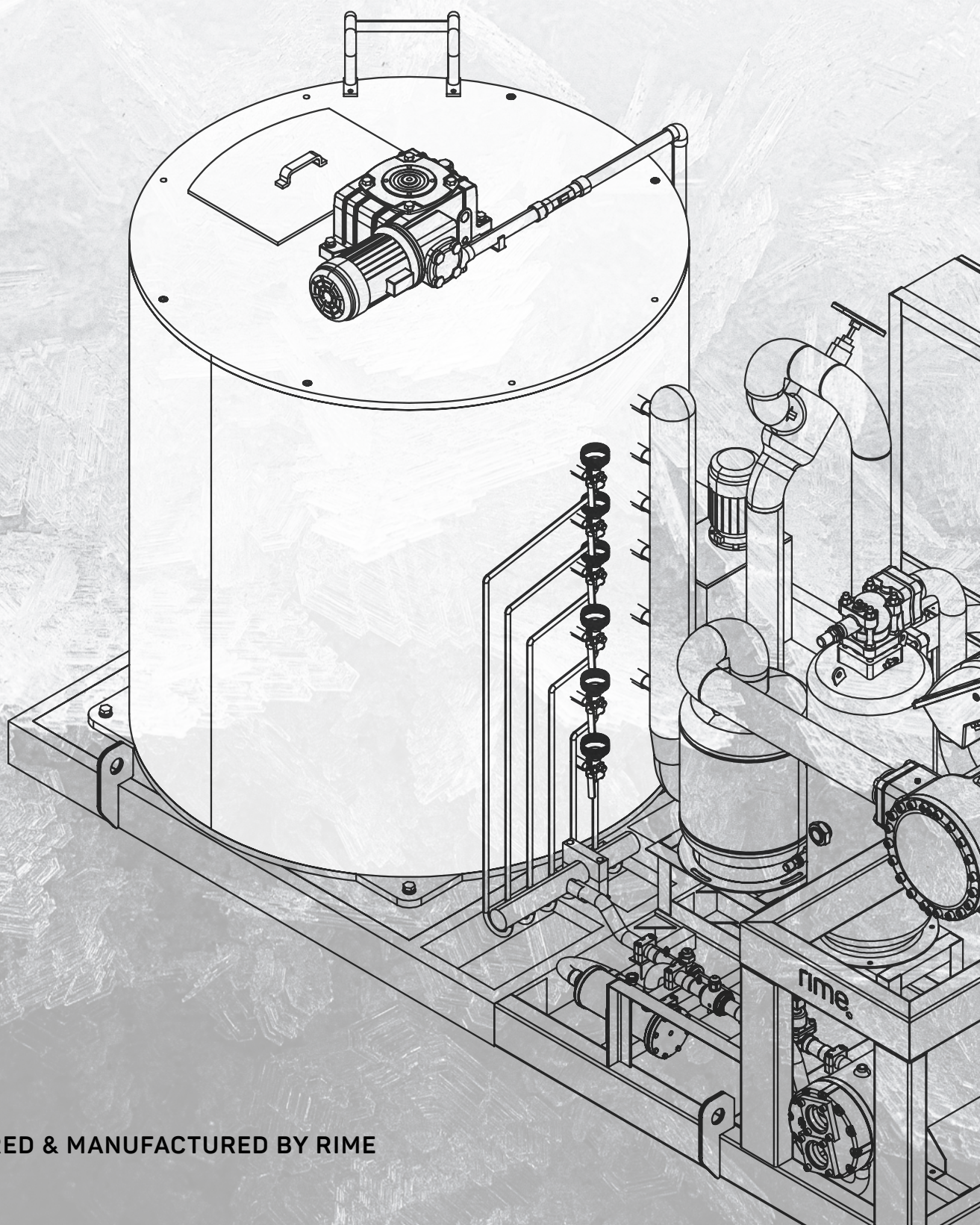


rime.

FLAKE ICE UNIT



ENGINEERED & MANUFACTURED BY RIME

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CONTACT

For inquiries, consultations, or to learn more about our innovative refrigeration solutions, please get in touch with us:

sales@rimegroup.com

For customer support email us:

support@rimegroup.com

Company Overview

Rime is a global manufacturer of refrigeration products for the commercial and industrial sectors, offering an extensive range that includes heat exchangers, condensing units, refrigeration racks, and HVAC copper products. Strategically headquartered in the Jebel Ali Free Zone, Dubai, the company leverages its UAE location to ensure efficient distribution, timely deliveries, and industry excellence.

