

## 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



intel



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%<sup>1</sup>
- Cools up to 368 kW/rack<sup>2</sup>
- 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<sup>®</sup> 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

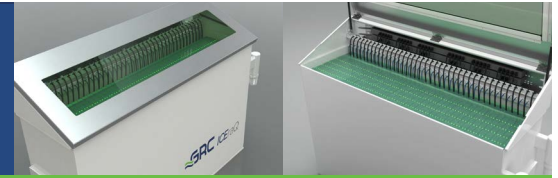


Eco-Friendly/Sustainable

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

+1.512.692.8003 • [ContactUs@grcooling.com](mailto:ContactUs@grcooling.com) • [grcooling.com](http://grcooling.com)

# 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 <sup>3</sup>	1.03	1.03	1.03
Redundancy <sup>4</sup>	Coolant pumps: 2N Control system: 2N		
Overall Dimensions (l x b x h)			
52U Rack	2.6 m x 0.7 m x 1.4 m (103" x 28.25" x 54.25")		
CDU	1.7 m x 0.6 m x 1.4 m (66.2" x 24.2" x 56") <sup>5</sup>		
Floor Loading (Operational)			
52U Rack	952 kg/m <sup>2</sup> (195 lbs/ft <sup>2</sup> ) <sup>6</sup>		
CDU	700 kg/m <sup>2</sup> (143 lbs/ft <sup>2</sup> )		

## Power & Water Specifications

Final Heat Rejection Options	Flexible Options: <ul style="list-style-type: none"> <li>• Adiabatic/evaporative cooling tower</li> <li>• Dry cooler</li> <li>• Chilled water loop</li> </ul>
Water Requirements	Possible water input temperature: <ul style="list-style-type: none"> <li>• 5 to 32 °C (41 to 89.6 °F)</li> </ul> Recirculating water flow rate: <ul style="list-style-type: none"> <li>• 21 to 30 m<sup>3</sup>/hr (90 to 135 gpm)</li> <li>• 6 to 8 C dT typical</li> </ul> Connections: <ul style="list-style-type: none"> <li>• 50.8 mm (2.0") grooved or hose barb</li> </ul>
Power Requirements	Two electrical feeds (primary & secondary) each with the following characteristics: <ul style="list-style-type: none"> <li>• 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.</li> <li>• Max power consumption: 5.6kW</li> </ul>

## 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"> <li>• Operating temperatures (water and coolant)</li> <li>• Operating pressures (water and coolant)</li> <li>• Primary coolant pump power consumption</li> <li>• Primary coolant pump speed</li> <li>• Rack temperatures</li> <li>• Liquid level (multiple locations)</li> <li>• System health, diagnostics, and early fault detection</li> </ul>

## 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

## Warranty<sup>7</sup>

One-year limited warranty with customized support options available.

**Compatible with Any OEM Servers Properly Optimized for Immersion**



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.



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

<sup>1</sup> Industry average.  
<sup>2</sup> 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.  
<sup>3</sup> General specification.  
<sup>4</sup> Additional redundancy options available.  
<sup>5</sup> Underfloor CDU option for space constrained sites.  
<sup>6</sup> Does not include weight of IT equipment and accessories.  
<sup>7</sup> Warranty is void if ICEraQ units are run outside of their operating parameters defined in the installation specification.