



**mCHILLER**

# FUGU

standard water-cooled ammonia chillers

## Story Of MAYEKAWA

**MAYEKAWA** is a family business founded by Kisaku Maekawa in 1924.

Since 1924, **MAYEKAWA** has grown to become a world-leading company within industrial refrigeration and employs more than 4,500 people world-wide. Since the release of our first reciprocating compressor in 1934, **MAYEKAWA** has continued to develop and improve the **MYCOM** compressor technology to become the strongest brand within industrial refrigeration.

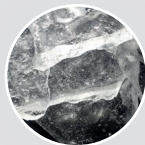
The focus of **MAYEKAWA** has always been natural refrigerant-based solutions driven by sustainable action towards protection of our environment.

Today, **MAYEKAWA's** core business is still industrial refrigeration but **MAYEKAWA** also covers other business areas such as meat processing equipment and robotics.



*Kisaku Maekawa*

1924: **MAYEKAWA** was founded by Kisaku Maekawa



1930: **MAYEKAWA** started ice making and cold storage business

1934: **MAYEKAWA** developed industrial vertical low-speed reciprocating compressors



1958: **MAYEKAWA** developed a high-speed multi cylinder single-stage reciprocating compressor



1964: **MAYEKAWA** started the production of a screw type refrigeration compressor



1966: **MAYEKAWA** developed a high-speed multi cylinder two-stage reciprocating compressor

## mCHILLER SERIES – Sustainable Innovation

The **mCHILLER** series is a **MAYEKAWA** plug-and-play compact standard solution with a strong focus on energy consumption and the perfect balance between durability and simplicity. The **mCHILLER** series is designed with ammonia as natural refrigerant, which gives the highest energy efficiency and the best sustainable solution. The **mCHILLER** series provides a high level of safety with a low ammonia charge. It has been designed for easy and simple installation and a long lifespan.

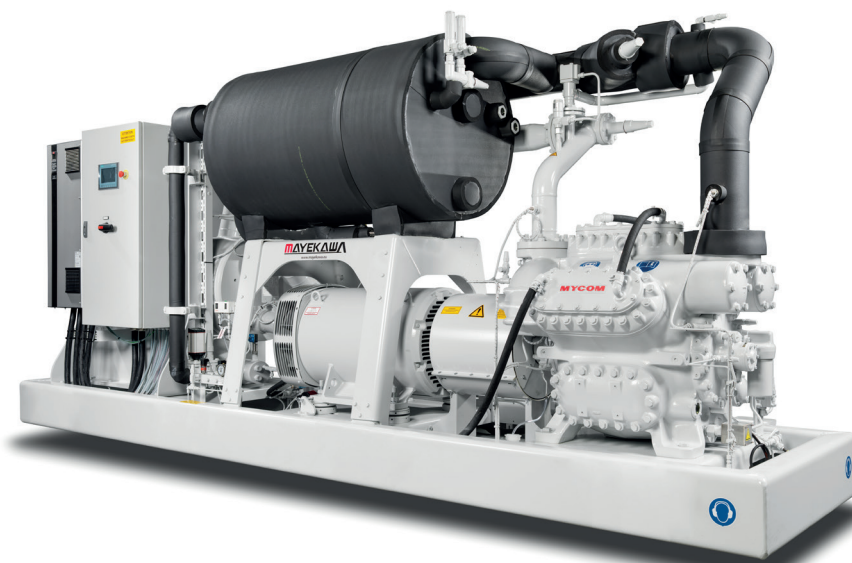
The **MAYEKAWA mCHILLER** series includes the water-cooled standard ammonia chillers **mCHILLER FUGU**, and the air-cooled standard ammonia chillers **mCHILLER TAKA**.

