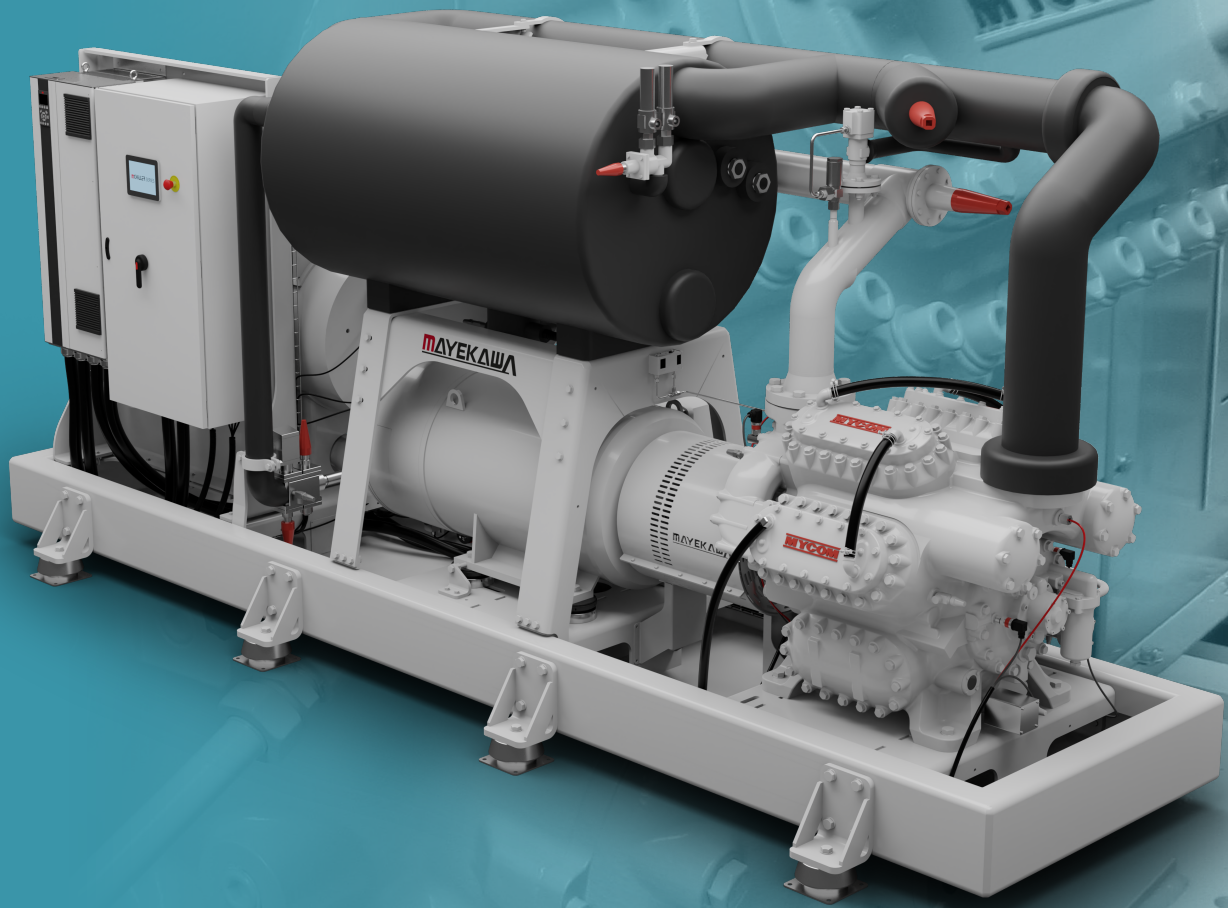
mCHILLER

FUGU

WATER-COOLED

CHILLER

MAYEKAWA MYCOM

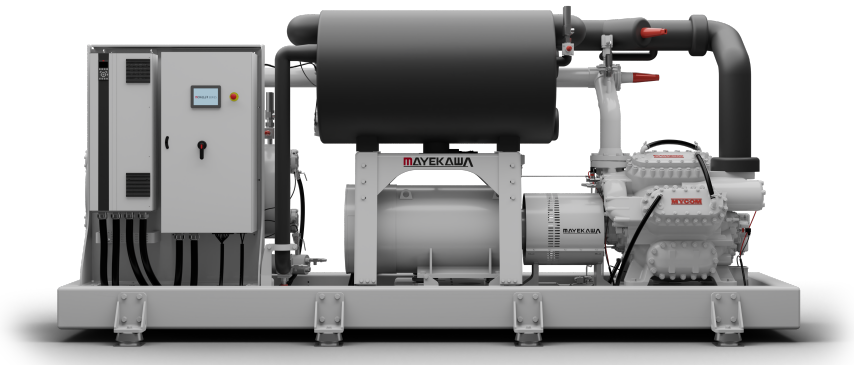


mCHILLER

FUGU

Designed to meet the need of industry

mCHILLER FUGU in the versions **1280R, 960R, and 640R** is designed to meet the needs of industrial markets such as breweries, paper industry, server farms and building facilities.



- ✓ Standardized product lines
- ✓ Low-charge future-proof natural refrigerant (R717)
- ✓ Plug & play solution

1924
Founded by Kisaku Maekawa in Tokyo, Japan.

1934
Began manufacturing ındustrial compressors.

1961
Established the MYCOM brand, recognized globally for compressor excellence.

1969
First overseas subsidiary beginning of worldwide expansion.

1990
Pioneered natural refrigerant solutions with ammonia and CO2 systems.

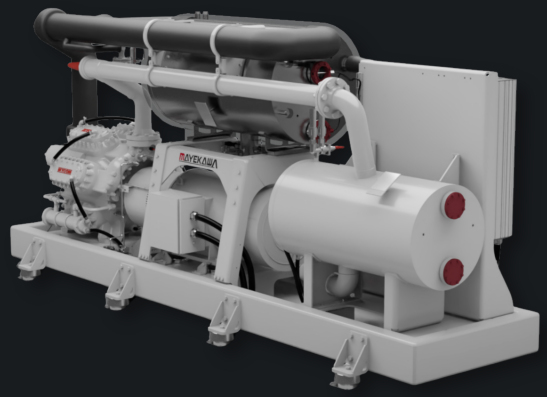
2021
Launched mCHILLER FUGU, standardised water-cooled ammonia chillers.

2022
Launched mCHILLER TAKA, standardised air-cooled ammonia chillers.

2026
Launched the mHEAT series high temperature industrial heat pumps.

Technology & Innovation

Engineered for efficiency, built for the future





FUTURE-PROOF REFRIGERANT

The mCHILLER FUGU operates on low-charge R717 (ammonia), a natural, highly sustainable refrigerant with zero ozone depletion and negligible global warming potential. It delivers an environmentally friendly cooling solution designed to comply with evolving environmental regulations without compromising performance.

CONVENIENT INSTALLATION AND COMMISSIONING

Engineered as a compact, all-in-one water-to-water package, the unit minimizes footprint requirements and streamlines site integration.
Pre-configured with an intuitive PLC controller and straightforward top-feed power supply connections, it ensures rapid and hassle-free setup.

SAFE AND RELIABLE OPERATION

Built with PED-compliant components and rigorous automatic safety protections, the system ensures secure everyday functioning.
Features like automated oil return, precise pressure monitoring, and an integrated electronic level gauge maintain stable, dependable operations across industrial environments

HIGH RUNNER CONFIGURATIONS ON STOCK

Standardized sizing options are readily available to meet urgent industrial demands. These pre-engineered configurations offer flexible heat exchanger and drive combinations to seamlessly fit diverse operational parameters.

