

MARINE HVAC/R SOLUTIONS

CHILLER UNIT

Engineered for Marine Performance.

Water Cooled Type



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



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High Performance

Marine Chiller Unit

Water-Cooled Type

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



High-Performance

Marine Chiller Unit

- This water-cooled chiller unit is engineered specifically for marine applications, designed to meet the demanding requirements of naval vessels and offshore environments.
- **Reliable Chilled Water Production:** Optimized for consistent, high-capacity cooling performance under extreme maritime conditions.
- **Corrosion-Resistant Construction:** Built to withstand highly corrosive, salt-laden environments, ensuring long-term durability and system integrity.
- **Operational Efficiency:** Designed with a strong focus on energy efficiency and reliable operation to minimize downtime and maintenance costs.
- **Service-Friendly Design:** Simplified access for maintenance and inspection, enabling technical teams to service the unit quickly and effectively.

Construction

- **Shell-and-Tube Heat Exchangers:** High-efficiency evaporator and condenser designed for optimal thermal transfer and long-lasting service life.
- **Marine-Grade Materials:** Corrosion-resistant construction ensures durability in saline and humid conditions.
- **Seawater Condenser:** Designed to operate with seawater cooling using copper-nickel alloy tubes.
- **Marine-Type Compressor:** Built for reliable operation under demanding naval conditions.
- **Comprehensive Protection System:** Includes high/low-pressure switches, water flow switch, anti-freeze protection, anti-liquid floodback safeguard, and oil separator for enhanced safety.

Core Features

- **Customized Design for Marine Applications:** Tailored solutions engineered to meet the rigorous demands of naval and marine environments.
- **Precision Selection Support:** ARI Standard 410-compliant sizing and selection ensures precise performance matching.
- **ISO 9001 & RoHS Certified Factory:** Manufactured under internationally recognized quality and environmental standards.
- **High-Quality Components:** Integrated for maximum reliability and long-term performance in harsh marine conditions.
- **Factory-Assembled and Tested:** Each unit undergoes rigorous testing in accordance with international standards.
- **Copper-Nickel Tubes:** Condenser equipped with 70/30 copper-nickel alloy tubes for superior corrosion resistance.



Selection

- Multiple unit sizes available to meet varied marine operational requirements.
- Custom configurations offered for specialized naval applications.
- **Cooling Capacities:** 10 USRT to 250 USRT, providing scalable solutions for different vessel sizes.

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- Compliance with international safety, environmental, and military-grade standards

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.



Corrosion Protection for Marine Chiller Units

Marine environments expose systems to salt-laden air and seawater, accelerating corrosion and reducing efficiency.

Our chiller units feature factory-applied **HERESITE P-413** coating, delivering:

- **Full Surface Protection:** Condenser and heat exchanger tubes are fully coated to resist salt, humidity, and marine pollutants.
- **Proven Durability:** Tested to meet severe corrosion resistance standards.
- **Field-Proven Reliability:** Backed by 40+ years of HVAC/R manufacturing expertise for long-term performance stability.

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



SWAAT Results	
	Raw 1,000 hour SWAAT
	P-413 1,000 hour SWAAT
	P-413 + topcoat 1,000 hour SWAAT



High Performance

Marine Chiller Unit

Water-Cooled Type

Design for Navy Applications

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

General Data									
Model		CICU 10	CICU 50	CICU 60	CICU 100	CICU 120	CICU 160	CICU 200	CICU 250
Cooling Capacity	USRT	10	50	60	100	120	160	200	250
Compressor Max operating Current	A	25	50	105	215	297	225	216x2	275x2
Compressor MaxPower input	kW	14	28	85	160	180	205	160x2	196x2
Condenser Condensing Temp.	°C	45	45	45	45	45	45	45	45
Condenser Water flow	GPM	30	150	180	300	360	480	600	750
Evaporator Water Inlet Temperature	°C	12	12	12	12	12	12	12	12
Evaporator Water Outlet Temp.	°C	7	7	7	7	7	7	7	7
Evaporator Water Water Flow	GPM	24	120	144	240	288	384	480	600

Options and Accessories

- Vibration eliminators and flexible pipe connections for improved durability.
- Hot gas bypass for stable performance under low-load conditions

Available Accessories:

- Circulation pump
- Expansion tank
- 2-way solenoid valve
- Balancing valve
- Refrigerant detection system
- Refrigerant recovery unit
- Noise enclosure.

Model Nomenclature

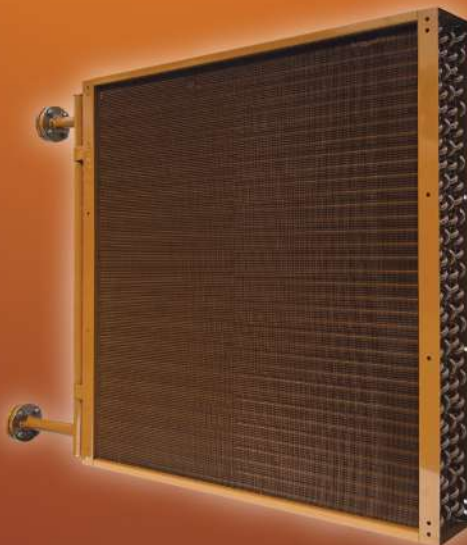


HERESITE
PROTECTIVE COATINGS, LLC
World Class Phenolic Epoxy Coating

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



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.

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