Our Mission

We strive to deliver high-quality, cost-effective refrigeration solutions focusing on advanced manufacturing and assembly. We aim to provide superior products and exceptional service, ensuring a seamless customer experience and ongoing support.

Our Vision

To lead the HVAC and Refrigeration industry from the GCC to the global stage, setting the benchmark for cost-effective and innovative solutions. Through advanced manufacturing and assembly practices, we strive to pioneer cutting-edge technologies that optimize energy efficiency, minimize environmental impact, and make a significant, positive difference worldwide.

Core Values

Responsiveness: We value responsiveness in our interactions with clients, partners, and team members. We prioritize open communication and timely actions to address their needs efficiently.

Integrity: It is at the core of our business. We uphold ethical practices, transparency, and honesty in all our endeavors, building trust and long-lasting relationships with our stakeholders.

Mindfulness: Extends to our workplace culture. We are committed to fostering a supportive and inclusive environment where employees well-being and personal growth are prioritized, ensuring a positive and collaborative work atmosphere.

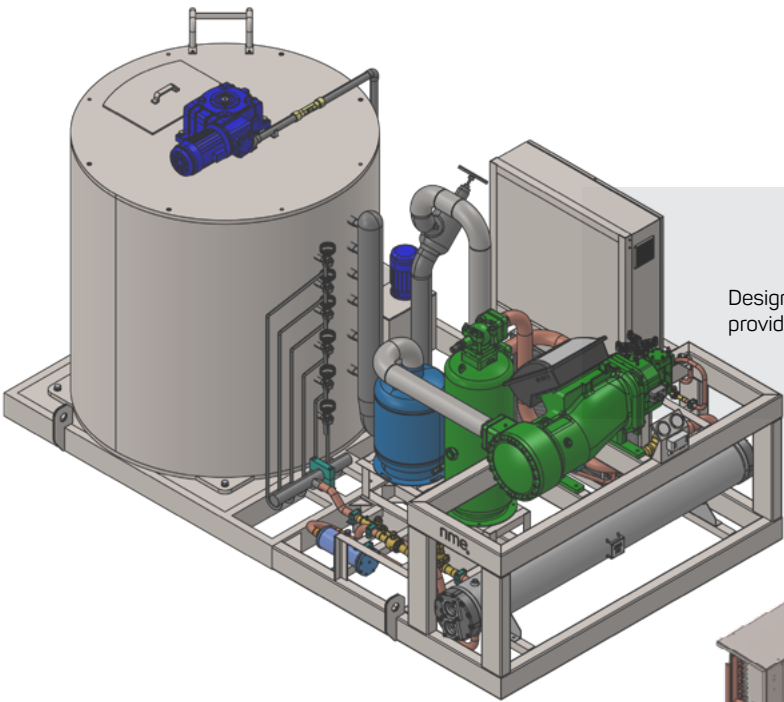
Empowerment: We believe in empowering our team members to foster creativity, growth, and professional development. We encourage collaboration and foster an environment where everyone's ideas and contributions are valued.

Flake Ice Unit Overview

Our Rime Flake Ice Units are designed to deliver reliable, energy-efficient, and continuous flake ice production for a wide range of commercial and industrial applications. Equipped with premium refrigeration components, precision-engineered evaporator technology, and an intelligent PLC control system, the units ensure consistent ice quality and dependable performance.

Built with hygienic stainless-steel construction and featuring an integrated water flow switch for enhanced evaporator protection—a feature not commonly offered by conventional flake ice machines—Rime Flake Ice Units provide exceptional durability, operational safety, and long service life, making them an ideal choice for industries that require a reliable supply of high-quality flake ice.

