



CRESTCHIC



600kW Liquid Cooled Loadbank

The **600kW liquid-cooled load bank** is designed for high-density data centre commissioning, enabling accurate thermal validation and precision electrical testing of liquid-cooled infrastructure.

Built for fast deployment and demanding site environments, it combines stable ΔT thermal control, full system protection, rugged transportability, and audit-ready reporting—delivering confidence, repeatability, and efficiency across every commissioning project.



Precision ΔT Control: Maintains temperature stability to $\pm 0.5^{\circ}\text{C}$, regardless of flow variation, ensuring repeatable results and greater confidence during critical commissioning activities.



Full system protection: Integrated flow, pressure, overload/underload and thermal shock protection, safeguarding the load bank and connected infrastructure.



Quick-release dry disconnect: Designed for fast deployment, the unit features quick-release, no-drip dry disconnect couplings for main supply (inlet/outlet), drain and overpressure connections, reducing downtime and improving on-site safety between jobs.



Compact and easy to move: Space-saving footprint with flush-mounted connections for safer stacking and transport. Heavy-duty castors plus dual-side forklift pockets for easy handling and positioning.



IP55 Rated Enclosure: Built for demanding indoor and outdoor commissioning environments.

CE compliant and built to UL Standards: Certified compliance for global deployment and regulated sites.

600kW Liquid Cooled Load Bank

Description

Model	Transportable (Castor Mounted)
Country of Origin	United Kingdom
Max Capacity - Packaged Load Bank	600kW (648kW at 415V)
Voltage Ranges - (Continuous Operation at Specified)	400V - 415V
Operating Frequency Range	50/60Hz
Main Supply Phases	3ph
Wires (Delta Connection)	3
Step Resolution @ Design Voltage	5kW
Voltage Tolerance (Short Term Operation)	+5%
Load Element Tolerance	+10%/-5%
Elements	80/20 nickel chrome resistance wire
Insulation Test	1000V
Auxiliary Supply Voltage	380-480V Via Ceeform
Auxiliary Supply Current	32A
Operating Frequency Range	50/60Hz
Auxiliary Supply Phases	3ph
Main Supply Connections	3 x 500A Single Pole PowerSafe Connectors Per Phase + 2 PE
Control Supply	Selectable - Main or Auxiliary
Pipework Connections	DN100/PN16 Flange - Dry Disconnect Coupling (With Covers)
Inlet / Outlet	4" STANAG 3756
Pressure Relief / Drain	1" STANAG 3756
Pipework Material	316L Stainless Steel
Coolant Compatibility	PG25 - PG35
Coolant Drain	Drain At Lowest Point Of Coolant Circuit
Protection	Thermal Emergency Cut Out Fan Overload (Control) Over Current Protection Process Stop Leak Detection Pressure Release Valve (9 Bar) Low Coolant/Flow Detection Pressure Detection
Cooling Method	Forced Liquid Cooling (Driven by CDU Pump)
Liquid Flow rate (Approx.)	Dependent on CDU (15 l/s Expected, Could Be Higher)
Utilization Category	AC-1 Resistive
Load Switching Contactor Type	3 Pole AC Contactors
Rated Maximum Ambient Temperature Operation	+80°C / +176°F
Rated Minimum Ambient Temperature Operation	-20°C / -4°F
Rated Maximum Relative Humidity	95% RH
Maximum Rated Operating Pressure	8 Bar [Pressure Relief @ 9 Bar]
Altitude Rating	<500m [m.a.s.l.]
Sound Power Level	50 dB(A) @ 10m

Enclosure

Material	Powder Coated Mild Steel
Finish	RAL9002 Grey White
Control Chamber IP Rating	IP55
Lifting	Fork Lift Pockets / Single Point Lift
Protection Frame	Intergrated Crash-Pack
Stacking	Stacking Pockets (*Requires Crash Pack)

Enclosure Dimensions

Length (Approx.)	mm	≤1580
Width (Approx.)	mm	≤1040
Height (Approx.)	mm	≤1160
Total Weight (Approx.)	kg	≤1250 (Wet)

Load Bank Control Systems

Control System	VCS2 - Software: V2.0.0
Control Method	Local Control Interface, Panel PC (Default) LC10 Remote (Default) LC80 Remote (Optional Extra) PC Software With Report Running Capability (Optional Extra)
Additional Features:	Current Limiting Available With Instrumentation Modbus TCP Extendable - Cluster Monitoring - Up To 240 Loadbanks Power & Fluid Instrumentation Data Reporting

Optional Extra:

- Control Extension Cable	10m, 20m, 50m or 90m Extension
- Protective Cover	Loadbank PVC Cover

Advanced Control & Reporting



The 600kW platform is available with either a simple on-board local controller, a portable handheld basic controller LC10, or Crestchic's state-of-the-art control and condition monitoring software (VCS shown above).



Automatic load profiles:

Create, run and monitor an unlimited amount of pre-set load application profiles; enabling repeatable tests and less intervention during commissioning.



Real-time monitoring and control:

Comprehensive digital dashboard with live supply and hydraulic instrumentation data with full data export functionality.



Cluster Up to 240 Units:

Combine air or liquid cooled loadbanks running the VCS platform to control. Monitor and control in clusters or as standalone units.



Automated compliance reporting:

Audit-ready reports via Crestchic Portal, including: ISO 8258-5/22514, NEMA MG1, EN60150, IEEE 141, ASHRAE G22 standards.

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Sales & Rental Offices in : UK, Ireland, Singapore, Germany, Belgium, France, China and UAE

