

Smart Passive Rear Door Cooler

By **USystems**
A brand of **Legend**

CL21

The Rear Door Coolers are established as highly efficient cooling systems for use on data center/server racks. Designed to operate on a closed loop water circuit, ensuring optimum thermal and energy performance by removing heat generated by the active equipment directly at source.

The CL21 technology “Smart Passive” designed to provide high performance cooling with Zero operational costs. The performance is entirely dependent on the active equipment inside the cabinet, and the available static pressure. At 14° C / 57.2°F Water inlet, the CL21 Smart Passive is able to supply up to 29kW of cooling. Ideal for a data centre targeting a highly sustainable operating structure.



Performance Examples

Performance examples — these examples show the RDC duties attainable when the active equipment inside the rack produces varying volumes of airflow. Other performance duties are attainable when calculating bespoke project specific requirements.

| CL21 Smart Passive Cooling Capacity | | | | | | | |
|-------------------------------------|--------------------------------|-----------------|----------------|----------------|----------------|----------------|----------------|
| Performance Data for: | | 42U / 47U / 52U | | | | | |
| DB Air On | °C (°F) | 40 (104) | | | | | |
| Water In | °C (°F) | 14 (57.2) | | | | | |
| Water Out | °C (°F) | 20 (68) | | | | | |
| Max Duty | kW | 7 | 13 | 17 | 22 | 25 | 29 |
| Airflow | m ³ /h (cfm) | 1000 (589) | 2000 (1177) | 3000 (1766) | 4000 (2354) | 5000 (2943) | 6000 (3531) |
| Air Pressure Drop Across Coil | Pa | 3.2 | 9.6 | 18.4 | 29.2 | 41.7 | 55.7 |
| Fluid Flow | m ³ /h (USGal/m) | 1 (4.5) | 1.9 (8.2) | 2.6 (11.3) | 3.2 (13.9) | 3.7 (16.2) | 4.2 (18.3) |
| Fluid Pressure Drop | kPa | 2.3 | 6.9 | 12.4 | 18.1 | 24.1 | 30 |

| CL21 Smart Passive Cooling Capacity | | | | | | | |
|-------------------------------------|--------------------------------|-----------------|----------------|----------------|----------------|----------------|----------------|
| Performance Data for: | | 42U / 47U / 52U | | | | | |
| DB Air On | °C (°F) | 35 (95) | | | | | |
| Water In | °C (°F) | 14 (57.2) | | | | | |
| Water Out | °C (°F) | 20 (68) | | | | | |
| Max Duty | kW | 5 | 10 | 13 | 17 | 19 | 22 |
| Airflow | m ³ /h (cfm) | 1000 (589) | 2000 (1177) | 3000 (1766) | 4000 (2354) | 5000 (2943) | 6000 (3531) |
| Air Pressure Drop Across Coil | Pa | 3.2 | 9.7 | 18.5 | 29.3 | 41.9 | 56 |
| Fluid Flow | m ³ /h (USGal/m) | 0.8 (3.5) | 1.4 (6.3) | 2 (8.7) | 2.4 (10.7) | 2.8 (12.4) | 3.2 (14) |
| Fluid Pressure Drop | kPa | 1.2 | 4.3 | 7.7 | 11.3 | 14.8 | 18.4 |

Cooling capacity data is shown for illustration purposes. USystems work alongside their customers who largely have unique challenges and ambitions. The nature of our technology, capabilities and approach is emulated in the delivery of efficient designs and solutions across the globe.

