

CORPORATE PROFILE

Perfecting the Air for Marine



Perfecting the Air for Marine



TOP MESSAGE



Daikin MR Engineering, a member of the Daikin Group, is an engineering company engaged in the development, sales, design and construction of air conditioning and refrigeration systems and equipment for marine.

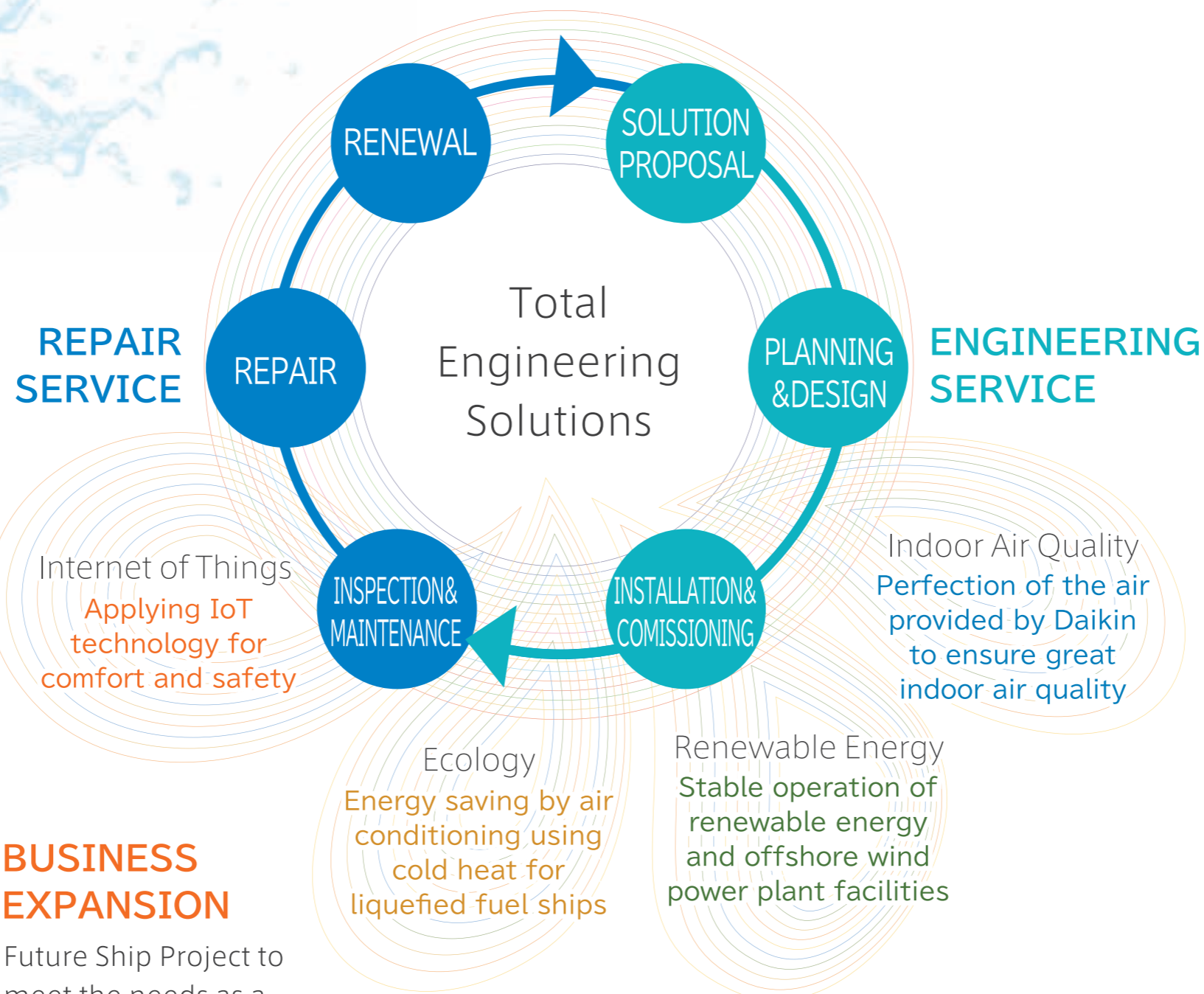
Our core business concept is to provide "Total Engineering Solutions". Not limited to new ships, we also support maintenance, repairs, and renewals according to the number of years of use. We are working to improve services and comfort according to the ship life cycle.

