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Kelvion

Large scale to reduce complexity of install 2.5MW – 15+MW

Engineered for small approach temperatures and low LMTDs (0.5K to 4K)

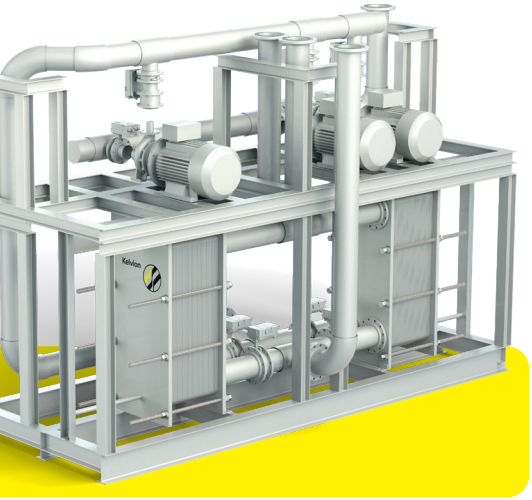
Smart Controls for real time tuning of flow and temperature differentials

BETTER SERVICE THAN SORRY

Our Service Portfolio

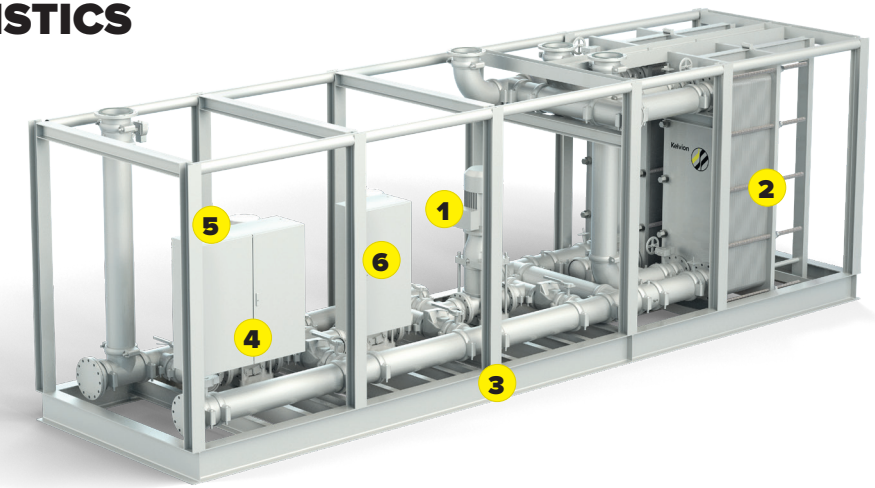
Precision Cooling, Reliably Distributed

CCDU | CENTRALISED COOLING DISTRIBUTION UNIT



BASE CHARACTERISTICS

- Centralised distribution at high capacity, increased efficiency & lower complexity
- Customisable, modular design to fit space, scale, and site-specific customer needs for water or oil-based liquid cooling systems.
- Improved N+1 effectiveness, compact footprint without compromising thermal output.
- All wetted parts are manufactured using stainless steel or equivalent materials suitable for data center applications.



1. Pumps
2. Plate Heat Exchanger
3. Piping & Frame
4. Sensors & Controls
5. Inline Filters
6. VFD

MARKETS

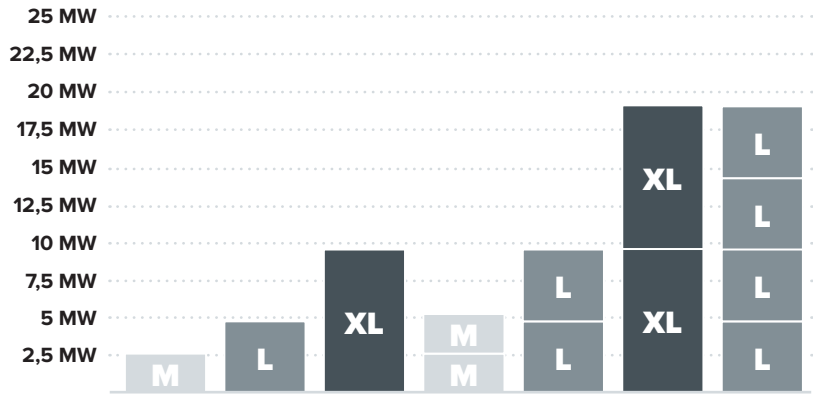
Data Center

MODULES

Numbers based on redundancy Pumps n+1, PHE n+1 Winter operation

CCDU	Single Module M	Single Module L	Single Module XL
Cooling Capacity	2,500 kW	4,600 kW	9,500 kW
Height		3,210 mm	3,210 mm
Width		2,787 mm	2,787 mm
Depth		9,200 mm	12,200 mm
Weight		17,500 kg	24,000 kg