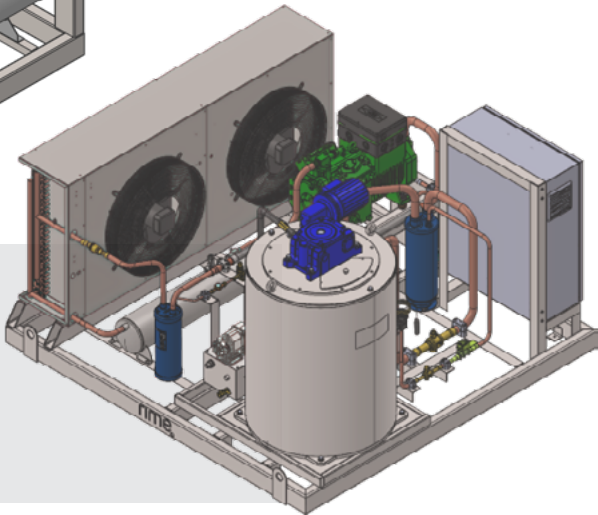
KEY FEATURES	BENEFITS
Precision-Engineered Evaporator Drum: Food-grade SS304 stainless-steel evaporator designed for continuous freezing and controlled ice formation.	Consistent Flake Ice Production: Supports the production of clean, uniform flake ice with consistent quality for commercial and industrial applications.
Integrated Water Flow Protection: A built-in flow switch continuously monitors water circulation and communicates directly with the PLC control system.	Enhanced Evaporator Protection: Automatically protects the system when insufficient or abnormal water flow is detected, reducing the risk of damage and unplanned downtime.
Automatic Water Level Monitoring: Level sensors continuously monitor the water level within the circulation tank during operation.	Reliable Water Management: Protects the circulation pump from low-water conditions and helps maintain stable, uninterrupted ice production.
PLC-Based Control System: Centralized automatic control manages operating sequences, water flow, water level, ice-bin status and system protection functions.	Safe & Automated Operation: Continuous monitoring reduces operator intervention while providing coordinated protection against abnormal operating conditions.
Adjustable Salt Dosing System: An integrated metering pump allows controlled adjustment of the salt solution according to operating requirements.	Optimized Ice Formation: Precise salt dosing supports stable ice production and allows the system to be adjusted according to process requirements.
Robust Refrigeration System: Compressor, refrigeration circuit, expansion control and supporting components are integrated into a complete engineered system.	Dependable Continuous Performance: Provides stable refrigeration capacity for continuous flake ice production under demanding operating conditions.
Crankcase Oil Heater Protection: The compressor oil heater operates automatically while the compressor is OFF, maintaining the required oil temperature before operation.	Improved Compressor Protection: Helps maintain suitable oil conditions during shutdown periods and supports reliable compressor start-up and long-term operation.
Integrated Modular Construction: Refrigeration, water circulation, controls and ice-making components are assembled within a single engineered skid.	Simplified Installation & Service: Provides convenient access to major components while reducing on-site assembly requirements and supporting easier inspection and maintenance.



WATER-COOLED FLAKE ICE UNIT
3–20 TPD

Designed for higher-capacity applications, the water-cooled range provides efficient heat rejection and stable, continuous ice production.

Available capacities: 20 | 15 | 10 | 5 | 3 TPD

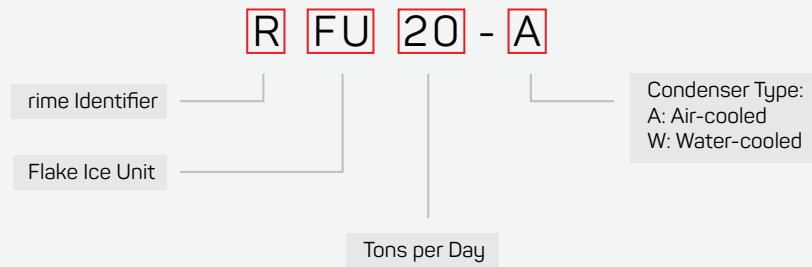


AIR-COOLED FLAKE ICE UNIT
1–5 TPD

An integrated air-cooled condenser delivers a self-contained solution with straightforward installation, reliable heat rejection, and consistent performance.

Available capacities: 1 | 2 | 3 | 5 TPD

NOMENCLATURE



APPLICATIONS

RIME Flake Ice Units are designed to provide a continuous supply of hygienic, high-quality flake ice for a wide range of commercial and industrial applications.

Food Processing & Cold Storage:

Supports the cooling and preservation of seafood, meat, poultry, fruits, vegetables, and other perishable products during processing, storage transport, and retail display.