Now, we are accelerating a new "Future Ship Project" with the concept of "Perfecting the Air for Marine". The project aims to develop our services by taking SDGs and ESG into consideration. It includes energy saving and eco-friendliness by air conditioning using the cold heat of liquefied fuel ships such as LNG, improving the comfort of passengers and crew as well as the working environment by utilizing IoT technology, and supporting offshore wind power generation facilities, which is drawing attention as a renewable energy.

We envision the future of an eco-friendly and sustainable society and the earth through engineering capabilities that are conscious of "Circulation" and "Expansion".

As a company offering the entire spectrum of solutions, we strive for the future of the industry and delivery of even greater comfort on the sea.

President
Yukihiro TSURUTA
鶴田 幸大



BUSINESS EXPANSION

Future Ship Project to meet the needs as a solution provider

Corporate Information

[Company Name] Daikin MR Engineering Co., Ltd.
[Incorporated] 1 September 2008
[Head Office] Osaka, Japan
[Capital] JPY 180 million
[Number of Employees] 139 (31 March 2023)
[Description of Business] Marine Air Conditioning & Refrigeration Systems
[President] Yukihiro Tsuruta

[Business Fields]
《Marine Vessel》
Air conditioning system / Refrigeration provision system / Pre-fabricated refrigeration provision chamber / Ship hull and piping insulation work (galley, piping etc.) / Pipe fabrication work

《Offshore Structure》
Air conditioning system / Refrigerating provision system / Total outfitting

《Land-based》
HVAC (Heating, Ventilation, and Air conditioning) solutions for industrial factory, workshop and office building

- [History]
- September 2008 Daikin MR Engineering Co., Ltd. established.
 - October 2009 Daikin Marine (Shanghai) Co.,Ltd. in Shanghai, China established.
 - April 2010 Spot air conditioner "Cool Partner" released.
 - February 2011 FUBO Fan Inverter Kit for the Daikin Deck Unit released.
 - June 2013 Air-cooled air conditioner for engine control room "CooPA" released.
 - January 2015 Production of marine air conditioners in China started.
 - May 2015 Project with Sasakura Acoustic Engineering Co.,Ltd.(former Sasakura Engineering Co.,Ltd.) for improvement of accuracy of onboard air conditioning noise prediction started.
 - October 2017 Tokyo Branch Office moved.
 - April 2017 Supported air conditioning system design for the luxury liner "Aida"
 - April 2018 Product line-up from marine chiller to refrigerant system with R407H, applicable refrigerant for environmental option in every classification society completed.
 - September 2018 Singapore Branch Office opened.
 - April 2020 Kyushu Branch Office moved.
 - May 2020 Marine-use Anti-virus Filter released.
 - October 2021 Awarded at the 24th Ozone Layer Protection and Global Warming Prevention Awards for our "Application of Low GWP Refrigerant to Marine Air Conditioning".
 - November 2021 Opened an exhibition space at the refrigeration division showroom "Cool Messe".
 - September 2023 Company's 15th anniversary of establishment

Important themes focused as a part of Daikin Group



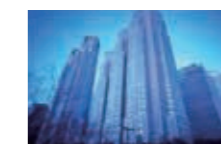
Environment
Introduce environmentally friendly solutions and products.



Quality Assurance
Provide trustworthy solutions by maintaining a side-by-side client-based approach.



Employees
Create a work environment in which employees can grow and contribute to society in innovative ways.



Social Responsibility
Work to contribute to surrounding society.

Circulation

[Marine Air conditioning and Refrigeration Business]
 Creating comfortable life on board with reliable Daikin technology, development and engineering skills

Total Solution

Service provided through design, construction, maintenance, and renewal



Daikin MR Engineering, as an engineering company, provides development, sales, design and construction of marine air conditioning and refrigeration systems. Our aim is to achieve circular business to offer "Total Engineering Solutions" that covers from the new shipbuilding to repair and renewal businesses. For the new shipbuilding business, we are able to offer solution proposal, planning, design, and implementation services, and for repair ship business, we are ready to provide inspection, maintenance, repair, and renewal services that is to support entire period of vessel from the time of construction to the renewal. This circular engineering service enables us to meet various needs arising from environmental regulations as well as maximizing productivity.