LOW OPERATION COST

Powered by high-efficiency MYCOM MII reciprocating compressors paired with variable speed drives (VSD), the chiller achieves best-in-class energy efficiency, particularly during part-load conditions.
Optional heat recovery features further optimize overall plant energy utilization, significantly reducing operational expenditures.

DURABLE DESIGN AND LONG LIFESPAN

Designed for longevity, the robust package features the reliable MYCOM compressors and high-quality plate and shell heat exchangers along with durable industrial-grade components ensuring maximized uptime and a prolonged operational lifecycle.

Technical Specifications

Standard water-cooled ammonia chiller - mCHILLER FUGU

	FUGU 1280R		FUGU 960R		FUGU 640R	
General						
Compressor type	Water-cooled chiller					
Refrigerant/charge	R717 / 80 kg		R717 / 80 kg		R717 / 55 kg	
Capacity range	11 - 100 %		15 - 100 %		22 - 100 %	
Cooling capacity	1376 kW	828 kW	1038 kW	621 kW	681 kW	399 kW
Condenser capacity	1588 kW	1025 kW	1196 kW	768 kW	787 kW	496 kW
Total power	252 kW	234 kW	188 kW	176 kW	125 kW	115 kW
EER	5.5 (-)	3.5 (-)	5.5 (-)	3.5 (-)	5.5 (-)	3.5 (-)
COP	6.3 (-)	4.4 (-)	6.4 (-)	4.4 (-)	6.3 (-)	4.3 (-)
Evaporator						
Secondary media	WATER	MEG - 30 %	WATER	MEG - 30 %	WATER	MEG - 30 %
Secondary inlet	12.0 °C	0.0 °C	12.0 °C	0.0 °C	12.0 °C	0.0 °C
Secondary outlet	7.0 °C	-5.0 °C	7.0 °C	-5.0 °C	7.0 °C	-5.0 °C
Secondary flow	236 m3/h	156 m3/h	178 m3/h	117 m3/h	117 m3/h	75 m3/h
Condenser						
Secondary media	Water					
Secondary inlet	30.0°C					
Secondary outlet	35.0°C					
Secondary flow	275 m3/h	190 m3/h	207 m3/h	143 m3/h	136 m3/h	92 m3/h

Electrical

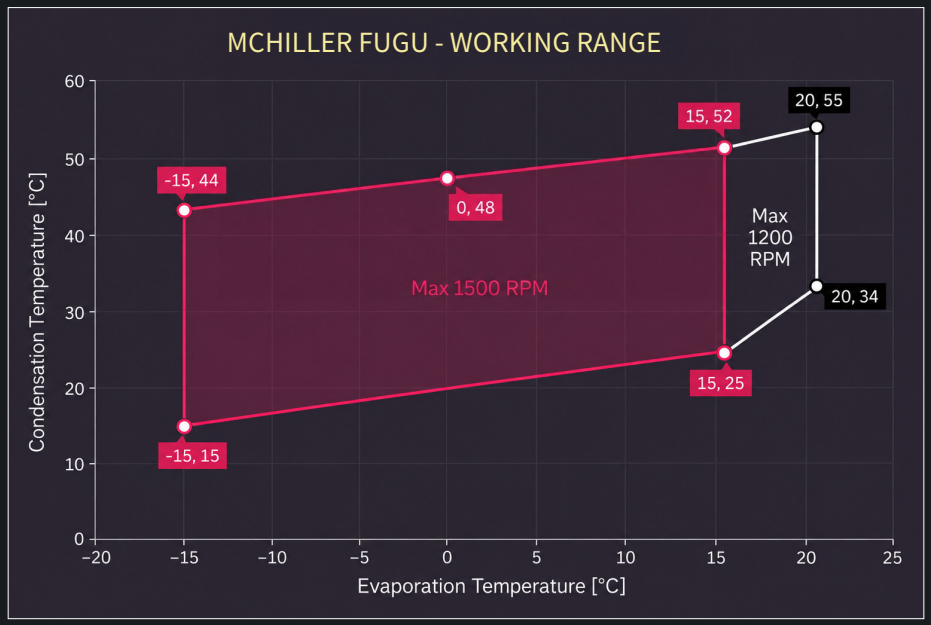
Parameter	1280R		960R	640R
System earthing	TN-S			
Input voltage	3X400VAC+PE			
Rated package current	603A	495A	406A	325A
IK Max.	20 kA			
Maximum fuse	800A	630A	500A	400A
Communication	ModBus TCP/IP, OUC			