Dairy Processing:

Assists with milk cooling and temperature control throughout dairy production.



Bakery & Beverage Production:

Provides process cooling for dough preparation, beverage production, and other food manufacturing processes.



Seafood & Fisheries:

Helps maintain freshness and product quality during handling, processing, transportation, and storage.



Chemical, Pharmaceutical & Healthcare:

Provides process cooling for temperature-sensitive manufacturing, laboratory applications, controlled environments, and hygienic ice requirements.



Concrete Cooling:

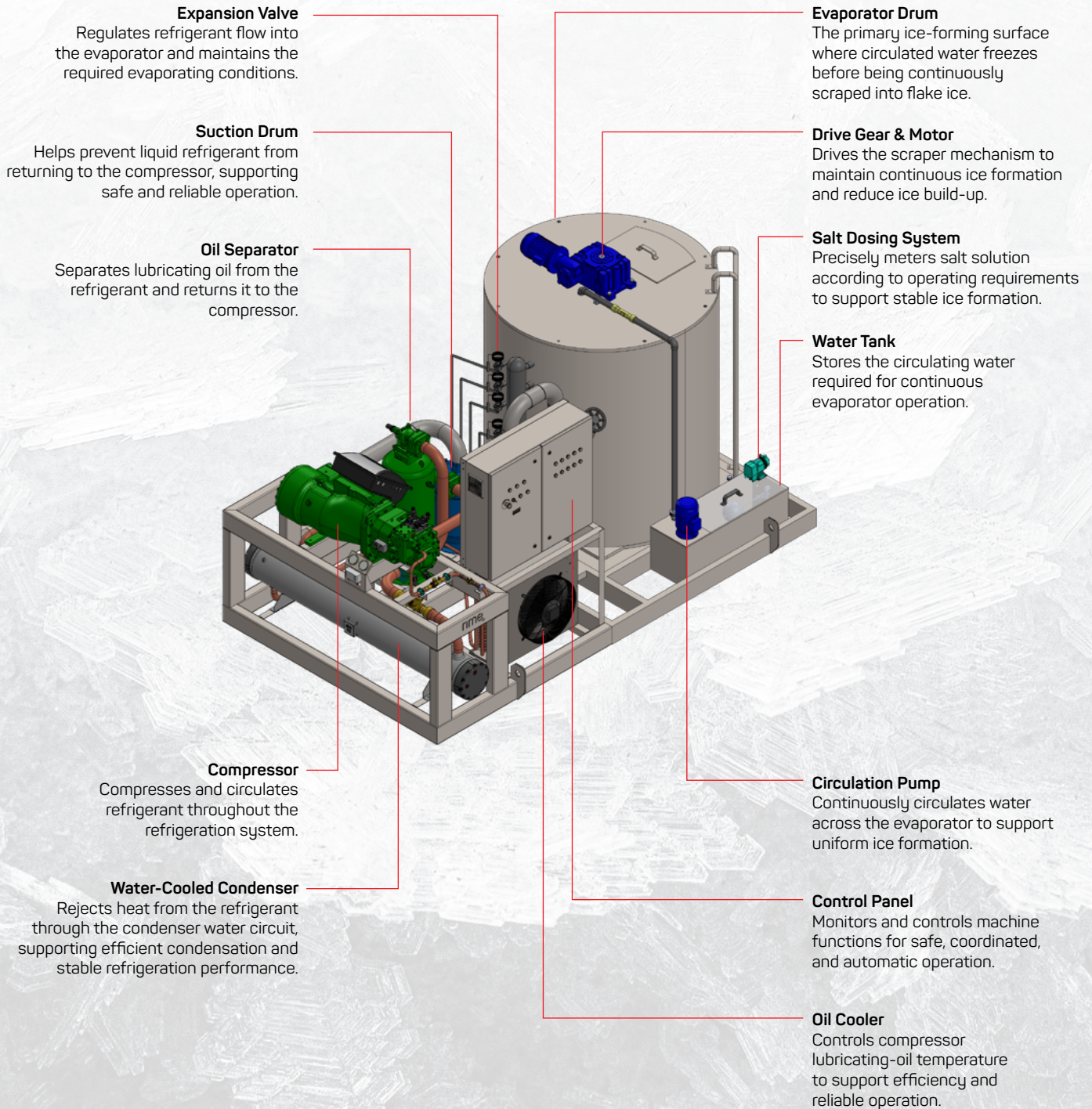
Helps control concrete temperature during batching for large construction and infrastructure projects.