**mCHILLER**  
**FUGU**

standard water-cooled ammonia chillers

**mCHILLER**  
**TAKA**

standard air-cooled ammonia chillers



*mCHILLER FUGU 960R*

1985: **MAYEKAWA** developed STM screw compressors for vapor recover systems in the brewery industry



2002: **MAYEKAWA** developed a large-sized compound two-stage screw compressor



2008: **MAYEKAWA** developed an energy saving reciprocating compressor 'M series'



1998: **MAYEKAWA** delivered 377 ammonia refrigeration units for the Nagano Olympic Games



2007: **MAYEKAWA** developed a semi-hermetic screw compressor containing IPM motor for ammonia refrigerant



2021: **MAYEKAWA** launched the sustainable, standard **mCHILLER** series

mCHILLER

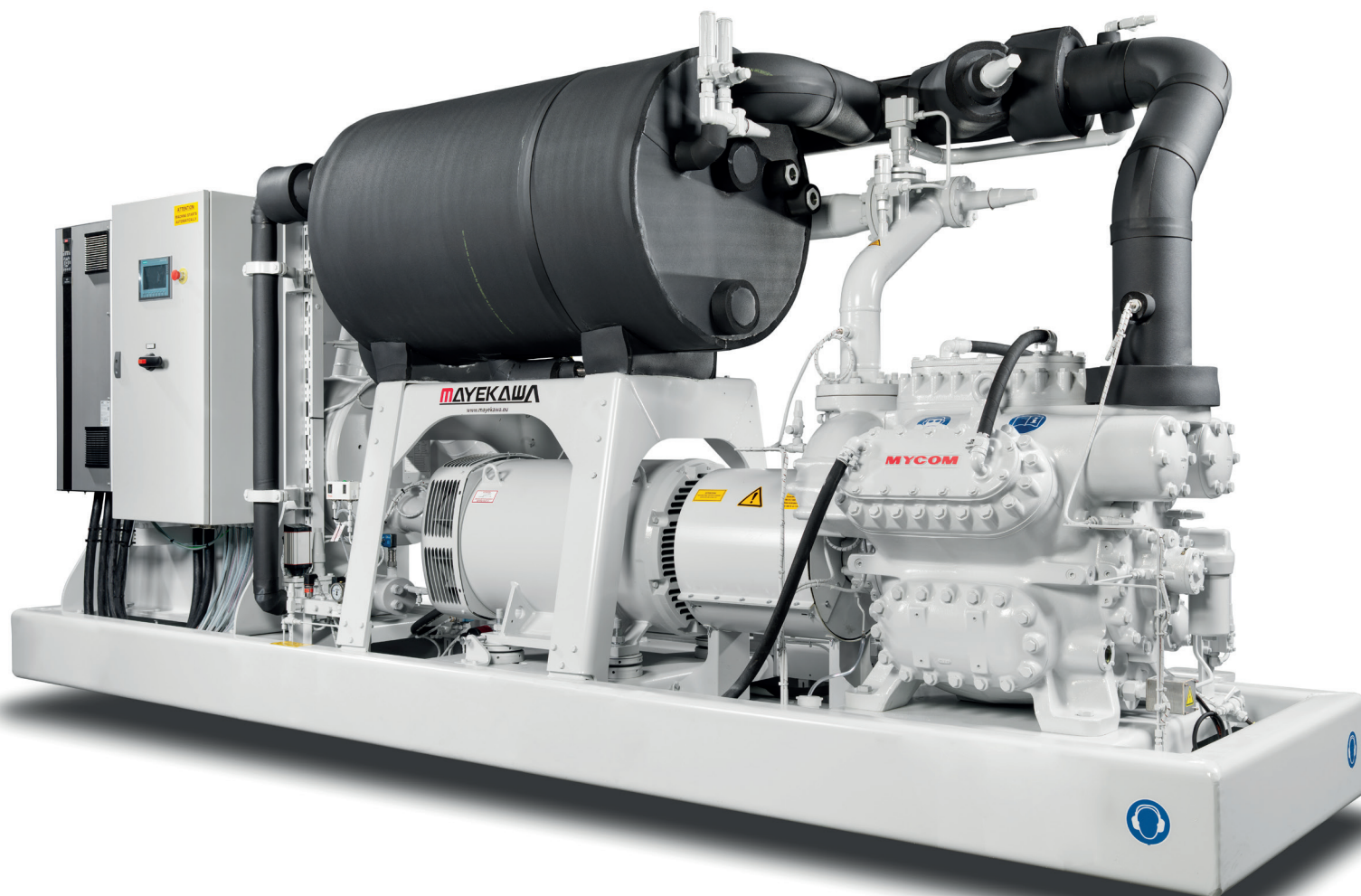
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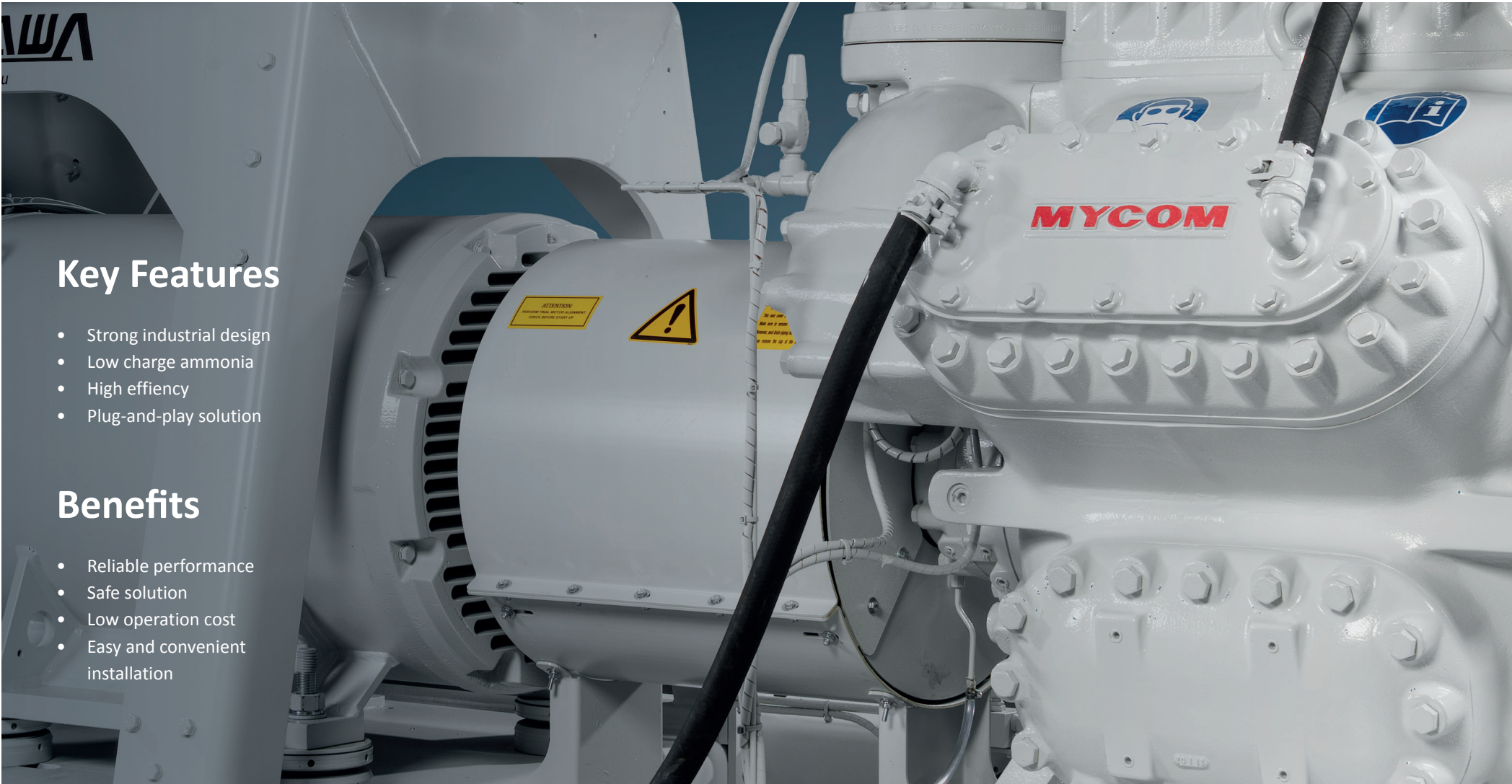
standard water-cooled ammonia chillers

