

INDUSTRIAL FIELDBOOK

Data-Center Liquid Cooling & CDU

V1.3 · Evidence-backed industrial intelligence

FREE PREVIEW — PARTIAL COVERAGE. This document shows a deliberate subset of the full product so you can judge the method and the evidence chain. Counts shown as PARTIAL are not the full product counts.

29 manufacturers · 65 current product families · 524 family×attribute specifications · 558 source-linked evidence relationships · sources checked 2026-09-10

This brief is the orientation layer, not the product. The comparison tables, the specification matrix and the full evidence chain are in the accompanying workbook.

What is inside the full package

Sheet / file	What it gives you
FULL COMPARISON WORKBOOK	One row per product family across every evidenced attribute, with lifecycle status and coverage counts.
FAMILY SCREEN	The screening sheet: the attributes a buyer filters on first, one row per family.
SPEC MATRIX	Families against the well-covered attributes, side by side.
COMMERCIAL SPECS	Every commercially included specification in long form, with its evidence class and caveat.
EVIDENCE	All 558 evidence relationships: the normalized value, the exact supported claim as published, the source type and a clickable source URL.
ATTRIBUTE COVERAGE	How many families carry each attribute, so you can see how complete a field is before relying on it.
METHODOLOGY	Inclusion rules, exclusions, known gaps and limitations.
CSV / JSON EXPORT	The same commercial specification set in machine-readable form.

Highest-coverage attributes in this category

Attribute	Families populated	Coverage	Evidence rows
Lifecycle status	60 of 65	92.3%	67
Product type	65 of 65	100.0%	65
CDU architecture	39 of 65	60.0%	60
Exact family name	57 of 65	87.7%	57
Cooling capacity kW max	32 of 65	49.2%	32
Form factor	24 of 65	36.9%	24
Cooling target	23 of 65	35.4%	23
Pump redundancy	19 of 65	29.2%	19
Phase	9 of 65	13.8%	15
Cooling capacity kW min	14 of 65	21.5%	14
Controls	13 of 65	20.0%	13
Applications	10 of 65	15.4%	10
Redundancy architecture	9 of 65	13.8%	9
Coolant	9 of 65	13.8%	9

Coverage is stated deliberately. A category where an attribute is evidenced for a third of the families is reported that way rather than padded.

How the evidence works

Of 558 commercially included evidence rows, 303 are VERIFIED_DIRECT (the value is stated on the cited source) and 255 are DERIVED_DETERMINISTIC (the value follows mechanically from stated facts by a recorded rule). 431 further rows held in the build are excluded from the commercial view because they are analytic inferences, unresolved conflicts or status-unclear. All 558 published rows carry a source URL; 65 distinct public sources are cited.

Evidence class	Meaning
VERIFIED_DIRECT	The value appears on the cited manufacturer page, document or disclosure. The exact wording is reproduced in the evidence sheet.
DERIVED_DETERMINISTIC	The value follows from stated facts by a single recorded rule, with the rule shown on the row.
EXCLUDED	Analytic inference, unresolved conflict or status-unclear. Not published.
UNKNOWN / NOT ESTABLISHED	The sources reviewed did not establish the fact. Not a negative finding.

Worked evidence chains from this build

Attribute & value	Exact supported claim as published	Source
exact_family_name Vertiv CoolChip CDU	Seamlessly transition to high-efficiency liquid cooling technology with Vertiv™ CoolChip CDU (next generation of Vertiv™ Liebert® XDU family)	https://www.vertiv.com/en-us/products-catalog/thermal-management/high-density-solutions/
cooling_capacity_kw_min 100	It allows for in-rack, end of row, or perimeter placement options. Easily distribute coolant to efficiently manage power dense deployments with liquid-to-liquid heat exchange up to 100 kW, 450 kW, 600 kW, 1,350 kW, or 2,300 kW, an	https://www.vertiv.com/en-in/products-catalog/thermal-management/high-density-solutions/
cooling_capacity_kw_max 2300	It allows for in-rack, end of row, or perimeter placement options. Easily distribute coolant to efficiently manage power dense deployments with liquid-to-liquid heat exchange up to 100 kW, 450 kW, 600 kW, 1,350 kW, or 2,300 kW, an	https://www.vertiv.com/en-in/products-catalog/thermal-management/high-density-solutions/

How to use it

Start on FAMILY SCREEN to shortlist families against the attributes your project filters on. Use SPEC MATRIX to compare well-covered attributes side by side. Use COMMERCIAL SPECS for the complete long-form list and EVIDENCE for the exact wording behind any value. ATTRIBUTE COVERAGE tells you how complete each attribute is before you rely on it.

Limitations

An empty cell or the word UNKNOWN means the sources reviewed did not establish the fact. It does not mean the product lacks the capability, and it is not a negative finding. Missing data is left missing rather than filled by assumption.

Every evidence row carries the date its source was checked. The COVERAGE tab states the range of those dates. This is a dated snapshot, not a live feed.

It is not a price list, lead-time guide, availability feed or procurement recommendation. It does not establish engineering suitability for your application, approved-vendor status, warranty terms, service coverage, certificate scope beyond what the source states, or export eligibility. It does not rank suppliers.

This is the free preview. Coverage here is deliberately partial: it exposes a subset of families and a subset of attributes. The full workbook adds the complete family set, the full specification matrix, the complete evidence chain and the machine-readable exports.

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This document is a dated research snapshot, not advice, a quotation, or a recommendation. Verify against the cited source before relying on any value.