WATER-COOLED FLAKE ICE UNIT

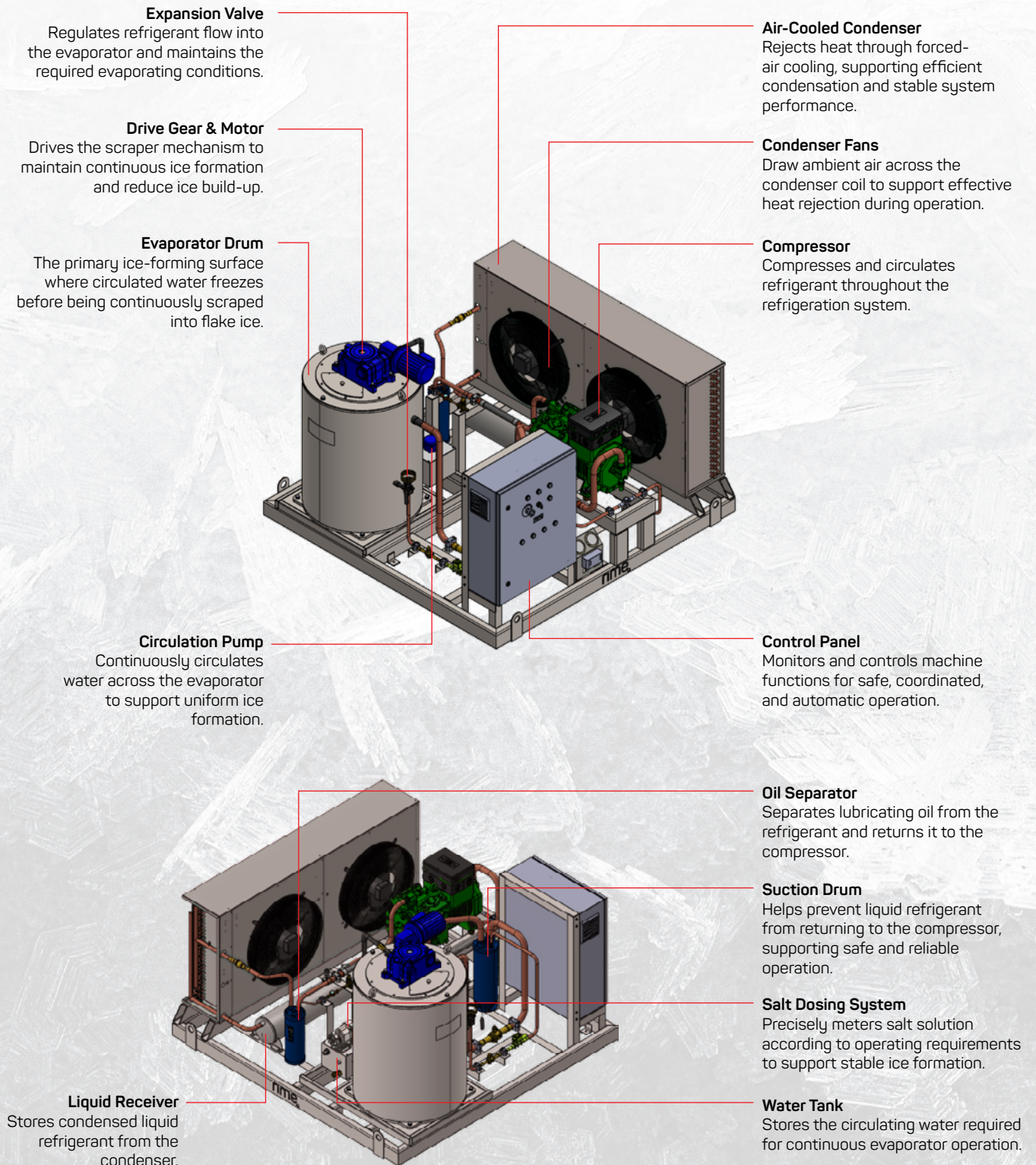
A closer look at the key components engineered into the rime Water-Cooled Flake Ice Unit, showing how the refrigeration, water-cooled heat rejection, water circulation, control, and ice-forming systems work together within one integrated design.