## mCHILLER FUGU 1280R, 960R, 640R

mCHILLER FUGU in the versions 1280R, 960R, and 640R is designed to meet the needs of industrial and semi-industrial markets such as breweries, industrial processes, server farms, building facilities etc.

mCHILLER FUGU 1280R, 960R and 640R has a strong industrial design, long lifespan – and can be used in a wide variety of applications.





## Key Features

- Strong industrial design
- Low charge ammonia
- High efficiency
- Plug-and-play solution

## Benefits

- Reliable performance
- Safe solution
- Low operation cost
- Easy and convenient installation

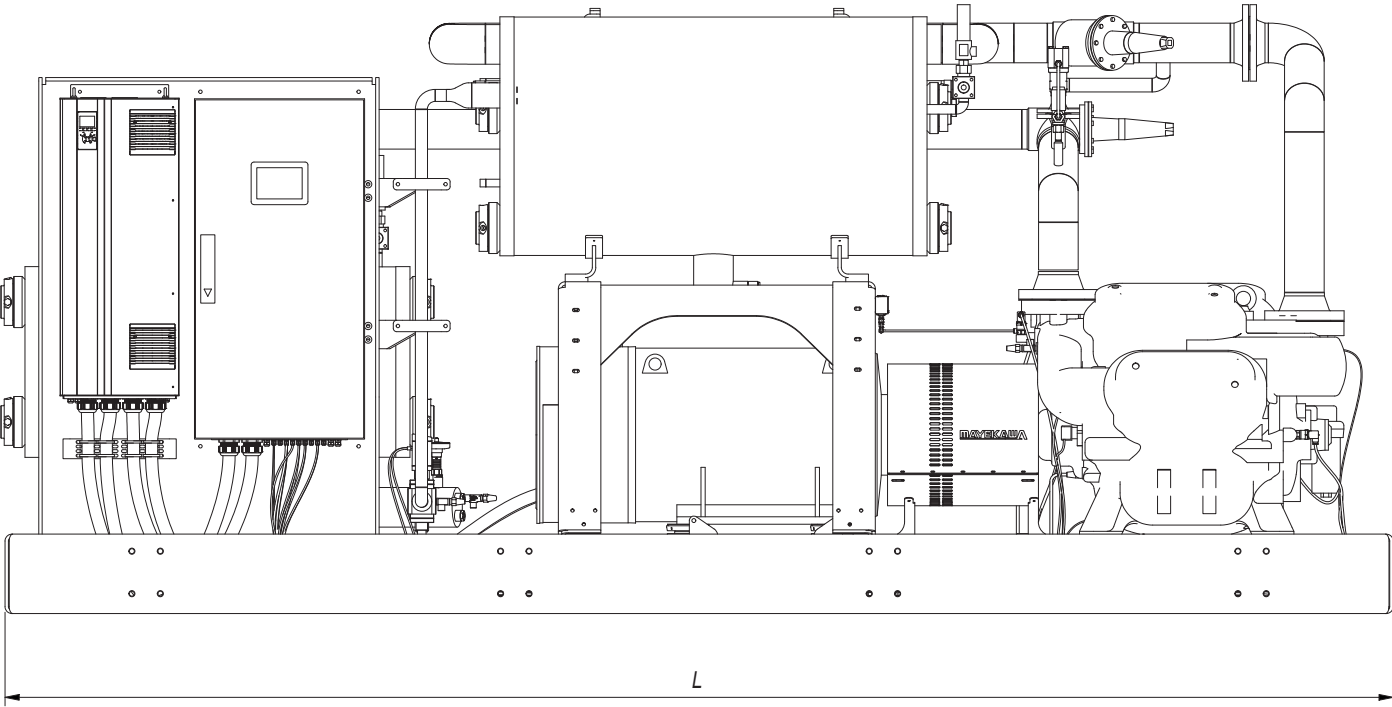
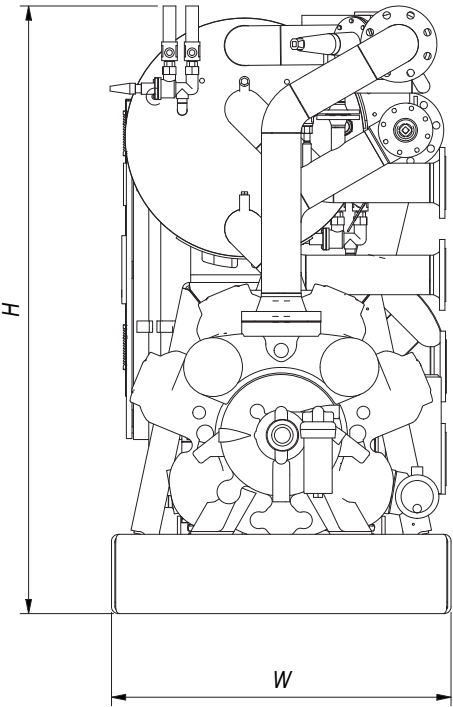
mCHILLER