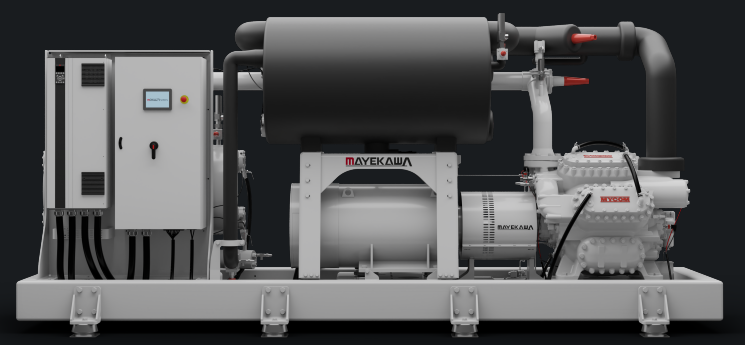
Eco design

Parameter	1280R	960R	640R
SEPR (High temperature +7)	11.47	12.09	13.1
SEPR (Medium -8)	5.59	5.68	6.03
SEPR (Comfort temperature +7)	9.36	9.74	10.48

Calculated according to EN14825: 2019, High/Comfort temp +7 Reg.2016/2281, and Medium temp -8 Reg.2015/1095

Dimensions & Application Range





DIMENSIONS AND WEIGHT

Length (L)	**4895 mm**
Width (W)	**1200 mm**
Height (H)	**2150 mm / 1970 mm (FUGU 640R)**
Dry weight	**8750 kg (FUGU 1280R) / 8250 kg (FUGU 960R)**
	/ 6900kg (FUGU 640R)

