

INDUSTRIAL FIELDBOOK

Data-Center Chillers

V1.1 · 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.

9 manufacturers · 17 current product families · 153 family×attribute specifications · 163 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 163 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
Data center application	17 of 17	100.0%	21
Refrigerant	13 of 17	76.5%	16
Compressor type	16 of 17	94.1%	16
Cooling capacity tons range	9 of 17	52.9%	9
Oil free	8 of 17	47.1%	8
Integrated free cooling	6 of 17	35.3%	6
Magnetic bearing	6 of 17	35.3%	6
Warm water support	4 of 17	23.5%	5
Maximum ambient	4 of 17	23.5%	4
Leaving chilled water temp range	4 of 17	23.5%	4
Ambient range	4 of 17	23.5%	4
Cooling capacity kW range	4 of 17	23.5%	4
Cooling capacity kW max	3 of 17	17.6%	3
Air cooled	3 of 17	17.6%	3

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 163 commercially included evidence rows, 162 are VERIFIED_DIRECT (the value is stated on the cited source) and 1 are DERIVED_DETERMINISTIC (the value follows mechanically from stated facts by a recorded rule). 0 further rows held in the build are excluded from the commercial view because they are analytic inferences, unresolved conflicts or status-unclear. All 163 published rows carry a source URL; 24 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
cooling_capacity_tons_max 6000+ tons (CDHH)	Cooling Capacity: CDHH 900–6000+ tons (up to 21MW)	https://www.trane.com/commercial/north-america/us/en/products-systems/chillers/data-cent
cooling_capacity_kw_max 21000 kW (21 MW)	Trane CenTraVac® CDHH and CVHH chillers are engineered to meet the demanding needs of hyperscale and colocation data centers with exceptional efficiency, proven reliability, and scalable performance. With capacities up to 21MW, lo	https://www.trane.com/commercial/north-america/us/en/products-systems/chillers/data-cent
refrigerant R-1233zd (low-GWP)	Ultra-low-GWP R-1233zd enables high efficiency with minimal environmental impact.	https://www.trane.com/commercial/north-america/us/en/products-systems/chillers/data-cent

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.

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