AIR-COOLED FLAKE ICE UNIT

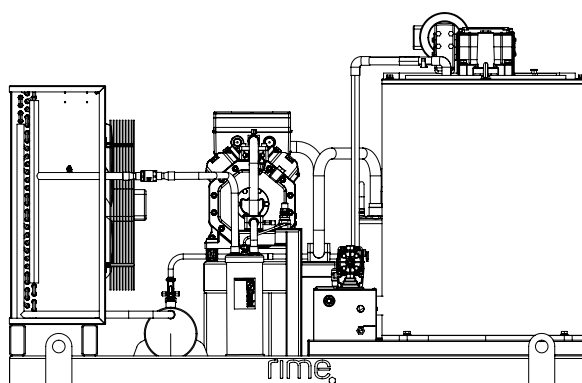
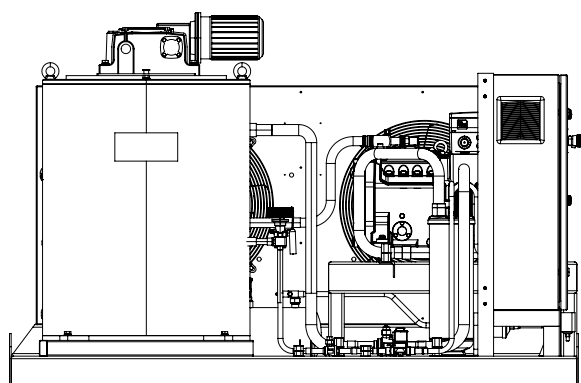
A closer look at the key components engineered into the rime Air-Cooled Flake Ice Unit, showing how the refrigeration, air-cooled heat rejection, water circulation, control, and ice-forming systems work together within one integrated design.



SPECIFICATION

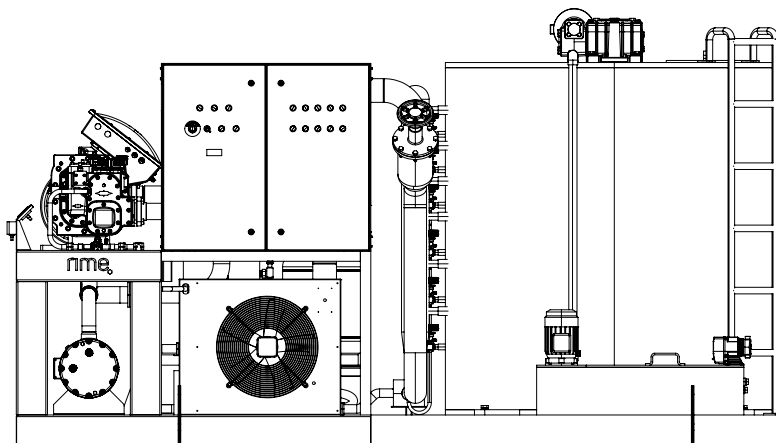
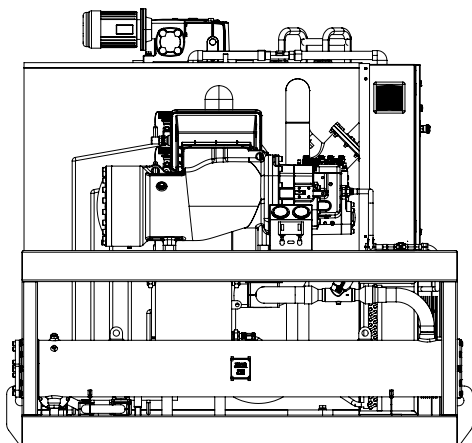
AIR-COOLED FLAKE ICE UNIT

Model	TPD	Cooling Capacity	Refrigerant	Cooling Method	Electrical Supply	Power Input	Water Flow Rate
RFU1-A	1	5.1 kW	R404A	Air	380–420V / 3Ph / 50Hz	6.1 kW	42 L/Hr
RFU2-A	2	10.1 kW	R404A	Air	380–420V / 3Ph / 50Hz	14.2 kW	84 L/Hr
RFU3-A	3	15.3 kW	R404A	Air	380–420V / 3Ph / 50Hz	18.2 kW	126 L/Hr
RFU5-A	5	25.5 kW	R404A	Air	380–420V / 3Ph / 50Hz	32.7 kW	250 L/Hr



