1	220-240/50/1
230/60/3	208-230/60/3 and 190-220/50/3
220/50/3	200-220/50/3
460/60/3	440-480/60/3 and 380-420/50/3
380/50/3	380-420/50/3

Notes:

- <sup>(1)</sup> Cooling capacity at 100°F (38°C) condensing temperature and 35°F (2°C) evaporating temperature. Reverse-cycle heating capacity at 130°F (54°C) condensing temperature and 45°F (7°C) evaporating temperature.
- <sup>(2)</sup> For more information regarding compressor voltages, refer to Field Notice #192-B3 which is available for download at the Dometic Marine Resource Center ([www.Dometic.com/Enviro](http://www.Dometic.com/Enviro)).
- <sup>(3)</sup> See the Compressor Electrical Power Specs table above.
- <sup>(4)</sup> All dimensions are ± 1/2" (13mm). All weights are ± 10%.



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Environmentally Responsible

Dealer:

# Modular MTD

## The Next Generation of Chillers



MTD72DC

**The Cruisair MTD is a modular chiller engineered for optimal use of the new environmentally safe R-410A refrigerant.** This tempered-water unit provides installation flexibility, reliability, maximum performance, and easy accessibility for maintenance and repair.

Flexible hose improves alignment for customer connections, and all seawater connections are reinforced with stainless-steel for added strength. Thermal expansion valves optimize performance over a wide range of conditions, while a hot-gas bypass valve maintains heating performance in cold seawater and helps prevent water freezing in the heat exchanger. With heating performance effective in cold seawater temperatures as low as 38°F (3.5°C), the need for separate fossil fuel or electric water heaters is eliminated in most applications.

The MTD is available in capacities of 24,000 to 120,000 BTU/hr (2 to 10 tons), and you can use multiple modules in any combination to achieve the total desired capacity. Custom frame and water-manifold installation for multiple units are also available. A reverse-cycle unit, the MTD provides reliable cooling and heating.

**Each MTD unit has two sub-modules.** This lets you rotate a sub-module to achieve more convenient water-connection locations or compressor access. The sub-modules can even be separated for remote mounting when space is limited. Sub-module changes can be handled in the field or special ordered from the factory.

The MTD has many built-in protection devices. A wire harness with polarized plug is included for easy electrical connections.

MTD units are available with several different compressors to suit a variety of power systems, including: 230V/60Hz/1Ph, 220V/50Hz/1Ph, 230V/60Hz/3Ph, 380V/50Hz/3Ph, and 460V/60Hz/3Ph.

Optional Variable Frequency Drives (VFDs) are available, which eliminate start-up power surge and run the unit at full-capacity 60Hz even with 50Hz input. The VFD requires a 3-phase tempering unit, but can operate on 1- or 3-phase input power.

### Key Benefits

- Engineered for optimal use of R-410A refrigerant.
- Modular design for installation flexibility.
- Reverse-cycle heating and cooling.
- Scroll compressors standard.
- Larger drain fittings for faster condensate drainage.
- Stainless-steel reinforced seawater connections.
- Flexible hose improves connection alignment.
- Removable seawater manifolds allow cleaning of condenser tubing.
- Integrated loop-water strainer and flow switch.
- Oversized heat exchangers for loop temperatures of 40° F (4.4° C) in cooling and 120° F (49° C) in heating.
- Thermal expansion valves optimize performance over a wide range of conditions.
- Hot-gas bypass valve maintains heating performance in cold seawater and helps prevent water freezing in the heat exchanger.
- 24,000 to 120,000 BTU/hr (2-10 tons).

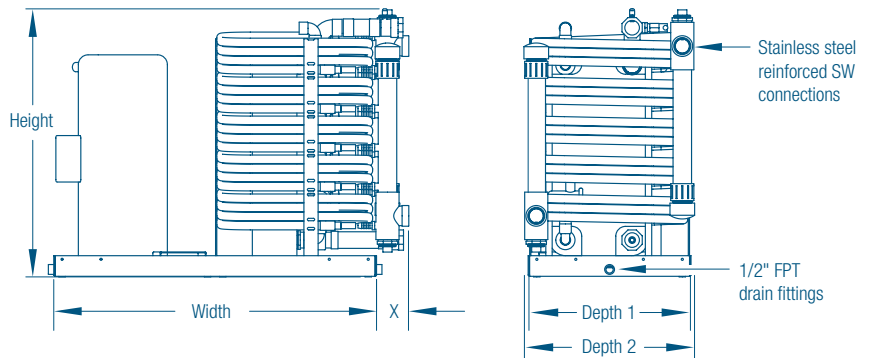
# Technical Specifications for MTD Tempering Units

Model	Capacity BTU/hr (Kcal/hr) <sup>(1)</sup>	Volts/Hz/ Ph <sup>(2)(3)</sup>	Full Load Amps Cool	Full Load Amps Heat	Locked Rotor Amps	Dimensions (in/mm) <sup>(4)</sup>					Connections (in.)		Weight (lb/kg) <sup>(4)</sup>
						Height	Width	Depth 1	Depth 2	X	SW	CW	
MTD24C	24,000 (6,048)	230/60/1	6.4	9.5	58.3	17.0/432	25.3/643	12.8/325	12.8/325	0/0	5/8 Hose	1.00 FPT	145/66 155/70 155/70 155/70
MTD24CK		220/50/1	7.5	11.0	67.0								
MTD24DC		230/60/3	5.5	7.3	58.0								
MTD24EC		460/60/3	2.7	3.6	28.0								
MTD30C	30,000 (7,560)	230/60/1	8.4	12.2	77.0	17.0/432	25.3/643	12.8/325	13.4/340	3.5/89	3/4 FPT	1.00 FPT	160/73 160/73 160/73 160/73
MTD30CK		220/50/1	9.5	13.2	82.0								
MTD30DC		230/60/3	6.4	8.3	71.0								
MTD30EC		460/60/3	3.3	4.2	38.0								
MTD36C	36,000 (9,072)	230/60/1	10.9	15.6	112.0	23.5/597	25.3/643	12.8/325	13.4/340	3.5/89	1.00 FPT	1.00 FPT	195/89 190/86 190/86 190/86
MTD36CK		220/50/1	11.6	16.9	97.0								
MTD36DC		230/60/3	7.3	9.4	88.0								
MTD36EC		460/60/3	4.0	5.2	44.0								
MTD48C	48,000 (12,096)	230/60/1	13.0	19.1	135.0	23.5/597	25.1/638	12.7/323	13.4/340	3.5/89	1.00 FPT	1.00 FPT	215/98 215/98 215/98 220/100
MTD48CK		220/50/1	14.4	20.7	136.0								
MTD48DC		230/60/3	9.1	12.2	98.0								
MTD48EC		460/60/3	4.7	6.2	46.0								
MTD48ECK	380/50/3	4.9	7.0	51.5									
MTD60C	60,000 (15,120)	230/60/1	17.0	24.7	158.0	23.5/597	25.1/638	12.7/323	13.4/340	3.5/89	1.00 FPT	1.25 FPT	230/105 220/100 220/100 225/102 220/100
MTD60CK		220/50/1	21.5	30.1	176.0								
MTD60DC		230/60/3	10.6	14.4	110.0								
MTD60EC		460/60/3	6.2	8.2	75.0								
MTD60ECK	380/50/3	6.8	9.1	74.0									
MTD72C	72,000 (18,144)	230/60/1	23.3	32.5	148.0	23.5/597	25.1/638	12.7/323	13.4/340	3.5/89	1.00 FPT	1.25 FPT	250/114 240/109 240/109 240/109
MTD72DC		230/60/3	14.2	18.2	149.0								
MTD72EC		460/60/3	6.9	9.1	75.0								
MTD72ECK		380/50/3	9.0	11.7	101.0								
MTD96DC	96,000 (24,192)	230/60/3	19.5	24.9	195.0	23.9/607	33.1/841	16.7/424	17.7/450	3.75/95	1.25 FPT	1.50 FPT	350/159
MTD96EC		460/60/3	9.8	12.4	95.0								
MTD96ECK		380/50/3	10.8	13.6	111.0								
MTD120DC	120,000 (30,239)	230/60/3	25.3	32.8	239.0	27.8/706	33.1/841	16.7/424	17.7/450	3.75/95	1.25 FPT	1.50 FPT	460/209 460/209 475/216
MTD120EC		460/60/3	12.7	16.4	125.0								
MTD120ECK		380/50/3	13.3	17.8	118.0								

Compressor Electrical Power Specs <sup>(2)</sup>	
Nominal Rating	Acceptable Range
230/60/1	208-240/60/1
220/50/1	220-240/50/1
230/60/3	208-230/60/3 and 190-220/50/3
220/50/3	200-220/50/3
460/60/3	440-480/60/3 and 380-420/50/3
380/50/3	380-420/50/3

Notes:

- (1) Cooling capacity at 100°F (38°C) condensing temperature and 35°F (2°C) evaporating temperature. Reverse cycle heating capacity at 130°F (54°C) condensing and 45°F (7°C) evaporating temperature.
- (2) For more information regarding compressor voltages, refer to Field Notice #192-B3 on Dometic Environmental's Customer News and Information website (www.DometicEnviro.com).
- (3) See the Compressor Electrical Power Specs table above.
- (4) All dimensions are ± 1/2" (13mm). All weights are ± 10%.



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Three  
New Sizes!

# TWC Compact Tempering Unit

## Compact & Enclosed Design



TWC48CK shown

### **Cruisair's TWC Compact is a high-performance, cost effective tempering unit.**

The reverse cycle TWC cools and heats, and is available in an expanded product range of 24,000 (2-ton) to 72,000 (6-ton) BTU/hr capacities. The three new models include 48,000 (4-ton), 60,000 (5-ton), and 72,000 (6-ton) BTU/hr units. Units can be multiplexed for even larger capacities as required.

Each unit includes a chilled water (CW) flow switch, refrigerant high- and low-refrigerant pressure switches, and inlet and outlet CW temperature sensors. The TWC does not include a chilled water modulating flow control, which means air handlers with or without flow controls can be used.\* The brazed platecoil evaporator and coaxial cupronickel seawater condenser allow for superior cooling and heating performance.

On 2- to 3-ton units, an electrical box mounted on top of the chiller houses the control board as well as starting components, and can be mounted remotely up to 6 ft. (1.8m) away. On 4- to 6-ton units, the electric box is normally contained within the enclosure and does not contribute to height. A remote electric box is available upon request for 4- to 6-ton units.

Two control systems are available. The standard control is our proven Digital Diagnostic Control (DDC) that provides simple, single-stage operation. For multiplexed systems, the Tempered Water Logic Control (TWLC) with LCD screen is available. Depending on the configuration, additional cables, switches, sensors, or a display may be required.

All TWC chillers come with R-410A, the preferred environmentally safe refrigerant used in modern, high-efficiency air conditioning systems.

*\*On larger boats we always recommend using flow-controlled air handlers to ensure proper water distribution. A balancing flow control (BFC) is not needed when using TWC chillers.*

### Key Benefits

- Compact, enclosed design.
- Reverse cycle for cooling and heating.
- High-efficiency rotary or scroll compressors.
- Includes flow switch, high- and low-pressure switches, and inlet and outlet CW temperature sensors.
- Large heat exchangers for superior performance in both cooling and heating.
- Choice of either TWLC or DDC chiller control (included on unit).
- Electrical box can be mounted remotely (2- to 3-ton units).
- All models use R-410A, an environmentally safe refrigerant.
- 24,000 (2-ton) to 72,000 (6-ton) BTU/hr capacities.

# Technical Specifications for TWC Compact Tempering Units

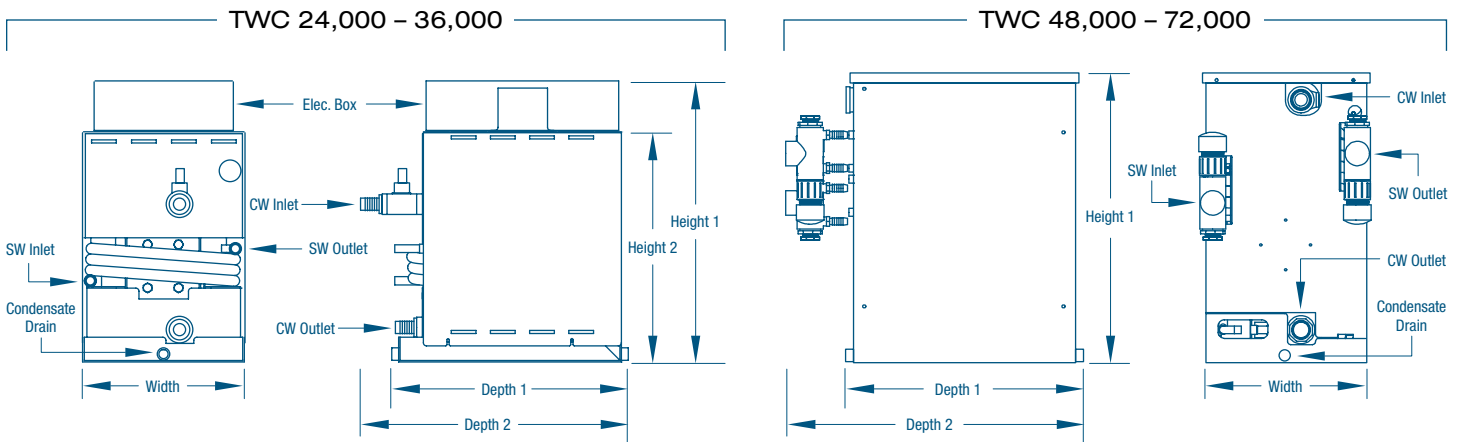
Model	Capacity (BTU/hr) <sup>(1)</sup>	Volts/Hz/Ph <sup>(2)</sup>	FLA Cool	FLA Heat	Dimensions (in/mm) <sup>(3)</sup>					Connections		Weight <sup>(3)</sup> (lb/kg)
					Height 1	Height 2	Width	Depth 1	Depth 2	SW	CW	
TWC24C	24,000	230/60/1	7.5	9.8	22.6/574	18.6/472	13.0/330	18.8/477	19.4/493	5/8" HB	1" FPT/ 1" HB	105/48
TWC24CK		220/50/1	9.5	11.0								
TWC24DC		230/60/3	5.7	7.3								
TWC24EC		460/60/3	2.8	3.6								
TWC24ECK		380/50/3	3.3	4.4								
TWC30C	30,000	230/60/1	9.3	13.5	22.6/574	18.6/472	13.0/330	18.8/477	19.4/493	5/8" HB	1" FPT/ 1" HB	110/50
TWC31CK		220/50/1	10.3	12.0								
TWC32DC		230/60/3	7.2	9.1								
TWC33EC		460/60/3	3.3 <sup>(4)</sup>	4.2 <sup>(4)</sup>								
TWC34ECK		380/50/3	N/A	N/A								
TWC36C	36,000	230/60/1	10.9	15.6	22.6/574	18.6/472	13.0/330	18.8/477	19.4/493	5/8" HB	1" FPT/ 1" HB	110/50
TWC36CK		220/50/1	9.6	12.7								
TWC36DC		230/60/3	8.0	10.2								
TWC36EC		460/60/3	4.1	5.3								
TWC36ECK		380/50/3	4.0	5.6								
TWC48C	48,000	230/60/1	13.0	19.1	23.4/594	N/A <sup>(5)</sup>	13.3/338	18.8/478	23.9/607	1-1/4" FPT	1" FPT	TBD
TWC48CK		220/50/1	14.4	20.7								
TWC48DC		230/60/3	9.1	12.2								
TWC48EC		460/60/3	4.7	6.2								
TWC48ECK		380/50/3	4.9	7.0								
TWC60C	60,000	230/60/1	17.0	24.7	23.4/594	N/A <sup>(5)</sup>	13.3/338	18.8/478	23.9/607	1-1/4" FPT	1-1/4" FPT	TBD
TWC60CK		220/50/1	21.5	30.1								
TWC60DC		230/60/3	10.5	14.4								
TWC60EC		460/60/3	6.2	8.2								
TWC60ECK		380/50/3	6.8	9.1								
TWC72C	72,000	230/60/1	23.3	32.5	23.4/594	N/A <sup>(5)</sup>	13.3/338	18.8/478	23.9/607	1-1/4" FPT	1-1/4" FPT	TBD
TWC72DC		230/60/3	14.2	18.2								
TWC72EC		460/60/3	6.9	9.1								
TWC72ECK		380/50/3	9.0	11.7								

**NOTES:**

- <sup>(1)</sup> Nominal capacity shown, as per ABYC guidelines of the compressor manufacturer's ratings.
- <sup>(2)</sup> Nominal compressor voltage shown. Refer to chart at right for operational voltage ranges.
- <sup>(3)</sup> All dimensions are ± 1/2" (13mm). All weights are ± 10%.
- <sup>(4)</sup> Preliminary data.
- <sup>(5)</sup> Electric box is contained within the enclosure on TWC48-72 models.

**Nominal Compressor Voltage Ranges**

- 230/60/1 = 208-240/60/1
- 220/50/1 = 220-240/50/1
- 230/60/3 = 208-230/60/3 and 200-220/50/3
- 380/50/3 = 380-420/50/3
- 460/60/3 = 440-480/60/3 and 380-420/50/3



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Environmentally Responsible

Dealer:



# MTS Chillers

## For Pleasure Yachts & Commercial Vessels



MTS25 shown



**The MTS is a high-capacity modular chiller unit for large pleasure yachts and commercial vessels.** Optional electric heaters can provide onboard comfort year round.

Each module contains a hermetic scroll compressor and shell-and-tube marine-grade condenser, along with other mechanical and electrical components on a single chassis. Multiple modules can be staged as needed to meet the required load.

These space-saving modules are designed for easy installation in tight spaces. The MTS provides easy front access for repair and maintenance of condenser tubes, heater rods, flow switch, compressor, and replaceable drier cores. Safety measures include high-pressure switch, refrigerant pressure-relief valve, low-pressure switch, flow switch, high-limit switch, and freeze protection.

A filter drier keeps refrigerant oil clean and dry for long compressor life. With 100 percent pump-down capacity, refrigerant circuit repairs can be made without recovering the refrigerant.

The MTS 25-ton (279,000 BTU/hr) chiller is available in 380V and 460V models.

### Key Benefits

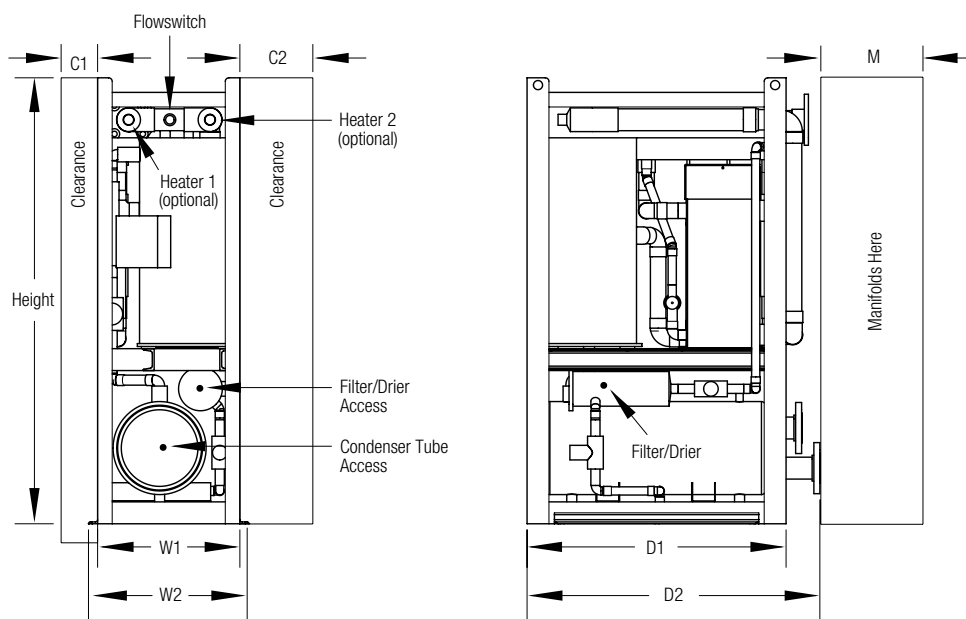
- Modular design for staging multiple units.
- Hermetic scroll compressor – avoids leaks.
- Marine-grade cupronickel shell-and-tube condenser.
- Dual bottom-draining liquid connections and trap in condenser – optimal performance in choppy seas.
- High-pressure switch and pressure-relief valve for safety.
- Frequency drives – minimize starting amps.
- Filter drier – keeps refrigerant oil clean and dry for long compressor life.
- 100% pump-down capacity – refrigerant circuit repairs can be made without recovering the refrigerant.

## Technical Specifications for MTS 25-Ton

Model	MTS25 (380V)	MTS25 (460V)
Capacity (BTU/Hr)	279,000	279,000
Voltage	380/60/3	460/60/3
Amps	35.5	35.5
Net Weight (lbs/kg)	1150/429.2	1150/429.2
Height (in/mm)	61.2/1554	61.2/1554
Width, W1 (in/mm)	19.5/495	19.5/495
Width, W2 (in/mm)	21.75/552	21.75/552
Depth, D1 (in/mm)	35.5/902	35.5/902
Depth, D2 (in/mm)	40.2/1021	40.2/1021
Clearance, C1 (in/mm)	5.0/127	5.0/127
Clearance, C2 (in/mm)	10.0/254	10.0/254
Manifolds (see notes)	See notes below	See notes below

**Notes:**

Allow 8" for manifolds only, or 14" for manifolds with isolation valves. All dimensions ± 0.5".  
 Clearance between modules should alternate 5", 10", 5"... and at least 5" at each end.



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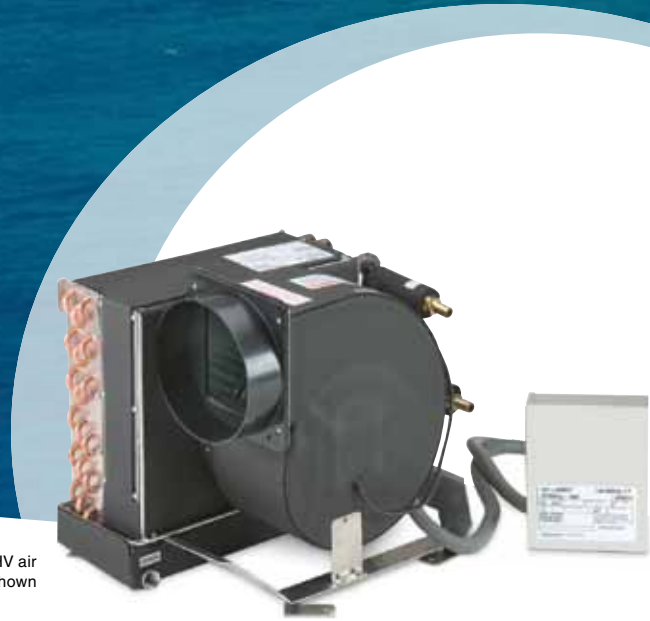


Environmentally  
 Responsible

Dealer:

# AT Series Air Handlers for TW

## Improved Design for Better Performance



AT18HV air handler shown

**Cruisair's AT series of air handlers for tempered water systems are draw-through (ducted) units that replace the CBU, CBBL, and CHBBL models, and have many improvements and options over the existing units.**

Significant improvements include: sloped "Positive-Flow" drain pan which reduces standing water, larger drain connections, improved coil design for better cooling and dehumidifying performance, coil is offset from drain pan edge to ensure all condensation is caught in the pan, redesigned piping so the bypass valve is clear of dripping condensation, pressure test ports for troubleshooting, and the new 24,000 BTU/hr unit uses a high-efficiency, internal-motor blower for quieter operation. On units with auxiliary (electric) heat, the new heater design allows removal from the top or side for access or servicing.

### Options:

- Electric heat with two-stage electric heat overload (no thermo-fuse), heater assembly accessible from top or side.
- Electric heat option may be added in the field
- Right-hand water connections
- Available without bypass valve
- Pre-rotated blowers
- Corrosion resistant coated evaporator coil
- 3ph electric heat available

### Key Benefits

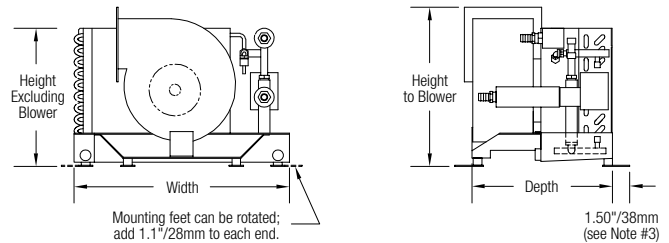
- Compact design; large coil shroud volume for optimum performance.
- High-efficiency internal-motor blower, except model AT4F. Blower can be rotated in the field.
- Integrated 3-way bypass valve with easy-change power head.
- Modulating flow control to ensure proper water distribution to all units.
- Sloped, positive-flow, anti-slosh drain pan with anti-fungal foam insulation.
- Two ½" FPT drain connections on back of pan within footprint of unit.
- Integrated chassis with vibration isolation mounting feet.
- Remote air bleeder on 6' (1.8 m) of flexible tubing with ball valve.
- Washable air filter included. Micro-Particle Anti-Allergenic air filters available.
- Large, remote electrical junction box with 6' (1.9 m) wire harness.
- 24k unit with high-efficiency internal-motor blower.
- Water pressure test ports for troubleshooting.
- Allowance for connecting variable fan speed drives.
- Rotatable blowers.
- ISTA certified packaging.
- Change-Over Stat (COS) is now sold with the new AT power/logic box (Model PLTX-HVSTAT) which also includes a TSEP10.

# Technical Specifications for AT Series Air Handlers

Model <sup>(1)</sup>	AT4HV		AT6HV		AT9HV		AT12HV		AT18HV		AT24HV		AT36HV
Cooling (BTU/hr / Kcal/hr)	4,000/1,008		6,000/1,512		9,000/2,268		12,000/3,024		18,000/4,536		24,000/6,048		36,000/9,072
Voltage @ 50-60Hz/1Ph	115	230	115	230	115	230	115	230	115	230	115	230	230
Amperage (FLA) Cool	0.8	0.4	1.2	0.6	1.4	0.7	1.4	0.7	2.2	1.0	2.2	1.0	1.6
<b>Optional Electric Heaters <sup>(2)</sup></b>													
Element Size (kW)	N/A		1.0		1.5		2.0		3.0		3.0		4.0
Heating (BTU/hr / Kcal/hr)	N/A		3,412/860		5,118/1,290		6,824/1,720		10,236/2,579		10,236/2,579		13,648/3,439
Amperage (FLA) Heat	N/A		10.5	4.9	14.4	7.2	18.8	9.4	28.3	14.0	28.2	14.0	19.0
<b>Max. Fuse/in. Circuit Ampacity</b>													
Without Electric Heat	5/2	5/1	5/3	5/1	5/2	5/1	5/2	5/1	5/3	5/2	5/3	5/2	5/3
With Electric Heat Open	N/A		10/9	5/5	15/14	10/7	20/18	10/9	30/27	15/14	30/27	15/14	25/20
Water Flow (GPM/LPM)	1.0/3.8		1.5/5.7		2.3/8.5		3.0/11.4		4.5/17.0		6.0/22.7		9.0/34.1
Air Flow (CFM / M <sup>3</sup> /Hr) Nominal	130/221		229/389		278/472		338/574		465/790		506/860		676/1149
External SP (in. H2O/eq. Ft.)	0.30/42.3		0.30/42.3		0.30/42.3		0.30/42.3		0.30/42.3		0.30/42.3		0.30/42.3
Height Excluding Blower (in/mm)	10.1/257		10.2/259		11.90/302		12.05/306		14.96/380		16.61/422		19.50/495
Height to Blower (in/mm)	9.5/241		12.63/321		13.25/337		13.88/353		16.50/419		16.68/424		19.50/495
Width (in/mm) <sup>(3)</sup>	14.8/376		15.00/381		16.63/422		18.75/476		20.25/514		22.63/575		26.63/676
Depth (in/mm) <sup>(3)</sup>	8.8/224		12.28/312		12.50/318		12.50/318		12.25/311		15.25/387		18.00/457
Supply Air Duct Diameter (in/mm)	4/102		5/127		6/152		6/152		7/178		8/203		8/203
Remote Mount Electric Box (in/mm)	8.00/203 High X 6.13/156 Wide X 2.00/51 Deep												
Return Air Inlet (sq in/sq cm)	64/413		70/452		98/632		130/839		200/1,290		240/1,548		360/2,323
Supply Air Outlet (sq in/sq cm)	32/206		35/226		49/316		70/452		100/645		140/903		196/1,265
Water Connections	Drain: 1/2" FPT with PVC HB. Chilled Water: 1/2" FPT on 4-24K; 1" FPT on 36K with Brass HB on All.												
Net Weight (lb/kg) <sup>(4)</sup>	16.0/7.3		18.4/8.3		24.0/10.9		24.0/10.9		32.8/14.9		38.0/17.2		60.0/27.2
Gross Weight (lb/kg) <sup>(4)</sup>	23.0/10.4		28.4/12.9		34.0/15.4		34.0/15.4		36.8/16.7		52.0/23.6		66.0/29.2

**Notes:**

- <sup>(1)</sup> Model numbers shown are for 115V units. Add a "Z" after the "HV" in the model number to designate 230V (i.e. AT12HVZ). Model number prefixes: -FC = Flow Control; -L# or -R# = Valve and Blower Rotation (see dwg H3050002); -#kW = Electric Heat Option.
- <sup>(2)</sup> Auxiliary heating elements are optional, and must be ordered with unit. Add "1KW, 1.5KW, etc." to the model number.
- <sup>(3)</sup> Rotatable feet affect the final dimensions. Front feet add 1.5" to the front, or 1.1" to both sides. Rear feet do not add to the width or depth when rotated to the side.
- <sup>(4)</sup> Weights listed are for standard "HV" units. For weights of units with the electric heater option, add heater elements weights to unit weight. 1.0kW & 1.5kW = 1.5 lbs/0.7 kg; 2.0kW & 3.0kW = 3.0 lbs/1.4 kg. Dimensional weights may apply to shipping charges; contact your sales-admin representative.