REPAIR SERVICE

Replacement or repair of air conditioners/Refrigerators, Replacement of refrigerant/Refrigerant piping, Duct design/Installation, Equipment supply of other air conditioning manufacturers, etc.

RENEWAL



From the simple replacement of aging equipment to the upgrade of the system to meet the latest environmental regulations.

REPAIR



Repairing equipments not only with Daikin parts but also with engineering parts (components) as well as parts made by other companies.

INSPECTION & MAINTENANCE



Inspection and maintenance to prevent failure and periodic inspection based on the law.

SOLUTION PROPOSAL



Planning, design, and construction of the most suitable air conditioning and refrigeration systems for various types of ships.



ENGINEERING SERVICE

Air conditioner/Refrigerator/Refrigerant piping work, Duct design/Installation, Refrigeration panel design/Assembly, Various pipe heat protection work, etc.

PLANNING & DESIGN

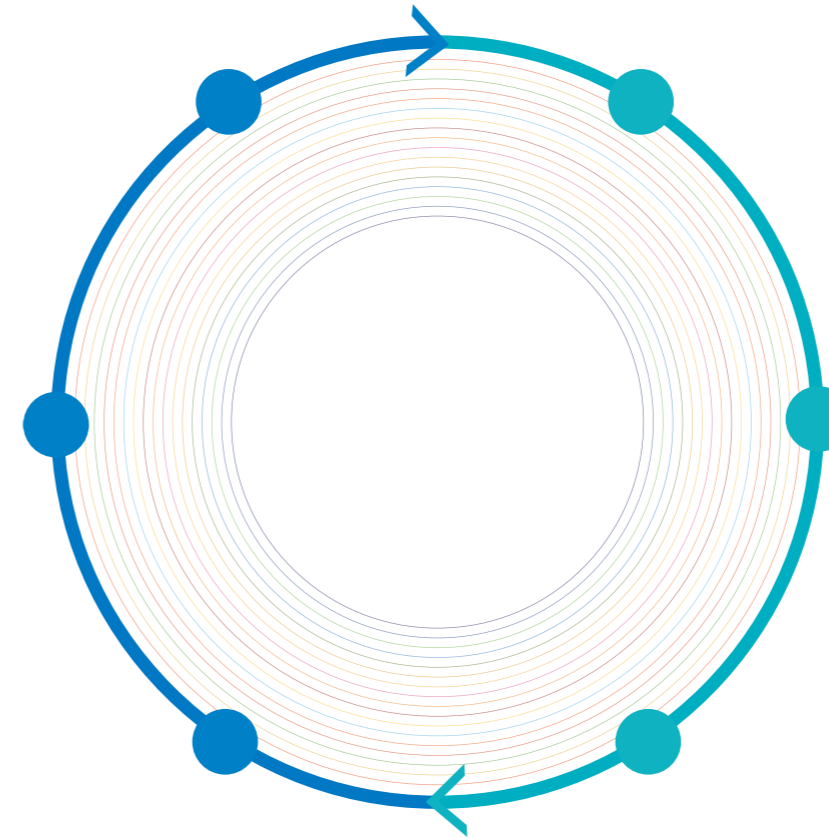


Fully custom-made design to meet the detailed needs of air conditioning and refrigeration system for each location, required energy efficiency, ship type and size.

INSTALLATION & COMMISSIONING



Reliable construction management based on extensive experience that enables commissioning after the installation as well as the large-scale ducts and refrigerant piping construction.



[PRODUCT LINE-UPS]



Deck Unit

Large central air conditioner that heats and cools each room through ducts.



Packaged Air Conditioner

Air conditioner for installing in each room. Lineup for all-fresh air conditioner that intake fresh air is also available.



Refrigeration Condensing Unit

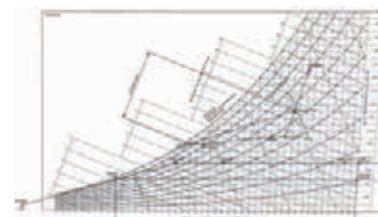
Refrigeration and freezer unit for provision chamber to preserve food freshness on board for a long period.

Water Chilling Unit

Heat source device produces cold water for air conditioner used in combination with air handling unit and fan coil unit.