Legend

DB - Dry Bulb

ΔT - Delta T / difference supply and return temperatures

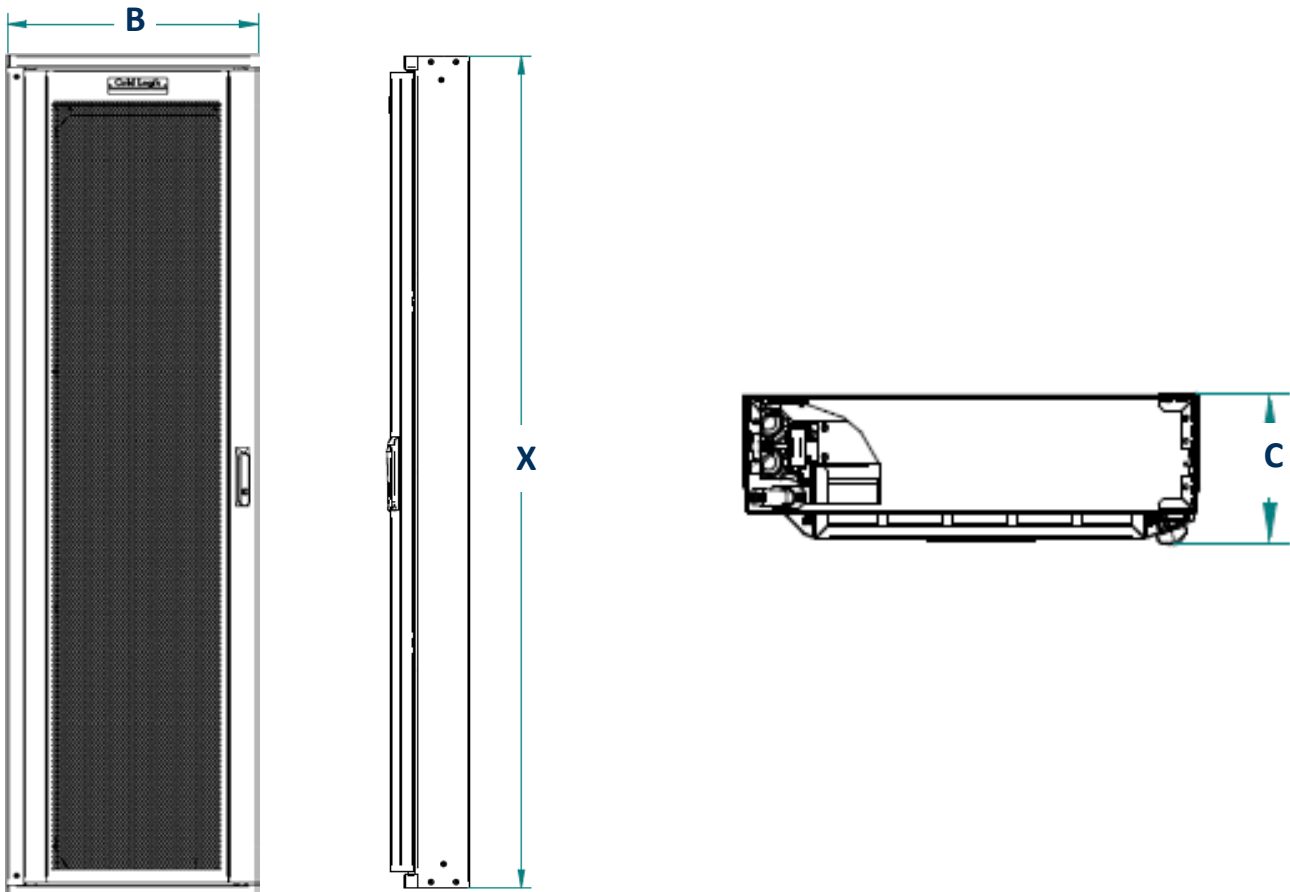
Air On - Air onto coil / air off active equipment

Air Off - Air off coil / air out from USystems cooler

Technical Data

| CL21 Smart Passive (Including interface frame) | | | | | | | | | | |
|--|-----------------------|--|------------------|------------------|-----------------|------------------|------------------|------------------|------------------|------------------|
| Technical Information to Suit: | | 42U | | | 47U | | | 52U | | |
| | | 600w | 750w | 800w* | 600w | 750w | 800w* | 600w | 750w | 800w* |
| Height (X) | | 2000 (78.4) | | | 2222 (87.5) | | | 2444 (96.2) | | |
| Width (B) | mm (inch) | 597 (23.5) | 747 (29.4) | 797 (31.4) | 597 (23.5) | 747 (29.4) | 797 (31.4) | 597 (23.5) | 747 (29.4) | 797 (31.4) |
| Depth (C) | mm (inch) | 198 (7.8) | | | | | | | | |
| Dry Weight (RDC only) | kg (lb) | 55 | 68.8 | 68.8 | 61.5 | 76.9 | 76.9 | 68.1 | 85.1 | 85.1 |
| Dry Weight (including frame) | kg (lb) | 83 | 98.8 | 99.8 | 92.5 | 108.9 | 109.9 | 101.1 | 119.1 | 120.1 |
| Wet Weight (including frame) | kg (lb) | 87.8 (193.6) | 103.6 (228.3) | 104.6 (230.5) | 97.8 (215.8) | 114.2 (251.9) | 115.2 (254.1) | 106.4 (234.6) | 124.4 (274.3) | 125.4 (276.5) |
| Paint | Finalised on Order | RAL 7035 (Light Grey) | | | | | | | | |
| | | RAL 9005 (Black) | | | | | | | | |
| Hinge Side | | Le -Hand Side - Standard | | | | | | | | |
| | | Right-Hand Side - Available on Request | | | | | | | | |
| Connections | mm (inch) | 25 (1) | | | | | | | | |
| Water Volume Capacity | L (U.S.gal) | 4.8 (1.3) | | | | | | | | |

*CL21 Door is 750w, CL21 Frame is 800w



Further Documentation

For additional information, please refer to the below. Available through your USystems representative, or our central enquires line at customerhub.sg@legrand.com.sg

Complete Product Range

Available at www.legrand.com.sg

Operations and Maintenance Manual

Please contact customerhub.sg@legrand.com.sg

Troubleshooting Guide

Please contact customerhub.sg@legrand.com.sg

Product Brochure

Available at www.legrand.com.sg



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