**Interpreting Model Numbers**

AT	12	HV	Z	-FC	-L120	-2KW
"AT" style Air Handler	Capacity X 1,000 BTU/hr	Blower HV: High-Efficiency F: External Motor	Voltage Z: 230V Blank: 115V	With Flow Control Blank: No Flow Control	Valve & Blower Orientation Blank: L0 (standard)	kW of Elec. Heat Blank: No Elec. Heat

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Environmentally Responsible

Dealer:

# Super Quiet AT-DC Air Handlers

## With WhisperCool Technology



AT6DC shown



**Dometic creates the new standard in luxury yacht climate control that you'll barely notice – precisely what your clients are asking for – quiet nights.** WhisperCool Technology harnesses engineering refinements to eliminate annoying “motor hum” from traditional air conditioning blowers that occurs at very low speeds. Incoming alternating current is converted to drive a high-efficiency, brushless DC fan motor. The result is a much quieter fan operating across a broad range of variable speeds, permitting the user to select the desired comfort level.

Additional design changes in the air handlers eliminate condensate drain problems, reduce dripping condensation and standing water issues. An improved coil enhances cooling and dehumidification performance. The redesigned unit also creates easily accessible water-pressure test points for troubleshooting and maintenance.

Better dehumidification, better cooling, less noise... just the kind of performance one expects aboard a luxury yacht.

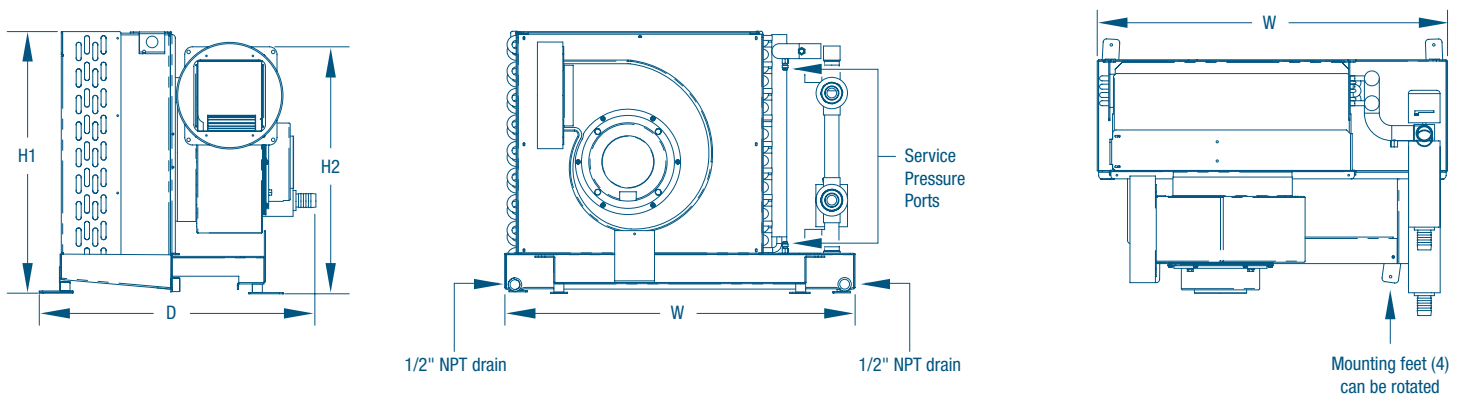
### Key Benefits

- Advanced super-quiet variable speed DC fan motor.
- Operates with Marine Air chilled water air conditioning systems.
- Engineering improvements eliminate condensate drain challenges – a positive-flow drain pan, larger drain connections, offset coil from drain-pan edge and a redesigned bypass valve.
- Improved coil design for better dehumidification and cooling.
- More accessible maintenance points including water pressure test ports.
- Rotateable blower.

# Technical Specifications for AT-DC Air Handlers

Model	AT6DC	AT9DC	AT12DC	AT18DC	AT24DC	AT36DC
Capacity (BTU/Hr)	6,000	9,000	12,000	18,000	24,000	36,000
Volts/Hz/Phase	208-230/ 50-60/1	208-230/ 50-60/1	208-230/ 50-60/1	208-230/ 50-60/1	208-230/ 50-60/1	208-230/ 50-60/1
Amps (FLA) Cool*	1.4	1.4	3.2	3.9	3.9	3.9
Optional Heater KW	1.0	1.0	1.5	1.5	3.0	3.0
Heater Amps	4.3	4.3	6.5	6.5	13.0	13.0
Amps (FLA) Heat*	5.7	5.7	9.7	10.4	16.9	16.9
<b>Max Fuse</b>						
Without Electric Heat	5.0	5.0	5.0	5.0	5.0	5.0
With Electric Heat	10.0	10.0	15.0	15.0	20.0	20.0
<b>Min Circuit Ampacity</b>						
Without Electric Heat	2.0	2.0	4.0	5.0	5.0	5.0
With Electric Heat	7.0	7.0	11.0	12.0	18.0	18.0
GPM/(liters/min)	1.50/5.7	2.25/8.5	3.00/11.4	4.50/17.0	6.00/22.7	9.00/34.1
CFM/(M <sup>3</sup> /hr)	200/340	280/476	400/680	600/1019	650/1105	670/1130
External Static Pressure (in H <sub>2</sub> O)	1.9	0.6	2.3	1.1	0.6	0.5
<b>Dimensions (in/mm)</b>						
Height with blower (H1)	13.63/346	13.73/349	13.94/354	16.94/430	16.70/424	19.74/501
Height without blower (H2)	11.08/281	11.79/299	12.05/306	14.83/377	16.70/424	19.74/501
Width (W)	14.81/376	16.48/419	18.75/476	20.08/510	22.48/571	26.41/671
Depth (D)	14.27/362	14.55/370	14.49/368	14.83/377	16.42/417	17.15/436
Duct Ring Diameter (in/mm)	5.00/127.0	6.00/152.4	6.00/152.4	7.00/177.8	8.00/203.2	8.00/203.2
Minimum Supply Air Outlet (sq. in.)	35	49	70	100	140	196
Minimum Return Air Inlet (sq. in.)	70	98	130	200	240	360
Drain Connections	two 1/2" female NPT	two 1/2" female NPT	two 1/2" female NPT	two 1/2" female NPT	two 1/2" female NPT	two 1/2" female NPT
Chilled Water Connections, Female NPT	1/2"	1/2"	1/2"	1/2"	1/2"	1"
Net Weight (lbs/kg)	23/10.4	27/12.2	29/13.2	39/17.7	44/20.0	63/28.6
Gross Weight (lbs/kg)	33/15.0	37/16.8	39/17.7	49/22.2	58/26.3	72/32.7

\* Amps listed above are based on maximum speed in free air. Speed would be set well below maximum, and the unit would ordinarily be ducted rather than free air, therefore, the real world amps will be considerably lower.



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Environmentally Responsible

Dealer:

# ATL Air Handlers for TW

## Designed With Height Constraints In Mind



ATL12DC shown

**Cruisair's ATL air handlers are improved low-profile, draw-through units for tempered water air conditioning systems.** Insulating foam covers the condensate pan, blower housing, shroud, and coil end cover to reduce noise and secondary condensation. The condensate pan also has an anti-slosh, anti-fungal foam lining. The ATL series is designed to replace the CHBBC models.

ATL air handlers are an excellent choice for over-head applications where height is limited. Typically, each cabin or area has one or more air handlers with an independent climate control to provide passengers with the most comfortable environment on the water.

All Cruisair air handlers use corrosion-resistant materials, and are fully insulated with deep drain pans to prevent secondary condensation.

### Key Benefits

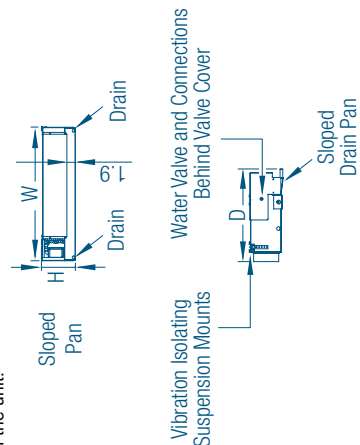
- Suspend from above or support from beneath, vibration isolation included.
- Bypass valve has removable power head for simple servicing.
- Valve body is soldered to unit to prevent leaks.
- The electrical box can be mounted remotely up to six feet away.
- Remote air bleeder on 6 ft. (1.8 m) of flexible tubing with easy-operating ball valve.
- Optional whisper-quiet DC blowers.
- Valve on left (standard) or on right (optional).
- Flow control helps balance chilled water distribution throughout the boat by ensuring that no air handler so equipped receives more flow than required. This eliminates the tedious job of trying to manually balance system flow.

# Technical Specifications for ATL Air Handlers

Model	ATL6DC	ATL9DC	ATL12DC	ATL18DC	ATL24DC	ATL30DC	ATL36DC	ATL16F
Capacity (BTU/hr)	6000	9000	12000	18000	24000	30000	36000	16000
Volts/Hz/Phase	208-230/ 50-60/1	208-230/ 50-60/1	208-230/ 50-60/1	208-230/ 50-60/1	208-230/ 50-60/1	208-230/ 50-60/1	208-230/ 50-60/1	115/60/1
Amps (FLA) Cool <sup>(1)</sup>	1.4	1.4	2.8	2.8	3.9	3.9	3.9	2.4
Optional Heater kW <sup>(2)</sup>	1	1	2.0	2.0	1.5	1.5	1.5	N/A
Heater Amps	4.3	4.3	8.7	8.7	6.5	6.5	6.5	N/A
Amps (FLA) Heat <sup>(1)</sup>	5.7	5.7	11.5	11.5	10.4	10.4	10.4	N/A
<b>Max. Fuse</b>								
Without Elec. Heat	5	5	5	5	5	5	5	5
With Elec. Heat	10	10	15	15	15	15	15	N/A
<b>Min. Circuit Amps</b>								
Without Elec. Heat	2	2	4	4	5	10	10	3
With Elec. Heat	7	7	13	13	12	12	12	N/A
Water Flow, GPM/(liters/min)	1.5/5.7	2.25/8.5	3/11	4.5/17	6/23	7.5/28	9/34	4/15
Air Flow, CFM/(m <sup>3</sup> /hr)	200/340	300/510	400/680	600/1020	800/1360	1000/1700	1200/2040	420/710
External Static Pressure (in H <sub>2</sub> O/Pa)	1.9/470	0.65/160	1.9/470	0.65/160	1.5/370	1.65/410	0.65/160	0.3/75
<b>Dimensions<sup>(3)</sup></b>								
Height (in/mm)	8.3/211	8.3/211	8.3/211	8.3/211	10.8/274	10.8/274	10.8/274	8.10/205
Depth (in/mm) <sup>(4)</sup>	22.7/577	22.7/577	22.7/577	22.7/577	19.7/500	21.6/549	21.6/549	17.60/447
Width (in/mm)	19.4/493	19.4/493	31.4/798	31.4/798	43.1/1095	62.2/1580	62.2/1580	23.40/595
Duct Connections (in/mm)	6/153, 1 ring	6/153, 1 ring	6/153, 2 rings	6/153, 2 rings	8/204, 1 ring	8/204, 1 ring	8/204, 1 ring	4/102, 2 obrounds
Min Supply Air Outlet Per Duct (in <sup>2</sup> /cm <sup>2</sup> )	35/226 1 duct	49/316 1 duct	35/226 2 ducts	49/316 2 ducts	147/949 1 duct	168/1084 1 duct	168/1084 1 duct	40/260 2 ducts
Total Return Air Inlet (in <sup>2</sup> /cm <sup>2</sup> )	70/452	98/632	130/840	200/1290	240/1550	300/1935	360/930	144/930
Drain Connections	Two 1/2" od tube stubs							
Chilled Water Connections, Female NPT (in)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Pan Style	Sloped	Sloped	Sloped	Sloped	Sloped	Sloped	Sloped	Sloped
Weight (lbs/kg)	31/14.1	31/14.0	51/23.1	51/23.1	62/28.1	76/34.5	76/34.5	34/15.4

**Notes:**

- <sup>(1)</sup> Blower amps will be reduced at lower speed/cfm static pressure.
- <sup>(2)</sup> The ATL12DC - ATL18DC models are rated at 2.0 kW because the heat is on the blower discharge, and these models have dual blowers. The larger ATL24DC - ATL36DC models require only 1.5 kW because they have a single blower.
- <sup>(3)</sup> Dimensions are ± 0.3" or 8mm.
- <sup>(4)</sup> Units with electric heat have a heater box on the discharge of each blower. Electric heat adds 5.80"/147mm to the depth. The heater box is only 9.50"/241mm wide (not including electrical gland), and does not add to the height or width of the unit.



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Dealer:



# ABL Air Handlers for TW

## Low-Profile Models



ABL18DCZ shown



**Cruisair's ABL air handlers are improved low-profile, draw-through units for tempered water air conditioning systems.**

Insulating foam covers the condensate pan, blower housing, shroud, and coil end cover to reduce noise and secondary condensation. The condensate pan also has an anti-slosh, anti-fungal foam lining. The ABL series is designed to replace the CBLB models.

ABL air handlers are an excellent choice for over-head applications where height is limited. Typically, each cabin or area has one or more air handlers with an independent climate control to provide passengers with the most comfortable environment on the water.

### Key Benefits

- DC blowers are strong and quiet at any speed.
- Suspend from above or support from beneath, vibration isolation included.
- Heater elements accessible from underneath (standard) or from above (optional).
- Bypass valve has removable power head for simple servicing.
- Valve body is soldered to unit to prevent leaks.
- The electrical box can be mounted remotely up to six feet away.
- Remote air bleeder on 6 ft. (1.8 m) of flexible tubing with easy-operating ball valve.
- Washable air filter included. Micro-Particle Anti-Allergenic air filters available.

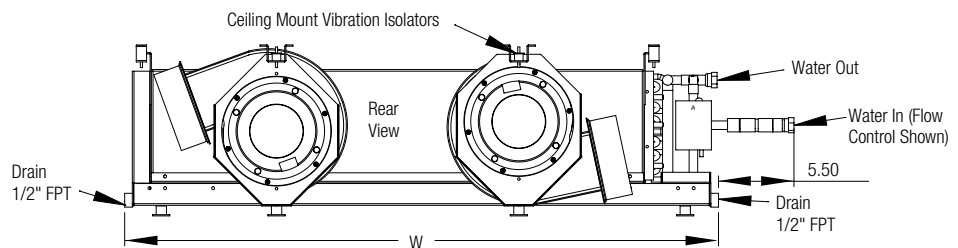
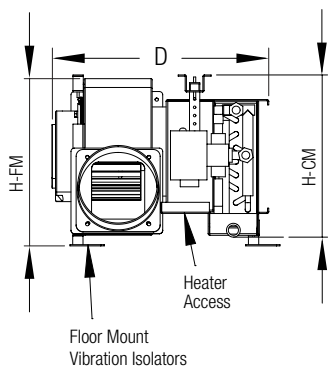
### Optional Features

- Valve on left (standard) or on right (optional).
- Heater elements accessible from underneath (standard) or from above (optional).
- Flow control helps balance chilled water distribution throughout the boat by ensuring that no air handler so equipped receives more flow than required. This eliminates the tedious job of trying to manually balance system flow.

# Technical Specifications for ABL Air Handlers

Model	ABL18DCZ	ABL24DCZ
Capacity (BTU/Hr)	18,000	24,000
Voltage	208-230/50-60/1	208-230/50-60/1
Amps (FLA) Cool	6.4	6.4
Optional Heater KW	3.0	3.0
Heater Amps	13.0	13.0
Amps (FLA) Heat	19.4	19.4
<b>Max. Fuse</b>		
Without Electric Heat	10.0	10.0
With Electric Heat	25.0	25.0
<b>Min. Circuit Ampacity</b>		
Without Electric Heat	8.0	8.0
With Electric Heat	21.0	21.0
GPM	4.5	6.0
CFM/(M <sup>3</sup> /Hr)	600/1019	800/1359
External static pressure (in H <sub>2</sub> O)	2.7	2.5
<b>Dimensions (in/mm)</b>		
Height Ceiling Mount, H-CM	11.9/302	11.9/302
Height Floor Mount, H-FM	12.2/310	12.2/310
Width, W	37.3/947	43.3/1100
Depth, D	15.8/401	15.8/401
Dual Duct Rings (in/mm)	6.0/152	6.0/152
Total Return Air Inlet (sq in)	200	240
Supply Air Outlet for Each Blower (sq in)	50 + 50	70 + 70
Drain Connections, Female NPT (in)	1/2"	1/2"
Chilled Water Connections, Female NPT (in)	1/2"	1/2"
Net Weight (lbs/kg)	63.0/28.4	66.0/29.9
Gross Weight (lbs/kg)	72.0/32.4	81.0/36.7

Notes:  
 Dimensions are ± 0.3 inches or 7.62 mm. Blower amps will be reduced at lower speed/CFM/static pressure.



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Dealer:

# ATV Air Handlers for TW

## Designed With Depth Constraints In Mind



ATV6DC  
air handler

**Cruisair's ATV series of tempered water air handlers were designed for applications where very little depth is available.** Showcasing a unique vertical layout, this model has the coil low and the blower above.

**Put it in the wall.** Tall and slim, the ATV makes previously unusable areas suitable for blower installation. With a depth of only 9.4 in. (240 mm) it can be hidden in side areas instead of in places above or below, where most air handlers go. Designed for ducted applications, the ATV has a strong yet quiet DC blower with internal motor to reduce depth, resulting in easier installation.

**Heat is just a button-press away.** Typically, each cabin or living space has one or more air handlers, each with an independent climate control to provide passengers with the most comfortable environment on the water. The ATV air handler includes an electric heater to provide supplemental heat in cold climates. The ATV can also provide heat to its cabin even while the chiller is supplying cool air to other areas.

Cruisair air handlers have deep drain pans, use corrosion-resistant materials, and are fully insulated to prevent secondary condensation. An optional flow control is highly recommended to help distribute the flow of chilled water more efficiently.

### Key Benefits

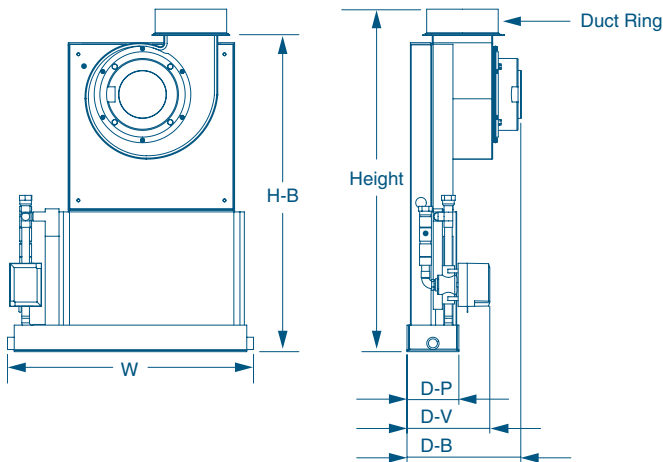
- Fits into walls.
- Unique vertical design.
- Minimal depth.
- DC blower provides strong, quiet performance.
- Electric heater included.
- Capacities from 6K - 36K BTU/hr.

# Technical Specifications for ATV Chilled Water Air Handlers

Model	ATV6DC	ATV9DC	ATV12DC	ATV18DC	ATV24DC	ATV36DC
Capacity (BTU/Hr)	6,000	9,000	12,000	18,000	24,000	36,000
Volts/Hz/Ph	208-230/50-60/1	208-230/50-60/1	208-230/50-60/1	208-230/50-60/1	208-230/50-60/1	208-230/50-60/1
Amps (FLA) Cool	1.4	1.4	3.2	3.9	3.9	3.9
Optional Heater KW	1.0	1.0	1.0	1.5	1.5	1.5
Heater Amps	4.3	4.3	4.3	6.5	6.5	6.5
Amps (FLA) Heat	5.7	5.7	7.5	10.4	10.4	10.4
<b>Max. Fuse</b>						
Without Electric Heat	5.0	5.0	5.0	5.0	5.0	5.0
With Electric Heat	10.0	10.0	10.0	15.0	15.0	15.0
Water Flow, GPM (liters/min)	2.25/8.5	2.25/8.5	3.00/11	3.00/11	6.00/23	9.00/34
Air Flow, CFM (m <sup>3</sup> /hr)	200/340 <sup>(2)</sup>	280/476	400/680 <sup>(2)</sup>	600/1020 <sup>(2)</sup>	650/1100	750/1275
External static pressure (in H2O/Pa)	0.75/186	0.75/186	0.75/186	0.75/186	0.75/186	0.50/125
<b>Dimensions (in/mm) <sup>(3)</sup></b>						
Height	22.3/566	22.3/566	24.1/612	27.8/706	34.4/874	34.4/874
Width	20.2/513	20.2/513	20.2/513	21.2/538	29.3/538	29.3/538
H-B	20.5/521	20.5/521	22.1/561	26.0/660	32.5/826	32.5/826
D-P	4.3/109	4.3/109	4.3/109	6.3/160	7.9/201	7.9/201
D-V	6.8/173	6.8/173	6.8/173	7.6/193	9.1/231	9.1/231
D-B	7.4/188	9.4/240	9.4/240	10.3/262	11.5/292	11.5/292
Duct Ring Diameter (in/mm)	5.0/127	6.0/152	6.0/152	7.0/178	8.0/203	8.0/203
Minimum Supply Air Outlet (in <sup>2</sup> /cm <sup>2</sup> )	35/226	49/320	70/450	100/645	140/903	196/1,265
Minimum Return Air Inlet (in <sup>2</sup> /cm <sup>2</sup> )	70/452	98/632	130/839	200/1,290	240/1,548	360/2,323
Drain Connections, Female NPT	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Chilled Water Connections, Female NPT	1/2"	1/2"	1/2"	1/2"	1"	1"
Net Weight (lb/kg)	22/10	25/11	31/14	36/16	65/29	65/29
Gross Weight (lb/kg)	32/15	32/15	40/18	46/21	76/34	76/34

**Notes:**

- <sup>(1)</sup> Blower amps will be reduced at lower speed/cfm/static pressure.
- <sup>(2)</sup> To avoid water droplets in the airstream, do not exceed this CFM.
- <sup>(3)</sup> Dimensions are ± 0.3 inches or 8mm.



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Environmentally Responsible

Dealer:

# AT-MU Fresh Air Make-Up Units

## For Use In Fresh Air Make-Up Systems



ATMU 24 shown

**AT-MU air handlers are designed for use in fresh air make-up (FAMU) systems where outside air is drawn in by the air handler, cooled, dehumidified, and reheated to room temperature, and then ducted to various areas in the vessel.**

The unit consists of a water coil, valve, electric heater, and a blower mounted on a condensate pan/chassis with rubber isolation mounting feet.

A specially designed water coil cools and dehumidifies the outside air in one pass, and is coated, along with the blower and sheet metal, to prevent corrosion. A motorized 3-way bypass valve controls the flow of circulated water through the coil. The high static pressure blower has a high-efficiency internal motor, and can be rotated as required for installation. An electric heater, with redundant over-temperature protections, is included to reheat the cooled air up to a comfortable temperature.

The sloped "Positive-Flow" condensate pan reduces standing water, and is lined with anti-fungal, anti-slosh foam. An optional modulating loop-water flow control regulates the water through the unit to ensure proper water distribution to all air handlers.

Cruisair AT-MU units are available with an integrated "Pulse Heat" control, either in 208VAC or 230VAC, or they can be ordered without a control, and a separate SMX control (with the humidistat option) can be used.

### Key Benefits

- Compact design.
- Corrosion resistant coating on evaporator coil, blower, and sheet metal sloped "Positive-Flow" drain pan with anti-slosh, anti-fungal foam.
- Vibration isolation mounting feet.
- Rotatable, high-efficiency internal-motor blower.
- Integrated 3-way bypass valve with easy-change power head.
- Electric heat with two-stage electric heat overload.
- Heater assembly accessible from top or side.
- Large coil shroud volume for optimum performance.
- Washable air filter.
- Brass hose barbs included for loop water connections.
- Remote air bleeder on 6ft (1.8m) of flexible tubing with ball valve.
- Water pressure test ports for troubleshooting.
- Modulating flow control ensures proper water distribution.
- Hose adapter included for round flex duct connection.
- ISTA Level IIIA certified packaging.

### Options

- Terminal strip style junction box for use with SMX instead of SCR-based controls. Precise voltage (i.e., 208 or 230) need not be specified with this option.

## Technical Specifications for AT-MU Fresh Air Make-up Air Handlers

Model <sup>(1)</sup>	AT18HVZ-1.5KW-MU	AT24HVZ-2KW-MU	AT36HVZ-4KW-MU
Capacity (BTU/Hr)/(Kcal/Hr)	17,000/4,284	27,000/6,804	53,000/13,356
Voltage @ 50-60Hz/1Ph <sup>(2)</sup>	230	230	230
Amperage (FLA)	7.4	9.5	19.1
Max. Fuse/Min. Circuit Ampacity	10/8	10/10	20/20
Electric Heaters Size (kW)	1.5	2.0	4.0
GPM/(liters/min.)	4.5/17.0	6.0/22.7	9.0/34.1
CFM/(M3/HR.) Nominal	174/296	276/469	550/935
External SP (in. H <sub>2</sub> O/eq. Pa)	0.72/180	0.36/90	0.75/190
<b>Dimensions (in/mm)<sup>(3)</sup></b>			
Height	15.0/380	16.6/422	19.5/495
Width	20.3/514	22.6/575	26.6/676
Depth	12.3/311	15.3/387	18/457
Supply Air Duct Ø (in/mm)	5.0/125	6.0/150	8.0/200
Return Air Inlet (sq in/cm)	100/645	140/900	220/1400
Loop Water Connections	1/2" FPT with 5/8" brass HB		1" FPT with 1" brass HB
Drain Pan Connections	1/2" FPT with PVC 5/8" brass HB		
Net Weight (lbs/kg)	34/15.5	41/18.6	63/28.6
Gross Weight (lbs/kg)	38/17.3	55/25.0	69/31.4

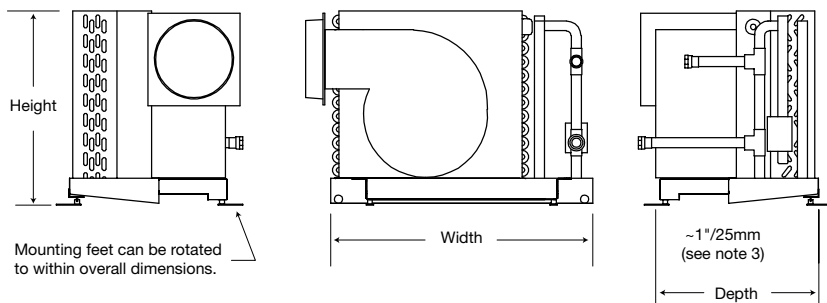
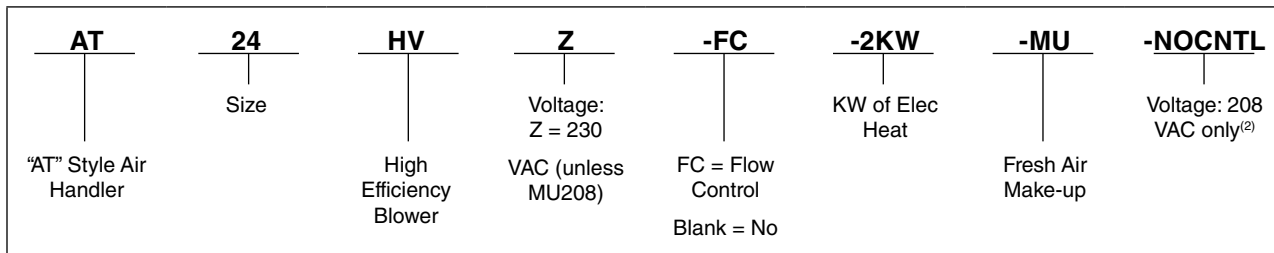
Notes:

<sup>(1)</sup> Electrical and blower data is based on 50Hz performance.

<sup>(2)</sup> Verify voltage! Units with SCR-based controls are designed for either 208VAC or 230VAC. Add "208" to the end of the model number for 208VAC units.

<sup>(3)</sup> Rotatable feet affect the final dimensions. front feet add 1.5" to the front, or 1.1" to both sides. Rear feet do not add to the width or depth when rotated to the side.

## Interpreting Model Numbers



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Environmentally Responsible

Dealer:

# Fresh Air Make-Up & Extraction Units

## Removes Stale Air From the Vessel Interior



T 800 Model shown

### **A Fresh Air Make Up (FAM) and Extraction systems by Dometic Marine is a must for large displacement yachts, ferries, and commercial vessels.**

The FAM system handles the treatment of incoming air and extraction of stale air to keep the vessel interior full of fresh treated air without fear of overpressure.

The system normally consists of a treatment unit with a specially designed water coil which cools and dehumidifies outside air. If needed, the extraction unit captures and extracts the amount of air specified to be removed, either centrally or distributed.

