



EDGECELL COOLING DOOR

Rear Door Heat Exchanger · Chilled-Water Rack Cooling



APPLICATION

The EdgeCell Cooling Door is a chilled-water rear door heat exchanger that provides localized, energy-efficient cooling directly at the rack. Tool-less, hot-swappable components ensure maximum uptime and easy servicing, extending system lifetime and keeping your IT environment productive.

Engineered for HPC workloads and warm-water cooling, the unit supports free cooling at suitable ambient temperatures throughout the year.

FEATURES

- Supports 3rd party racks
- Available in 3 widths — 600 mm, 750 mm & 800 mm — and 4 heights: 2000 mm (42U), 2200 mm (47U), 2250 mm (48U), 2450 mm (52U)
 - Additional sizes, colors and configurations available upon request
- Total depth of device incl. fans 337.5 mm
- Door opening angle > 90° with optional door stop
- Optional sensors: air temperature, air humidity, water temperature, water flow, water pressure
- Built-in leak detection sensors (optional)
- Tool-less, hot-swappable fans, PSUs and main controller — no opening of the door required
- 7" touch panel display with intuitive user interface
- Connectivity: Ethernet, Web Interface, SNMP v3, Modbus TCP and RTU, Redfish and BACnet

BENEFITS

- Front-accessible, quick-swap modular controller cassette for simplified maintenance and reduced service time.
- Compatible with direct-to-chip liquid cooling solutions for high-density computing applications.
- Modular adapter frame with a standardized design that can be easily configured to suit individual rack and site requirements.
- Quick-swap door hinging system enabling fast installation, removal and replacement of the RDHx door.
- Quick-swap coil mounting system designed for improved accessibility, servicing and replacement.
- Flexible fluid hose entry from either the top or bottom of the RDHx unit to suit different installation requirements.
- Minimal planning requirements and reduced installation and commissioning time.
- Front-accessible hot-swappable fans and controller, allowing key components to be serviced or replaced without opening the RDHx door.
- Slim, space-efficient design suitable for installations where aisle or rear-rack clearance is limited.



STANDARD OFFERING

Standard Offering	EdgeCell Cooling Door
Key Application / Market Positioning	Data center cooling in facilities with white space, warm water temperatures, increased air temperatures
Adapter Frame	Approx. 180 mm in depth; solid frame housing the heat exchanger and complete plumbing/wetted components; no penetration of wetted material into the rack; increased safety against leaks
Top Cover	Panel with cutouts for flexible hoses and cabling
Bottom Cover	Panel with cutouts for flexible hoses and cabling
Size Variation	Custom
Return Air Filter	Accessory
Hose Package	Accessory
Door Switch Package	Accessory
External Temp Sensor	Accessory
Power Supplies	Dual — Standard
Leak Detection	Optional
Water Sensor	Optional; please order corresponding hose package

* Water quality requirements must be maintained to avoid problems during operation. Usage of appropriate anti-corrosion and frost protection agents is recommended.

** Below 14 °C / 57 °F there is an increased risk of condensation. Water temperature must be maintained at 2 °C above dew point. It is recommended to use the cooling door in conjunction with a CDU to mitigate condensation.

FEATURES

Features	EdgeCell Cooling Door
Dual / Redundant PSU	Standard
Air Humidity Sensors	12 (1 in each fan module)
Controller Swap	Tool-less quick swap
Fan Swap	Tool-less quick swap
PSU Swap	Tool-less quick swap
External Communication	Serial (RS485), 2 × Gbit Ethernet
Communication Interfaces	Modbus RTU, Modbus TCP, SNMP, Redfish, Web Browser, BACnet
Local Interface / HMI	7" Touch Panel Display
Fan Control	Automatic
Valve Control	Automatic
Valve Type	2-Way
Hose Kit Connection	Tri-Clamp



