

MARINE HVAC/R SOLUTIONS

AIR CONDITIONER FOR MARINE

Engineered for Marine Performance.

**Sea Water-Cooled
Marine Air Conditioner**



**COMPACT UNIT WITH
HERESITE P-413 COATING**



CIG BLUSOLUTIONS CO., LTD.

ADVANCING SUSTAINABILITY

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MARINE HVAC/R SOLUTIONS



Innovating for Marine & Heavy-Duty Applications

- Proven track record in naval HVAC/R projects and critical climate control solutions
- Custom-engineered systems built for durability and long-term reliability
- Compliance with international safety, environmental, and military-grade standards

About CIG BluSolutions

Engineering Excellence in HVAC/R Solutions

CIG BluSolutions is a trusted name in advanced HVAC/R technologies, delivering high-performance solutions for commercial, industrial, and specialized applications worldwide. With over 40 years of engineering expertise, we are committed to designing systems that excel in marine-grade environments and withstand the most demanding operational conditions.

Advancing Sustainability

Our vision, "Advancing Sustainability", drives everything we do—from selecting eco-friendly materials to engineering energy-efficient designs. We continuously invest in innovative technologies that reduce environmental impact while maximizing performance and operational safety.

Global Certifications

CIG BluSolutions products are manufactured under ISO 9001:2015 standards, ensuring strict quality control and compliance with UL, RoHS, and REACH certifications. Our dedication to sustainability is recognized by the EcoVadis Bronze Rating and Carbon Footprint Organization (CFO) certification.

- UL Certified for Maximum Capacity and Safety
- Carrier Q+ Level 3 Approved
- cURus Safety Compliance
- EcoVadis Sustainability Bronze Rating
- ISO 9001:2015 Certified
- Carbon Footprint Organization (CFO) Recognized
- REACH Compliant
- RoHS Certified
- Material Safety Data Sheet (MSDS) Compliant



High Performance

AIR CONDITIONER

Sea Water Cooled - A/C Unit For Marine

Design for Marine Applications

Engineered for Performance, Fire Safety, and Marine-Grade Reliability

Experience & Expertise

- Over 40 Years of Engineering and Marine HVAC Expertise
- Proven track record in naval and heavy-duty applications
- Commitment to sustainable, eco-friendly engineering solutions



Core Features

- **Customized Marine Design:** Specifically engineered to meet the demanding requirements of naval and offshore environments.
- **High-Performance Cooling:** Delivers reliable cooling capacities from 12,000 BTU/hr to 24,000 BTU/hr, ensuring stable climate control in marine cabins and control rooms.
- **Corrosion-Resistant Condenser:** Built with Copper-Nickel (90/10) tubes, designed for long-lasting performance against saltwater and harsh marine conditions.
- **Compact and Lightweight:** Space-efficient design allows easy installation even in confined marine environments, with unit weights starting from 51 kg.
- **Energy-Efficient Operation:** Optimized rotary compressor and direct-drive centrifugal fan reduce energy consumption while maintaining cooling performance.
- **Certified Marine-Grade Components:** Manufactured under ISO 9001 and RoHS-compliant processes, with components designed for durability and operational safety.
- **Factory-Assembled and Tested:** Every unit undergoes rigorous testing for airflow performance, pressure integrity, and cooling efficiency.

Evaporator Coil

- **High-Efficiency Heat Transfer:** Equipped with inner-grooved copper tubes and copper fins to maximize thermal conductivity.
- **Multi-Row Construction:** Three-row design ensures enhanced cooling capacity and efficient air distribution.
- **Durable Design:** Resistant to marine pollutants, maintaining performance stability even in high-humidity and salt-laden environments.
- **Optimized Airflow:** Integrated single-inlet centrifugal fan delivers smooth, quiet airflow, minimizing operational noise inside cabins.

Casing

- **Stainless Steel Construction:** Built with corrosion-resistant stainless steel for maximum protection in marine environments.
- **Compact Marine-Grade Housing:** Designed for easy access during installation and servicing, even in tight spaces.
- **Protected Electrical Control:** Sealed electrical components and optional remote control (wired or wireless) provide operational flexibility and safety.
- **Marine-Safe Connections:** Equipped with tube-in-tube condenser and marine-grade hose connections for reliable seawater cooling.

MARINE HVAC/R SOLUTIONS



Maintenance & Quality Control

- **Easy Installation and Service:** – Designed for user-friendly access and maintenance.
- **Factory Airflow Testing:** – Each unit undergoes airflow performance verification.
- **Optional Special Performance Testing*:**
 - Shock Test: MIL-STD-901D
 - Vibration Test: MIL-STD-167-1A
 - Noise Test: MIL-STD-740-1/2

** Equivalent to Navy standards. If official certification is required, testing costs must be covered by the purchaser.*



Protect corrosion Evaporator Coil

In marine environments, salt-laden air accelerates coil corrosion, leading to refrigerant leakage and efficiency loss. Our factory-applied **HERESITE P-413** coating ensures long-term durability, rigorously tested under severe corrosion conditions.

With over 40 years of expertise and manufacturing experience, we proudly offer a reliable solution to combat corrosion and enhance the performance and durability of evaporator coils. Our coils are fully coated with a specialized protective material, ensuring that every surface is shielded against the harsh effects of salt-laden marine environments. This coating, combined with our advanced production technology, has been rigorously tested and proven effective under severe corrosion conditions. Certified test documentation is available to support this performance, giving you confidence in the long-term durability of our factory-produced evaporator coils.