FAM systems are custom designed and built to the requirements of individual vessels. There are many configuration options with two major considerations: Structural/material and treatment/control type. Structural/material options include single walled (standard) or double walled (optional), stainless-steel construction, heavy-duty motors and ventilators, to name a few. Treatment/control options include reheat, humidification, full flow, or balanced flow, and can be controlled by the latest PLC technology or a simple on/off switch.

FAM units are available in single and 3-phase configurations and are tailored to available onboard power.

### Key Benefits

- Stainless-steel drain pan.
- Fully assembled.
- Minimum of 6-row coil.
- Field serviceable ventilator.
- Custom designed and built to the client's requirements.

### Configuration Options

- Single- or double-wall sheet metal.
- Suspension hardware.
- Large multi-point discharge plenums.
- Flexible treated water flow options.
- Fixed or variable air volume.
- Flexible electric reheat combinations.
- Mist separation and filter types.
- Ducted or free-flow return.
- Direct expansion, chilled and hot water coils.
- Humidification.
- Copper fin coils.
- UV-C germicidal lamps.

## Technical Specifications for Fresh Air Make Up & Extraction Systems

Model	Air Volume CFM <sup>(1)</sup>	BTU/hr Absorption <sup>(2)</sup>	Average 400/3 <sup>(3)</sup>	Dimensions (in/mm) <sup>(4)</sup>			
				Height	Width	Depth	With Heater <sup>(5)</sup>
T 400	170–260	20,000–27,000	0.39	18.11/460	19.68/500	20.47/520	Width = 28.74/730
T 800	265–400	36,000–52,000	0.39	18.11/460	21.65/550	20.47/520	Width = 30.71/780
T 1000	530–700	76,000–98,000	1.43	21.65/550	23.62/600	39.37/1000	Depth = 45.28/1150
T 1400	700–880	100,000–120,000	1.94	21.65/550	27.56/700	39.37/1000	Depth = 51.18/1300
T 1700	880–1050	120,000–146,000	2.90	27.56/700	27.56/700	43.31/1100	Depth = 55.12/1400
T 2600	1350–1700	190,000–238,000	4.00	27.56/700	38.19/970	43.31/1100	Depth = 55.12/1400

Notes:

- <sup>(1)</sup> Pulleys provide adjustable air flow. Actual total air flow depends on the size and length of the plenum.
- <sup>(2)</sup> Based on entering water of 45°F/7.2°C.
- <sup>(3)</sup> Based on 400VAC/3-Phase. Actual depends on voltage. Units are available in standard voltages and phase configurations. Note heat amps are not included.
- <sup>(4)</sup> Dimensions for base chilled water unit includes standard filter only and does not include supply and return plenums, heater, demister or double-walled units.
- <sup>(5)</sup> Actual dimensions with heater depends on the quantity of heat required.

Extraction Units:

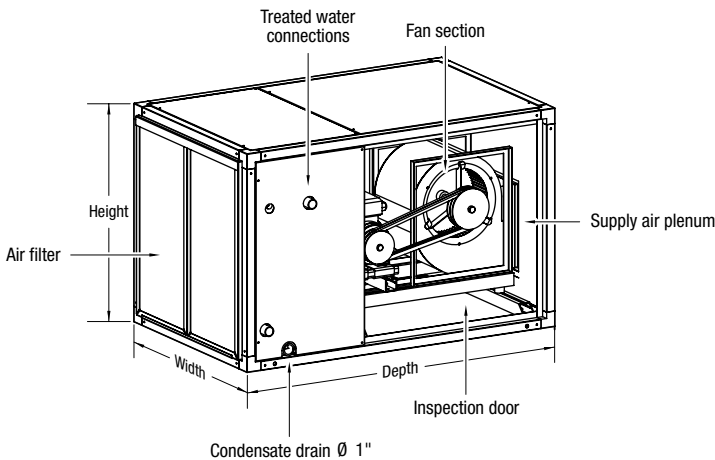
To maintain balanced air pressure that is slightly positive, it is recommended to use an Extractor that will remove slightly less air than has been added to the vessel by way of the Fresh Air Make Up system. We offer a range of Extraction equipment to suit your needs.

Fresh Air Make Up and Extraction Control Panel:

Vessels are often equipped with multiple Make Up and Extraction units. Each Make Up and Extractor comes with a junction box and contactor (when required). However, when multiple units are utilized, we will provide a unified control panel to centralize control of these components.

Make Up and Extraction Options:

As noted on side 1, Fresh Air Make Up and Extraction Systems are completely customized to the client vessel's requirements. Prior to utilizing the details found in this specification sheet, please contact your technical sales manager. To improve the turn-around of your request, please be prepared to provide the class of the vessel (if applicable), and required air changes. We also need to know if a central or distributed system is needed. Additionally, we recommend that you over-estimate the amount of room required for the units, as the dimensions listed above do not include plenums, ducting, or other optional equipment.



The illustration above shows the Fresh Air Make Up and Extraction system without the optional heater.

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Environmentally Responsible

Dealer:



# Rotary Switch Assemblies for DX & TW

## Mechanical Control Over Basic AC Functions



SA4A-ZB &amp; SSA3-ZB shown

**Cruisair electromechanical rotary-knob switch assemblies provide conventional control over basic air conditioning functions.** Both 115V and 230V switches are available. The standard design is an aluminum plate covered with a modern black plastic overlay with text and graphical representations of the various functions. Many different configurations are available:

Standard three-knob assemblies provide function selection (OFF-FAN-RUN), fan speed control, and a room thermostat with 10' (3 m) capillary tube. For tempered water systems, a special thermostat on the air handler allows automatic changeover between heating and cooling modes.

A two-knob control for tempered water systems features function control (OFF-FAN-RUN) and fan speed control. It is used with a remote thermostat, or in situations where a thermostat is not needed, such as in an engine room or on a makeup air handling unit with a bypass valve.

Single-knob switch assemblies control fan speed (either variable or 2-speed) and offer two operational modes: In the ON position, the fan will run continuously; in the AUTO position, the fan will cycle on and off with the compressor.

A four-knob assembly is available for DX systems, allowing control of an auxiliary electric heater. Functions are: system mode (OFF – FAN – RUN), heat mode (Reverse Cycle or Aux. Heat), thermostat, and fan speed.

Switches are also available for use with auxiliary heat modules, but an HRX type heat relay may be needed in certain cases.

### Key Benefits

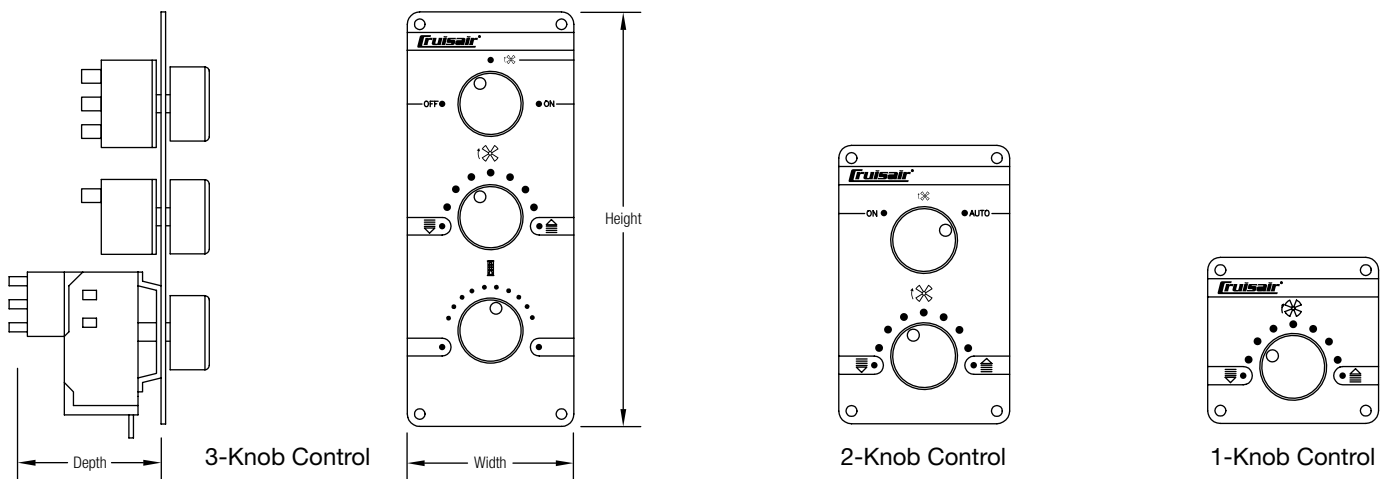
- Electromechanical Rotary Switches.
- Black plates with modern graphics.
- For use with variable or 2-speed blowers.
- Wiring connections via color-coded terminal strip; six-pin plugs used for self-contained DX systems.
- 115 or 230V.
- Auxiliary heat controls available.
- Multiple configurations for different uses.
- Vertical and horizontal versions.

# Technical Specifications for Rotary Switch Assemblies

Model	Type of Switch	Volts	Fan-Speed Control	Type of Connection	Height (in/mm)	Width (in/mm)	Depth (in/mm)
<b>Rotary Switch Assemblies for Direct Expansion AC Systems</b>							
SSA3-ZB SSA3-ZCB	3-Knob	115 230	Variable	Plug	7.25/184	2.88/73	3.5/89
SA3-ZB10 SA3-ZCB10	3-Knob	115 230	Variable	Term. Strip	7.25/184	2.88/73	3.5/89
SA3-BB10 SA3-BCB10	3-Knob	115 230	2-Speed	Term. Strip	7.25/184	2.88/73	3.5/89
SA4-ZB SA4-ZCB	1-Knob	115 230	Variable	Term. Strip	3.75/95	2.88/73	2.25/57
SA4-BB	1-Knob	115	2-Speed	Term. Strip	3.75/95	2.88/73	2.25/57
SA4A-ZB SA4A-ZCB	2-Knob	115 230	Variable	Term. Strip	5.13/130	3.13/80	3.0/76
SA5-ZB10 SA5-ZCB10	4-Knob	115 230	Variable	Term. Strip	7.82/198	2.88/73	3.5/89
<b>Rotary Switch Assemblies for Tempered Water AC Systems</b>							
TSE-TZB	3-Knob	115	Variable	Term. Strip	7.25/184	2.88/73	3.5/89
TSE-TZCB	3-Knob	230	Variable	Term. Strip	7.25/184	2.88/73	3.5/89
TS3-ZCB1	3-Knob	230	Variable	Term. Strip	7.25/184	2.88/73	3.5/89
TSR-TZB	2-Knob	115	Variable	Term. Strip	5.13/130	3.13/80	3.0/76
TSR-TZCB	2-Knob	230	Variable	Term. Strip	5.13/130	3.13/80	3.0/76
TS1A-BXB	1-Knob	115/230	2-Speed	Term. Strip	3.75/95	2.88/73	3.0/76

**Notes:**

- Most 3-knob switches are also available in a horizontal configuration (2.88" H x 7.25" W). These switches will have a letter "H" in the model number.
- TSEH and switches are available for use with auxiliary heating modules.
- The fan current on variable speed switches must not exceed four amps.



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Environmentally Responsible

Dealer:

# SMX Series Control Systems

## Microprocessor Systems for DX

Photo courtesy of Cruisers Yachts



SMXir Keypad/Display  
with Remote Control

**Cruisair offers two different SMX microprocessor control systems for use with direct expansion (DX) air conditioning systems.** SMXII offers all the standard operational and safety features required for most DX systems, SMX Net adds networking capability and other special features that make it unique in the industry. The SMXII or SMX Net power/logic board comes installed on the designated self-contained unit or condensing unit, or either system can be retrofitted in the field to replace an electromechanical switch assembly. The SMXir keypad/display and optional SMXir remote is used on both SMX II and SMX Net systems.

Normal operation consists of simply turning the system on by pressing either the Cool or Heat buttons and adjusting the desired cabin temperature setpoint. Fan speed is automatically controlled (fan speed decreases as room temperature approaches setpoint), or the fan speed can be manually set.

The dehumidification mode can be used to operate the system on a timed basis so that the boat will stay ventilated and dry even when no one is aboard.

Line voltage and refrigerant high and low pressure switches are constantly monitored and if a problem is detected, the system will shut down and display a fault on the keypad/display.

Many of the factory settings can be changed to allow the user to fine-tune the system to best match the boat and personal preferences. (See the chart on the back for a list of programmable functions.)

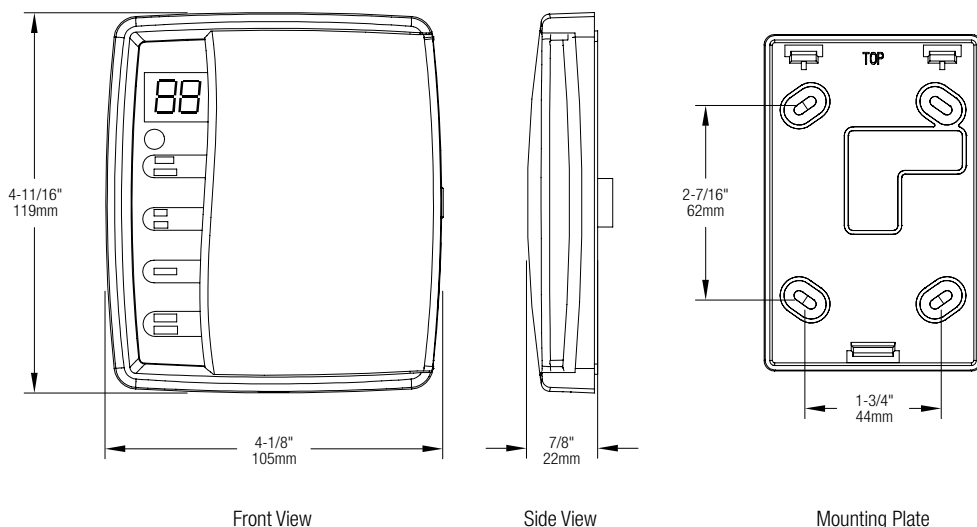
### Key Benefits

- Works with SMXII or SMX Net Control Systems
- Optional Remote Control
- Automatic/Manual Fan Speed Control
- Optional 2-Speed Fan (SMX Net only)
- Inside Temperature Display
- Outside Temperature Display (SMX Net only)
- Dehumidification (absent) Program
- Nonvolatile Memory
- Low Voltage Shutdown
- High Pressure Shutdown
- Low Pressure Shutdown
- Fault Display
- Software Update Capability (SMX Net only)
- Remote System Control (SMX Net only)
- Slaving Capability (SMX Net only)
- Optional Convenience Panel (SMX Net only)
- Auxiliary Heat Control (SMX Net only)
- Brightness Control

A nonvolatile memory retains current operation mode and all programmable settings when power is turned off or lost, such as when changing from generator to dock power. The programmable compressor time delay function will prevent multiple units from starting at the same time when power is restored.

In addition to all of the standard SMX functions listed above, the SMX Net system allows multiple units to be networked together for central control. Each unit in the network has a unique ID number, and any unit can be accessed and controlled from any other control in the network. SMX Net also permits one unit to be "slaved" to another so that only one keypad can be used to control multiple units in a large cabin. Additional SMX Net features include outside temperature display, auxiliary (electric) heat control, 2-speed fan control, and an optional SMX Net Convenience Panel, from which the entire network can be easily accessed and controlled with a single keystroke to go into one of four programmed modes.

The **SMXir** keypad/display has an attractive, compact housing with easy surface-mount installation. A large, easy-to-read LED display shows cabin temperature, setpoint, programming prompts, and fault code warnings, and small LEDs and backlit text indicate system status. Under a decorative hinged door



is the familiar SMX 10-button arrangement with clearly labeled keys for single-keystroke operation. An optional infrared remote control is available that allows system adjustments to be made remotely.

The SMXir keypad/display can be used with either SMX II or SMX Net control systems. A complete system consists of a power/logic module (either SMX II or SMX Net), an SMXir keypad/display, CXP connecting cable and a TSEP temperature sensor. Additional components will be needed to network multiple SMX Net units, including: CNP network cables, one TSEP outside temperature sensor, and the optional SMXir Convenience Panel (the convenience panel kit includes a SMXir keypad/display connected to a SMXir Convenience Panel).

Specifically designed for the marine environment, the SMXir features a plastic housing, sealed membrane keypad, and electronics with anticorrosion coating. Housings are available in black or white, and with either a 3/4 or full coverage door.

## Programmable Functions

- Fahrenheit/Celsius Display
- Low Fan Speed Adjustment
- High Fan Speed Adjustment
- Compressor Time Delay
- Compressor Response Differential
- Fan Response Differential
- Continuous/Intermittent Fan
- Line Voltage Calibration
- Temperature Sensing Calibration
- Factory Memory Reset
- Dehumidification Cycle Parameters

### DOMETIC MARINE DIVISION

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Environmentally  
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Dealer:

# SMXht Keypad/Display

## Operates Both DX & TW AC Systems



SMXht Keypad/Display  
with bronze Vimar bezel



**Cruisair introduces SMXht, the latest in our line of SMXII series keypad/displays.** The SMXht is a microprocessor-based controller designed for use with the SMX II-HV power/logic board. It is operable with both DX and TW systems and can be retrofitted to existing SMXII type systems in the field. The control is dual 115/230 voltage and operates at 50 or 60 cycles. Functionally, it is identical to our current SMXir keypad/display (sans remote), but is easier to program and operate.

The new SMXht is available in gray or white and has a sleek, modern European design. Two popular decorative snap-on bezels, Vimar® Idea or Gewiss® Playbus, are available for the keypad/display. The Gewiss bezel snaps directly onto the display; the Vimar bezel requires the use of two “wings” (included) to snap onto the display. (Bezel styles are limited, and are sold separately.) The keypad/display features raised buttons for easy access and control and an attractive, blue backlit LCD. The blue LCD has three levels of brightness or a programmable sleep mode in which the display is darkened automatically when not in use. With these new features, programming and operation is simple and easy. Installation is also uncomplicated; see the back of this sheet for a detailed diagram.

Normal operation consists of simply turning the system on by pressing the Power button and adjusting the desired cabin temperature setpoint. Fan speed is automatically controlled, (fan speed decreases as room temperature approaches setpoint), or the fan speed can be manually set. The modes available are: Cool, Heat, Auto Switchover (automatically switches from Cool to Heat Mode), or Dehumidification Mode. The dehumidification mode can be used to operate the system on a timed basis so that the boat will stay ventilated and dry even when no one is aboard. Aux (electric) Heat Mode is available for TW systems.

(Continued on reverse side)

ISO 9001:2008

L-2376 Rev. 20080829

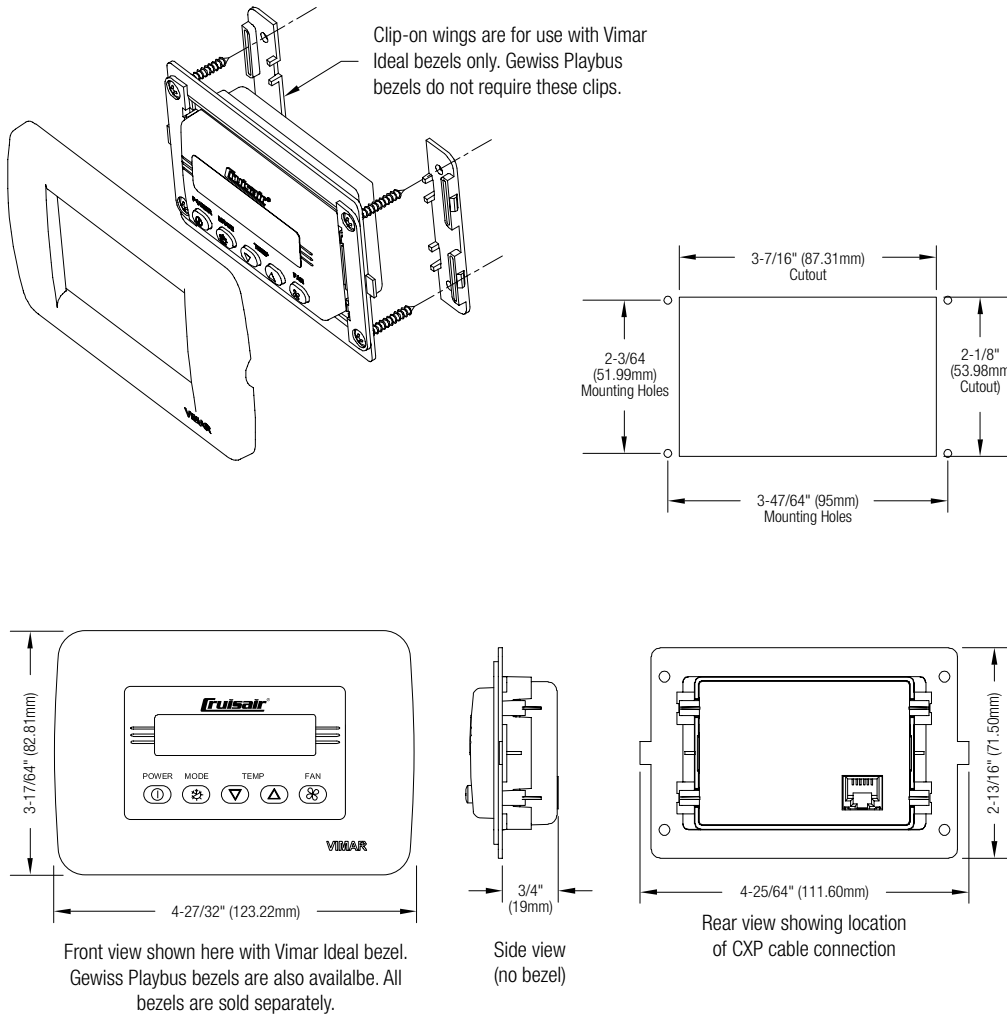
### Key Benefits

- Sleek modern Euro design
- Supports certain Vimar or Gewiss bezels
- Backlight and Sleep Modes
- Controls both DX and TW systems
- World First Technology
- Automatic Dehumidification
- Complete System Monitoring
- Supports Auxiliary Heat for TW systems
- Pressure Switch Testing
- Low Voltage Protection

**Cruisair**®  
by Dometic GROUP

SMXht offers the same outstanding a/c system protection as our other SMXII series controls. Line voltage and refrigerant high and low pressure switches are constantly monitored. If a problem is detected, the system will shut down and display a fault code on the keypad/display. A nonvolatile memory retains current operation mode and all programmable settings when power is turned off or lost, such as when changing from generator to dock power. The programmable compressor time delay function will prevent multiple units from starting at the same time when power is restored.

Many of the factory settings can be changed to allow the user to fine-tune the system to best match the boat and personal preferences. (See the list of programmable functions.) A complete system consists of a power/logic module (the SMX II-HV), keypad/display, CXP connecting cable and a TSEP temperature sensor.



**Programmable Functions**

- Backlight Mode
- Select DX or TW power/logic board
- Fahrenheit/Celsius Display
- DX Compressor Time Delay
- Fan Response Differential
- Low and High Fan Speed
- AC Line Voltage Calibration
- Temperature Calibration
- HU Dehumidification
- High to Low Speed Adjustment
- Software Version
- Software Revision
- LED Segment Test
- Select SMXII power/logic board. (SMX Net will be supported in the future.)

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Dealer:

Ship-Wide  
Network Capable

# Q-Logic Controls for DX & TW

## Qht & Q3 Keypad/Display



Qht display with  
Vimar® bezel shown



**The Cruisair® Q-Logic Control System is designed for use with both Direct Expansion (DX) and Tempered Water (TW) air conditioning systems.** This dual microprocessor-based control consists of a new power/logic circuit board in the system's electrical box that operates with Qht and Q3 displays.

An optional CAN-bus network adapter is available for new Q-Logic systems and as a retrofit for existing installations. Supporting both the Qht and the Q3 controls, this adapter provides ship-wide network monitoring and controlling of multiple DX systems or air handlers. The CAN-bus adapter adheres to CAN-bus Standard 2.0B and is fully ISO compliant. It is available in two CAN-bus communication protocols to support connection to several popular helm and cabin touchscreen control systems.

The **Qht** high technology display is European in style, fits into an assortment of decorative bezels, has many new features, and is designed for user-friendly, logical operation. The Qht display features raised buttons for easy access and control and an attractive blue backlit LCD.

The **Q3** display is rectangular with a bezel look and LED display window. Designed as an economical version of the Qht, the Q3 features a sturdy, smooth, black plastic case with attractive white lettering, and raised buttons for easy access. Like the Qht, the Q3 was developed for user-friendly, logical operation.

The Qht and Q3 are compatible only with Q-Logic boards and are not backward compatible with SMX II systems. Both displays have three levels of brightness and a programmable sleep mode in which the display dims automatically when not in use.

### Key Benefits

- Easier menu-based programming.
- Smarter error/fault codes.
- Timed setting for air filter replacement.
- Automatic dehumidification.
- Optional humidity sensor to monitor and control relative humidity.
- Optional outside-temperature sensor.
- Optional electric heat package.
- Better serviceability with separate off-board compressor triac.
- Inside temperature sensor and display cable are identical to SMX platform.
- Optional CAN-bus network adapter for monitoring and controlling multiple DX systems or TW air handlers.
- Q3 has a small surface-mount display with a simple four-button interface.
- The Qht supports both Vimar® Idea or Gewiss® Playbus Euro-style bezels in a wide variety of colors.
- The Qht's elegant, panel-mount design can be installed in the same cutout as the SMX II SMXht, however it must be operated by a Q-Logic board.

(Continued on reverse side)

**A dehumidification mode** operates the system on a timed basis so the boat stays ventilated and dry even when no one is aboard (optional electric heat package recommended). For more precise control over relative humidity, install the optional dual-purpose humidity/temperature sensor, then input the relative humidity level you want the system to maintain.

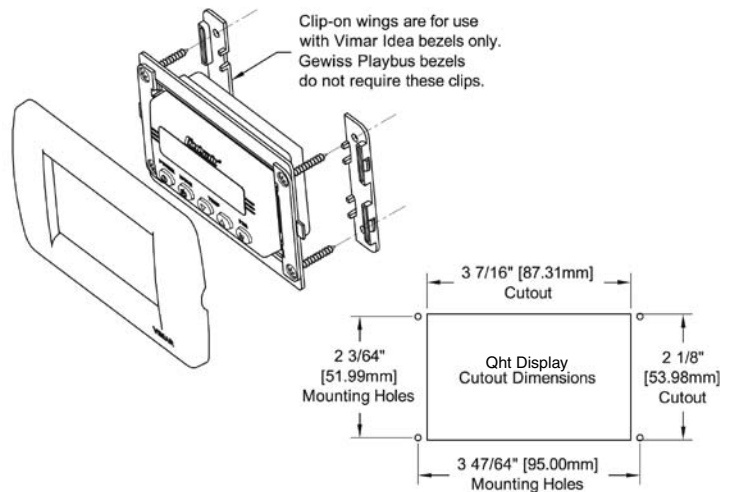
The Qht and Q3 also operate the Aux Heat mode. Auxiliary heat is standard on TW systems and optional on DX systems. If the optional water-temperature sensor is installed, Q-Logic

provides an automatic change-over function from cooling to heating.

Q-Logic Control Systems are offered on Cruisair Stowaway Turbo self-contained air conditioners and sold as a retrofit upgrade for existing product installations through the Cruisair dealer network.

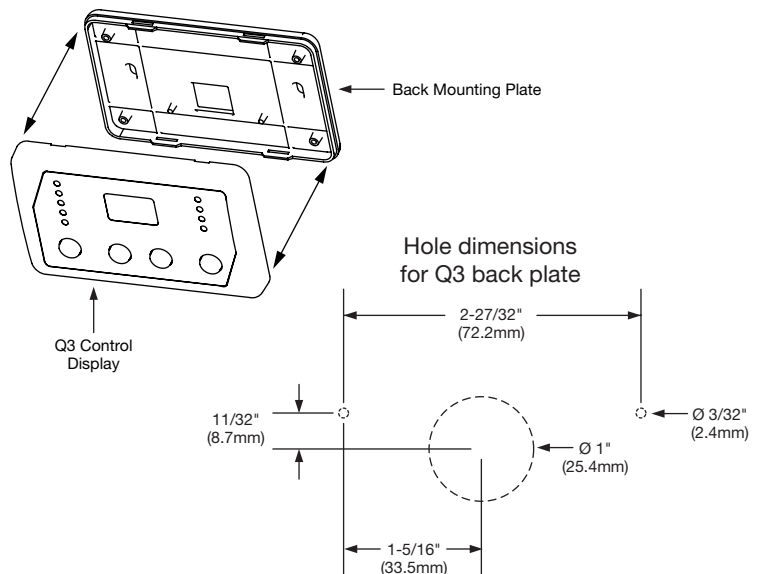
### Specification Details for Qht Display

Model	Qht Display & Bezel
<b>Control Cutout Dimensions (in/mm)</b>	
Height, Mounting Holes	2.05/52.0
Width, Mounting Holes	3.73/95.00
Height, Back of Control	2.13/54.0
Width, Back of Control	3.44/87.3
<b>Control Actual Dimensions (in/mm)</b>	
Height, Back of Control	2.81/71.5
Width, Back of Control	4.39/111.5
Depth, Side of Control, no bezel	0.75/19.0
<b>Vimar Idea Bezel Actual Dimensions (in/mm)</b>	
Height	3.27/83.0
Width	4.84/123.0



### Specification Details for Q3 Display

Model	Q3 Display
Width Between Mounting Holes (in/mm)	2.84/72.1
Hole Size in bulkhead for CXP cable connection (in/mm)	1.00/25.4
<b>Control Actual Dimensions (in/mm)</b>	
Height	2.53/64.2
Width	3.50/89.0
Depth	0.75/19.0



Q3 display for DX shown

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# SMX Series Controls

## For Modulating Air Conditioning Systems



SMXir Keypad/Display  
with Remote Control

### Modulating System Controls

Each cooling unit in a modulating system requires its own separate control. There are two control options; the SMX II microprocessor control system or a 3-knob electromechanical switch assembly.