COMBINATION EXAMPLES



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TECHNICAL DETAILS

Summary for Single Module XL

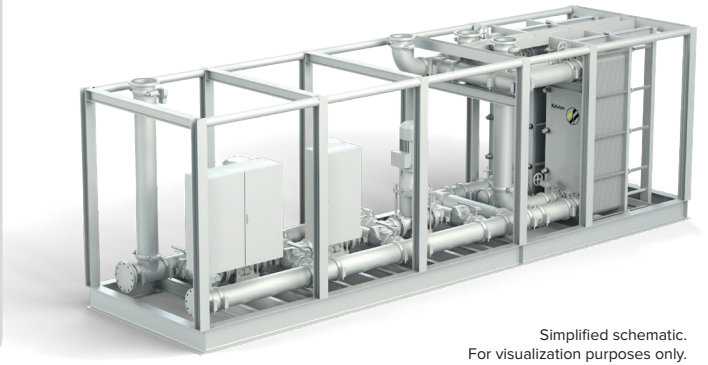
CCDU	Single Module XL
Cooling Capacity	9,500 kW
Approach temperature	1.8 K

Operational Media	Primary Side	Secondary Side
TCS/ FS	Water / Glycol	Water / Glycol
Flow	795 m^3/h	795 m^3/h
Inlet Temperature	43.5 °C	55.6 °C
Outlet Temperature	54 °C	45 °C

Pump Type	Single Stage End Suction Pump (Stainless steel wetted parts)
Power Supply	460V 60Hz
Inline Filtration	Bag Type (25µm)
Expansion Vessel	~ 500 liters
Sensors & Controls	Including DP+DT Breakers, VFD and PLC

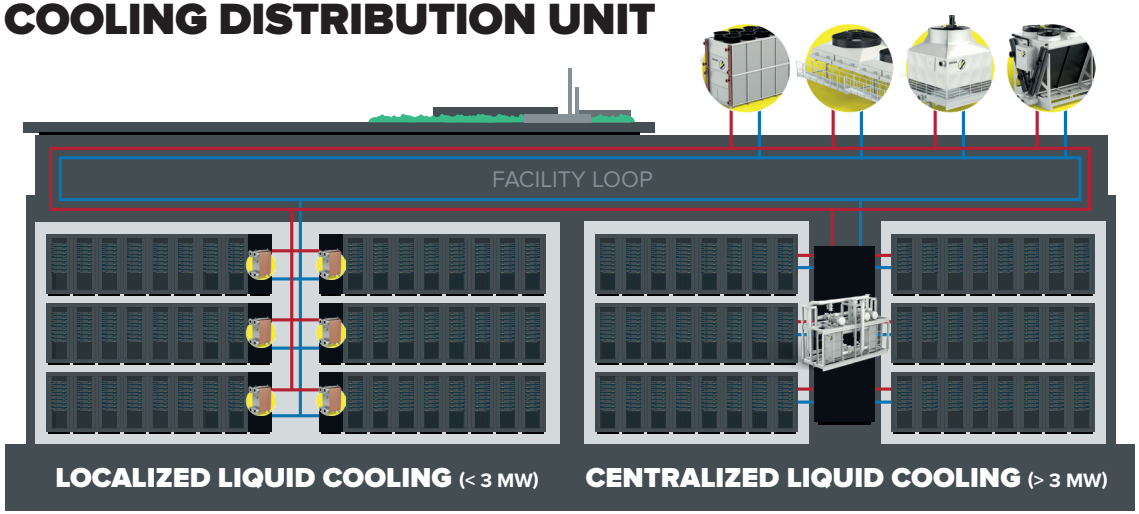
ACCESSORIES

- Flow Meter
- Side Stream Filter
- Air Vents for Expansion Vessel
- Isolation Valves (Manual/Lever Operated)
- ATS
- Harmonic Filters



Simplified schematic.
For visualization purposes only.

LOCALIZED VS CENTRALIZED COOLING DISTRIBUTION UNIT



WHY THE CCDU

MAINTAINABILITY
Located outside of Whitespace, more rack space available.

SCALABILITY
Support growth without touching operational racks.

MONITORING
Single interface for monitoring multiple loops and alarms.

LOWER REDUNDANCY COSTS
Redundancy at central level rather rack level, lowers CAPEX and OPEX

HIGHER VOLUME CAPACITIES
Higher thermal inertia enhances system resilience against fluctuating heat loads.

HEAT REJECTION INTEGRATION
Direct connection to facility chilled water, improves hydraulic efficiency.

INITIAL CAPEX
Lower Cost/KW at large scale VS higher per rack costs.