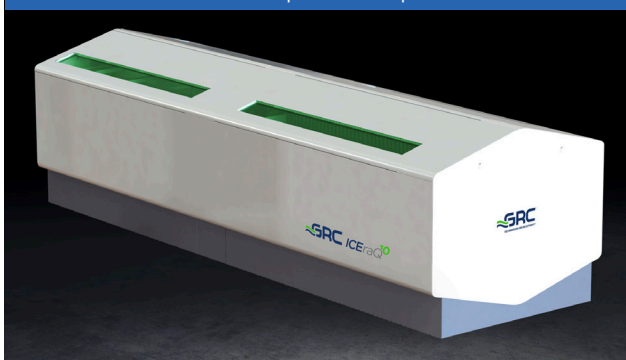


High-Efficiency, Scalable, Rack-Based, Green Cooling Solutions for Data Centers

Quad Up to 92 kW per rack



Duo Up to 184 kW per rack



Our Deployments Are in Twenty-One Countries Across the Globe



Tokyo Institute
of Technology



U.S. AIR FORCE



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

Our ICEraQ Series 10 is the result of more than a decade of experience designing powerful immersion cooling solutions. Featuring an integrated CDU, racks, and internal plumbing and control systems, the Series 10 makes cooling compute simpler and more reliable. The elegant, space-saving units offer unprecedented potential in rack density, location flexibility, and capacity planning, while also reducing the expense of building, running, and expanding a data center. With our Earth-friendly focus, the Series 10 advances sustainability through reductions in power use, carbon-footprint, e-waste, and more.

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 184 kW/rack²
- Compatible with any OEM servers properly optimized for immersion
- Fast deployment: typically within three months

Common Applications:

- Overcome space or power constraints
- Surmount rising energy costs
- Integrate high-density racks
- Deploy capacity quickly
- Reduce data center build costs
- Take full advantage of virtualization benefits
- Support sustainability/ESG goals

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



Scaleable



Cost-Effective

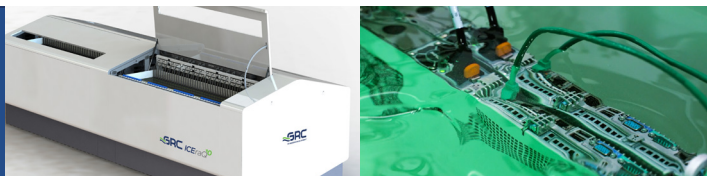


Eco-Friendly/
Sustainable

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

+1.512.692.8003 • ContactUs@grcooling.com • grcooling.com

ICEraQ¹⁰ Quad | Duo



Product Specifications

ICEraQ¹⁰ Quad

ICEraQ¹⁰ Duo

Number of 42U Immersion Cooled Racks	4	2
Number of Cooling Distribution Units (CDU)	Integrated	Integrated
Chiller-Free Water @ 32 °C (89.6 °F)		
Cooling Capacity	200 kW	200 kW
Per Rack Density	50 kW	100 kW
Chilled Water @ 13 °C (55.4 °F)		
Cooling Capacity	368 kW	368 kW
Per Rack Density	92 kW	184 kW
Partial PUE ³	<1.03	<1.03
Redundancy ⁴	Coolant pumps: 2N Control system: 2N 2N CDU options available	
Maximum Server Length ⁵	987 mm (38.9")	

Overall Dimensions (l x w x h)⁶

Series 10 Quad	5.46 m x 1.68 m x 1.42 m (215.2" x 66.25" x 56")
Series 10 Duo	2.92 m x 1.68 m x 1.42 m (115.25" x 66.25" x 56")

Floor Area Loading (w/ Coolant)⁷

Series 10 Quad	655 kg/m ² (143 lbs/ft ²)
Series 10 Duo	690 kg/m ² (141 lbs/ft ²)

Contact Area Loading (w/ Coolant)⁷

Series 10 Quad	668 kg/m ² (137 lbs/ft ²)
Series 10 Duo	715 kg/m ² (146 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)
Operating Guidelines	Ambient temperature 5 to 40 °C (41 to 104 °F) Secondary containment Standard data center fire suppression Adequate ventilation

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

Warranty⁸

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 May be limited by server model, orientation, and other features.
⁶ Underfloor CDU option available for space constrained sites.
⁷ Does not include weight of IT equipment and accessories.
⁸ Warranty is void if ICEraQ units are run outside of their operating parameters defined in the installation specification.



11525 Stonehollow Drive, Suite A-135 Austin, TX 78758
+1.512.692.8003 • ContactUs@grcooling.com • grcooling.com

GRC believes the information in this Data Sheet to be accurate; however, GRC does not make any representation or warranty, express or implied, as to the accuracy or completeness of any such information and shall have no liability for the consequences of the use of such information.

This Data Sheet and its contents do not constitute an order by GRC to sell any product. An order is made only by a quotation provided by GRC. The terms of sale in such quotation may vary from those set forth in this Data Sheet. GRC's acceptance of any order shall be in GRC's sole discretion, and all quotations and sales are subject to GRC's Terms and Conditions of Commercial Sale.