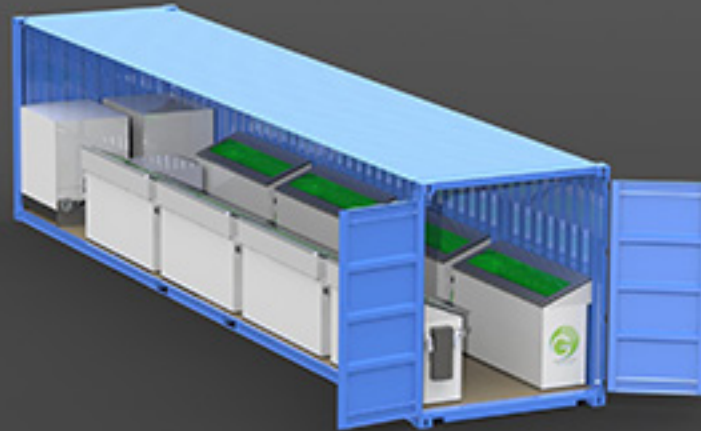




# CARNOTJET™ SUBMERSION COOLING CONTAINER

CARNOTJET CNJ-C3



The CarnotJet™ CNJ-C3 fits up to QTY-8 48U racks and redundant infrastructure in the space of a 40' ISO shipping container

## Data Center Build-out for the Lowest Cost in the Industry: \$2 per Watt

Green Revolution Cooling introduces the Containerized CARNOTJET™ System, a “data center in a box” featuring the world’s most efficient server-cooling technology. Available for around \$2 per Watt of critical load, the CARNOTJET™ CNJ-C3 Container is the most capital-light and energy-efficient data center cooling solution ever developed.

## Simple Configuration

A single CARNOTJET™ CNJ-C3 Container supports 50 kW - 200 kW of critical load across QTY-8 48U racks, for a total server capacity of 384U per container. The CNJ-C3 may be stacked double-high and side-by-side, resulting in a maximum power density of 800 Watts per square foot.

## Unparalleled Energy Efficiency

Servers installed in the CARNOTJET™ solution use 10% - 20% less power than air-cooled equivalents due to the removal of server fans and lower component temperatures. In addition to power savings on the server side, the cooling system itself features just 3% - 5% overhead for a mechanical PUE of 1.03 - 1.05.

## Outstanding Flexibility and Rapid Deployment

The CARNOTJET™ CNJ-C3 is a drag-and-drop solution that ships within 8-10 weeks of purchase and requires very little time to install on-site. Since each container stands alone, it is possible to build out an entire data center block-by-block as needed.

## Intelligent Cooling and Proven Reliability

Centralized monitoring and diagnostics provide realtime snapshots of the health of the entire containerized data center and communicate this information via BACnet and over the Internet. The power and electrical systems in the container are 2N redundant and each rack has significant thermal ridethrough capacity.

# CARNOTJET™ Containerized System (CNJ-C3) Specifications

<b>Model</b>	CNJ-C3				
<b>Capacity</b>	Number of Racks	Up to 8 x 48U per 40' container Up to 10 x 48U per 53' container			
	Number of Pump Modules	Up to 2 per container			
	Max Server Heat	Up to 100 kW per rack			
	Maximum Number of Servers	42U or 55U racks			
<b>Container Dimensions</b>	Container Length	40'	12.2 m		
	Container Width	8'	2.4 m		
	Container Height	9.5'	2.9 m		
<b>Rack Dimensions</b>	Rack Capacity	<b>42U</b>	<b>48U</b>	<b>42U</b>	<b>48U</b>
	Rack Length	81"	92"	205 cm	234 cm
	Rack Width (42U)	27"	27"	69 cm	69 cm
	Rack Height (lid closed)	51"	51"	130 cm	130 cm
	Rack Height (lid open)	78"	78"	198 cm	198 cm
	Rack Mass (empty)	440 lbs	500 lbs	200 kg	227 kg
	Rack Mass (filled with coolant)	2650 lbs	3080 lbs	1200 kg	1397 kg
<b>Pump Module Dimensions</b>	Pump Module Length	57"	57"	145 cm	145 cm
	Pump Module Width	34"	34"	86 cm	86 cm
	Pump Module Height	55"	55"	140 cm	140 cm
	Pump Module Mass	880 lbs	880 lbs	400 kg	400 kg
<b>Infrastructure Requirements</b>	Access to power Access to water Level installation surface				
<b>Electricity</b>	<b>Primary Input</b>				
	Voltage	200 - 240 VAC, 50-60 Hz			
	Current	Depends on capacity			
<b>Water Connection</b>	Water Input Temperature	37° F - 122° F		3° C - 50° C	
	Water Output Temperature	39° F - 129° F		4° C - 54° C	
	Flow	Up to 120 gpm		Up to 7.5 L/sec	
	Pressure Loss	<10 psi		<69 kPa	
	Inhibitors Required	N/A			
	Connections	2" flange or NPT			
<b>Operating Guidelines</b>	Outdoor Temperature	-40° F - 131° F		-40° C - 55° C	
	Secondary Containment	Integrated (200% of the largest single container)			
	Fire Suppression	Standard data center fire suppression			
	Operating Humidity	Noncondensing			
	Site Requirements	Level floor			
<b>Data Reporting</b>	Server electrical load and distribution Heat load Coolant pressure Estimated filter life Pump command Operating temperatures Rack temperature (multiple locations) Power consumption Liquid level (multiple locations) Heat rejection System health and diagnostic output Container interior air temperature Container physical access history				
<b>Warranty</b>	Standard one-year limited warranty with purchase, includes 24/7 system health monitoring by GRC technicians. Extended warranty available.				

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