WATER-COOLED FLAKE ICE UNIT

Model	TPD	Cooling Capacity	Refrigerant	Cooling Method	Electrical Supply	Power Input	Water Flow Rate
RFU3-W	3	15.3 kW	R404A	Water	380–420V / 3Ph / 50Hz	17.5 kW	126 L/Hr
RFU5-W	5	25.5 kW	R404A	Water	380–420V / 3Ph / 50Hz	27.5 kW	250 L/Hr
RFU10-W	10	51.0 kW	R404A	Water	380–420V / 3Ph / 50Hz	47.2 kW	420 L/Hr
RFU15-W	15	76.5 kW	R404A	Water	380–420V / 3Ph / 50Hz	76.4 kW	630 L/Hr
RFU20-W	20	102 kW	R404A	Water	380–420V / 3Ph / 50Hz	111.7 kW	840 L/Hr



IMPORTANT INFORMATION

Safety Note

Only qualified personnel are permitted to install and repair compressors. All electrical connections of the compressor and its accessories must be carried out by authorised personnel only.

Evaporator Drum Construction

The evaporator drum is constructed from food-grade SS304 stainless steel, providing hygienic ice production, excellent corrosion resistance, and long service life. It is designed to meet the stringent hygiene requirements of industries that demand clean and safe flake ice.

Integrated Water Flow Protection

To further enhance system safety and reliability, rime has introduced a flow switch on the water supply line as a standard safety feature. Fully integrated with the PLC control system, it provides continuous water flow monitoring and automatically protects the machine by initiating a shutdown whenever abnormal or insufficient water flow is detected. This feature safeguards critical components, extends equipment life, and ensures dependable, uninterrupted ice production.



Automatic Water Level Monitoring

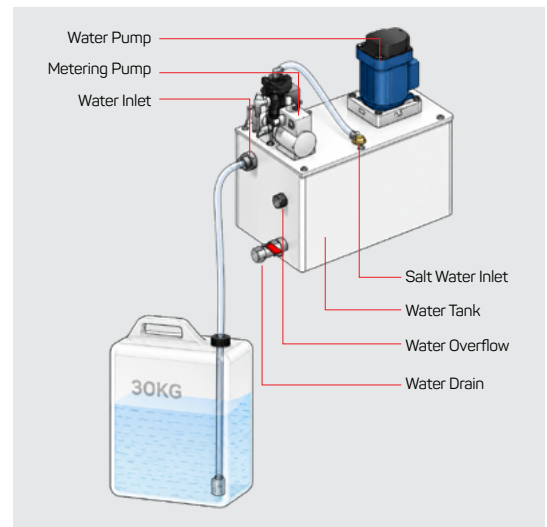
As part of our enhanced safety features, level sensors have been incorporated into the water tank to provide continuous water level monitoring. Working in conjunction with the PLC control system, they safeguard the water pump and protect the machine from low-water conditions, improving operational reliability and extending equipment life.

Salt Dosing System

The system is equipped with a salt dosing unit for saltwater flake ice production. An adjustable metering pump enables accurate regulation of the salt dosage according to operating requirements.

PLC-Based Control System

The system is fully controlled by a PLC-based automation system integrated with comprehensive safety monitoring and protection features. The control system continuously monitors critical operating parameters, including water flow, water level, and ice-bin status through an infrared sensor, ensuring safe, reliable, and efficient operation while protecting the equipment from abnormal operating conditions.



Crankcase Oil Heater

The oil heater operates inversely to the compressor:

- Compressor OFF → Oil Heater ON (Maintains the oil temperature approximately 15–20 K above ambient temperature)
- Compressor ON → Oil Heater OFF



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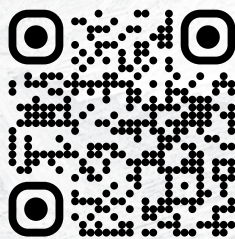


RIME GROUP HQ

No. S21315 South Zone JAFZA,
Dubai, United Arab Emirates
P.O. Box 26820
+971 4 4918522



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www.rimegroup.com

Contact us

Product inquiries and consultation
sales@rimegroup.com

Customer support
support@rimegroup.com