# FUGU

standard water-cooled ammonia chillers

| mCHILLER model                  | FUGU 1280R | FUGU 960R  | FUGU 640R |
|---------------------------------|------------|------------|-----------|
| Cooling side connections        | 2/4x DN100 | 2/4x DN100 | 2/4x DN80 |
| Heat rejection side connections | 2/4x DN100 | 2/4x DN100 | 2/4x DN80 |
| Length (L)                      | 4895 mm    | 4895 mm    | 4895 mm   |
| Width (W)                       | 1200 mm    | 1200 mm    | 1200 mm   |
| Height (H)                      | 2150 mm    | 2150 mm    | 1970 mm   |
| Dry weight                      | 8500 kg    | 8050 kg    | 6400 mm   |

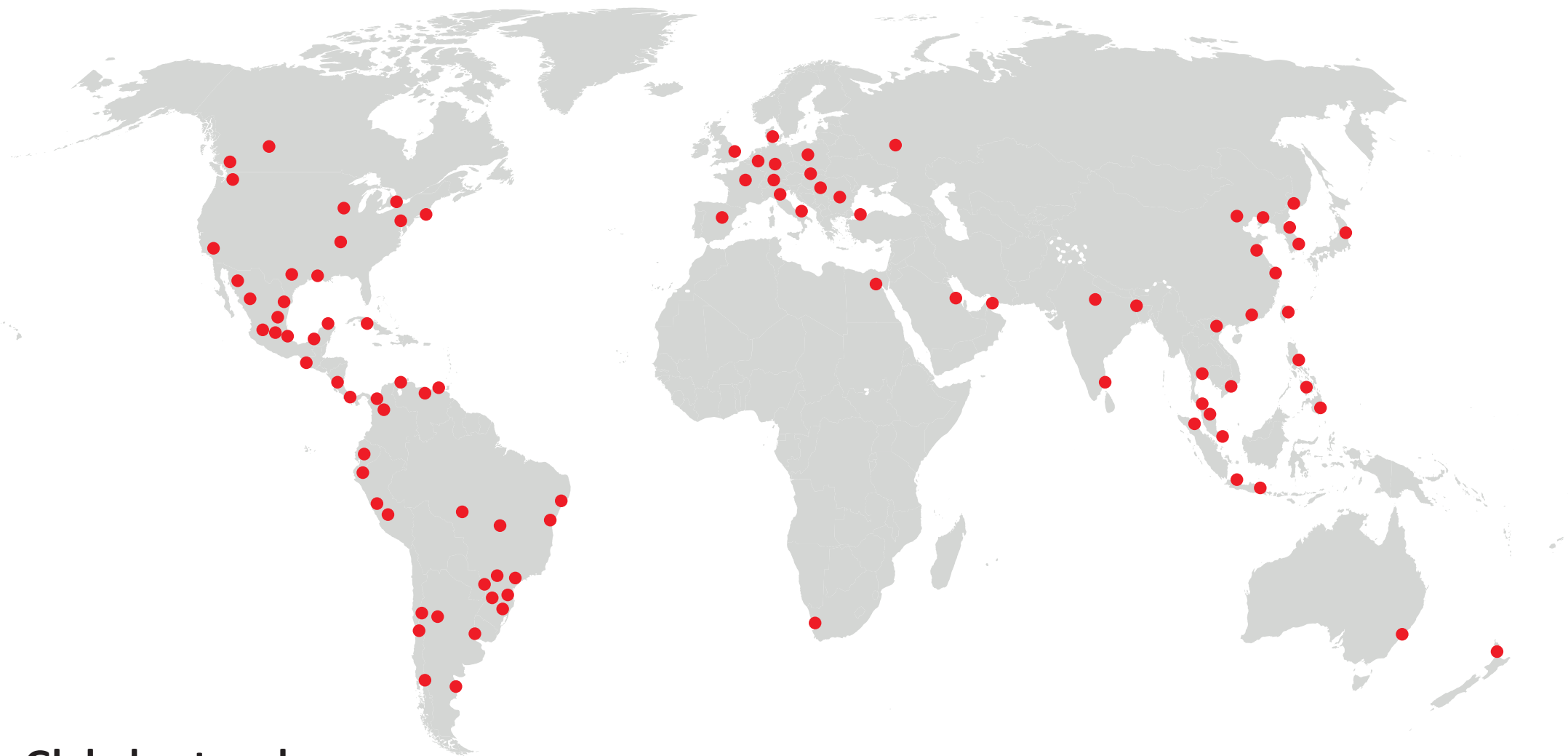
Values are to be considered as guidance and will be finally confirmed in the quotation process