### SMX II Control System

The following components are required for each cooling unit: PLHMx-HV power/logic module, SMXir keypad/display, CXP connection cable, and a TSEP temperature sensor.

The power/logic module includes a 3 ft (.9m) wire harness to connect to the cooling unit junction box. The CXP cable, available in many different lengths, connects the SMXir keypad to the P/L module. The TSEP temperature sensor, also available in different lengths, plugs into the P/L module and the sensor bulb is installed in the return air path of the cooling unit.

The SMXir keypad/display has an attractive, compact housing and includes a mounting plate for easy surface-mount installation. A large, easy-to-read LED display shows cabin temperature, setpoint, programming prompts, and fault code warnings. Small LED's and backlit text indicate system status. Under a decorative hinged door is the familiar SMX 10-button arrangement with clearly labeled keys for single-keystroke operation. An optional infrared remote control is available that allows system adjustments to be made remotely.

(Continued on reverse side)

### SMX II Key Benefits

- Works with SMXir Keypad/Display.
- Works with SMXir Remote.
- Automatic/Manual Fan Speed Control.
- Inside Temperature Display.
- Auxiliary Heat Control.
- Dehumidification (absent) Program.
- Nonvolatile Memory.
- Fault Display.
- Brightness Control.

### SMX II Programmable Functions

- Factory Memory Reset
- Fahrenheit/Celsius Display
- High Fan Speed Adjustment
- Low Fan Speed Adjustment
- Setpoint Differential
- Fan Response Differential
- Continuous/Intermittent Fan
- Temperature Calibration
- Dehumidification Cycle

Specifically designed for the marine environment, the SMXir features a plastic housing, sealed membrane keypad, and electronics that have an anticorrosion coating. Housings are available in black or white, and with either a 3/4 or full coverage doors.

Normal operation consists of simply turning the system on by pressing the COOL or HEAT buttons and adjusting the desired cabin temperature setpoint. Fan speed is automatically controlled (fan speed decreases as room temperature approaches setpoint) or can be set manually. Note that the modulating system is cooling only, and the cooling unit must have the optional electric heater to provide heat.

Many of the factory settings can be changed to allow the user to fine-tune the system to best match the boat and personal preferences. (See the chart on the back for a list of programmable functions.) A nonvolatile memory retains current operation mode and all programmable settings when power is turned off or lost, such as when changing from generator to dock power.

**3-Knob Switch Assemblies**

Two different switch assemblies are available for modulating systems. The MS5 is for units with electric heat, and the SA1 is for cooling only systems. Both have three rotary knob controls: mode, variable fan speed, and a thermostat. The thermostat has a 10 ft (3m) capillary tube that must be routed to the return airflow of the cooling unit. A 3' (.9m) wire harness and color-coded terminal strip is also included.

**Refrigerant Distributors**

Cruisair offers five-way distributors to split the condensing unit refrigerant lines to multiple cooling units. The use of these distributors can help provide equal refrigerant flow to each unit. To better accomplish this, the distributors should be located so that the tubing running to each cooling unit are close to equal in length. Depending on the installation, the installer may prefer to use multiple "Tee" fittings instead.

The DD6-4 discharge distributor has a 3/8" male flare inlet connection, and five 1/4" male flare outlets. The SD8-6 suction distributor has a 3/4" male flare inlet, with five 1/2" flare outlets. Flare nuts are provided, as are flare sealing caps so if less than five units are connected, the other ports do not need to be used. The flare nuts on the suction distributor are 3/8" reducing nuts, that will allow 3/8" copper tube to be connected to the 1/2" flare fittings. If a 1/2" tube is to be connected, a standard 1/2" flare nut will be required.

Additional configurations are available. Please contact the Dometic Applications department for availability.

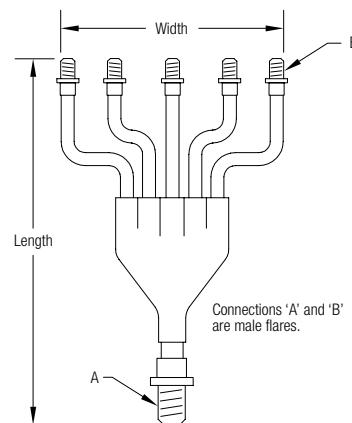
**Interpreting Model Numbers**

DD or SD		8	6	(3)
Discharge Distributor	Suction Distributor	Inlet (1) 8/16" or 1/2"	Outlet(s) 6/16" or 3/8"	Three Outlets

**Dimensions for Refrigerant Distributors**

Dimension	DD6-4 (in/mm)	SD8-6 (in/mm)
Length	7.5/191	9.0/229
Width	4.5/114	7.0/178
A Connection	3/8"	3/4"
B Connections	1/4"	1/2"*

\*SD8-6 has 1/2" male flares with 3/8" reducing flare nuts.



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Dealer:

# Tempered Water Logic Control

## Advanced Monitoring & Control



MPE-XC Single Unit Control Panel  
with TWLC keypad/display



**The Tempered Water Logic Control (TWLC) is an advanced microprocessor chiller control specifically designed for marine circulated water systems.** The TWLC system maximizes system performance, protects the chillers with advanced fault protection monitoring and shut-down routines, and has easy menu-driven operation supplying the user with important system information.

System redundancy and easy field repair were the priorities when the TWLC was developed. Each chiller in a TWLC system has a dedicated power/logic board, and the boards are networked together to form an integrated system (automatically controlling up to 6 chillers). This design means that a single board or network failure will not shut down the entire system. The P/L board has board-mounted LEDs to help with troubleshooting, replaceable EPROM for software upgrades, and plug-in terminal strips and RJ-12 jacks which allow for quick field installation.

Interaction with the system is through the TWLC keypad/display. A simple 4-button keypad is used to change operation mode and to navigate through the menus to view and change system parameters. A backlit LCD display supplies easy to read information about the system, including water temperatures, operation mode, which chillers are running, and other detailed information. Three small LEDs on the keypad clearly indicate Cool or Heat modes, and faults. An alarm buzzer on the keypad can also signal a fault. Additional TWLC keypads can be installed to allow remote system access.

### Key Benefits

- Up to 6 tempering units can be integrated into one network.
- Keypad/Display has a 4-button control and a 4-line backlit LCD display.
- Multiple keypad/displays can be used for remote access.
- Multi-unit panels come with circuit breakers for compressor and pump control.
- Chiller staging based on circulated water temperature.
- Compressor rotation to equalize run time of each unit.
- Compressor and pump time delay to prevent simultaneous starting.
- Records and logs faults and run times.

### Advanced Options

- Connect to an on-board computer or modem.
- Current transducers to monitor compressor and pump amperage.
- Seawater temperature sensors.
- Refrigerant pressure transducers.
- Loop water and seawater pressure transducers.
- Control an optional source of heat (electric immersion heater or fuel-fired boiler).
- Remote unit shutdown for loadshedding.
- Fault signal output for remote alarm.

Set up and operation of the TWLC is fully automatic. It senses how many units are connected and programs the temperature staging and unit rotation of the units to pre-programmed parameters. The TWLC board has non-volatile memory so settings and recorded information are not lost even if power is interrupted. The large memory capacity allows the TWLC to record run time of the compressors and pumps, and store the fault history of each unit.

Another feature of the TWLC is that it can be connected to an on-board computer or modem to allow full remote access of the system. Custom software emulates the TWLC on the computer screen and navigation through the menus is identical to the TWLC keypad/display. If a land phone line is available, a modem can be connected and the system can be viewed and operated remotely, allowing a knowledgeable service agent to troubleshoot the system anywhere in the world.

## Single-Unit & Multi-Unit Control Panels

The TWLC system is available in 2 different control panel options, single-unit panels and multi-unit panels. Single-unit panels are less expensive than multi-unit panels and can often be fit in spaces where a large multi-unit panel won't fit. They are also typically in stock for quick delivery. Single-unit panels are often the answer for refit jobs where the vessel's power panel already has breakers for each chiller and pump.

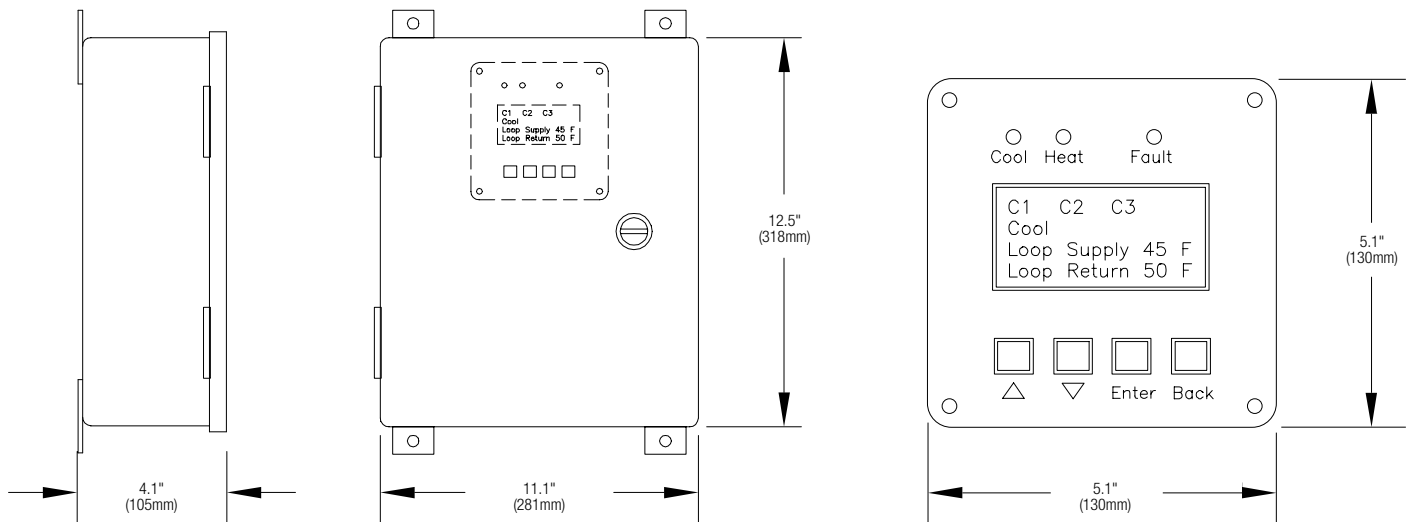
Multi-unit panels are custom built for each system with circuit breakers and contactors for up to 6 chillers and the circulation and seawater pumps. Installation is easier than with single-unit panels because separate pump relays are not needed, all the network and high-voltage wiring is provided, and only one power input from the vessel is required. With all the P/L boards, breakers, relays, etc. in one location, a multi-unit panel is more convenient to the user.

### Single-Unit Panels

The MPE-XC will work with either 230V 1-phase compressors, or 230V – 460V 3-phase compressors. The control circuit is 230V 1ph, and a separate power feed is required on 380-460V systems. The MPE-VXC has the same features, but is for use with a variable frequency drive (VFD).

The MPE single-unit panel includes the P/L board, compressor contactor (or relay), 10 ft (3m) wire harness, control circuit fuses, and a short CNP cable to connect to a TWLC keypad/display.

In addition to the MPE single-unit panels (one per chiller), the system will require: one TWLC keypad/display, CNP network cables (one per panel), pump relays (for circulation and seawater pumps), and one temperature sensor to monitor the common loop water supply. The TWLC keypad can be installed in the door of the panel, or installed remotely (with a CNP cable). Multiple TWLC keypads (up to one per board) can be installed if desired.



MPE-XC & MPE-VXC Single-Unit Panel Dimensions

TWLC Keypad/Display Dimensions

### MPE Multi-Unit Panels

Custom multi-unit panels provide breakers and relays for the compressors and pumps all on one chassis. This allows the installer to bring in one power feed for the complete system, and there are no separate pump relays to install, and many options can be built into the panel.

Each multi-unit panel includes a TWLC keypad mounted in the door, fusing for the control circuit, a transformer on 380-460V panels for the control power, and a wire harness to connect to the chillers.

Since each multi-panel is custom built, there are many options available:

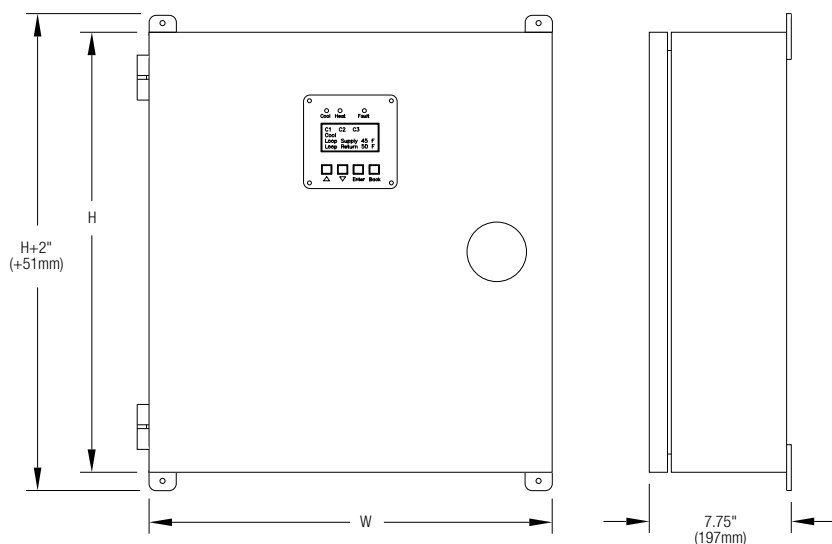
- **Spare Pump Switch** – Selector switches can be added for backup (spare) pumps.
- **Multiple Power Inputs** – Up to 3 power blocks can be installed to help divide the chiller and pump loads.
- **Auxiliary Water Heater** – If an auxiliary water heater is desired, the panel can be built with the appropriate breakers and contactors to control the heater.
- **Fault Output Relay** – A set of “dry” contacts can be installed to operate an alarm on the vessel’s monitoring system.
- **Longer Wire Harness** – The standard harness is 10 ft (3m) but longer harnesses are available, up to 30 ft (9m).
- **Frame Mounted Panel** – If a framed chiller is ordered, the panel can be mounted on the frame.
- **Load Shedding** – Terminals can be provided in the panel to allow a load-shedding system to remotely shut down individual chillers.

In addition to the options above, two different upgrade packages are available for multi-unit panels.

The Level 1 upgrade package adds current transducers for the compressors and pumps, seawater out temperature sensors in each chiller, a common seawater inlet temperature sensor, and the computer and modem adapters.

The Level 2 package includes all items in Level 1, plus: high and low refrigerant pressure transducers for each chiller, a seawater pressure transducer (to install on the discharge of the seawater pump) and a loop water pressure transducer (to install on the inlet of the loop water pump).

All of the optional inputs can be added to MPE single unit panels, and there is a location for a compressor current transducer in the panel. Temperature sensor wells are also available for the common loop water supply sensor, and for the seawater out sensors.



MPE Multi-Unit Control Panel Dimensions

No. of Units	Width (in/mm)	Height (in/mm)
2	22.0/560	19.3/490
3	22.0/560	24.0/610
4	30.0/760	24.0/610
5	35.0/890	24.0/610

Typical dimensions for standard panels. Options such as transducers, spare pump switches, multiple power inputs, etc. might require the next larger panel size.

## Faults

The system monitors all the inputs and will display 12 different faults based on the information received. Each fault has a specific routine that protects the unit while helping to prevent nuisance faults. Some will generate a sustained shutdown, which must be reset from the TWLC keypad.

If a fault is sensed, the fault LED on the TWLC keypad will light (and the buzzer will sound, if activated) and the specific fault will be displayed on the LCD screen. The fault signal output on the P/L boards will also be powered.

The faults monitored by the system are:

- High Refrigerant Pressure
- Low Refrigerant Pressure
- Loop Water Flow Switch
- Loop Water Temperature Differential
- Loop Water High Temperature Limit
- Seawater Out Low Limit
- Seawater Temperature Differential
- Auxiliary Heater High Limit
- Temperature Sensor Fault
- Low Control Voltage
- Network Fault
- EPROM Error

### INPUTS

Each P/L board has up to 14 inputs. The six standard inputs are listed in bold. The other inputs shown \*#7 - #14) are optional, and are available in pupgrade packages or can be added separately.

- 1. Loop Water Return Temperature Sensor**
- 2. Loop Water Out Temperature Sensor**
- 3. Common Loop Water Supply Temperature Sensor**
- 4. Flow Switch**
- 5. High Pressure Switch** (or Pressure Transducer)
- 6. Low Pressure Switch** (or Pressure Transducer)
7. Compressor Current Transducer
8. Loop Water Pump Current Transducer
9. Seawater Pump Current Transducer
10. Seawater Out Temperature Sensor
11. Common Seawater Inlet Temperature Sensor
12. Loop Water Pressure Transducer
13. Seawater Pressure Transducer
14. Auxiliary Heater Temperature Sensor

### OUTPUTS

There are six outputs on each board. Each line voltage (115or 230VAC) output is through a board-mounted triac which can control a relay or contactor.

1. Compressor
2. Reversing Valve
3. Loop Water Pump
4. Seawater Pump
5. Auxiliary Heater
6. System Fault

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Environmentally  
Responsible

Dealer:

Now  
Compatible With  
Q-Logic/CAN bus

# Chiller Gateway Network Interface

## Total Control at the Touch of a Button



Chiller Gateway Network Interface boxes with and without graphical touch screen shown

**The Cruisair Chiller Gateway lets you monitor and control the functions of a multi-staged Cruisair chilled water system at the chiller control panel or from a remote location via Modbus TCP/IP connection.** The Gateway and optional GUI-style color touch screen provide a high-speed digital interface to the chiller system for monitoring temperatures, current, pressures, input/output status, system faults/alarms, mode of operation, and system logs. In addition, the Gateway offers two-way data transmission via Modbus/TCP Ethernet protocol to the yacht's integrated network, allowing chiller operation to be handled from there.

The Gateway can also monitor the optional Variable Frequency Drive (VFD), which is used to smooth out current spikes and enhance the efficiency of the compressor.

The Chiller Gateway now has an exciting new option available that allows CAN bus communication to all of the yacht's Cruisair Q-Logic Tempered Water (TW) air handler controls. Combined with the other features, this new capability allows the Chiller Gateway to monitor and control all aspects of the entire air conditioning system.

The Gateway unit can be mounted remotely or inside the chiller control panel, and will monitor up to 5 chillers. A second Gateway can be configured to monitor a sixth chiller. The optional touch screen unit is approximately 7" X 9" (178mm X 229mm), with a 5.7" (145mm) display screen.

### Key Benefits

- Monitor and control a multi-staged chiller, plus individual air handlers (with optional CAN bus adapter), from one location.
- Compatible with the Cruisair Tempered Water Logic Control (TWLC) and the Cruisair Q-Logic TW Air Handler Control.
- High-speed digital interface.
- Two-way data transmission via Modbus/TCP Ethernet protocol puts chiller control on yacht's integrated network.
- Monitor and control up to 6 chillers.
- Monitor the optional Variable Frequency Drive.
- Monitor and control up to 49 air handlers.

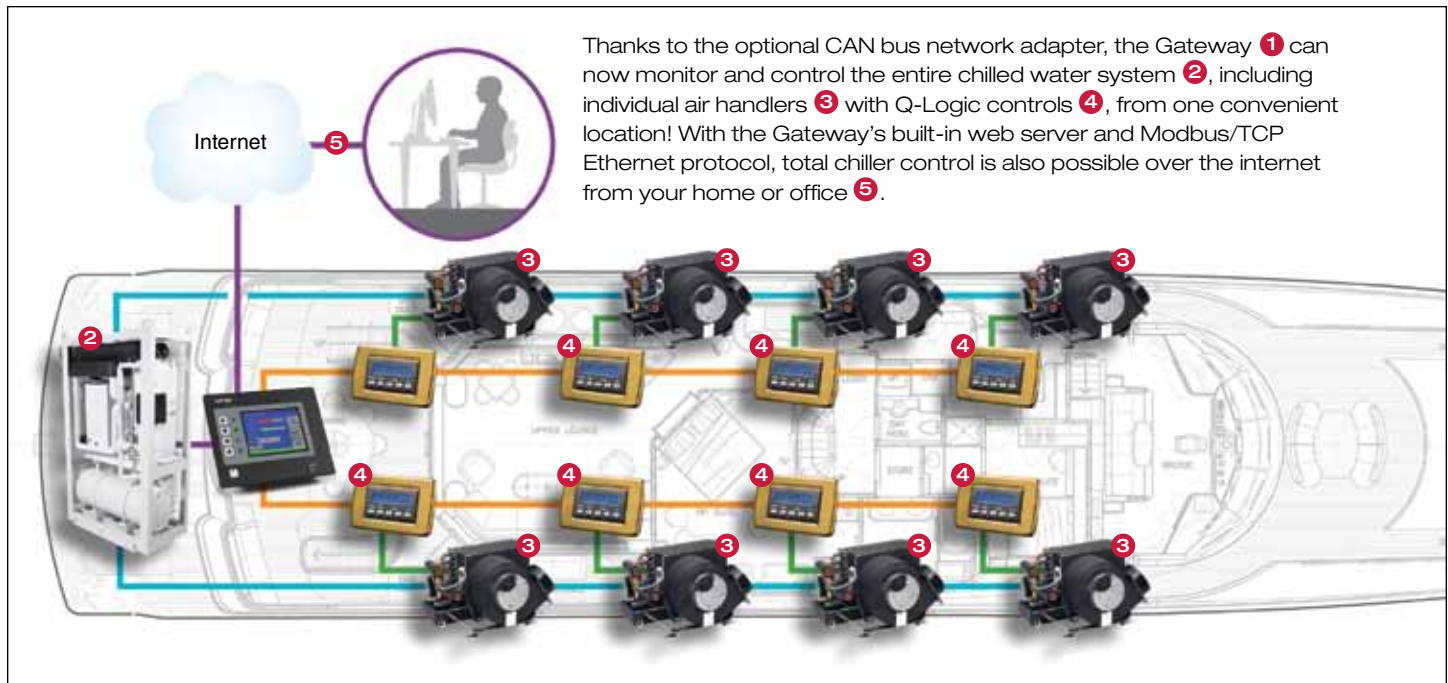
## Chiller Gateway Network Interface Models &amp; Accessories

Model	Description
763300025	Gateway without display touchscreen with enclosure that monitors up to 3 chillers
763300028	Gateway without display touchscreen with enclosure that monitors up to 4 chillers
763300029	Gateway without display touchscreen with enclosure that monitors up to 5 chillers
763300035	Gateway without display touchscreen with enclosure NEMA4X water tight that monitors up to 3 chillers
763300041	Gateway without display touchscreen with enclosure that monitors up to 2 chillers
763300030	Gateway without display touchscreen that monitors only chiller 6
763300032	Gateway without display touchscreen box with Variable Frequency Drive (VFD), 3 chillers, monitors 3 chillers and 3 VFDs
763300033	Gateway without display touchscreen box with VFD, 4 chillers, monitors 4 chillers and 4 VFDs
763300024	Gateway without display touchscreen without enclosure that monitors up to 5 chillers
763300044	Gateway without display touchscreen without enclosure that monitors up to 2 chillers
763300026	Gateway with display touchscreen that monitors up to 5 chillers
763300045	Gateway with display touchscreen that monitors up to 2 chillers
763300037	Gateway without display touchscreen for Q-Logic tempered water air handlers with NEMA4X gray fiberglass box
763300040	Gateway without display touchscreen for Q-Logic tempered water air handlers without enclosure
763300042	Gateway without display touchscreen for Q-Logic tempered water air handlers with white enclosure NEMA2
763300043	Gateway with display touchscreen for Q-Logic tempered water air handlers
763300049	Gateway with display touchscreen that monitors up to 2 chillers and Q-Logic air handlers
763300050 <sup>(1)</sup>	Gateway with display touchscreen that monitors up to 6 chillers and Q-Logic air handlers
763300051	Gateway without display touch screen that monitors up to 2 chiller and Q-Logic air handlers
763100027	Q-Logic CAN bus adapter box for Gateway
763100031	PLTQ-TW Q-Logic air handler control box with integrated CAN bus adapter
4250042	Q-Logic CAN bus adapter circuit board
763300036	Modular controller for Gateway that monitors boat temperatures

## Notes:

<sup>(1)</sup> Additional equipment is required: #763300030 is needed to monitor chiller #6, and item #763300040 is needed to monitor Q-Logic air handlers.

- The amount of accessories such as serial communication cables, converter RS485 to RS232, and 24VDC power supplies will be needed, depending on the number of chillers being monitored.
- When monitoring chillers four and five, each will require an RS485 to RS232 converter (Model #763300027).

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Environmentally  
Responsible

Dealer:



Compatible With  
Q-Logic/CAN bus

# DX Gateway Network Interface

## Total Control at the Touch of a Button



DX Gateway Network Interface units with and without graphical display touch screen

**Cruisair introduces the Gateway Network Interface for direct expansion (DX) and modulating marine air conditioning systems.** The Gateway Network Interface works with Cruisair's Q-Logic microprocessor control equipped with the optional CAN bus adapter. All CAN bus adapter boards must be connected, along with the Gateway, to a common ship-wide CAN bus network.

The Gateway communicates with the central monitoring system via Modbus/TCP Ethernet protocol. Important information such as temperatures, output status, system faults, modes of operation, and fan speed can be monitored at the Gateway interface. In addition, convenient broadcast commands can be sent to a group of DX units, or all DX units at once.

The Gateway can be mounted remotely or inside the air conditioning system's electrical box. The standard Gateway unit is 3.09" wide X 5.30" high X 4.15" deep (78mm X 135mm X 105mm). The optional touch screen model is 8.83" wide X 7.08" high X 2.30" deep (224mm X 180mm X 58mm), with a 5.7" (145mm) graphical display touch screen.

### Key Benefits

- Monitor and control up to 49 evaporating or self-contained units from one location.
- Works with Cruisair Q-Logic system with optional CAN bus adapter boards.
- Built-in web server for local and remote virtual monitoring.\*
- High-speed digital interface.
- Two-way data transmission via Modbus/TCP Ethernet protocol puts air conditioning control on yacht's integrated network.
- Optional graphical display touch screen model is available.

\* Internet service required for remote monitoring. For local monitoring, an Ethernet connection to a PC running Internet Explorer (not included) is required.

## DX Gateway Network Interface Models &amp; Accessories

Model	Description
763300046	Gateway Q-Logic DX no display touch screen, NEMA2 enclosure included
763300048	Gateway Q-Logic DX no display touch screen and without enclosure
763300047	Gateway Q-Logic DX with graphical display touch screen without an enclosure
763300057	Gateway Q-Logic modulating air handler, no display touch screen <sup>(1)</sup> , NEMA2 enclosure included
4250012	Power supply 24VDC 30 watt

Note:

<sup>(1)</sup> Gateway Q-Logic modulating air handler with display touch screen is available upon request.

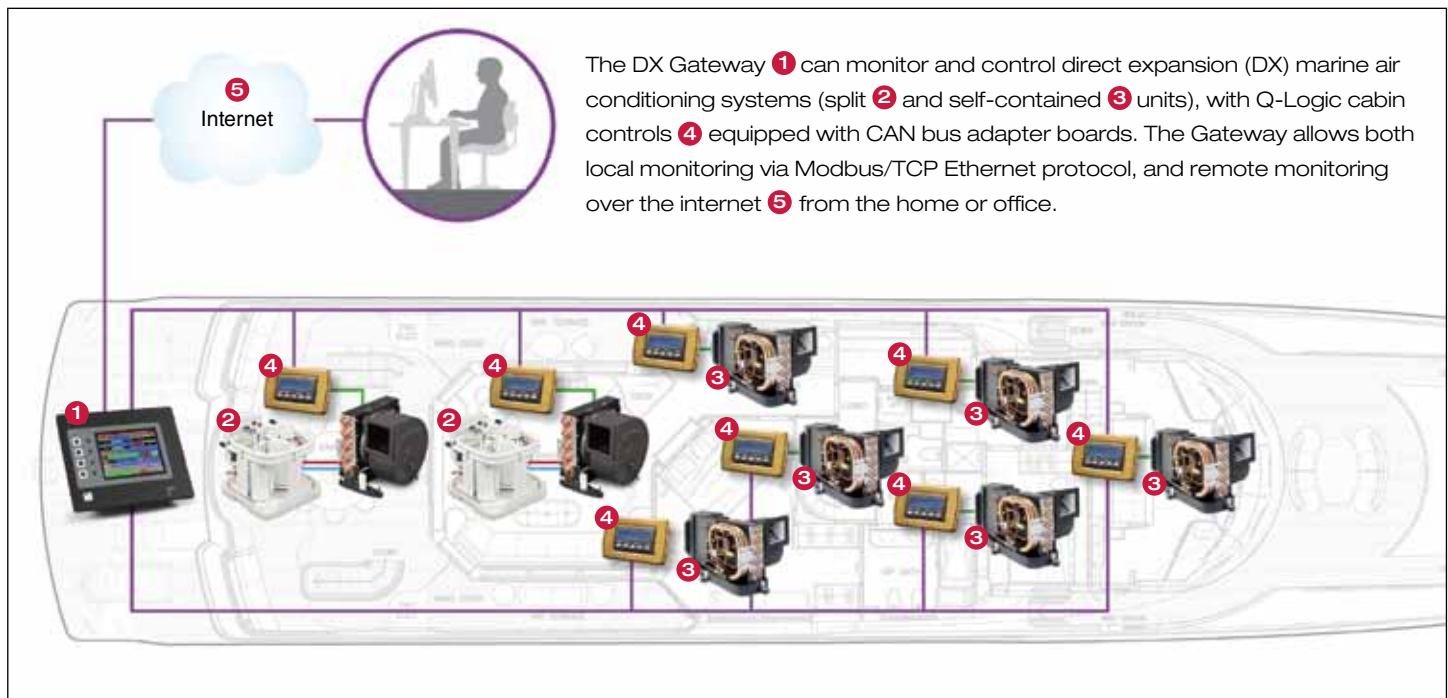
### Several configurations are available for the DX Gateway based on installation requirements:

#### Option 1: DX Gateway without graphical display touch screen

- Gateway unit mounted inside an enclosure along with a 24VDC power supply to be installed in a conditioned space.
- Gateway unit and a 24VDC power supply without an enclosure that can be customer-installed inside an existing enclosure in a conditioned space.