OPTIONS

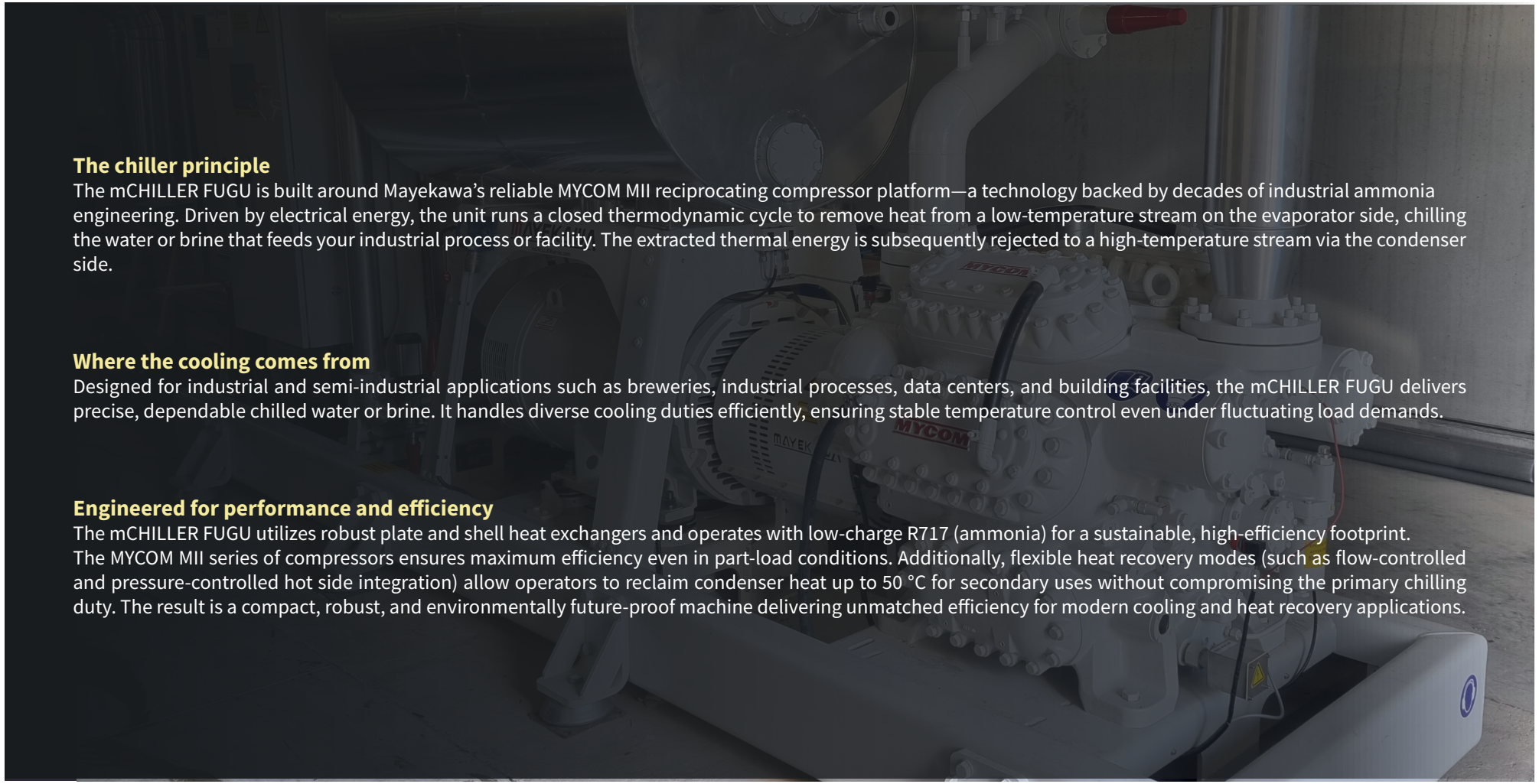
- Evaporator flow switch
- Condenser flow switch
- PUR/PIR foam and alu cladding
- Desuperheater
- IIOT gateway
- Energy meter

DESIGN PARAMETERS

Design pressure - discharge side	**25 bar**
Design pressure - suction side	**16 bar**
Design temperature	**-30 / 150°C**
Secondary connection - evaporator	**DN 100 , DN 80**
Secondary connection - condenser	**DN 100 , DN 80**
Secondary design pressure	**10 bar**

All components are PED 2014/68/EU compliant and approved by a notified body. Every unit is End of Line Tested (EOLT) in compliance with European Norms before shipping.

Applications



The chiller principle

The mCHILLER FUGU is built around Mayekawa's reliable MYCOM MII reciprocating compressor platform—a technology backed by decades of industrial ammonia engineering. Driven by electrical energy, the unit runs a closed thermodynamic cycle to remove heat from a low-temperature stream on the evaporator side, chilling the water or brine that feeds your industrial process or facility. The extracted thermal energy is subsequently rejected to a high-temperature stream via the condenser side.

Where the cooling comes from

Designed for industrial and semi-industrial applications such as breweries, industrial processes, data centers, and building facilities, the mCHILLER FUGU delivers precise, dependable chilled water or brine. It handles diverse cooling duties efficiently, ensuring stable temperature control even under fluctuating load demands.