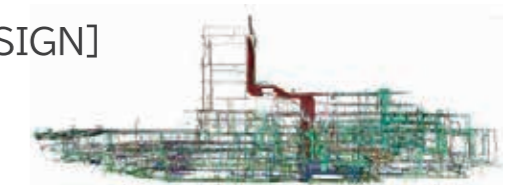
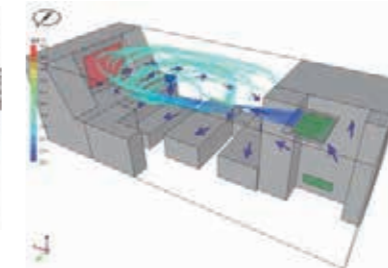


[HEAT LOAD CALCULATION AND DUCT DESIGN]



Heat Load Calculation

With original heat load calculations software, our programming team makes improvements on daily basis to meet all design requirements. Years of experience and knowledge enable us to perform accurate and efficient calculations.



Duct Design

Utilize 3D CAD functions to perform 3D modeling for duct design. The pressure loss of the duct and the local pressure loss are calculated to create drawings efficiently.



Expansion

[Future Ship Projects]

Contributing to the shipping and energy industries engaging zero emissions for decarbonization and energy conservation

SDGs FOR MARINE

SDGs Contribution by Daikin MR Engineering

Creating new values for sustainable growth with engineering skills as a Daikin group member.



Internet of Things

Utilizing experienced IoT air conditioning technology for marine safety and comfort



"Remote monitoring technology for marine air conditioning systems" monitors the air conditioning of marine vessels from the land, creates comfort and safety onboard like in a hotel. Manages the performance of air conditioning onboard from land through ocean broadband. Daikin's remote monitoring and control technology for the land-use air conditioning has already marked a history of research and development for more than a quarter of a century. Based on the highly specialized experience and know-how cultivated thus far, we aim to build a system to respond various needs, such as energy-saving measures and failure prediction as well as improving comfort.

DAIKIN GROUP AND SDGs

Visions for Sustainable Development Goals

We will contribute to a sustainable society by creating new value in making people and spaces healthy and comfortable, while reducing environmental and climate impacts.

SDGs Contribution by Daikin

	Ensure healthy lives and promote well-being for all at all ages		Ensure access to affordable, reliable, sustainable and modern energy for all
	Contribute to sustainable cities and communities		Ensure responsible production and consumption
			Take urgent action to combat climate change and its impacts

DAIKIN FOR ENVIRONMENT

Environmental Vision 2050

We will reduce the greenhouse gas emissions generated throughout the entire lifecycle of our products. Furthermore, we are committed to creating solutions that link society and customers as we work with stakeholders to reduce greenhouse gas emissions to net zero. Using IoT and AI, and open innovation attempts, we will meet the world's needs for air solutions by providing safe and healthy air environments while at the same time contributing to solving global environmental problems.



Ecology

Eco-friendly air conditioning with cold energy recovery from liquefied fuel ships



In response to the growing environmental awareness for the reduction of greenhouse gas emissions from ships, liquefied natural gas-fueled marine vessels such as LNG and LPG are rapidly enhanced and deployed as a solution. We have begun research and development of original air conditioning system that utilizes the heat of vaporization of liquefied gas fuel. Our aim is to offer an environment-friendly and highly energy-saving air conditioning system.

Renewable Energy

Supporting the renewable energy and offshore wind farm development



Source : Website of the Ministry of Economy , Trade and Industry of Japan

As a countermeasure against the global warming caused by greenhouse gas emissions from fossil fuel power generation, there is a growing demand for the renewable energy around the world, and offshore wind power generation is expected to have high potential especially in Japan surrounded by the sea. We aim to support the stable production of electric power on the sea by developing a cooling system for offshore wind power facilities with utilized technologies cultivated in this marine field.

Indoor Air Quality

"Perfecting the Air"
Control and improve the environment



The "Air Quality" is emphasized more in recent days with the rising awareness of prevention and control of infectious disease, and that requires the compatibility of ventilation and air conditioning. Daikin has begun initiatives under the theme of "New Lifestyle x IAQ (Indoor Air Quality)". Based on the heat exchange and energy conservation technologies cultivated over the years, we provide various air purification solution by utilizing systems such as air conditioning, ventilation, air purification systems, and filters. By developing products that meet the needs of our customers, we aim to offer safe and comfortable IAQ for marine.

Providing Solutions through Air



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<https://www.dmre.daikin.co.jp/english/>