#### Option 2: DX Gateway with graphical display touch screen

- Gateway unit and a 24VDC power supply without an enclosure that can be customer-installed inside an existing enclosure in a conditioned space. A rectangular cutout on the wall or a flat panel is required to mount the Gateway unit. Cutout dimensions: 7.875" X 5.875" (200mm X 149mm)



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Dealer:

**NEW!**

# In-Duct Breathe Easy™ Air Purifier

## Stops Odors & Reduces Unhealthy Contaminants



In-Duct Breathe Easy Air Purifier

### Customer Comment:

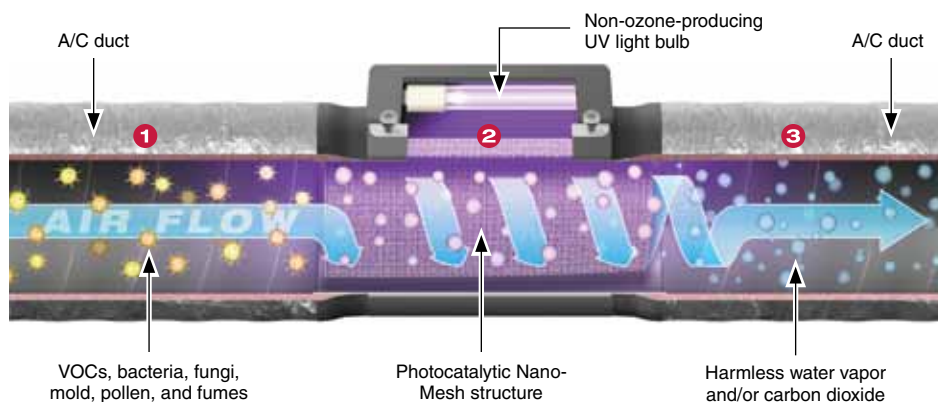
"The crew had consistent problems with sore throats and coughs. So we've gone to Dometic. We discovered the air...went from being almost heavy and saturated to being a lot lighter. It was easier to breathe...cleaner. It's fantastic."

— James Rose-Innes, First Mate, 95 ft. motor yacht  
Fort Lauderdale, FL

**Reduce the odors of tobacco smoke, mildew, mustiness, chemical vapors and toilets, and inhale fresher, cleaner, healthier air.** The in-duct Breathe Easy Air Purifier uses innovative Photocatalytic Nano-Mesh technology with ultraviolet (UV) light to improve air quality. The UV bulb inside uses a specific frequency of light that produces no harmful ozone.

### How It Works

- 1 Biological contaminants like VOCs, mold spores, bacteria, and viruses pass through the air conditioning duct and into the air purifier system.
- 2 UV light energy activates the titanium-dioxide catalyst on the surface of the nano-mesh structure. The molecules of pollutants and odors that come in contact with the catalytic nano-mesh structure are reconfigured into non-toxic elements. Vortex action maximizes air contact with the catalytic surface.
- 3 Significantly cleaner, healthier air exits the photocatalytic air purifier.

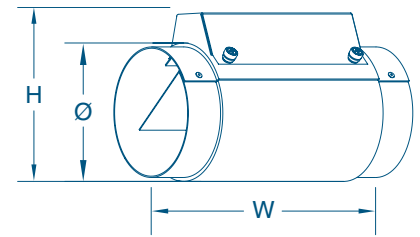


### Key Benefits

- Reduces mold spores, bacteria, viruses, and fumes.
- Eliminates unpleasant odors.
- Uses an intense UV light that produces no harmful ozone.
- Enhances air quality.
- Cleaner air may lessen allergy and asthma symptoms.
- Silent operation.
- Up to 100% reduction in diesel fumes, acetone, benzene, formaldehyde, and other VOCs.
- Up to 100% reduction in bacteria, fungi, mold, and pollen.
- Photocatalytic Nano-Mesh structure is safe and powerful.
- Photocatalytic Nano-Mesh structure does not degrade under intense UV light.
- UV bulb is easy to replace.
- Tube sizes for common duct diameters.

# Technical Specifications for In-Duct Breathe Easy Air Purifiers

Model	4" In-Duct Tube	5" In-Duct Tube	6" In-Duct Tube	7" In-Duct Tube	8" In-Duct Tube
Capacity <sup>(1)</sup>	6K BTU/hr	7K - 8K BTU/hr	10K - 12K BTU/hr	14K - 16K BTU/hr	24K BTU/hr
Volts/Hz/mA	115/60/200	115/60/200	115/60/200	115/60/250	115/60/250
	220/50/350	220/50/350	220/50/350	220/50/350	220/50/350
	230/60/200	230/60/200	230/60/200	230/60/225	230/60/225
UV Bulb Watts	12	12	12	20	20
Ø (in/mm) <sup>(2)</sup>	4.50/114	5.50/140	6.50/165	7.50/191	8.50/216
Height (in/mm) <sup>(2)</sup>	5.25/133	6.50/165	7.50/191	8.50/216	9.50/241
Width (in/mm) <sup>(2)</sup>	10.50/267	10.50/267	10.50/267	13.50/343	13.50/343



Notes:

- <sup>(1)</sup> Purification capacity of in-duct units equals or exceeds the airflow and BTU capability of its duct size.
- <sup>(2)</sup> Dimensions are overall, including grommets, insulation, and duct rings.

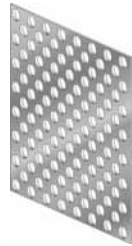
## Competitive Advantages

### Photocatalytic Nano-Mesh Technology

- A 3-dimensional Photocatalytic Nano-Mesh structure coated with titanium-dioxide (TiO<sub>2</sub>) provides maximum surface area for maximum destruction of airborne contaminants that come in contact with it.
- Little or no reduction in air flow because the Photocatalytic Nano-Mesh structure creates very little static pressure.
- Does not need to be cleaned, maintained, or replaced.



Dometic's Photocatalytic Nano-Mesh structure



Competitor's screen structure

### UV Lamps

- Sized for the dimensions of the Photocatalytic Nano-Mesh structure, a single UV bulb with dual tubes provides greater intensity and service coverage to activate more of the photocatalytic material for high-performance results.

### Safe & Effective Catalyst

Titanium-dioxide is in many common products, including pigments, processed foods, toothpaste and cosmetics. It is harmless to people, pets, plants, and the environment.

### Laboratory Test Results

Testing of the Breathe Easy Air Purifier performed by Environmental Diagnostics Laboratory showed up to **98% reduction** in volatile organic compounds (VOCs) and up to **100% reduction** in bacteria, fungi, mold, and pollen grains.

## The Power of Photocatalytic Nano-Mesh Technology

Photocatalytic Nano-Mesh technology removes airborne contaminants that pass through the system and contact the photocatalytic surface. As air re-circulates it makes multiple passes through the system for continuously improving purification levels.

Photocatalytic air purification only occurs when airborne contaminants physically touch the catalyst. Innovative Photocatalytic Nano-Mesh technology creates a much greater contact surface for much greater results.

The Breathe Easy Air Purifier's three-dimensional Photocatalytic Nano-Mesh structure is constructed of metalized foam. This minutely intricate construction provides **2200%** more surface area for holding the molecular catalytic coating than is possible with a simple screen structure. This unique design also provides scant air resistance, so there is no noticeable decrease in air flow.

In addition, through the science of nanotechnology, the titanium-dioxide catalyst is restructured at the molecular level to have an increased number of contact surfaces. This formation puts 70% larger molecules on the contact surface and dramatically improves reactivity with contaminants.

### Two Innovative Models

- **In-Duct Tube:** Air purifier tube is installed within ducting line and uses the air-conditioning system's blower to move air past the UV light and Photocatalytic Nano-Mesh structure. Available in tube sizes to fit all common duct diameters.
- **Portable:** Small and lightweight, the portable air purifier can be situated anywhere and uses an internal fan to move air past the UV light and Photocatalytic Nano-Mesh structure. It is suitable for areas up to 100 sq. ft. (9.3 sq. m.) and operates on both DC and AC voltages.

**Note:** The Breathe Easy Air Purifier does not fix the source of ongoing odor problems. For example, a leak that caused mold must be repaired and the mold must be removed.

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Dealer:

**NEW!**

# Portable Breathe Easy™ Air Purifier

## Reduces Contaminants & Stops Odors



### Customer Comment:

After cleaning up a diesel fuel leak from the generator, we still had a persistent petroleum odor. I installed the portable Breathe Easy Air Purifier in the galley. A week later all odors were completely eliminated.

— John H. Thommen, Guilford, CT

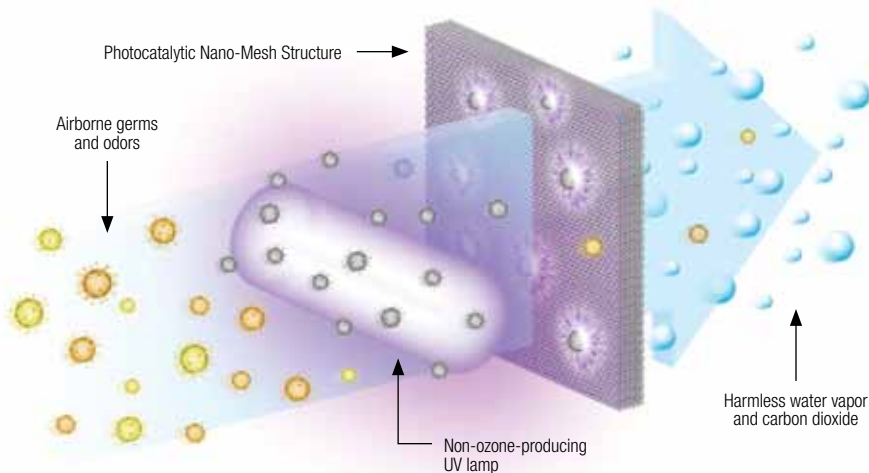


Includes worldwide AC adapter with plugs and 12V DC power plug.

**Reduce the odors of tobacco smoke, mildew, mustiness, chemical vapors, and toilets, and inhale fresher, cleaner, healthier air.** Effective in areas up to 100 sq. ft. (9.3 sq. m.), the portable Breathe Easy Air Purifier uses innovative Photocatalytic Nano-Mesh technology with ultraviolet (UV) light to improve air quality. The UV bulb inside uses a specific frequency of light that produces no harmful ozone. The unit operates quietly and has two fan-speed settings.

### How It Works

1. Non-ozone-producing UV light reduces biological contaminants like mold spores, bacteria, and viruses that pass through the air purifier system.
2. UV light energy activates the titanium-dioxide catalyst on the surface of the nano-mesh structure. The molecules of pollutants and odors that come in contact with the catalytic nano-mesh structure are reconfigured into non-toxic elements.
3. Significantly cleaner, healthier air exits the system.

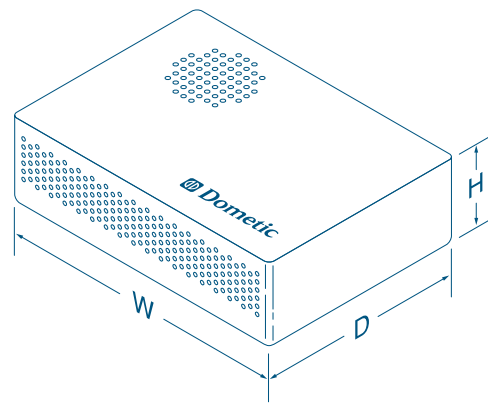


### Key Benefits

- Reduces mold spores, bacteria, viruses, and fumes.
- Eliminates unpleasant odors.
- Uses an intense UV light that produces no harmful ozone.
- Enhances air quality.
- Cleaner air may lessen allergy and asthma symptoms.
- Quiet operation with two fan speeds.
- Up to 96% reduction in volatile organic compounds (VOCs).
- Up to 99% reduction in bacteria and fungi.
- Photocatalytic Nano-Mesh structure is safe and powerful.
- Photocatalytic Nano-Mesh structure does not degrade under intense UV light.
- UV bulb is easy to replace.
- Effective in areas up to 100 sq. ft. (9.3 sq. m.).
- Worldwide AC power adapter with plugs and 12V DC power plug included.

## Technical Specifications for Portable Breathe Easy Air Purifier

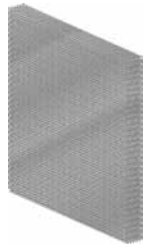
Model	Portable
Capacity	Up to 100 sq. ft. (9.3 sq. m.)
Volts/Hz/mA	115/60/300 220/50/200 230/60/275 12VDC/-/500
UV Bulb Watts	5
Height (in/mm)	1.75/45
Width (in/mm)	6.25/159
Depth (in/mm)	4.50/115



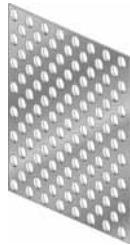
### Competitive Advantages

#### Photocatalytic Nano-Mesh Technology

- A 3-dimensional Photocatalytic Nano-Mesh structure coated with titanium-dioxide (TiO<sub>2</sub>) provides maximum surface area for maximum neutralization of airborne contaminants that come in contact with it.
- Little or no reduction in air flow because the Photocatalytic Nano-Mesh structure creates very little static pressure.
- Does not need to be cleaned, maintained, or replaced.



Dometic's Photocatalytic Nano-Mesh structure



Competitor's screen structure

#### UV Bulbs

- Sized for the dimensions of the Photocatalytic Nano-Mesh structure, a single UV bulb with dual tubes provides greater intensity and service coverage to activate more of the photocatalytic material for high-performance results.

#### Safe & Effective Catalyst

Titanium-dioxide is in many common products, including pigments, processed foods, toothpaste and cosmetics. It is harmless to people, pets, plants, and the environment.

#### Laboratory Test Results

Independent testing of the Breathe Easy Air Purifier performed by Environmental Diagnostics Laboratory showed up to **96% reduction** in volatile organic compounds (VOCs) and up to **99% reduction** in bacteria and fungi.

### The Power of Photocatalytic Nano-Mesh Technology

Photocatalytic Nano-Mesh technology removes airborne contaminants that pass through the system and contact the photocatalytic surface. As air re-circulates it makes multiple passes through the system for continuously improving purification levels.

Photocatalytic air purification only occurs when airborne contaminants physically touch the catalyst. Innovative Photocatalytic Nano-Mesh technology creates a much greater contact surface for much greater results.

The Breathe Easy Air Purifier's three-dimensional Photocatalytic Nano-Mesh structure is constructed of metalized foam. This minutely intricate construction provides 2200% more surface area for holding the molecular catalytic coating than is possible with a simple screen structure. This unique design also provides scant air resistance, so there is no noticeable decrease in air flow.

In addition, through the science of nanotechnology, the titanium-dioxide catalyst is restructured at the molecular level to have an increased number of contact surfaces. This formation puts 70% larger molecules on the contact surface and dramatically improves reactivity with contaminants.

### Two Innovative Models

- **In-Line Ductable:** Air purifier ducting tube is installed within ducting line and uses the air-conditioning system's blower to move air past the UV light and Photocatalytic Nano-Mesh structure. Available in tube sizes to fit all common duct diameters.
- **Portable:** Small and lightweight, the portable air purifier can be situated anywhere and uses an internal fan to move air past the UV light and Photocatalytic Nano-Mesh structure. It is suitable for areas up to 100 sq. ft. (9.3 sq. m.) and operates on both DC and AC voltages.

**Note:** The Breathe Easy Air Purifier does not fix the source of ongoing odor problems. For example, a leak that caused mold must be repaired and the mold must be removed.

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# Breathe Easy™ Air Filters

## Micro-Particle, Anti-Allergenic Air Filters



**Enjoy cleaner, improved air quality on your boat with Breathe Easy™ Air Filters.** Breathe Easy micro-particle, anti-allergenic air filters are rated Merv 7, making them seven times more effective than ordinary air filters.

Breathe Easy Air Filters are efficient and disposable, and are available for most Dometic air conditioning systems.

### Key Benefits

- Rated Merv 7: Seven times more effective than ordinary foam and slide-in mesh screen air conditioning filters at capturing airborne micro-particles.
- Capture diesel smoke, dust, lint, bilge odors, and pet dander.
- Electrostatically-charged fibers attract and retain micro-particles in the air.
- Easy installation for all types and models of air conditioners.
- Custom sizes are available.



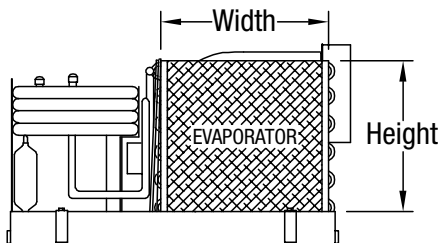
*Breathe Easy™ Air Filters are easily installed and are available for most Dometic air conditioning systems.*

Filter P/N	Fits Cruisair A/C Models	Fits Marine Air A/C Models	Fits Dometic A/C Models	Width x Height	
				inches	mm
235000600	SXF5, SXF5-1, SHF5, SHF5-1, ZF5, ZF5-1	VCD5K/1, VCP5K, VCM5K, VCM5K/1, CLM5KC, CLM5KC/1	ECM5, ECD5	7-7/8 x 9	200 x 229
235000601	SXF7, SXF7-1, SHF7, SHF7-1, SXR7-1, SHR7-1, SXR10, SHR10, SXR12, SHR12	VCD7K/1, VCP7K, VCM7K, VCM7K/1, CMCD7K/1, CMCM7K, CMCM7K/1	ECM6.5, ECD6.5	9-3/8 x 10	238 x 254
235000602	SXR7, SHR7 (old style 7K), ZF3.5	CD3.5, SVCM3.5, CLM3.5	N/A	8-1/8 x 8	206 x 203
235000603	SXF10-1, SHF10-1, ZF10-1	VCD10K/1, VCM10K/1, CLM10KC/1, CMCD10K/1, CMCM10K/1	ECM9, ECD9	10-7/8 x 10	276 x 254
235000604	SXF10, SHF10, ZF10, ZF12	VCP10K, VCM10K, CLM10KC, CLM12KC, CMCP10K, CMCM10K	N/A	11-7/8 x 10	302 x 254
235000605	SXF12-1, SHF12-1, SXF16-1, SHF16-1, ZF12-1, SXR16, SHR16, ZF16-1, STX14, STX16, STQ14, STQ16, STH14, STH16	VCD12K/1, VCM12K/1, CLM12KC/1, CMCD12K/1, CMCM12K/1, VCD16K/1, VCM16K/1, CLM16KC/1, CMCD16K/1, CMCM16K/1, VTD14, VTD16, VTM14, VTM16	ECM11, ECD11	10-7/8 x 12	276 x 305
235000606	SXF12, SHF12, SXF16, SHF16, SXF18, SHF18, ZF16	VCP12K, VCM12K, VCP16K, VCM16K, VCD18, CLM16KC, CMCP16K, CMCM16K	ECM15, ECD15	11-7/8 x 12	302 x 305
235000607	SXF24, SXF24-1, SHF24, SHF24-1 (special order)	VCD24K/1, VCP24K, VCM24K, VCM24K/1 (special order)	N/A	16-3/8 x 16	416 x 406
235000608	SX24, SH24 (special order)	N/A	N/A	15-1/8 x 17	384 x 432
235000638	STX6, STX8, STQ6, STQ8, STH6, STH8	VTD6, VTD8, VTM6, VTM8	N/A	8-7/8 x 10-1/4	226 x 261
235000639	STX10, STX12, STQ10, STQ12, STH10, STH12	VTD10, VTD12, VTM10, VTM12	N/A	10-7/8 x 11-1/2	276 x 293

Note to Customer: Please pay close attention to A/C models 10, 12, and 16, and whether or not they have the suffix "-1" or "/1" in the model number. Additionally, unit filters for all 5-16K models with the suffix "-1" and "/1" unit filters are interchangeable with "-2" and "/2" units.

**Decide What Size You Need**

Locate the data plate on the air conditioning unit and determine the model number or BTU capacity, and measure the size of the evaporator face to determine the correct filter size. Note: the evaporator is the large square corrugated metal piece situated just behind the blower.



**How To Install the Filter**

The filter should be installed directly over the face of the evaporator, using the existing brackets on the air conditioning unit. If there are no installed brackets to hold the filter in place, use the pins contained in this package to attach the filter. Press the pins through the four corners of the filter and into the spaces between the thin metal fins on the evaporator face.

Note: These high-efficiency filters should not be used in conjunction with any other filters or screens. Make sure you remove any existing filters or screens in the return air path.

**When To Replace the Filter**

Because of its high efficiency in filtering air, the white filters should be changed at frequent intervals to maintain the air quality, and to avoid restricting airflow. Failure to change filters at the recommended intervals can cause the air conditioner to shut down from lack of air flow or from an icing condition.

- Every 2 months** – liveaboard conditions or a boat where the air conditioner runs constantly.
- Every 4 months** – using the boat 3 weekends of every month.
- Every 6 months** – using the air conditioner 1 – 2 times per month.

**Please contact your Cruisair or Marine Air dealer to order air filter replacements.**

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**NEW!**

# Power Up With SmartStart™

## Eliminate Startup Spikes



SmartStart™ Model  
#4220040 shown

**The biggest drain on your power source usually occurs when the air conditioning compressor starts.** The big power surge can cause lights and other electrical appliances to flicker and falter. In severe cases, the surge can cause the boat to lose power completely.

The SmartStart™ is a unique device that smoothes out startup power demand instead of spiking it, reducing amp requirements by up to 65%. The technology uses dynamic feedback control to reduce the inrush of current by starting the compressor motor slowly. No other soft starter in the industry provides better performance.

### Discover How to Save Money and Energy

Once running, an air conditioning compressor has a much lower, steady amp draw, but the initial locked-rotor amps needed to start the system can create high current surges that could adversely affect the operation of an overstrained power source.

In some situations, this gentler method of handling the power surge can mean the difference between keeping the generator you have or investing thousands of dollars in a larger generator.

For boats without a generator, the SmartStart™ may allow the option of powering an air conditioning system from an inverter.

When running on dock power, a SmartStart™ may resolve issues where the power source or connection may be weak.

*Continued on reverse side*

### Key Benefits

- Reduces strain on the power source.
- Reduces brown-out effects at compressor start up.
- May enable an inverter to power A/C.
- May eliminate the need to upgrade your generator.
- Inexpensive.
- Small and lightweight.

### Customer comment:

"The generator's control circuit would trip and stop the generator due to the inrush of the Emiko's heat pump. The SmartStart reduced that inrush of current so the generator would continue to run.

We started with an inrush of 77 amps and finished with an inrush of only 20 amps. [The SmartStart] is a great solution to our problem."

M/V Emiko, 37 ft. Nordic Tug  
Mr. John Poole, Poole Refrigeration Service  
Alameda, CA

Not only does the SmartStart™ ease strain on the power source, it's also less stressful for the compressor itself since it starts more gently. Additionally, it provides valuable protection by shutting down the compressor if the power source or the connection to the compressor is briefly interrupted, then it reattempts a soft start after a three-minute delay.

## Little Package

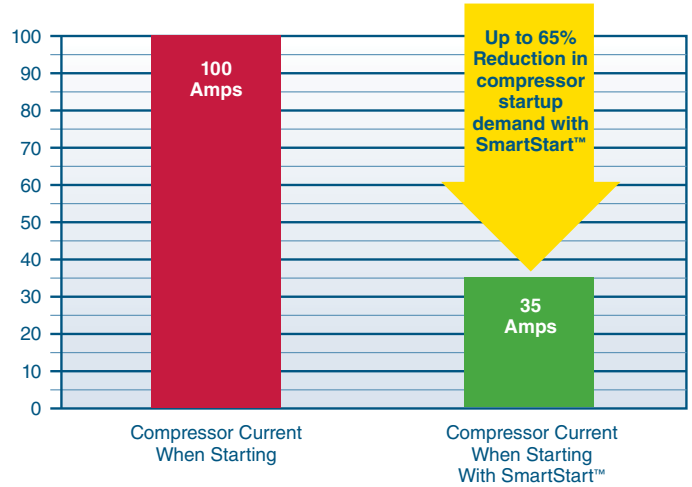
All this power comes in a surprisingly small package. At only 5 x 3 x 2 in. (127 x 76 x 51 mm), the SmartStart™ takes up little space and weighs only 15 oz. (0.43 kg.). The SmartStart™ is wired directly into the air-conditioning system's electrical box.

## Technical Specifications for SmartStart™

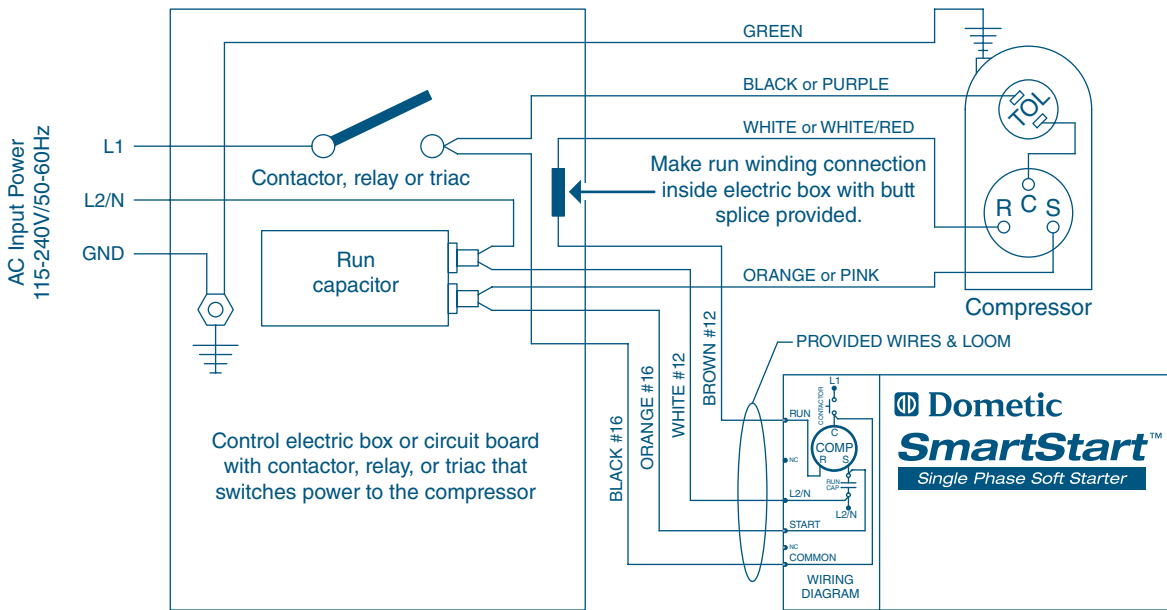
Model	Voltage (volts) / Frequency (Hz)	Supported Compressor Capacity Range (BTUs)
4220040	115/60	5K-18K
4220043	208-240/50-60	12K-30K
4220044	208-240/50-60	36K-60K
SmartStart™ Accessories		
4220045	Optional Mounting Tray	

**Notes:**

- Maximum continuous current for all models: 32 Amps.
- Typical start surge reduction as compared to compressor locked-rotor amperage (LRA): 65%.



## SmartStart™ Wiring Diagram



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Environmentally Responsible

Dealer:

# March Marine Pumps

## Centrifugal Seawater Pumps for Marine A/C



Clockwise from left:  
LC-2CP-MD, AC-5CP-MD,  
and LC-3CP-MD

**March centrifugal pumps are an excellent choice for providing seawater circulation for marine air conditioning systems.** The proven magnetic drive eliminates the troublesome mechanical shaft seal.

There is no seal wear, power-robbing friction, or leakage through the seal. The impeller and drive magnets are strong, permanent ceramic types, which prevent slippage, ensuring that full motor power is converted into pumping power.

Centrifugal pumps require a flooded inlet and should be mounted below the waterline. However, an optional priming reservoir is available for applications where the pump must be mounted above the waterline (2.0'/0.6 m max.).

“LC” models have liquid-cooled motors and can be run in open air or submerged. “AC” models have air-cooled, open drip-proof motors and must be in a dry environment.

Replacement parts for March pumps are available through Dometic.

### Key Benefits

- Magnetic-drive impeller means no seal to wear, leak, or repair.
- Efficient motor with low power consumption.
- Includes a marine-grade base.
- 115V and 230V models.
- Liquid-cooled (submersible) and air-cooled motors available.
- All components in contact with water are plastic, ceramic, or stainless steel.
- 6' (1.9 m) power cord standard.
- Optional priming reservoir available for above-waterline applications.
- 1-year warranty on parts.

