



Download
the flyer!

DATA E-COOLER™

High-performance **liquid chiller**, **innovatively** designed to ensure **reliability** and **efficiency** in your **Data Centers**.



R290

Make your Data Centers
greener and more efficient!

A partial PUE among the lowest in the market.



SIZING CRITERIA

- ▶ **Geographic location of the data center**
- ▶ **Temperature range of the water loop (from 18°C to 35°C inlet water)**

- Dimensions of units for installation on the roof
- PUE and WUE
- Acoustic constraints
- Number of operating hours in Free chilling (dry or adiabatic cooling versus thermodynamic group)

A tailored definition for each project, based on the objectives you have set:

- Capex (Capital Expenditure)
- Opex (Operational Expenditure)
- Return on Investment (IRR/ROI)

We offer a personalised assessment to help us determine the most appropriate solution for you.



Compatibility with all cooling terminals:

- ▶ CRAH
- ▶ Fan Wall
- ▶ DLC
- ▶ Immersion cooling

Recovery of waste heat:

- ▶ Heat networks
- ▶ District Heating
- ▶ Health Sector
- ▶ Eco-Districts
- ▶ Public Administration

COMPARATIVE CASE STUDY BETWEEN A STANDARD COOLER AND THE DATA E-COOLER

- Server room with a power capacity of 1 MW IT – Water temperature range 20/30°C – MEG 30 %.
- Average electricity consumption share of a standard cooler: 144 kW.
- Other systems + auxiliaries: Electricity, security lighting (video surveillance, etc.).
- Heat recovery from a district heating network, eco-districts, healthcare facilities, etc.
- p PUE (Partial PUE) or system PUE refers to the portion of the PUE associated with the cooling system.

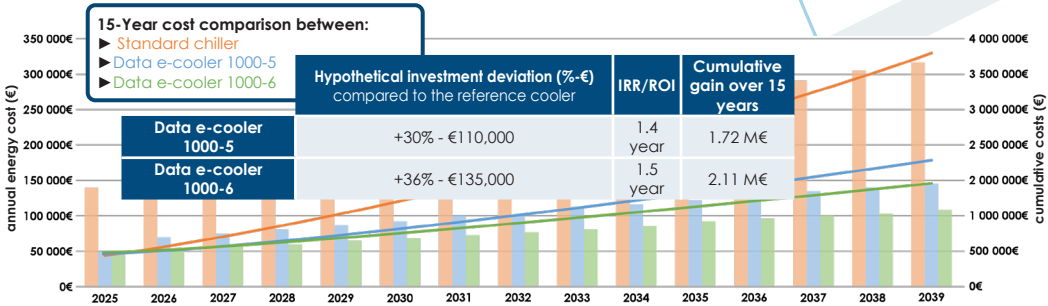
The performance of the **Data e-Coolers** presented below is calculated while maintaining the same IT and auxiliary power levels as for the standard system.

	2019		2023	
	Paris/Lille	Marseille	Paris/Lille	Marseille
Target Free chilling operation > 68% (8 months per year)				
Data e-cooler reference	1000-5	1000-8	1000-5	1000-8
Real Free chilling (%)	73.9	69.7	70.3	69.2
Machine dimensions (mm)	12250 x 3,000 x 3,300	15730 x 3,000 x 2950	12250 x 3,000 x 3,300	15730 x 3,000 x 3,300
Average power consumption ⁽¹⁾	60.3	69.3	66.6	68.8
Sound pressure level ⁽²⁾	64	64	65	62
p WUE	0.120	0.214	0.098	0.226
p PUE	0.060	0.069	0.067	0.069
Target Free chilling operation > 75% (9 months per year)				
Data e-cooler reference	1000-5	1000-9	1000-6	1000-10
Real Free chilling (%)	78.8	76.2	79.6	73.6
Machine dimensions (mm)	12250 x 3,000 x 3,300	16890 x 3,000 x 3,300	13,410 x 3,000 x 3,300	18050 x 3,000 x 2950
Average power consumption ⁽¹⁾	50.8	55.2	49.0	60.4
Sound pressure level ⁽²⁾	65	62	64	71
p WUE	0.132	0.247	0.126	0.221
p PUE	0.051	0.055	0.049	0.060

⁽¹⁾ Electrical Power in kW
⁽²⁾ Sound Pressure at 15 meters (Q=2) in dB(A)

The results presented above are based on actual data from the reference year, with a free cooling operational target of > 68% and then > 75%. Actual performance may vary depending on climatic conditions.

ENERGY PERFORMANCE COMPARISON MULTIPLE CONFIGURATION OPTIONS AVAILABLE UPON REQUEST



- ▶ Comparative analysis between two distinct choices of Data e-Cooler and the standard cooler in Paris in 2023
- ▶ Electricity price (France): €0.11/kWh in 2025, followed by a successive increase of €0.01/kWh per year

A 100% FRENCH SOLUTION

Low energy consumption

- ▶ Optimisation of Free Chilling operating times through the use of adiabatic cooling
- ▶ Optimisation of compressor operating modes (improved efficiency)
- ▶ Low PUE

Environmental impact (limited carbon footprint)

- ▶ Use of a natural refrigerant for cooling – Propane R290 – GWP 0.02
- ▶ Total heat recovery for return to the heating network
- ▶ Possibility of rejection to the adiabatic cooler in the event of heating network failure

Redundancy

- ▶ Modular and Multi-Circuit Solution

CSR

- ▶ Strategic lever for competitiveness



DATA E-COOLER™



CONTACT OUR EXPERT

Johann RIVOALEN

Data Centre Market
Development Manager

johann.rivoalen@ett-hvac.com

+33 7 72 11 22 31



Reference: MARK-FIC_76-EN_B



ETT - Route de Brest - BP26
F-29830 Ploudalmézeau
Tel: +33 2 98 48 14 22



www.ett-hvac.com