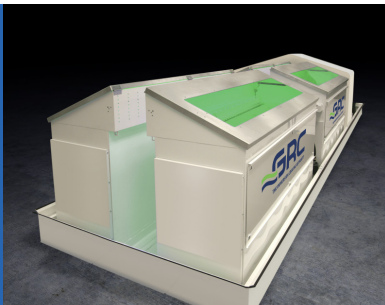


Low-Cost, High-Efficiency, Modular, Rack-Based Cooling Solutions for Data Centers

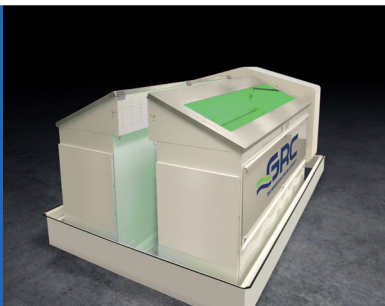
Quad

Up to 92 kW per rack



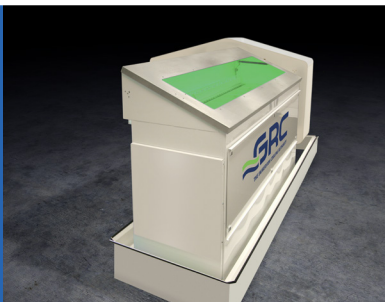
Duo

Up to 184 kW per rack



One

Up to 368 kW per rack



Our Deployments Are in Twenty-One Countries Across the Globe



Tokyo Institute of Technology



GRC immersion cooling drives mission-critical systems for these and many more organizations.

Our ICEraQ Flex, powered by our latest Series 10 CDU, offers optimal performance and efficiency along with the ability to deploy where obstacles, room shape, and/or flooring challenges require more flexible layouts or piping approaches. It offers breakthrough potential in power efficiency, rack density, and capacity planning, while also reducing the expense of building, running and expanding a data center. It needs no energy-intensive air conditioners, oversize generators, or raised floors. As a result, it enables rapid deployment of super-reliable, chilled, or chiller-free cooling right where you want it.

Features & Benefits

- Cuts energy for cooling ITE by up to 90%
- Provides a pPUE of <1.03
- Lowers upfront costs by up to 50%
- Reduces server power draw 11%¹
- Cools up to 368 kW/rack²
- Compatible with any OEM servers properly optimized for immersion
- Fast deployment: 10-12 weeks

Common Applications:

- Overcome space or power constraints
- Overcome site obstacles requiring layout flexibility
- Surmount rising energy costs
- Integrate high-density racks
- Support ultra-high-density hardware (up to 368 kW/rack)
- Deploy capacity quickly
- Reduce data center build costs

Includes:

- Rack(s) filled with a high-performance, synthetic ElectroSafe® fluid — selected specifically by use-case
- Coolant distribution unit (CDU)
- Assured reliability with 2N-redundant pumps and control system
- Cloud-based and local monitoring and reporting capabilities, with configurable email alerts.
- Integrated cable management
- Service bars for easy, in-rack server maintenance
- One-year limited warranty with customized support options available.



Location Flexibility



Supports High Density



Easy To Adopt & Use



Quick Deployment



Scalable



Cost-Effective

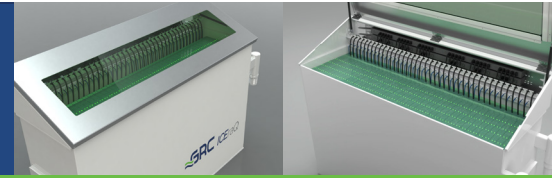


Eco-Friendly/Sustainable

Experience the Freedom to Add High-Density Compute Capacity Anywhere — Easily

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ICEraQ^{FLEX} Quad | Duo | One



Product Specifications	ICEraQ ^{FLEX} Quad	ICEraQ ^{FLEX} Duo	ICEraQ ^{FLEX} One
Number of Immersion Cooled Racks	4	2	1
Number of Cooling Distribution Units (CDU)	1	1	1
Chiller-Free Water @ 32 °C (89.6 °F)			
Cooling Capacity	200 kW	200 kW	200 kW
Per Rack Density	50 kW	100 kW	200 kW
Chilled Water @ 13 °C (55.4 °F)			
Cooling Capacity	368 kW	368 kW	368 kW
Per Rack Density	92 kW	184 kW	368 kW
Partial PUE ³	1.03	1.03	1.03
Redundancy ⁴	Coolant pumps: 2N Control system: 2N		
Max Server Length	962 mm (37.9")		
Overall Dimensions (l x b x h)			
Rack	2.2 m x 0.8m x 1.5 m (84.75" x 30.8" x 59.8)		
CDU	1.7 m x 0.6 m x 1.4 m (66.2" x 24.2" x 56") ⁵		
Rack Floor Loading ⁶	903 kg/m ² (185 lbs/ft ²)		
CDU Floor Area Loading	881 kg/m ² (180 lbs/ft ²)		
CDU Contact Area Loading	973 kg/m ² (199 lbs/ft ²)		
Power & Water Specifications			
Final Heat Rejection Options	Flexible Options: <ul style="list-style-type: none">• Adiabatic/evaporative cooling tower• Dry cooler• Chilled water loop		
Water Requirements	Nominal water input temperature: <ul style="list-style-type: none">• 5 to 32 °C (41 to 89.6 °F) Recirculating water flow rate: <ul style="list-style-type: none">• 21 to 30 m³/hr (90 to 135 gpm)• 6 to 8 C dT typical Connections: <ul style="list-style-type: none">• 50.8 mm (2.0") grooved or hose barb		
Power Requirements	Two electrical feeds (primary & secondary) each with the following characteristics: <ul style="list-style-type: none">• 200-208V 3P 50/60 Hz OR 380-415V 3P 50 Hz OR 380-415V 3P 60 Hz (primary only) OR 480V 3P 60 Hz.• Max power consumption: 5.6kW		

Infrastructure / Site Requirements

Client to Provide	Access to power & water Level installation surface with slope < 1/650 (raised floor or concrete slab) Adequate ventilation
Operating Guidelines	Ambient temperature 5 to 40 °C (41 to 104 °F) Secondary containment Standard data center fire suppression

Monitoring and Reporting

Platform	Cloud based monitoring and graphing platform and local DCIM hooks
Alerts	Configurable email alerts
DCIM/BMS Integration Protocols	SNMP, Modbus TCP, and RESTful API
Data & Measurements	<ul style="list-style-type: none"> • Operating temperatures (water and coolant) • Operating pressures (water and coolant) • Primary coolant pump power consumption • Primary coolant pump speed • Rack temperatures • Liquid level (multiple locations) • System health, diagnostics, and early fault detection

Delivery & Installation

Lead Time	Typically ships within three months of receipt of purchase order
Shipping Terms	Ex-Works
On-site Installation & Training	Three days for the first unit, plus two days for every subsequent unit

Warranty⁷

One-year limited warranty with customized support options available.

Compatible with Any OEM Servers Properly Optimized for Immersion



¹ Industry average.
² Cooling Capacities: Rated to limit maximum coolant temperature near 50 °C (122 °F). Actual usable cooling capacity will depend on the hardware/configurations used. Thermal thresholds of individual components may limit usable capacity. Alternatively, higher permissible maximum coolant temperatures may allow higher cooling capacities.
³ General specification.
⁴ Additional redundancy options available.
⁵ Underfloor CDU option for space constrained sites.
⁶ Does not include weight of IT equipment and accessories.
⁷ Warranty is void if ICEraQ units are run outside of their operating parameters defined in the installation specification.



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