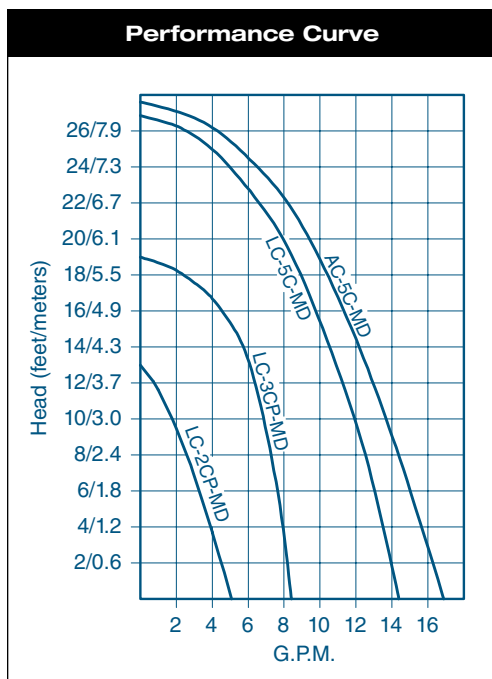
## Technical Specifications for March Centrifugal Seawater Pumps

Model	Max. flow (gpm)	Max. head (ft/m)	Connections		Motor HP	Volts	Freq. <sup>(1)</sup>	Amps	Weight (lbs/kg)	Motor type <sup>(2)</sup>	Wet end assembly
			Inlet	Outlet							
LC-2CP-MD 115V	5.0	13/3.9	3/4" MPT	1/4" MPT	1/35	115V	50/60Hz	1.00	5.0/2.3	TE/SUB	A-507P
LC-2CP-MD 230V	5.0	13/3.9	3/4" MPT	1/4" MPT	1/35	230V	50/60Hz	0.53	5.0/2.3	TE/SUB	A-507P
LC-3CP-MD 115V	8.5	19/5.8	3/4" FPT	1/2" MPT	1/20	115V	60Hz	2.00	9.0/4.1	TE/SUB	A-508P
LC-3CP-MD 230V	8.5	19/5.8	3/4" FPT	1/2" MPT	1/20	230V	60HZ	1.00	9.0/4.1	TE/SUB	A-508P
LC-5C-MD 115V	14.5	27/8.2	1" FPT	1/2" MPT	1/8	115V	50/60HZ	2.20	15.5/7.0	TE/SUB	A-506LC
LC-5C-MD 230V	14.5	27/8.2	1" FPT	1/2" MPT	1/8	230V	50/60HZ	1.10	15.5/7.0	TE/SUB	A-506LC
AC-5C-MD 115V	17.0	27/8.2	1" FPT	1/2" MPT	1/8	115V	50/60HZ	2.10	10.0/4.5	OD	A-506
AC-5C-MD 230V	17.0	27/8.2	1" FPT	1/2" MPT	1/8	230V	50/60HZ	1.00	10.0/4.5	OD	A-506

Notes:

<sup>(1)</sup> Standard 50/60Hz pumps may be operated at 50Hz and reduced voltages. However, there will be a 17% reduction in flow rate and as much as a 30% drop in head in that application. The model LC-3CP-MD pump is 60Hz only and may not be operated at 50Hz.

<sup>(2)</sup> The TE/SUB is a totally-enclosed, liquid-cooled motor and can be operated in the open air or submerged. The OD is an open drip-proof, air-cooled motor and must be kept dry.



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Environmentally Responsible

Dealer:

# DX Seawater Pumps

## Reliable & Heavy-duty Centrifugal Pumps



P3600B3X and  
PML500CL shown

### **Cruisair specifies reliable, heavy-duty centrifugal pumps to provide a steady flow of cooling water through the air conditioning system.**

The glass reinforced polypropylene head pumps have magnetic drive impellers, and are available with submersible or air cooled motors. Larger pumps have bronze heads with mechanical seals, and air cooled, drip-proof motors. A wide range of pumps and motors are available for use in different power environments.

Centrifugal pumps must be mounted below the water line. Self-priming pumps are also available for above water line applications. A scoop type through-hull and a seawater strainer are recommended for proper operation.

When more than one air conditioning unit is served by a single pump, a separate pump relay is used. To complete the installation, Cruisair can also supply water manifolds, hose, and fittings.

### Key Benefits

- High capacity, centrifugal pumps.
- 250 -10,800 gph capacities.
- 115V and 230V, 60 Hz; 240V, 50 Hz; and 220/440V, 3 ph. models.
- Seawater grade construction, with glass filled polypropylene or bronze pump heads.
- Submersible or air cooled motors.
- High head pressure models available.
- Self-priming pumps available.

## Technical Specifications for DX Seawater Pumps

Model	GPH @ Feet of Head	Volts	Freq. (Hz)	Phase	Running Amps	Inlet Connection	Outlet Connection	Height (in/mm)	Width (in/mm)	Length (in/mm)	Weight (lb/kg)
PML250	250@3'	115	50/60	1	1.0	3/4" MPT	1/4" MPT	5.0/125	5.0/125	6.0/150	7/3.2
PML500	490@3'	115	50/60	1	2.5	3/4" FPT	1/2" MPT	5.3/125	5.0/125	7.3/185	10/4.5
PML500CL	490@3'	230	60	1	1.0	3/4" FPT	1/2" MPT	5.3/125	5.0/125	7.3/185	10/4.5
PML500CK	400@3'	240	50	1	1.0	3/4" FPT	1/2" MPT	5.3/125	5.0/125	7.3/185	10/4.5
PMA500	500@7'	115	50/60	1	2.1	3/4" FPT	1/2" MPT	5.0/125	4.0/100	9.5/240	8/3.6
PMA500C	500@7'	230	50/60	1	1.0	3/4" FPT	1/2" MPT	5.0/125	4.0/100	9.5/240	8/3.6
PMA1000	985@3'	115	50/60	1	2.2	1" FPT**	1/2" MPT	6.1/155	4.5/115	9.0/230	10/4.5
PMA1000C	985@3'	230	50/60	1	1.2	1" FPT**	1/2" MPT	6.1/155	4.5/115	9.0/230	10/4.5
PMA1000CK	800@3'	240	50	1	1.2	1" FPT**	1/2" MPT	6.1/155	4.5/115	9.0/230	10/4.5
P1200BXT-SP	1200@5'	115/230	50/60	1	10.4/5.2	1" FPT	1 1/2" FPT	6.3/160	6.5/165	14.1/360	35/15.8
P1500BXT	1320@5'	115/230	50/60	1	10.4/5.2	3/4" FPT	1/2" MPT	6.3/160	6.5/165	14.1/360	28/12.7
P1500B3X	1320@5'	220/440	50/60	3	3.4/1.7	3/4" FPT	3/4" MPT	6.6/170	6.5/165	11.6/295	33/15.0
P3000BXT	3000@7'	115/230	50/60	1	10.4/5.2	1-1/4" FPT	1" FPT	6.3/160	6.5/165	14.1/360	32/14.5
P3000B3X	3000@7'	220/440	50/60	3	3.4/1.7	1-1/4" FPT	1" FPT	6.6/170	6.5/165	11.6/295	37/16.8
P3000BXT	3000@20'	115/230	50/60	1	10.4/5.2	1-1/4" FPT	1" FPT	6.3/160	6.5/165	14.1/360	37/16.8
P3000BX-SP	3000@30'	115/230	50/60	1	13.8/6.9	1-1/2" FPT	1-1/2" FPT	9.8/250	8.5/215	18.7/475	48/21.8
P3600BX	3600@20'	115/230	50/60	1	11.2/5.6	1-1/2" FPT	1-1/2" FPT	9.4/240	6.5/165	14.5/370	41/18.6
P3600B3X	3600@20'	230/460	50/60	3	2.8/1.4	1-1/2" FPT	1-1/2" FPT	9.4/240	6.5/165	14.5/370	41/18.6
PH4000BX	4000@30'	115/230	50/60	1	14.2/7.1	1-1/2" FPT	1-1/2" FPT	9.4/240	6.5/165	15.8/400	43/19.5
PH4000B3X	4000@30'	230/460	50/60	3	3.8/1.9	1-1/2" FPT	1-1/2" FPT	9.4/240	6.5/165	15.8/400	43/19.5
P7800BX	7800@20'	115/230	50/60	1	15.0/7.5	2-1/2" FPT	2-1/2" FPT	10.0/255	8.5/215	17.6/450	90/41.0
P7800B3X	7800@20'	230/460	50/60	3	3.4/1.7	2-1/2" FPT	2-1/2" FPT	10.0/255	8.5/215	17.6/450	90/41.0

\* 3/4" FPT adapter included  
 \*\* 1" TO 3/4" bushing included

**Notes:**

- When operating a 50/60 Hz pump at 50 Hz, the flow rate will decrease approximately 17%, while the head capability will drop as much as 30%.
- Hose fittings are not included with pumps and must be ordered separately.

**Interpreting Model Numbers**

P	1200	B	X	SP
PML: Magnetic drive, submersible PMA: Magnetic drive, air-cooled motor PDS: Direct drive, submersible P: Pump, mechanical seal, air-cooled motor PH: Mechanical seal, high head only	Capacity in gallons per hour	B: Bronze head No Letter: Polypropylene	No Letter: 100/115V, 50/60 Hz C: 200/230V, 50/60 Hz CL: 230V, 60Hz only CK: 220V, 50Hz X: 115/230V, 50/60 Hz 3X: 230/460V, 3-phase, 50/60 Hz	Capacity X 1,000 BTU/hr

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Environmentally Responsible

Dealer:

# DX Pump Relays

## For Condensers Supported by a Single Pump



PR3X and PR8X Pump Relays  
and TR115 Trigger Shown

Pump relays are used to control cycling of seawater pumps when more than one condensing unit is supported by a single pump. One control trigger is needed for each condensing unit.

The PR8X is a solid-state relay which supports up to eight systems. Control triggers, matched to the system control voltage, are ordered separately and added at the time of installation. Trigger circuits for both 115V and 230V systems may be installed in the same PR8X box. The PR8X is ignition protected.

The PR3X type relay is ordered with two or three pre-installed control triggers which are matched to the system voltage. The PR3X-2 can be upgraded from two to three triggers in the field. Models can be ordered for 115 or 230V control voltage and can control 115V or 230V pumps. The unit is ignition protected.

The PR4D pump relays handle up to four control triggers which are ordered separately and added at the time of installation. The PR4D is used to control 230V 3-phase pumps.

### Key Benefits

#### PR8X

- Ignition protected.
- Up to 8 control triggers.
- 115V or 230V.
- 15 amp fuse on pump circuit.

#### PR3X

- Ignition protected.
- Two or three internally mounted triggers.
- 115V or 230V.
- 15 amp fuse on pump circuit.

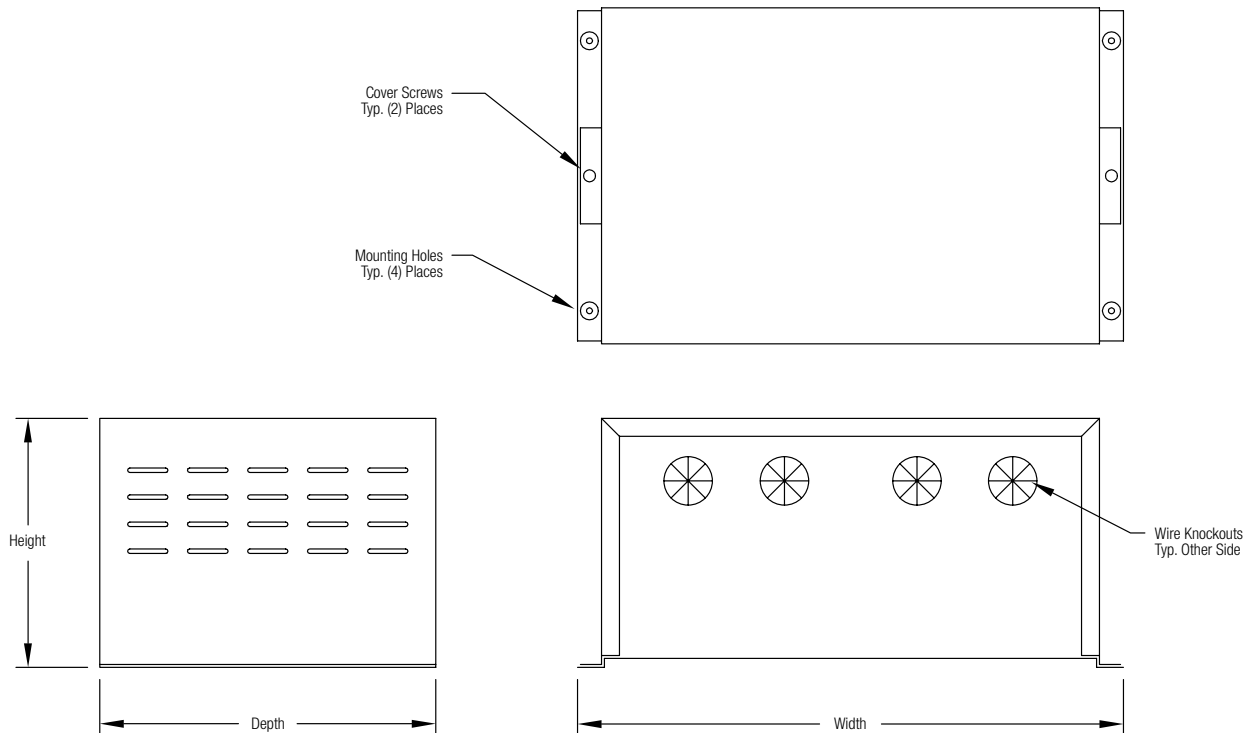
#### PR4D

- Up to four control triggers, ordered separately.
- Designed for 230V three-phase pumps.

## Technical Specifications for DX Pump Relays

Model	Max Rated Amps	Control Voltage*	Pump Voltage (VAC)	Phase	Height (in/mm)	Weight (in/mm)	Depth (in/mm)	Weight (lb/kg)
PR3X-2	15	115	115/230	1	2.38/60	7.94/202	5.50/140	1.5/0.7
PR3X-3		115						
PR3X-2C		230						
PR3X-3C		230						
PR8X*	15	*	115/230	1	5.25/334	10.50/267	7.00/178	2.0/0.9
PR8X-4		115						
PR8X-4C		230						
PR8X-5C		230						
PR8X-6C		230						
PR8X7C	230							

\* Control triggers (TR115, TR230) are ordered separately depending on application.



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Environmentally Responsible

Dealer:



# Tempered Water Pumps

## Reliable, Heavy-Duty Water Pumps



PH3000BX-SP and  
CP0D120BX shown

**Cruisair specifies reliable, heavy-duty water pumps for use in the seawater and circulated water systems.** All pumps are centrifugal, with bronze and stainless components.

Pumps are available with 115/230V single-phase, or 230/460 3-phase, dual voltage motors. Most are rated for 50/60 Hz use, but special 50 Hz only pumps are also available for full performance.

Circulation pumps are sized for the total loop capacity. Cruisair design specification is 3 gpm (11.4 lpm) per 12,000 Btu/hr capacity, rated at 40' (12.2 m) head. Seawater pumps are selected for the tempering unit capacity, at 250 gph (15.8 lpm) per 12,000 Btu/hr.

Self-priming seawater pumps are available for installations where the pump cannot be mounted below the water line, or if air is able to enter the system such as on a sailboat or high speed craft.

Pump relays are used to control each pump. The circulation pump must run whenever the system is cooling or heating, and the seawater pump is typically cycled with the tempering units.

Single-phase pumps have internal overload protection. An external overload relay should be used with 3-phase pumps.

### Key Benefits

#### Seawater Pumps

- High-capacity, centrifugal pumps.
- Seawater grade construction.
- Single-phase 115/230V or 3 phase 230/460V dual voltage motors available.
- 50 or 60 Hz.
- Available for high head situations.
- Self-priming models available.

#### Circulating Pumps

- High-capacity, centrifugal pumps.
- Seawater grade construction.
- Single-phase 115/230V or three-phase 230/460V dual voltage.
- 50 or 60 Hz.
- Rated at 40' of head.

## Technical Specifications for Seawater Pumps

Model	GPH @ Feet of Head	Volts	Freq. (Hz)	Phase	Running Amps	Inlet Connection	Outlet Connection	Height (in/mm)	Width (in/mm)	Length (in/mm)	Weight (lb/kg)
P1200BXT-SP	1200@5'	115/230	50/60	1	10.6/5.3	1" FPT	1" FPT	6.6/170	6.5/165	13.6/345	35/15.8
P1500BXT	1320@5'	115/230	50/60	1	10.6/5.3	3/4" FPT	3/4" FPT	6.6/170	6.5/165	14.2/360	28/12.7
PS1500B3X	1500@15'	230/460	50/60	3	2.6/1.3	1-1/4" FPT	1" FPT	8.1/205	6.5/165	15.4/390	30/13.6
PS1500BX	1500@7'	115/230	50/60	1	7.0/3.5	1-1/4" FPT	1" FPT	8.1/205	6.5/165	13.0/330	25/11.4
PS1800BX	1800@15'	115/230	50/60	1	7.0/3.5	1-1/4" FPT	1" FPT	8.1/205	6.5/165	13.0/330	25/11.4
PS2200BX	2200@15'	115/230	50/60	1	7.2/3.6	1-1/4" FPT	1" FPT	8.1/205	6.5/165	13.0/330	25/11.4
P3000BXT	3000@7'	115/230	50/60	1	10.6/5.3	1-1/4" FPT	1" FPT	6.6/170	6.5/165	14.2/360	32/14.5
PH3000BXT	3000@20'	115/230	50/60	1	10.6/5.3	1-1/4" FPT	1" FPT	6.6/170	6.5/165	14.2/360	37/16.8
PS3000B3X	3000@20'	230/460	50/60	3	2.6/1.3	1-1/4" FPT	1" FPT	8.1/205	6.5/165	15.4/390	30/13.6
PH3000BX-SP	3000@30'	115/230	50/60	1	13.8/6.9	1-1/2" FPT	1-1/2" FPT	9.8/250	8.5/215	18.7/475	48/21.8
PH3000B3X-SP	3000@20'	230/460	50/60	3	3.4/1.7	1-1/2" FPT	1-1/2" FPT	9.8/250	8.5/215	18.7/475	48/21.8
P3600BX	4200@20'	115/230	50/60	1	11.2/5.6	1-1/2" FPT	1-1/2" FPT	9.4/240	6.5/165	14.5/370	41/18.6
P3600B3X	4200@20'	230/460	50/60	3	2.8/1.4	1-1/2" FPT	1-1/2" FPT	9.4/240	6.5/165	14.5/370	41/18.6
PH4000BX	4200@30'	115/230	50/60	1	14.2/7.1	1-1/2" FPT	1-1/2" FPT	9.4/240	6.5/165	15.8/400	43/19.5
PH4000B3X	4200@30'	230/460	50/60	3	3.8/1.9	1-1/2" FPT	1-1/2" FPT	9.4/240	6.5/165	15.8/400	43/19.5
P7800BX	7800@18'	115/230	50/60	1	15.0/7.5	2-1/2" FPT	2-1/2" FPT	10/255	8.5/215	17.6/450	90/41
P7800B3X	7800@18'	230/460	50/60	3	3.4/1.7	2-1/2" FPT	2-1/2" FPT	10/255	8.5/215	17.6/450	90/41
P10500B3XK	10500@20'	380	50	3	5.4/2.7	2-1/2" FPT	2-1/2" FPT	10/255	8.5/215	18/457	100/45.5
P10800BX	10800@20'	115/230	50/60	1	14.2/7.1	2-1/2" FPT	2-1/2" FPT	10/255	8.5/215	18/457	100/45.5
P10800B3X	10800@20'	230/460	50/60	3	5.2/2.6	2-1/2" FPT	2-1/2" FPT	10/255	8.5/215	18/457	100/45.5

## Technical Specifications for Circulating Pumps

Model	Capacity* (BTU/hr)	Volts	Freq. (Hz)	Phase	Running Amps	Inlet Connection	Outlet Connection	Height (in/mm)	Width (in/mm)	Length (in/mm)	Weight (lb/kg)
CP0D80BX	80,000	115/230	60	1	7.8/3.9	1-1/4" FPT	1" FPT	6.5/165	6.5/165	12.8/325	24/11
CP0D120BX	160,000	115/230	60	1	11.2/5.6	1-1/2" FPT	1-1/2" FPT	9.4/240	6.5/165	14.5/370	41/18.6
CP0D120B3X	120,000	380	50	1	13.8/6.9	1-1/2" FPT	1-1/2" FPT	9.4/240	6.5/165	15.6/397	43/19.5
CP0D120B3X	160,000	230/460	60	3	2.8/1.4	1-1/2" FPT	1-1/2" FPT	9.4/240	6.5/165	14.5/370	41/18.6
CP0D120B3XK	120,000	380	50	3	5.2/2.6	1-1/2" FPT	1-1/2" FPT	9.4/240	6.5/165	15.6/397	43/19.5
CP0D180BX	210,000	115/230	50/60	1	14.2/7.1	1-1/2" FPT	1-1/2" FPT	9.4/240	6.5/165	15.8/400	43/19.5
CP0D180B3X	180,000	380	50	1	14.2/7.1	1-1/2" FPT	1-1/2" FPT	9.4/240	6.5/165	15.6/397	43/19.5
CP0D180B3X	210,000	230/460	50/60	3	3.8/1.9	1-1/2" FPT	1-1/2" FPT	9.4/240	6.5/165	15.8/400	43/19.5
CP0D180B3XK	180,000	380	50	3	4.1/2.0	1-1/2" FPT	1-1/2" FPT	9.4/240	6.5/165	15.6/397	43/19.5
CP0D240BX	240,000	115/230	60	1	16.2/8.1	2" FPT	1-1/2" FPT	8.6/220	10/250	15.9/400	60/27.2
CP0D240B3X	240,000	380	50	1	13.8/6.9	2" FPT	1-1/2" FPT	8.6/220	10/250	15.9/400	60/27.2
CP0D240B3X	240,000	230/460	60	3	4.0/2.0	2" FPT	1-1/2" FPT	8.6/220	10/250	15.9/400	60/27.2
CP0D240B3XK	240,000	380	50	3	2.2/1.1	2" FPT	1-1/2" FPT	8.6/220	10/250	15.9/400	60/27.2
CP0D320B3X	320,000	230/460	60	3	6.0/3.0	2" FPT	2" FPT	8.6/220	11/280	15.9/400	85/38.6
CP0D360B3XK	360,000	380	50	3	6.4/3.2	2" FPT	2" FPT	8.6/220	11/280	16.1/410	89/40.5
CP0D500BX	500,000	115/230	60	1	19.2/9.6	2-1/2" FPT	2-1/2" FPT	10/250	11/280	18/460	110/50
CP0D500B3X	500,000	230/460	60	3	6.4/3.1	2-1/2" FPT	2-1/2" FPT	10/250	11/280	18/460	110/50
CP0D800B3X	800,000	230/460	50/60	3	9.6/4.8	2-1/2" FPT	2-1/2" FPT	10/250	11/280	18/460	110/50

\*Circulating pumps rated at 40 feet head.

Notes:

• When operating a 50/60 Hz pump at 50 Hz, the flow rate will decrease approximately 17%, while the head capability will drop as much as 30%.

• Hose fittings are not included with pumps and must be ordered separately.

### Seawater Pumps – Interpreting Model Numbers

P	1200	B	X	-SP
PMA: Magnetic drive, air-cooled motor P: Pump, mechanical seal, air-cooled motor PH: Mechanical seal, high head only	Capacity in gallons per hour	B: Bronze Head No Letter: Plastic Head	CK: 220V, 50Hz X: 115/230V, 50/60 Hz 3X: 230/460V, 3-phase, 50/60 Hz	SP: Self priming No Letter: Not Self Priming

### Circulating Pumps – Interpreting Model Numbers

CP	O	D	240	B	3X
Circulating Pump	O: Open Motor E: Enclosed Motor	D: Direct Drive M: Magnetic Drive	Capacity BTU/hr X 1,000	B: Bronze Head P: Plastic Head	X: 115/230V, 50/60 Hz 3X: 230/460V, 50/60 Hz

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Environmentally Responsible

Dealer:

# Auxiliary Heat Modules for DX & TW

## Providing Heat In Extremely Cold Conditions



HMDL2-7 auxiliary  
heat module shown

Cruisair auxiliary heat modules provide additional heating when the boat is in extremely cold seawater. They also permit specific compartments on the boat to be heated when the circulated water system is in the cooling mode.

The modules are installed on the discharge side of the air handler. Safety features include: fintube heating elements with relatively low surface temperature, high temperature insulation on interior of unit, and two-stage thermal protection.

Air handling units are available with integral electrical heat (CHBB Type).

### Key Benefits

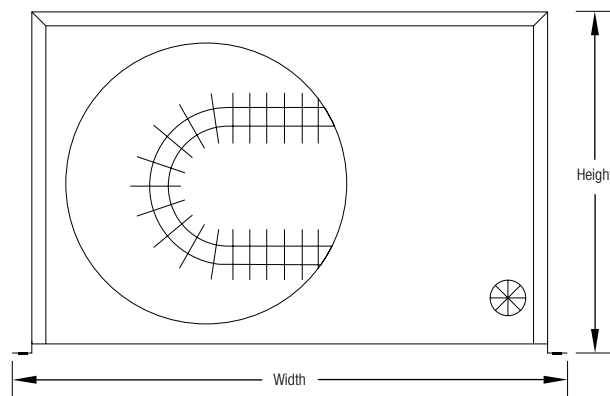
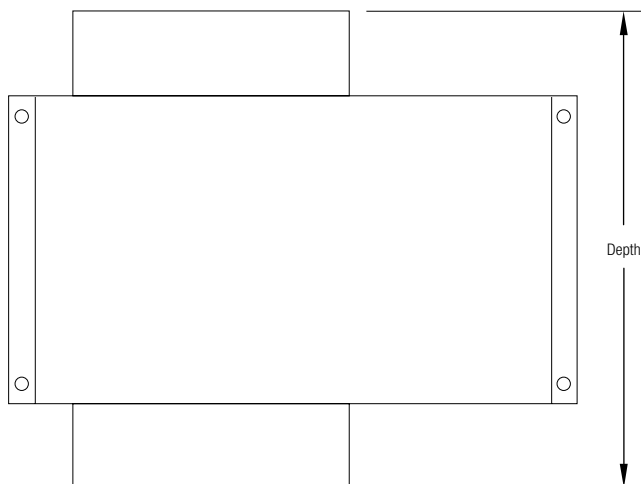
- Electric resistance heat modules.
- 1-4 KW models.
- 115V & 230V power.
- Fintube heating elements.
- Two-stage thermal protection.
- High temperature insulated interior.
- Installed in flexible or built-in ductwork.
- Used with ducted air handlers.

## Technical Specifications for Auxiliary Heat Modules

Model	Height (in/mm)	Width (in/mm)	Depth (in/mm)	Amps	Volts	Watts	Weight (lb/kg)	Fits Duct Size (in/mm)
HMDL1-5	7.00/180	12.00/305	10.00/255	9.0	115	1 kW	4.5/2.0	5.00/127
HMDL1C-5	7.00/180	12.00/305	10.00/255	4.2	230	1 kW	4.5/2.0	5.00/127
HMDL1.5-6	7.60/195	13.25/335	10.00/255	13.5	115	1.5 kW	5.0/2.3	6.00/152
HMDL1.5C-6	7.60/195	13.25/335	10.00/255	6.3	230	1.5 kW	5.0/2.3	6.00/152
HMDL2-7	7.60/195	13.25/335	10.00/255	18.0	115	2 kW	5.0/2.3	7.00/178
HMDL2C-7	7.60/195	13.25/335	10.00/255	8.3	230	2 kW	5.0/2.3	7.00/178

### Seawater Pumps – Interpreting Model Numbers

HM	D	L	2	C	-5
Heat Module	Ducted	L: Line Load (No Relay)	Power in kW	C: 230V No Letter: 115V	Duct Size In Inches



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Environmentally Responsible

Dealer:

# Variable Frequency Drive

## For Chilled Water A/C Compressors



VFD SQD312

A Variable Frequency Drive (VFD) completely eliminates the large starting inrush current of the compressor by ramping up voltage and frequency in a controlled time period. This allows running on limited dockside power, and also protects the generator from overload.

In addition to eliminating inrush, the VFD will also run a 60Hz rated compressor at 60Hz even when input power is 50Hz, which allows full BTU capacity performance (230V only). The drive also protects the compressor by monitoring input voltage and output current, and will shut down if a problem is detected. On 208/230V systems, the VFD can “convert” single-phase input power to 3-phase output; however, the VFD current capacity must be derated (see table on second page).

The VFD unit produces a modified sine wave output for smooth acceleration and running, with precise frequency resolution. It is designed to operate in extreme environments, such as an engine room. However, the enclosure is ventilated, and must be kept dry. Any direct water contact can damage the unit.

Built-in noise filters are standard and the VFD is CE approved. The Schneider Electric Altivar 312 VFDs incorporate a class A EMC filter into their design. This helps prevent high frequency noise from affecting the AC power supply to which the drives are connected. If you have an application or a power system that requires even lower noise emission, then we recommend you purchase the class B EMC filters specifically designed to fit with the entire family of Altivar 312 VFDs. To reduce the harmonic distortion caused by the VFD, we recommend you purchase a line reactor sized appropriately for the particular VFD.