***CIG BluSolutions is a HERESITE Certified Applicator – the only one in Southeast Asia.**



SWAAT Results	
	Same 1,000 hour SWAAT
	P-413 1,000 hour SWAAT
	P-413 + Heresite 1,000 hour SWAAT



High Performance

AIR CONDITIONER

Sea Water Cooled - A/C Unit For Marine

Design for Navy Applications

Engineered for Performance, Fire Safety, and Marine-Grade Reliability

Sea Water Cooled - AC Unit					
Model			CIGM-12	CIGM-18	CIGM-24
Cooling capacity*		BTU/hr	12000	18000	24000
		kW	3.52	5.28	7.33
Power Consumption		W	1378	2404	2774
Air Flow Rate		CFM	400	600	800
Refrigerant		Type	R410a		
Casing		Type	Stainless Steel		
Control**		Type	Remote Control - Wired / Wireless (Optional)		
Compressor		Type	Rotary		
Power Supply		V / Ph / Hz	220 / 1 / 50		
Locked Rotor		A	24	43	47
Current		A	5.3	8.8	10.13
Quantity		Pcs	1		
Condenser		Type	Tube in Tube		
Material		Type	Copper - Nickel (90-10)		
Sea water		GPM	3.2	4.8	6.7
flow rate		L/S	0.15	0.23	0.32
Evaporator Coil		Type	Inner Groove Copper Tube & Copper Fin		
Face Area		Sq.ft	1	1.36	2.1
Evaporator Tube		Inch	3/8		
No. of Rows		Row	3		
Motor		Type	Direct Drive - Single Inlet Centrifugal Fan		
Power Output		W	242	270	270
Quantity		Pcs	1		
Sea water	Inlet	Inch	1/2	1	1
Connection (hose)	Outlet	Inch	1/2	1	1
Dimension	Width	mm	755	857	913
	Height	mm	429	464	520
	Depth	mm	363	488	698
Net Weight		kg	51	56	69

HERESITE[®]

PROTECTIVE COATINGS, LLC

World Class Phenolic Epoxy Coating

OVER **980** TEST RESULTS

Over 20 Different Tests

- Salt Spray (ASTM B117) : 20,000 hours
- ISO 12944-6 high durability C5-M
- ISO 12944-6 high durability C5-1
- SWAAT (ASTM G85 A3; acidified synthetic seawater) : 1,000 hours
- ISO 12944-9 offshore cyclic weathering (4,200 hours; formerly ISO 20340)
- Humidity (ASTM D4585; Cleveland Condensing) : 2,000 hours



**HERESITE
P-413**



Resist to corrosion

The most extensive test data set with 980 chemical test results



Superior Protection

Pass ASTM B-117: 20,000+ hours and other 20 different tests.



Long Lasting

The Coating Film provides Class 5H-6H hardness with flexibility and adhesive ability under extreme temperature tests.



Meets FDA 175.300

for indirect food contact
Compatible with a food processing line

Premium benefits of coating with the CIG Certified Applicator.

- We pass the readiness of the production process assessment from **HERESITE**.
- We prepare and train our employees by **HERESITE** standards.
- We inspect the quality of the coating before delivery.
- We are the only **HERESITE Certified Applicator** in the Southeast Asia region.



Rest assured that your HVACR protection is the same quality as the coating made by HERESITE USA.

ASTM B117

Salt Spray Test:
20,000+ hrs

ASTM G85

Modified Salt Spray
Test: 1000 hrs
using pressurize coil.

ISO-12944-9 (Previously ISO20340)

- Cyclic test
- Test run on 4,200 hrs
- 1 test cycle is a combination of
 - 72 hrs UV
 - 72 hrs of salt spray
 - 24 hrs of freezing

Days
1-3

UV/Condensation
ISO-11507

Days
4-6

Salt Spray
ISO-9227

Day
7

Low - Temp.
Exposure at
(-20 ± 2) °C

ISO-12944-6

Corrosion protection
of steel structures by
protective paint
systems

Passed: C5-M (Marine)
and C5-I (Industrial)
with High durability



D-COAT™

Reduce your maintenance costs with a special coating that upgrades your coil to be a self-cleaning coil.

**SELF
CLEANING**

NSF P1 Registration plus FDA
antimicrobial approval

=

**SUPER
HYDROPHOBIC**



MAXIMUM PROTECTION WITH
D-COAT | D-COAT UV
SUPER HYDROPHOBIC
SURFACE

UNCOATED
SURFACE

HYDROPHOBIC
SURFACE



Dust resistance



Corrosion
Protection



Reduce
maintenance costs



Anti Fungi
& Microbial

Full Corrosion Protection For HVAC/R Equipment

D-COAT™ treatment series are designed for use on commercial air conditioning coils, refrigeration, industrial coils, transportations and other air conditioning equipment; coils, fins, tubes and all internal metal surfaces.

These products can be installed on units before installation or on previously installed field units with equal success.

D-COAT™ HVAC/R protective treatments retard corrosion on the non-ferrous metal fins and tubes, thus, extending the life of the equipment asset and helping to maintain good airflow efficiencies.

D-COAT UV™ offers UV protection which helps the coating to last longer. Best for outdoor units to preserve the performance and longevity of the coils.



www.cigblusolutions.com



Line OA @CIGCare



CIG BLUSOLUTIONS CO., LTD.

บริษัท ซีไอจี บลูโซลูชันส์ จำกัด

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