Engineered for performance and efficiency

The mCHILLER FUGU utilizes robust plate and shell heat exchangers and operates with low-charge R717 (ammonia) for a sustainable, high-efficiency footprint.
The MYCOM MII series of compressors ensures maximum efficiency even in part-load conditions. Additionally, flexible heat recovery modes (such as flow-controlled and pressure-controlled hot side integration) allow operators to reclaim condenser heat up to 50 °C for secondary uses without compromising the primary chilling duty. The result is a compact, robust, and environmentally future-proof machine delivering unmatched efficiency for modern cooling and heat recovery applications.

Applications

The mCHILLER FUGU offers high-efficiency water-to-water cooling and heat recovery solutions tailored for industrial and semi-industrial applications such as breweries, industrial processes, data centers, and building facilities.



Cold Storage & Refrigeration

Reliable cooling for cold stores and refrigerated logistics.
Maintain precise temperature conditions with our high efficiency and robust ammonia technology designed for continuous operation.



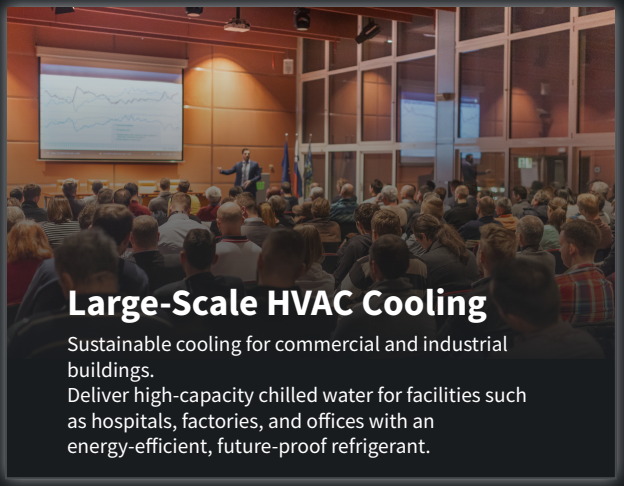
Data Centers

High-performance cooling for continuous IT operations.
Manage constant heat loads with efficient chilled water production while enabling heat recovery for improved overall energy utilization.



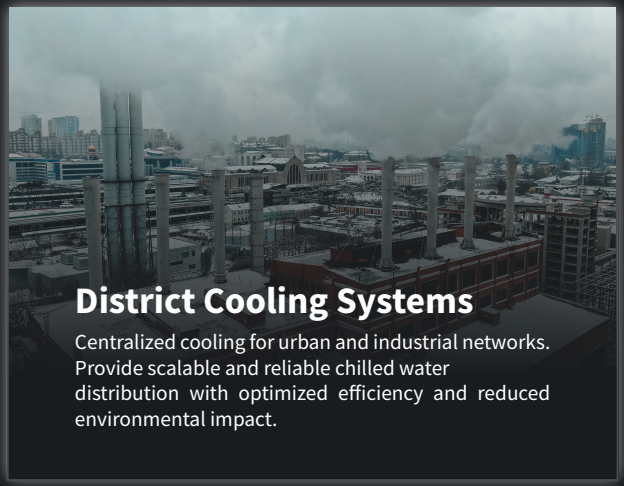
Industrial Process Cooling

Efficient cooling for demanding industrial processes.
Support temperature-critical applications such as food, beverage, and chemical production with our reliable mCHILLER FUGUs



Large-Scale HVAC Cooling

Sustainable cooling for commercial and industrial buildings.
Deliver high-capacity chilled water for facilities such as hospitals, factories, and offices with an energy-efficient, future-proof refrigerant.



District Cooling Systems

Centralized cooling for urban and industrial networks.
Provide scalable and reliable chilled water distribution with optimized efficiency and reduced environmental impact.



Ice Production & Energy Storage

Flexible cooling for ice generation and thermal storage.
Enable load shifting and peak shaving by storing cooling capacity, improving system efficiency and operational flexibility.

Global Network

MAYEKAWA operates in over 50 countries with a worldwide network of sales, engineering, and service offices — ensuring local support wherever you are.



50+
Countries

100+
Offices Worldwide

100+
Years of Excellence

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