An LED display allows the user to monitor operation and faults. The VFD is pre-programmed from the factory and no further setup is required. Power cables are available through special order.

### How to choose the right size Variable Frequency Drive:

- Chiller compressor must be 3 phase and each compressor requires a dedicated VFD.
- Multiply the chiller's reverse cycle amps by 1.10 (10% safety factor).
- Choose the VFD from the Comp Voltage and Max AMP Rating columns (in the table on the following page) depending on compressor voltage and the phase of the input power supply, respectively.

### Key Benefits

- Eliminates compressor start inrush current.
- 208/230V 3 phase output, with 1-phase or 3-phase input.
- Full 60Hz capacity even at 50Hz input (230V only).
- Low electronic noise, CE approved.
- 380/480V 3-phase models available.

Technical Specifications for Variable Frequency Drives

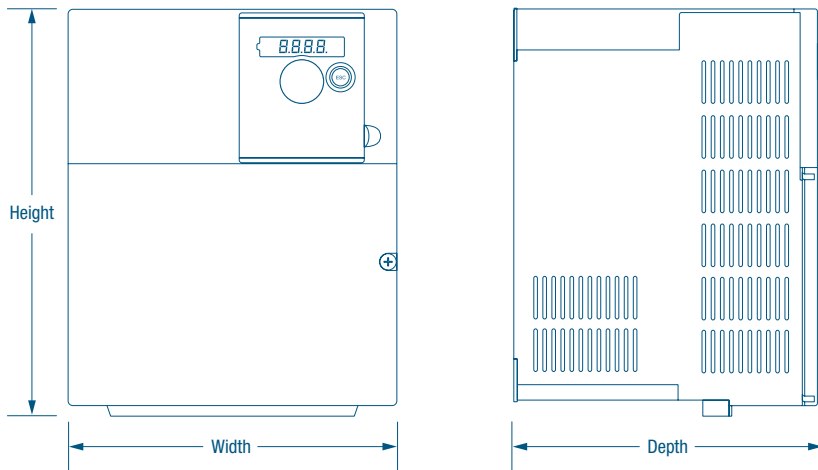
Model	Reference Number	Comp Voltage	Max AMP Rating		Dimensions (in/mm)			Weight (lb/kg)
			3Ph Input	1Ph Input	Height	Width	Depth	
VFD SQD17.5A230V	4251104	208-230V <sup>(1)</sup>	17.5	10.1	7.2/184	5.5/140	5.9/150	5.2/2.4
VFD SQD27.5A230V	4251105	208-230V <sup>(1)</sup>	27.5	15.9	9.1/232	7.1/180	6.7/170	10.4/4.7
VFD SQD33A230V	4251106	208-230V <sup>(1)</sup>	33.0	19.1	9.1/232	7.1/180	6.7/170	10.4/4.7
VFD SQD54A230V	4251110	208-230V <sup>(1)</sup>	54.0	31.2	13.0/330	9.7/245	7.5/190	19.9/9.0
VFD SQD66A230V	4251111	208-230V <sup>(1)</sup>	66.0	38.1	13.0/330	9.7/245	7.5/190	19.9/9.0
VFD SQD9.5A460V	4251108	380-460V <sup>(2)</sup>	9.5	N/A	7.2/184	5.5/14	5.9/150	5.2/2.4
VFD SQD13.4A460V	4251112	380-460V <sup>(2)</sup>	14.3	N/A	9.1/232	7.1/180	6.7/170	10.4/4.7
VFD SQD17A460V	4251202	380-460V <sup>(2)</sup>	17.0	N/A	9.1/232	7.1/180	6.7/170	10.4/4.7
VFD SQD27.7A460V	4251109	380-460V <sup>(2)</sup>	27.7	N/A	13.0/330	9.7/245	7.5/190	19.9/9.0
VFD SQD33A460V	4251201	380-460V <sup>(2)</sup>	33.0	N/A	13.0/330	9.7/245	7.5/190	19.9/9.0

Notes:

<sup>(1)</sup> 208-230V VFDs will produce a 60Hz output even with 50Hz input. This allows 60Hz compressors to produce full BTU capacity in 50Hz systems.

<sup>(2)</sup> High voltage (380-480V) VFDs can be used at 380-420V 50Hz, or 440-480V 60Hz. At these higher voltages the VFD output frequency should be the same as the input.

For programmed VFDs, please call your sales representative with the reference number and programming information (output voltage, input phase, and output frequency).



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Environmentally  
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Dealer:

# Pump Packages for Chillers

## Convenient Solutions for Simpler Installations



P700 Centrifugal  
Pump Package

**Pump packages reduce the installation time of chilled-water systems by combining several necessary components in one convenient package.** The packages include a chilled-water pump, expansion tank, pump drain pan, dual-scale (psi/kPa) pressure gauge, and fill assembly. The fill assembly includes a hose connection, ball valve, and pressure-reducing valve.

The cushion of air in the expansion tank allows the water to expand and contract with temperature fluctuations. This relieves pressure that might otherwise result in leaks.

The latest design includes a bladder-style expansion tank. Without the bladder, air in the expansion tank would gradually dissolve into the water and be bled off. Eventually, the protective cushion of air would be gone.

The pressure gauge is connected to an inlet pipe on the pump for the most accurate reading of system return water pressure.

### Key Benefits

- Convenient packaging of multiple essential components simplifies installation.
- Bladder-style expansion tank protects against loss of air cushion.
- Dual-scale pressure gauge is convenient for US and international customers.
- Pressure gauge connected to inlet pipe gives most accurate reading.

## Technical Specifications for Pump Packages

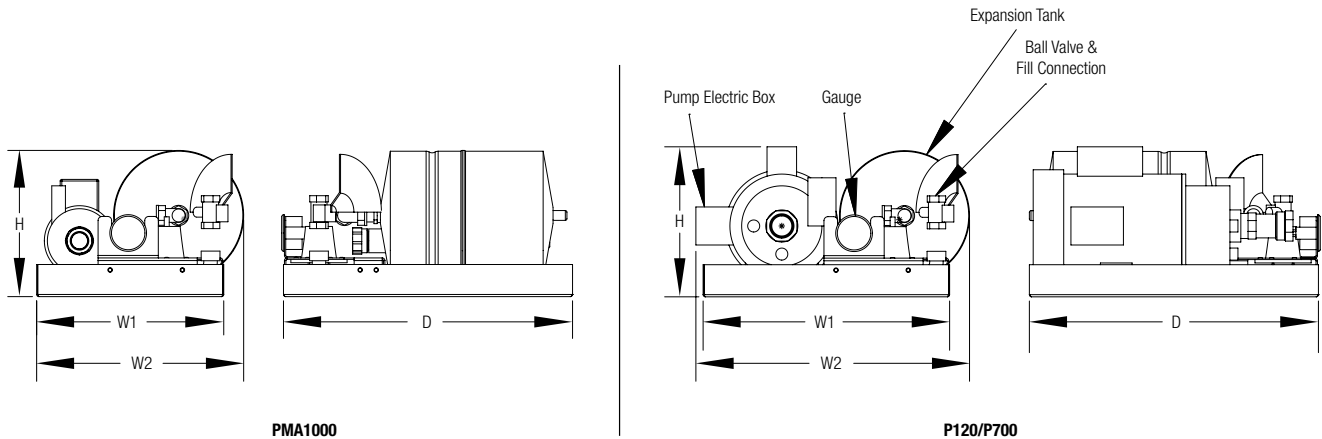
Model	PMA1000	PMA1000C	PMA1000CK	P120	P120Z		P700	P700Z	
Voltage (V/Hz/Phase)	115/60/1	230/60/1	240/50/1	115/60/1	230/50/1	230/60/1	115/60/1	230/50/1	230/60/1
Amps (FLA)	2.1	1.0	1.1	4.9	3.5	3.5	7.2	3.6	3.6
Recommended Applications: Total Air Handler Capacity (BTU/hr)	16-23	16-23	16	24-48	17-23	24-48	49-120	24-84	49-120
Height (in/mm)	9.2/233	9.2/233	9.2/233	9.2/233	9.5/241	9.5/241	9.5/241	9.5/241	9.5/241
Pan Width, W1 (in/mm)	11.7/297	11.7/297	11.7/297	11.7/297	15.4/391	15.4/391	15.4/391	15.4/391	15.4/391
Overall Width, W2 (in/mm)	12.9/327	12.9/327	12.9/327	12.9/327	17.1/434	17.1/434	17.1/434	17.1/434	17.1/434
Depth, D (in/mm)	18/457	18/457	18/457	18/457	18/457	18/457	18/457	18/457	18/457
Chilled Water "in" connections, female NPT	1" female	1" female	1" female	1.25" female	1.25" female	1.25" female	1.25" female	1.25" female	1.25" female
Chilled Water "out" connections, NPT	1/2" male	1/2" male	1/2" male	1" female	1" female	1" female	1" female	1" female	1" female
Net Weight, (lbs/kg)	33/14	33/14	33/14	48/21	48/21	48/21	49/22	49/22	49/22
Gross Weight, (lbs/kg)	47/21	47/21	47/21	62/28	62/28	62/28	62/28	62/28	62/28

**Notes:**

- Dimensions are +/- 0.125 inches.

**Safety note:**

- Pump packages do NOT include backflow preventers. If the chilled-water fill assembly might be supplied by a potable water supply, then a reduced pressure zone (RPZ) backflow preventer should be installed between the fill assembly and the potable water supply to prevent contamination of the potable water.



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Dealer:



# Discharge & Return Air Grilles

## Aluminum, Wood, & Plastic Styles



Assorted aluminum, wood, and plastic grilles shown

**Cruisair discharge and return air grilles are available in a wide assortment of dimensions, styles, and materials to blend with any yacht's interior.**

The vanes of discharge grilles are secured in nylon bushings for easy dependable positioning. RA-type return air grilles have one row of fixed vanes. Wood return air grilles have a lint screen which can be removed for cleaning.

Round plastic discharge grilles are also offered in several colors with and without shut-off dampers.

Micro-Particle Anti-Allergenic air filters, designed to capture diesel smoke, dust, lint, bilge odors, and pet dander, are available for Cruisair A/C systems. These filters mount to the unit's evaporator coil and are eight times more efficient than standard filters. Due to the high efficiency of these new filters, they should be inspected and replaced at frequent intervals. When using a filter on the unit, do not also have a filter on the grille, as that would cause too much restriction of the airflow.

### Key Benefits

- Large selection and variety of grilles
- Standard and custom materials complement all yacht interiors.
- Custom sizes available for any application.

#### Wood Frame Grilles

- Pop out louver panels with return air grilles have easy to clean replaceable filters.
- Supply air grilles have double-deflection, moveable louvers available in anodized bronze or aluminum finish.

#### Aluminum Grilles

- Supply air grilles have adjustable louvers to direct air flow.
- Return air grilles feature durable, fixed-vane louvers.
- Return air grilles are supplied with or without filters depending on system requirements.
- Painted grilles are sprayed with polyurethane.
- Multiple color selection.

## Grille Sizing Per Unit

Unit Capacity in BTU/hr	Return		Supply	
	Sq. In.	Sq. cm	Sq. In.	Sq. cm
4,000	64	412.9	32	206.5
5,000	64	412.9	32	206.5
6,000	70	451.6	35	225.8
7,000	80	516.2	45	290.3
9,000	98	632.3	49	316.1
10,000	100	645.2	60	387.1
12,000	130	838.8	70	451.6
16,000	160	1032.3	80	516.2
18,000	200	1290.4	100	645.2
24,000	240	1548.5	140	903.3
30,000	350	2258.2	170	1096.8
36,000	360	2322.7	196	1264.6
48,000	480	3097.0	256	1651.7

Notes:

- Supply and Return Air Grille minimums are required to achieve rated capacity.
- Custom sizes and custom painted grilles are available. Contact Cruisair for pricing and availability.

## Product Characteristics

### Wood Frame Grilles

- Cut-out dimensions are the nominal grille size, i.e., a 10" X 5" VH requires a 10" x 5" (254 mm x 127 mm) cut out.
- Outside frame dimensions are 0.9375" ± 0.0625" (24 mm ± 16 mm) larger than nominal grille size, i.e., a 10" X 5" VH has overall dimensions of 10.9375" X 5.9375" (278 mm x 151 mm).
- Depth of grilles: VH is 1.375" (35 mm), VML is 1.875" (48 mm), RA is 0.875" (22 mm), measured from back of frame.
- Frame (flange) dimensions are 0.563" (14 mm) on all sides.

### Aluminum Grilles

- Cut-out dimensions for the TH, TV, and TRA style grilles are 0.375" (10 mm) smaller than the nominal grille size, i.e., a 10" X 5" TH requires a 9.625" X 4.625" (244 mm X 117 mm) cut-out. The TRAF style grilles are 0.125" (3 mm) smaller.
- Outside frame dimensions are 0.875" (22 mm) larger than the nominal grille size, i.e., a 10" X 5" TH has overall dimensions of 10.875" X 5.875" (276 mm x 149 mm).
- Depth of grilles: TH and TRA are 0.875" (22 mm), TRAF is 1" (25 mm), measured from back of frame.
- Frame (flange) dimension is 0.625" (16 mm) on all sides.

### Plastic Grilles (Circular)

- Depth of grilles: 2SA is 1.31" (33 mm), 3SA is 2.16" (55 mm), 4SA is 2.38" (60 mm), measured from back of frame.
- Frame (flange) dimensions: 2SA is 2.75" (70 mm), 3SA is 3.875" (98 mm), 4SA is 5.50" (140 mm), in diameter.
- Cut-out dimensions are 2.0" (52 mm), 3.0" (76 mm), and 4.0" (102 mm) respectively, in diameter.
- A special adapter is available to use the 4SA with 3.0" (76 mm) ducting.

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## Grille Dimensions

Wood Frame Grilles			
Supply Air, Primary		Supply Air, Secondary Closeable	
Model VH		Model VML	
7" X 7"	10" X 5"	4" X 4"	6" X 4"
12" X 5"	14" X 4"	8" X 4"	8" X 8"
14" X 5"	14" X 6"	10" X 4"	12" X 4"
16" X 4"			
Supply Air, Secondary		Return Air with Filter	
Model VH		Model RA	
4" X 4"	6" X 4"	7" X 7"	8" X 8"
8" X 4"	10" X 4"	8" X 10"	11" X 8"
12" X 4"		12" X 12"	
		12" X 14"	14" X 7"
		14" X 10"	14" X 12"
		16" X 9"	
Plastic Grilles (Round and Closeable Supply Air Grilles)			
Model	2SA	3SA	4SA
Duct Size	2"	3"	4"
Aluminum Grilles			
Supply Air		Return Air	
Model TH	Model TV	Model TRAF (with Filter); Model TRA (without Filter)	
4" X 4"	10" X 4"	8" X 11"	14" X 7"
7" X 7"	12" X 3"	10" X 4"	14" X 10"
8" X 4"	12" X 4"	11" X 7"	14" X 12"
10" X 4"	12" X 5"	11" X 8"	16" X 9"
10" X 5"	12" X 6"	11" X 12"	20" X 5"
	14" X 4"	12" X 12"	22" X 7"
	14" X 5"		28" X 6"
	14" X 6"		
	14" X 7"		
	16" X 4"		
	18" X 3"		
	20" X 5"		
	24" X 3"		

Note:

- Multiply the dimensions above by 2.54 to calculate for centimeters.

Dealer:

# Dometic EnviroComfort Kit

## Climate Control at the Touch of a Button

50Hz Models  
Now Available!



Dometic EnviroComfort  
15,000 BTU/hr Kit



**Enjoy ideal temperatures in your boating environment year-round with Dometic's EnviroComfort air conditioning systems.** We offer a wide range of capacities from 5,000 to 15,000 BTU/hr, so you can size the system to suit your boat for ultimate cooling and heating comfort. All EnviroComfort models use R-417A refrigerant, an environmentally safe gas.

The EnviroComfort kit includes everything needed for a professional installation on boats with or without an existing air conditioning system.

EnviroComfort units use high-velocity blowers that eliminate blower-motor overhang for a smaller installation footprint. For flexibility in connecting to ductwork, the blower is rotatable to either a horizontal or vertical position. The compact, space-saving design is contained in a stainless-steel drain pan, and the pre-installed return-air filter is easily removable and cleanable.

For system operation, EnviroComfort kits include a compact Dometic digital-display control. For added installation convenience, the plastic electrical box can be mounted remotely.



For applications requiring an additional air outlet, Dometic's dual-duct kit (shown at left) is available for EnviroComfort models with BTU/hr capacities of 6.5K and higher.

### Key Benefits

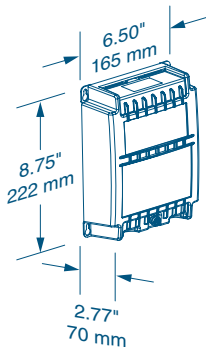
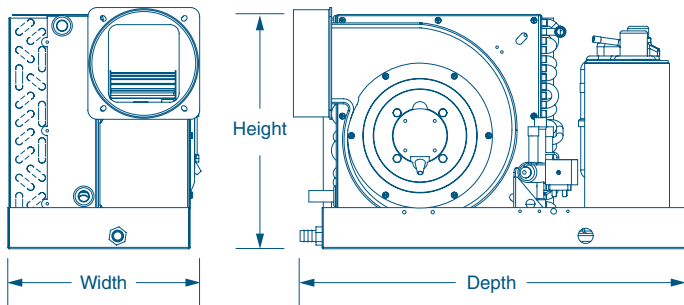
- Cools and heats.
- Available in 50Hz and 60Hz models.
- High velocity, rotatable blower for horizontal or vertical installation.
- Green gas (R-417A).
- Compact Dometic digital-display control.
- Plastic remote electrical box for convenience in mounting.
- Stainless-steel drain pan.
- Pre-installed return-air filter, easily removable and cleanable.
- Small, compact, space-saving design.
- Complete kit - All pieces, parts, and pumps (from seawater intake to supply-air grille).
- Optional dual-duct kit for models 6.5K BTU/hr and higher (details on reverse side).
- Available capacities (in BTU/hr): 5,000, 6,500, 9,000, 11,000, and 15,000.
- Replaces Cabin Mate.

## Technical Specifications for Dometic EnviroComfort Air Conditioners

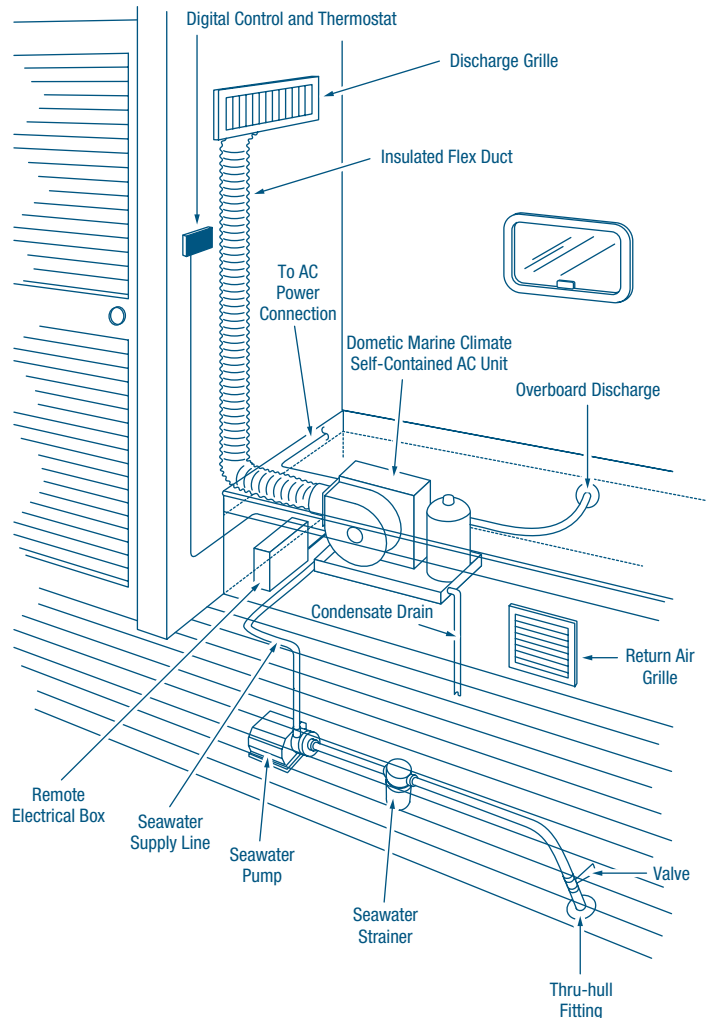
Model	ECD05		ECD06.5	ECD09	ECD11		ECD15	
Capacity (BTU/hr)	5,000		6,500	9,000	11,000		15,000	
Power (Volt/Hz/Ph)	115/60/1	220/50/1	115/60/1	115/60/1	115/60/1	220/50/1	115/60/1	220/50/1
Full Load Amps - Cool	3.8	2.2	5.4	6.3	6.8	3.7	10.0	4.5
Full Load Amps - Heat	5.0	2.9	7.0	8.6	9.4	4.7	13.0	5.8
Locked Rotor Amperage	29.0	11.0	40.0	49.0	53.0	22.2	67.0	32.0
Refrigerant type	R-417A		R-417A	R-417A	R-417A		R-417A	
Control type	Dometic Digital		Dometic Digital	Dometic Digital	Dometic Digital		Dometic Digital	
<b>Dimensions</b> (± 0.5" or 13mm)								
Height (in/mm)	11.75/298		11.75/298	13.50/343	13.50/343		13.50/343	
Width (in/mm)	9.50/241		9.50/241	9.75/248	9.75/248		11.00/279	
Depth (in/mm)	17.75/451		19.75/502	21.75/552	21.75/552		21.75/552	
<b>Connections</b>								
Sea Water (in/mm)	0.63/16		0.63/16	0.63/16	0.63/16		0.63/16	
<b>Estimated Weight</b> <sup>(1)</sup>								
Net weight (lbs/kg)	39.0/17.7		44.0/19.6	58.0/26.3	57.0/25.9		64.0/29.0	
Ship weight (lbs/kg)	TBD		TBD	TBD	TBD		TBD	

**Notes:**

<sup>(1)</sup> Weights listed are for ECM units only and do not include kit components.



Dimensions for remote-mountable electrical box for all ECD models.



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Environmentally Responsible

Dealer:

# Dometic EnviroCool Kit

## Climate Control at the Touch of a Button

50Hz Models  
Now Available!



Dometic EnviroCool  
5,000 BTU/hr Kit

**Enjoy ideal temperatures in your boating environment with Dometic's EnviroCool Series of marine air conditioning kits.** The EnviroCool Series offers a wide range of BTU capacities from 3,500 to 15,000 BTU/hr to allow you to size your system for ultimate cooling. The EnviroCool series uses environmentally safe R-134A (3.5K BTU/hr. model) and R-417A (5K - 15K BTU/hr. models) refrigerants.

The EnviroCool kit includes everything needed for a professional installation on boats with or without an air conditioning system.

EnviroCool units use high-velocity blowers that eliminate blower-motor overhang for a smaller installation footprint. For flexibility in connecting to ductwork, the blower is rotatable to either a horizontal or vertical position. The compact, space-saving design is contained in a stainless-steel drain pan, and the pre-installed return-air filter is easily removable and cleanable.

For system operation, EnviroCool uses a two-knob mechanical switch for reliable control over air conditioner functions.

### Key Benefits

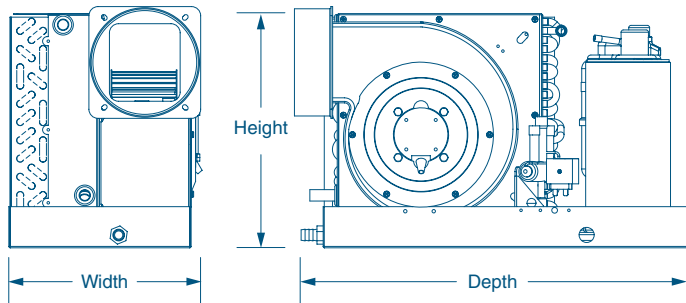
- Small, compact space-saving design.
- Stainless-steel drain pan.
- Available in 50Hz and 60Hz models.
- Green gas (R-134A and R-417A).
- Two-knob mechanical control.
- Complete air conditioning kit - All pieces, parts, and pump.
- High velocity, rotatable blower - either horizontal or vertical positions.
- Pre-installed return-air filter, easily removable and cleanable.
- Optional dual-duct kit for 6.5K BTU/hr and up models (details on reverse side).
- Available capacities (in BTU/hr): 3,500, 5,000, 6,500, 9,000, 11,000, and 15,000.
- Replaces Cool Mate and Zephyr.

## Technical Specifications for Dometic EnviroCool Air Conditioners

Model	ECM03.5	ECM05		ECM06.5	ECM09	ECM11		ECM15	
Capacity (BTU/hr)	3,500	5,000		6,500	9,000	11,000		15,000	
Power (Volt/Hz/Ph)	115/60/1	115/60/1	220/50/1	115/60/1	115/60/1	115/60/1	220/50/1	115/60/1	220/50/1
Full Load Amps - Cool	4.3	3.8	2.2	5.4	6.3	6.8	3.7	9.4	4.5
Locked Rotor Amperage	14.0	29.0	11.0	40.0	49.0	53.0	22.2	59.0	32.0
Refrigerant type	R-134A	R-417A		R-417A	R-417A	R-417A		R-417A	
Control type	Mechanical	Mechanical		Mechanical	Mechanical	Mechanical		Mechanical	
<b>Dimensions</b> (± 0.5" or 13mm)									
Height (in/mm)	9.50/241	11.75/298		11.75/298	13.50/343	13.50/343		13.50/343	
Width (in/mm)	9.75/248	9.50/241		9.50/241	9.75/248	9.75/248		11.00/279	
Depth (in/mm)	17.75/451	17.75/451		19.75/502	21.75/552	21.75/552		21.75/552	
<b>Connections</b>									
Sea Water (in/mm)	0.63/16	0.63/16		0.63/16	0.63/16	0.63/16		0.63/16	
<b>Estimated Weight</b> <sup>(1)</sup>									
Net weight (lbs/kg)	25.0/11.3	39.0/17.7		45.0/20.4	54.0/24.5	54.0/24.5		60.0/27.2	
Ship weight (lbs/kg)	32.0/14.5	50.0/22.7		TBD	TBD	TBD		72.0/32.7	

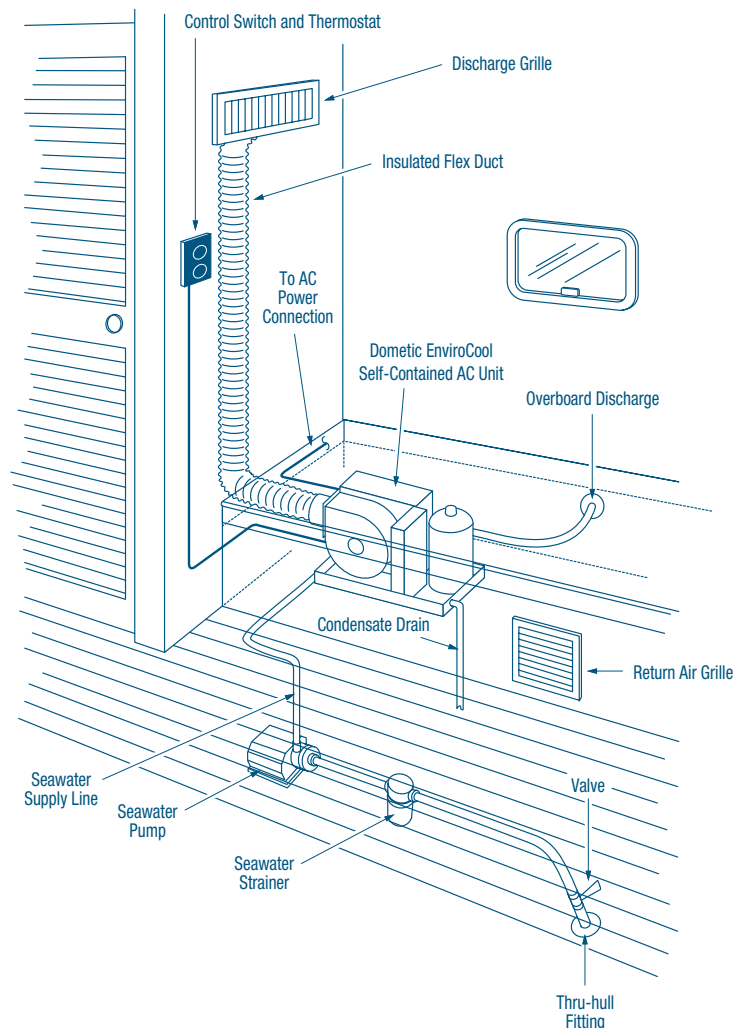
**Notes:**

<sup>(1)</sup> Weights listed are for ECM units only and do not include kit components.



### Dual-Duct Kit

For applications requiring an additional air outlet, Dometic's dual-duct kit is available for 6.5-15K BTU/hr EnviroCool models.



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Environmentally Responsible

Dealer:

# DuraSea Condensing Units

## Designed for Maximum Durability



DCA60D shown; optional risers not shown



**Dometic DuraSea air conditioning condensing units are designed for maximum durability in the harshest of nautical applications.** These rugged units offer long service life, exceptional performance, energy conservation, and reliability.