TECHNICAL DATA

Standard Colors	Black Grey (RAL 7021), White (RAL 9003) Textured
Fan Modules	6 smart fan modules with integrated sensors and fall-back control; hot-swappable without tools; access from aisle
Fan Speed Control	Manual or automatic
Controller	Smart controller, hot-swappable without tools, access from aisle
Power Supplies	Up to 2 wide-range PSUs, hot-swappable without tools, access from cold aisle
Coolant Feed	Egress for flexible hoses through cutouts at top or bottom panel
Control Valve	2-way ball valve
Valve Control	Manual or automatic
Coolant Flange at Device	Male BSPP 1" flat gasket (ISO 228-1) threaded flange
Operating Temperature	5–60 °C / 41–140 °F
Transport & Storage Temperature	–40–85 °C / –40–185 °F
Normal Operating Pressure	5 bar / 75 psi
Minimum Burst Pressure	20 bar / 290 psi
Communication Interfaces	RS485, Ethernet, 2 digital inputs, 3 relay outputs
Communication Protocols	Modbus RTU, Modbus TCP, SNMP, Redfish, Onboard Web Browser, BACnet, TCP/IP,
Onboard Sensors	1 × supply air temperature + 1 × relative humidity in each fan module; 3 × inlet air temperature, 6 × outlet air temperature; 1 × fluid differential temperature, 1 × fluid differential pressure, 1 × air differential pressure,
Optional Sensors	Leak detection; door contact sensor kit; coolant sensors in hose package

COOLANT REQUIREMENTS

pH	7 to 9
Corrosion Inhibitor(s)	Required, as of ASHRAE TC 9.9
Sulfides	< 10 ppm
Sulfate	< 100 ppm
Chloride	< 50 ppm
Bacteria	< 1000 CFU/mL
Total Hardness (as CaCO ₃)	< 200 ppm
Residue After Evaporation	< 500 ppm
Turbidity	< 20 NTU (nephelometric)
Glycol (Propylene Glycol) Concentration	Up to 35%

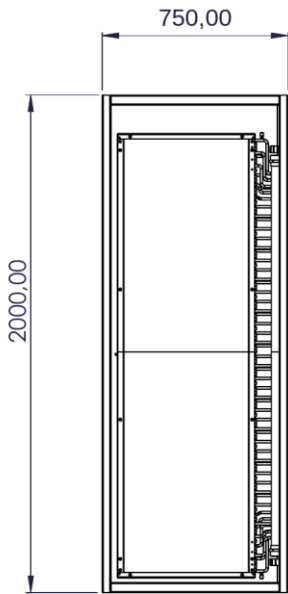
DELIVERY INCLUDES

Extension frame for installation onto the rack, with hinges and cutouts for hose egress and cabling at top and bottom; levelling feet; blankings to cover hoses towards the rack; door with pre-assembled heat exchanger, prepared for hose assembly at top or bottom with provisions for filling/draining; handle with door lock and keys; sensors; fan wall including 6 hot-swappable fan modules, hot-swappable controller, pressure differential sensor, touch interface and 2 × hot-swappable power supplies. User manual provided as a download and within the packaging.



DIMENSIONAL DRAWINGS

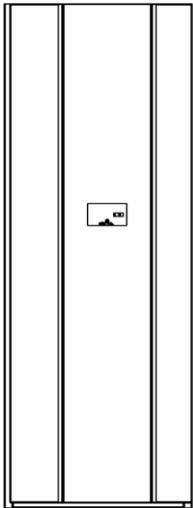
750 mm WIDTH	2000 mm HEIGHT	337.5 mm MAX DEPTH	157.5 mm DOOR DEPTH
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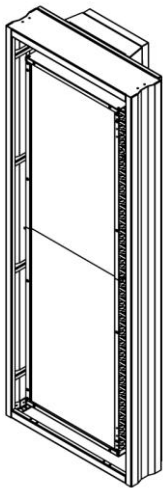
FRONT VIEW



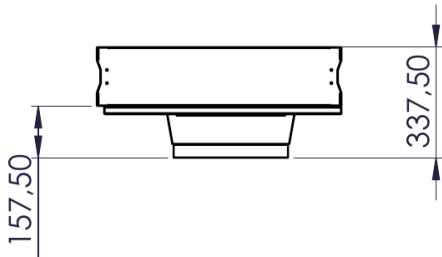
SIDE VIEW



REAR VIEW



ISOMETRIC VIEW



TOP VIEW

Part Number	B-002-0001-BDX-OUT-FR-R1
Drawing date	27.02.2026
General tolerances	ISO 2768-1 m
Welded construction	EN ISO 13920:1996 Class B
Format / Scale	1:20