# Technical Data

| General                   | FUGU 1280R              |                         | FUGU 960R               |                         | FUGU 640R               |                         |
|---------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Package type:             | Water-cooled chiller    | Water-cooled chiller    | Water-cooled chiller    | Water-cooled chiller    | Water-cooled chiller    | Water-cooled chiller    |
| Refrigerant/charge:       | R717 / 80 kg            | R717 / 80 kg            | R717 / 80 kg            | R717 / 80 kg            | R717 / 55 kg            | R717 / 55 kg            |
| Total part load:          | 11.0-100 %              | 11.0-100 %              | 14.5-100 %              | 14.,5-100 %             | 21.5-100 %              | 21.5-100 %              |
| Cooling capacity:         | 1329.2 kW               | 793.5 kW                | 1037.0 kW               | 614.0 kW                | 674.4 kW                | 425.4 kW                |
| Condenser capacity:       | 1557.7 kW               | 995.0 kW                | 1207.9 kW               | 766.6 kW                | 790.4 kW                | 425.8 kW                |
| Shaft power:              | 228.5 kW                | 201.50 kW               | 170.7 kW                | 152.6 kW                | 116.1 kW                | 101.2 kW                |
| EER comp:                 | 5.82 (-)                | 3.94 (-)                | 6.07 (-)                | 4.02 (-)                | 6.20 (-)                | 4.30 (-)                |
| EER Total:                | 5.47 (-)                | 3.70 (-)                | 5.71 (-)                | 3.79 (-)                | 5.90 (-)                | 4.00 (-)                |
| COP:                      | 6.82 (-)                | 4.94 (-)                | 7.07 (-)                | 5.02 (-)                | 7.20 (-)                | 5.30 (-)                |
| Evaporator                |                         |                         |                         |                         |                         |                         |
| Secondary medie:          | WATER                   | MEG-30.0 %              | WATER                   | MEG-30.0 %              | WATER                   | MEG-30.0 %              |
| 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                 |
| Flow:                     | 228 m3/h                | 150 m3/h                | 178 m3/h                | 116 m3/h                | 116 m3/h                | 80 m3/h                 |
| Condenser                 |                         |                         |                         |                         |                         |                         |
| Secondary medie:          | WATER                   | WATER                   | WATER                   | WATER                   | WATER                   | WATER                   |
| Secondary inlet:          | 30.0 °C                 | 30.0 °C                 | 30.0 °C                 | 30.0 °C                 | 30.0 °C                 | 30.0 °C                 |
| Secondary outlet:         | 35.0 °C                 | 35.0 °C                 | 35.0 °C                 | 35.0 °C                 | 35.0 °C                 | 35.0 °C                 |
| Flow:                     | 269 m3/h                | 172 m3/h                | 209 m3/h                | 133 m3/h                | 137 m3/h                | 92 m3/h                 |
| Electrical                |                         |                         |                         |                         |                         |                         |
| System earthing:          | TN-S                    | TN-S                    | TN-S                    | TN-S                    | TN-S                    | TN-S                    |
| Input voltage:            | 3x400VAC+PE             | 3x400VAC+PE             | 3x400VAC+PE             | 3x400VAC+PE             | 3x400VAC+PE             | 3x400VAC+PE             |
| Rated package current:    | 603A                    | 495A                    | 406A                    | 406A                    | 325A                    | 325A                    |
| IK Max.:                  | 20kA                    | 20kA                    | 20kA                    | 20kA                    | 20kA                    | 20kA                    |
| Maximum fuse:             | 800A                    | 630A                    | 500A                    | 500A                    | 400A                    | 400A                    |
| Slave communication type: | MODBUS TCP/IP, PROFINET | MODBUS TCP/IP, PROFINET | MODBUS TCP/IP, PROFINET | MODBUS TCP/IP, PROFINET | MODBUS TCP/IP, PROFINET | MODBUS TCP/IP, PROFINET |

Capacity according to EN12900



## Global network

Headquartered in Tokyo Japan, Mayekawa provides products and services world-wide through an extensive network of local offices and plants.

[www.mayekawa.com](http://www.mayekawa.com). For more information, please contact your local sales office.