The DuraSea's cabinet is constructed of stainless-steel 304, which resists heavy salt-spray and also provides UV protection. Designed for deck or rooftop mount, the optional risers elevate the unit above the mounting surface to provide excellent water drainage and protect the coil from debris and salt water. To further fortify the unit from severe marine conditions, corrosion-resistant stainless-steel fasteners are used, and all other external components have a protective coating. The control box and compressor are strategically located within the cabinet for easy service access and for extra protection against corrosion.

All DuraSea units employ scroll compressors, the latest in high-efficiency, reliable compressor technology. They reduce noise and vibration, and have a higher tolerance of liquid refrigerant and system contaminants. Scroll compressors also feature low start torque to minimize the starting-current spike that occurs with old-technology compressors.



DCA60D shown with service panel removed

### Key Benefits

- Designed specifically for the rugged workboat market.
- Operates with most air handler units.
- Hermetically sealed scroll compressor with internal overload protection.
- Permanently lubricated condenser fan motor with VIP Vacuum Impregnated windings.
- High-efficiency copper tube/aluminum fin coil with dipped coating that exceeds 1000-hour salt spray test.
- Copper tube/copper finned coils are available for ultimate protection.
- Brass base valves with sweat connections and service ports.
- Vertical fan-mount design.
- High- and low-pressure controls.
- Heavy-duty contactor with lug connections.

## Technical Specifications for DuraSea Condensing Unit (Standard Models)

Model	DCA36D	DCA36E	DCA48D	DCA48E	DCA60D	DCA60E	DCA72D	DCA72E	DCA90D	DCA90E	DCA120D	DCA120E
Capacity (BTU/hr)	36,000	36,000	48,000	48,000	60,000	60,000	72,000	72,000	90,000	90,000	120,000	120,000
RLA	9.7	4.9	12.7	6.5	16.7	8.3	20.7	10.0	32.1	16.4	42.0	19.2
LRA	77	39	91	50	128	63	156	70	195.0	95.0	239.0	125.0
MCC	16	8	23	11	29	14	29	14	45.0	23.0	58.9	26.9
CFM	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	10000	10000
Motor FLA	3.6	2.0	3.6	2.0	3.6	2.0	3.6	2.0	3.6	2.0	8.5	4.9
Liquid Valve Size (OD) <sup>(1)</sup>	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	5/8"	5/8"
Suction Valve Size (OD) <sup>(1)</sup>	3/4"	3/4"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	1-1/8"	1-1/8"	1-3/8"	1/3/8"
Refrigerant Charge	80	80	80	80	120	120	120	120	150	150	150	150
Volts/Hz/Phase	208-230/ 60/3	460/ 60/3	208-230/ 60/3	460/ 60/3	208-230/ 60/3	460/ 60/3	208-230/ 60/3	460/ 60/3	208-230/ 60/3	460/ 60/3	208-230/ 60/3	460/ 60/3
Min. Circuit Amps <sup>(2)</sup>	16	8	20	10	25	15	30	15	45	25	65	30
Max. Breaker Protection <sup>(3)</sup>	20	15	30	15	40	20	40	20	60	30	80	35
Min./Max. Volts	197/253	414/506	197/253	414/506	197/253	414/506	197/253	414/506	197/253	414/506	197/253	414/506
Sound Level (dbA) <sup>(4)</sup>	84	84	84	84	84	84	84	84	84	84	87	87
Unit Weight (lbs/kg) <sup>(5)</sup>	290/132	290/132	310/141	310/141	365/166	365/166	375/170	375/170	475/215	475/215	525/238	525/238

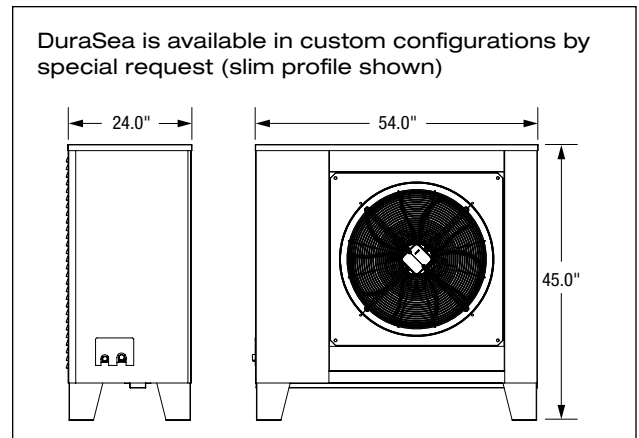
Notes:

- <sup>(1)</sup> Up to 50' (15.2 m) in equivalent line length.
- <sup>(2)</sup> Wire size should be determined in accordance with National Electric Codes. Extensive wire runs require larger wire sizes.
- <sup>(3)</sup> Must use time-delay fuses or HACR type circuit breakers of the same size as noted.
- <sup>(4)</sup> Sound level measured at 3' (0.9 m) away from condensing unit.
- <sup>(5)</sup> Weight for aluminum fin condenser coil with coating.

\*In the interest of product improvement, all data is subject to change at Dometic's discretion.

### DCA Dimensions (Standard Models)

Model	Dimensions (in/mm)		
	Width	Depth	Height
DCA36	33.0/838	33.0/838	38.5/978
DCA48	33.0/838	33.0/838	38.5/978
DCA60	33.0/838	33.0/838	38.5/978
DCA72	33.0/838	33.0/838	38.5/978
DCA90	33.0/838	48.0/1219	42.0/1067
DCA120	33.0/838	48.0/1219	42.0/1067



### Commitment to Quality

Built with quality inside and out by Dometic, the world leader in marine air conditioning for 50 years. Every DuraSea condensing unit is factory charged and thoroughly run tested. DuraSea units meet or exceed ABYC and USCG regulations, CE directives, and general ARI standards.



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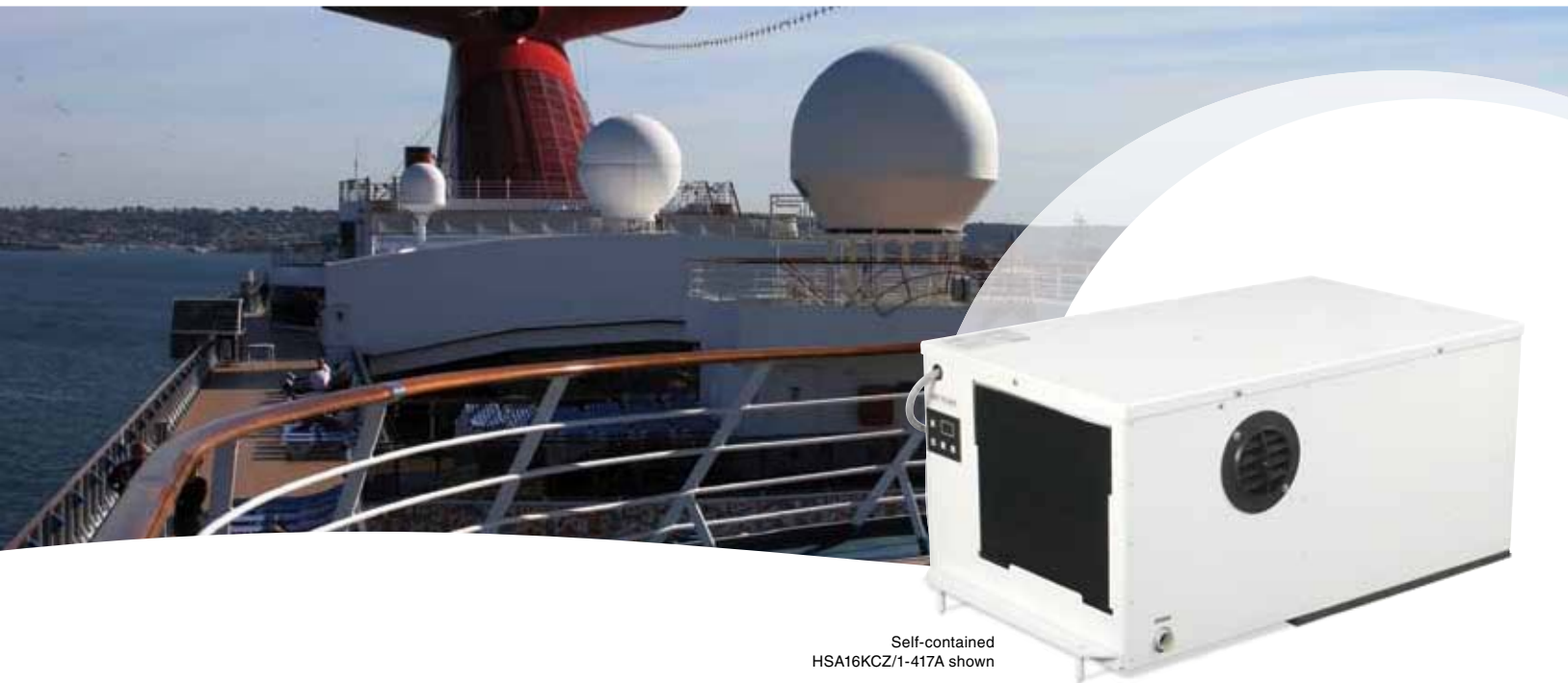
Environmentally Responsible

Dealer:



# Radome Environmental Control Units

## Keep Your Equipment Cool



Self-contained  
HSA16KCZ/1-417A shown

**Safe navigation relies on your ship's radar and communications equipment, and as with all electronics, overheating leads to equipment failure.** The Radome Environmental Control Unit (ECU) is specifically designed to work within the dome enclosure, ensuring optimum temperatures for the critical equipment inside.

As you would expect from the world leader in marine air conditioning technology, this air-cooled unit is built for at-sea conditions. Although small and lightweight to provide ease of installation and maintenance, the Radome ECU is designed to exceed the cooling requirements of pleasure boat, commercial vessel, and military ship applications. Rugged construction with corrosion-resistant materials allows the unit to be operated in the most extreme conditions at sea.

The Radome ECU's highly efficient yet powerful rotary compressor provides quieter operation, increased reliability, and reduced amperage. Its raised-lance fin and the rifled tubing design of the evaporator and condenser coils provide maximum capacity. Three configurations are offered: interior dome self-contained, remoted ducted self-contained, and split-gas.

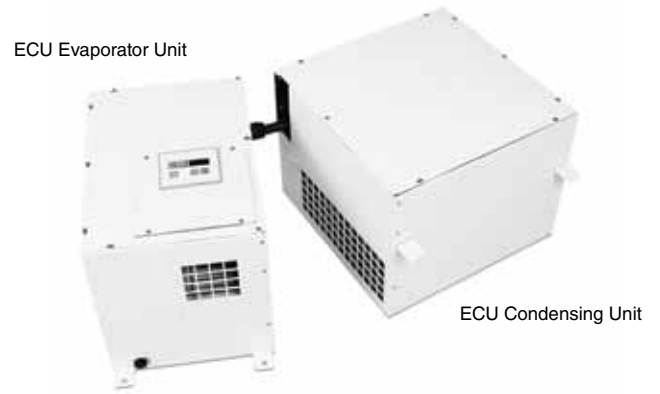
The Radome ECU is not limited to marine applications. It can also control the temperature and humidity levels of on-land locations such as electronics enclosures, telecommunications shelters, vaults, buildings, trailers, vans, and cleanrooms.

### Key Benefits

- 3 configurations: Self-contained interior dome, self-contained remote ducted, and split-gas.
- Compact, lightweight, and easy to install.
- Durable, corrosion-resistant coating.
- Uses environmentally safe R-417A refrigerant.
- R-22 units are retrofittable to R-417A to meet global environmental regulations.
- Solid state digital control provides reliable monitoring and control.
- Control circuitry monitors and protects the unit.
- High-efficiency rotary compressors provide reduced amperage, quieter operation, lower weight, and increased reliability.
- Raised lance fin and rifled tubing for maximum capacity.
- Each unit is pre-charged and leak checked.
- Charge Guard® protection provides sealed access ports, ensuring environmental protection and system integrity.
- Meet or exceed applicable ABYC and U.S. Coast Guard regulations, CE directives, and general Air Conditioning and Refrigeration Industry (ARI) standards.

## Technical Specifications for Radome Environmental Control Units

Model	Radome ECU Unit		
Capacity (BTU/hr)	16,000		
Voltage/Hz/Ph	115/50-60/1	230/60/1 <sup>(1)</sup>	220/50/1
Locked Rotor Amps (Comp)	67.0	29.0	32.0
K.V.A. (Kilo-Volt-Amps)	1.3	1.3	1.3
Max. Circuit Breaker (Amps)	40.0	20.0	20.0
Min. Circuit Ampacity	25.0	14.0	12.0
R-417A (oz/g) Refrigerant	26/737		
Net Weight (lbs/kg)	95.0/43.1		
Gross Weight (lbs/kg)	130.0/59.0		



Radome ECU split-gas system shown above

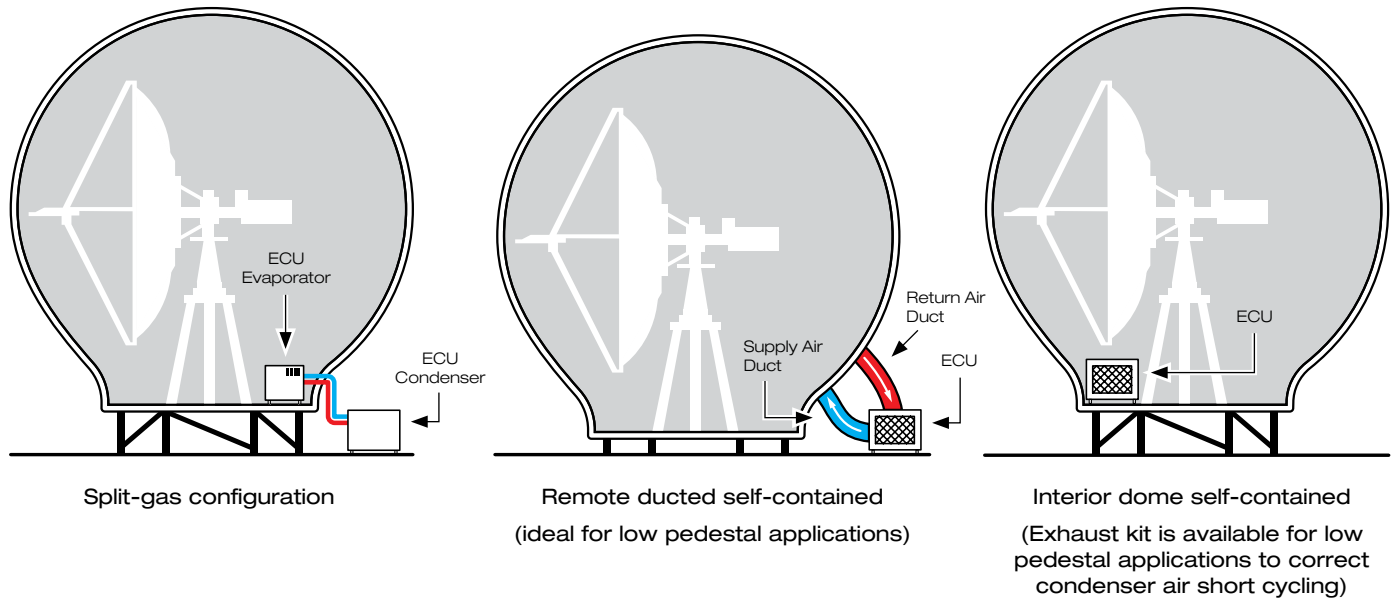
### Dimensions

Self-Contained (LxWxH) <sup>(2)</sup>	Split (LxWxH) <sup>(3)</sup>	
	Condenser	Air Handler
30.0" X 18.0" X 14.5" 762mm X 457mm X 368mm	17.5" X 18.0" X 14.5" 445mm X 457mm X 368mm	12.7" X 18.0" X 14.5" 323mm X 457mm X 368mm

Notes:

- <sup>(1)</sup> Can also be operated at 200-220V/50Hz.
- <sup>(2)</sup> Allow 1.5" (38mm) for mounting brackets.
- <sup>(3)</sup> Rotary compressors only.

The Radome ECU is available in three configurations:



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Environmentally  
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Dealer:

# Eskimo Ice Crushed Ice Systems

## For Serious Tournament Anglers



- Keep your catch fresh all day.

EI600D-115 Self-Contained Model



### Crushed ice—preferred by fishermen—cools more quickly and packs better.

A Dometic Eskimo Ice system produces up to 600 pounds (272 kg) of crushed ice per day to keep even the largest catches fresh. Ice is generated within minutes after starting the unit, and makes up to 25 pounds (11.3 kg) of ice per hour under normal operating conditions.

The easy-to-install Eskimo Ice system is designed to be mounted below deck or in an engine room where it is protected from salt spray. The ice it produces can be pumped through hose lengths up to 30 feet (9.1 meters) to nearly any desired location onboard, such as a fish box or cooler.



All self-contained and remote Eskimo Ice systems feature the Smart Logic Digital Display. A full menu of sensors and status lights monitor gas pressure, auger motor, compressor, water level, ice level, and ice clogs, and will shut off the system if problems are detected. The system automatically resets and restarts for certain key functions that can be triggered by extreme boat motion.

Available in either 60Hz or 50Hz versions. Digital-control retrofit kits are available.

### Key Benefits

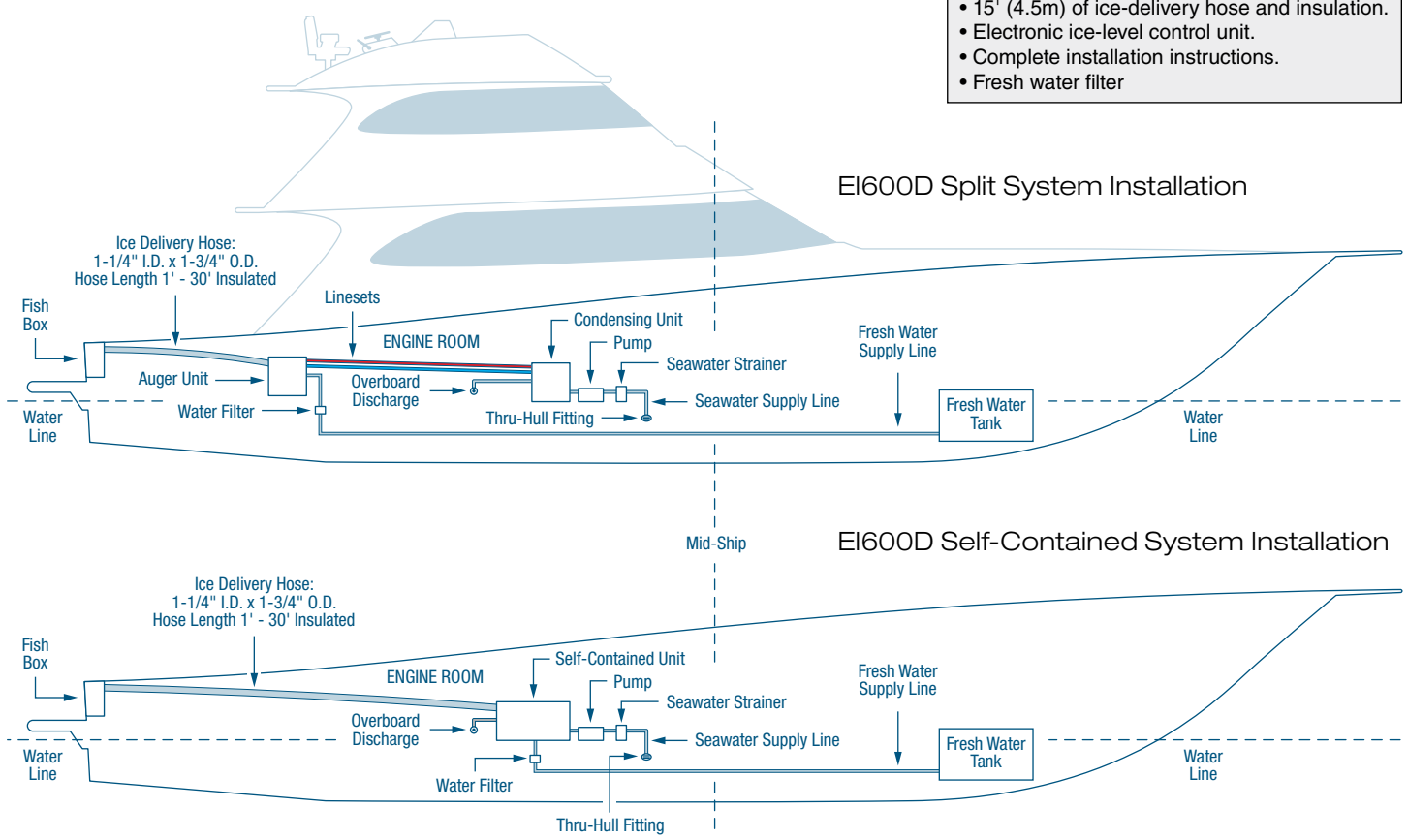
- Available in 60Hz or 50Hz.
- Self-contained and remote models available with Smart Logic digital control.
- Up to two remotely mounted digital displays/user interface panels.
- Photo-electric ice-level sensor.
- Start-time delay.
- Fresh water filter included.
- Pre-charged system.
- Sensors monitor all system functions.
- Manual reset to restart system from lock-out.
- Improved fresh-water float switch.
- Redesigned refrigerant meter for improved performance in cold water.
- Optional side and top covers for protection and improved appearance.

# Technical Specifications for Eskimo Ice 600 Series

Model	Volts/Freq/Ph	Running Amps	LRA	Capacity <sup>(1)</sup>	Water Consumption	Dimensions (in/mm)			Net Weight (lb/kg)
						Width	Depth	Height	
<b>Remote Systems</b>									
EIR600-115 Condensing Unit	115/60/1	14.0	66.3	N/A	N/A	12.88/327	12.88/327	15.00/381	67/30.5
EIR600-115 Auger Unit	115/60/1	2.0	N/A	600 lb/day	60 gal/day	14.25/362	16.38/416.1	20.88/530.4	83/37.7
EIR600-230 Condensing Unit	230/60/1	7.0	33.5	N/A	N/A	12.88/327	12.88/327	15.00/381	67/30.5
EIR600-230 Auger Unit	230/60/1	1.0	N/A	600 lb/day	60 gal/day	14.25/362	16.38/416.1	20.88/530.4	83/37.7
EIR600-220 Condensing Unit	220/50/1	6.5	40.0	N/A	N/A	12.88/327	12.88/327	15.00/381	67/30.5
EIR600-220 Auger Unit	220/50/1	1.0	N/A	500 lb/day <sup>(2)</sup>	60 gal/day	14.25/362	16.38/416.1	20.88/530.4	83/37.7
Remote Electrical Box	N/A	N/A	N/A	N/A	N/A	9.25/234	5.38/136	6.38/162	4.00/1.81
<b>Self-Contained Systems</b>									
EI600D-115	115/60/1	16.0	66.3	600 lb/day	60 gal/day	17.50/445	23.50/597	22.00/559	135.00/61.4
EI600D-230	230/60/1	8.0	33.5	600 lb/day	60 gal/day	17.50/445	23.50/597	22.00/559	135.00/61.4
EI600D-220	220/50/1	7.5	40.0	500 lb/day <sup>(2)</sup>	60 gal/day	17.50/445	23.50/597	22.00/559	135.00/61.4

Notes:  
<sup>(1)</sup> Capacity ratings depend upon conditions.  
<sup>(2)</sup> Rated at 500 (227 kg) lbs per day because of 50Hz derate.

- The Eskimo Ice basic kit includes:**
- Ice Machine with condensate pan.
  - 15' (4.5m) of ice-delivery hose and insulation.
  - Electronic ice-level control unit.
  - Complete installation instructions.
  - Fresh water filter



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Dealer:

50Hz Models  
Now Available!

# Ice Cube Fishbox Ice System

## Produces Up to 250 Lbs. of Ice a Day



■ Keep your catch fresh all day.

EI250D-115 shown



### The Ice Cube - A Smaller Crushed-Ice System

Dometic Eskimo Ice is available in a smaller version—the Ice Cube—for boats with less space or less demand for daily ice output. Cube-shaped, with a footprint of only 16" x 16" (413 mm x 413 mm), the Ice Cube makes up to 250 lbs. (113 kg) of crushed ice per day. Ice is generated within minutes after starting the unit, and makes more than 10 lbs. (4.5 kg) of ice per hour under optimal operating conditions.

The Ice Cube is a self-contained unit and easy to install. The ice it produces can be pumped through insulated hose lengths up to 15' (4.5 m), to nearly any desired location onboard, such as a fish box or cooler.

Operation of the Ice Cube is easy with its Smart Logic Digital Displays. A full menu of sensors and status lights monitor gas pressure, auger motor, compressor, water level, ice level, and ice clogs, and will shut off the system if problems are detected. But the system automatically resets and restarts for certain key faults.



### Key Benefits

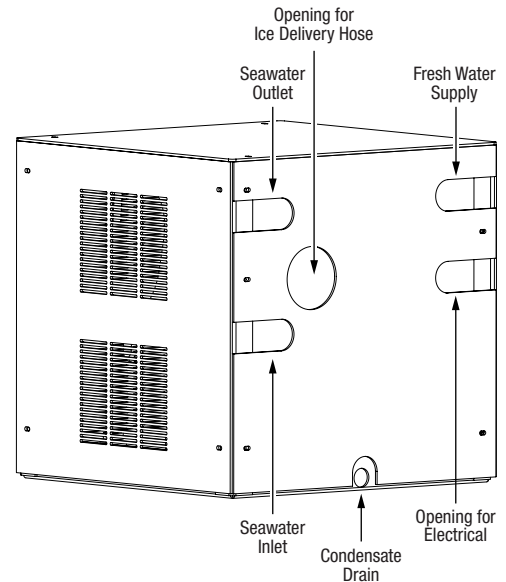
- Small footprint—16" x 16" (413 mm x 413 mm).
- Available in 50Hz and 60Hz models.
- Up to two remotely mounted digital displays/user interface panels.
- Photo-electric ice-level sensor.
- Start-time delay.
- Water filter included.
- Pre-charged system.
- Sensors monitor all system functions.
- Manual reset to restart system after lock-out.
- Improved fresh-water float switch.
- Ventilated cover panels are removable for servicing from virtually any side of the unit.

## Technical Specifications for Ice Cube

Model	EI250D-115	EI250D-220V/50
Capacity per day (lbs/kg)	250/113 <sup>(1)</sup>	
Capacity per hour (lbs/kg)	>10.42/>4.73 <sup>(1)</sup>	
Voltage	115	220
Frequency	60Hz	50Hz
Full Load Amps (FLA) Cool	9.68	4.50
Locked Rotor Amps (LRA)	40.00	14.80
Refrigerant	R-134A	
Water consumption, gallons per day	30 @ 250 lbs	
Water consumption, liters per day	113.56 @ 113.4	
<b>Dimensions</b>		
Height (in/cm)	16.25/41.3	
Width (in/cm)	16.25/41.3	
Length (in/cm)	16.25/41.3	
<b>Connections</b>		
Sea water (in/type)	5/8"/hose barb	
Fresh water (in/type)	1/4"/SAE	
<b>Weight</b>		
Net weight (lbs/kg)	82.0/37.2	
Shipping weight (lbs/kg)	97.0/43.9	

Notes:

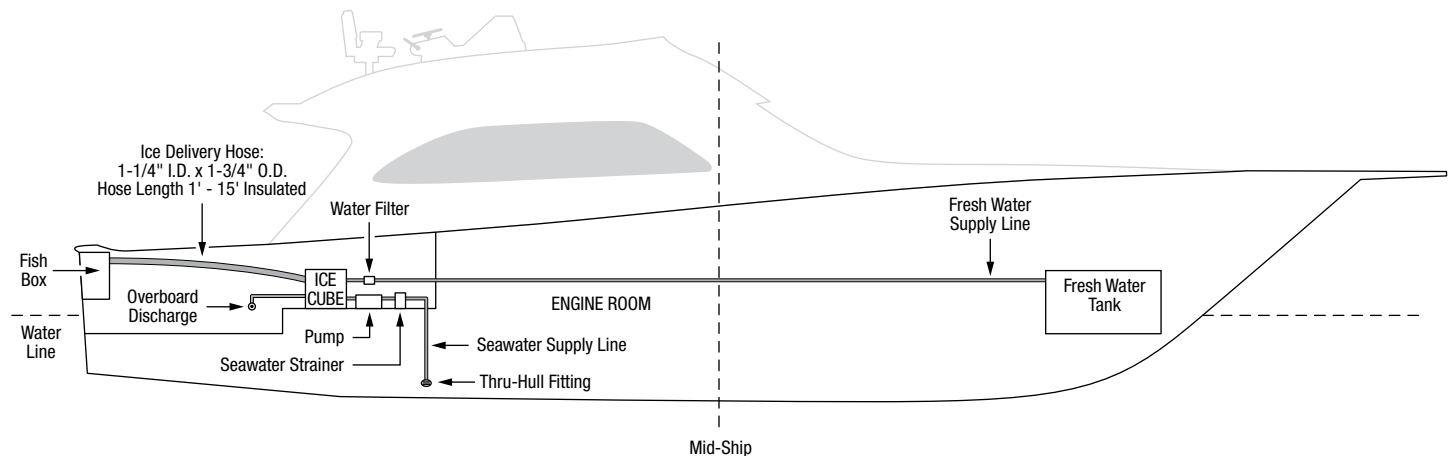
<sup>(1)</sup> Under optimal conditions.



**The Ice Cube basic kit includes:**

- Ice Cube ice-making system.
- (1) Smart Logic digital display.
- Water filter.
- 15' (4.5 m) of ice-delivery hose and insulation.

## Recommended Ice Cube System Installation



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