

**NEW**

# Modular Dry Cooler



PATENT  
PENDING



ENERGY EFFICIENCY



LONG-TERM RELIABILITY



POWER SCALABILITY



LOW NOISE IMPACT



OPERATIONAL CONTINUITY

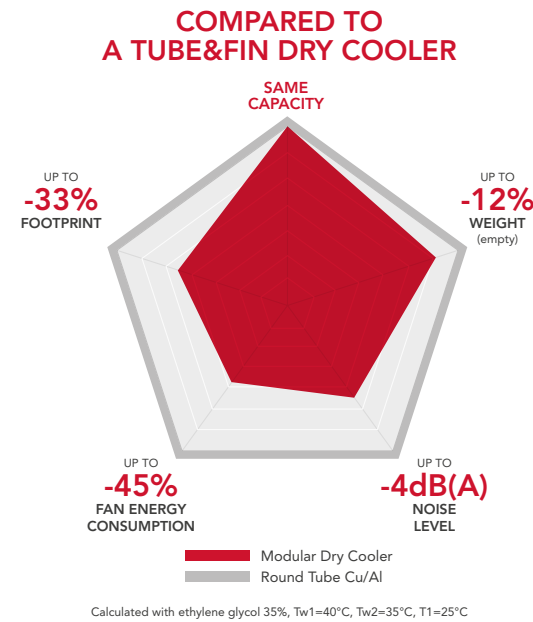


LOW FOOTPRINT AND WEIGHT

# Main advantages

ThermoKey's innovative Modular Dry Cooler is designed to deliver maximum energy efficiency, operational continuity, flexibility, and power scalability — ensuring outstanding performance while reducing transport and management costs.

- HIGH ENERGY EFFICIENCY
- OPERATIONAL CONTINUITY
- LONG-TERM RELIABILITY
- POWER SCALABILITY
- REDUNDANCY
- EASY AND QUICK MAINTENANCE
- LOW NOISE LEVEL
- HIGH CORROSION RESISTANCE
- LOW FOOTPRINT, SIZE AND WEIGHT
- LOW INSTALLATION COSTS



# Operational continuity

The innovative design is engineered to ensure no service interruption, even during maintenance

Thanks to the hot-swappable components and manual valve system, each half-module can be isolated for quick and safe cores replacement in less than one hour.

This guarantees continuous operation, maximum uptime, and simplified maintenance, with no need for specialized training.



# Energy efficiency and scalability

The Modular Dry Cooler is specifically engineered to meet the critical demands of Data Center and IT Cooling systems

Modular architecture enables scalable capacity expansion to meet growing demand, integrating plug-and-play modules in series or in parallel.



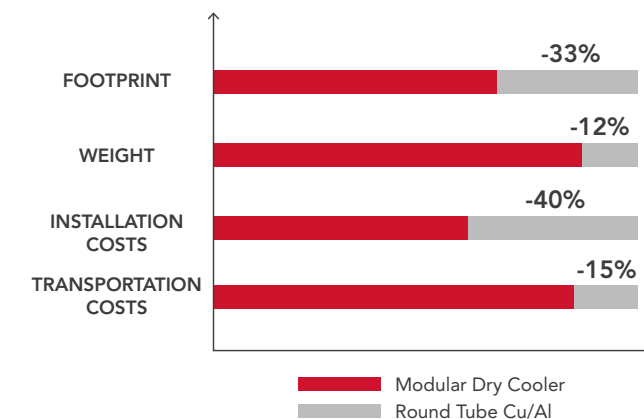
The advanced microchannel cores ensure superior heat transfer efficiency with lower air-side pressure drops. This directly reduces fan energy consumption by up to -45%, improving the overall PUE index.

Modular Dry Cooler is engineered to guarantee high system resilience and greater redundancy, requiring fewer units. It fully aligns with any data center Tier requirements while lowering overall CAPEX.

# Low size and costs

The aluminium based microchannel technology offers a highly efficient approach to transport and installation.

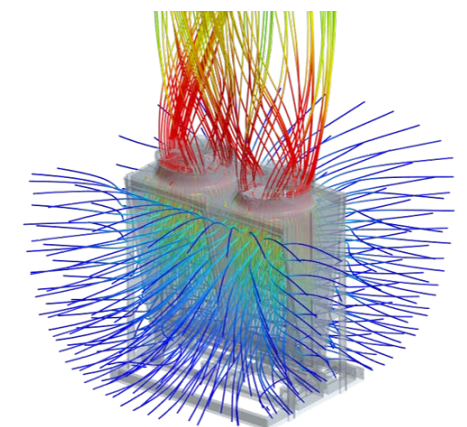
Compared to a same capacity traditional round-tube unit, the Modular Dry Cooler offers measurable benefits:



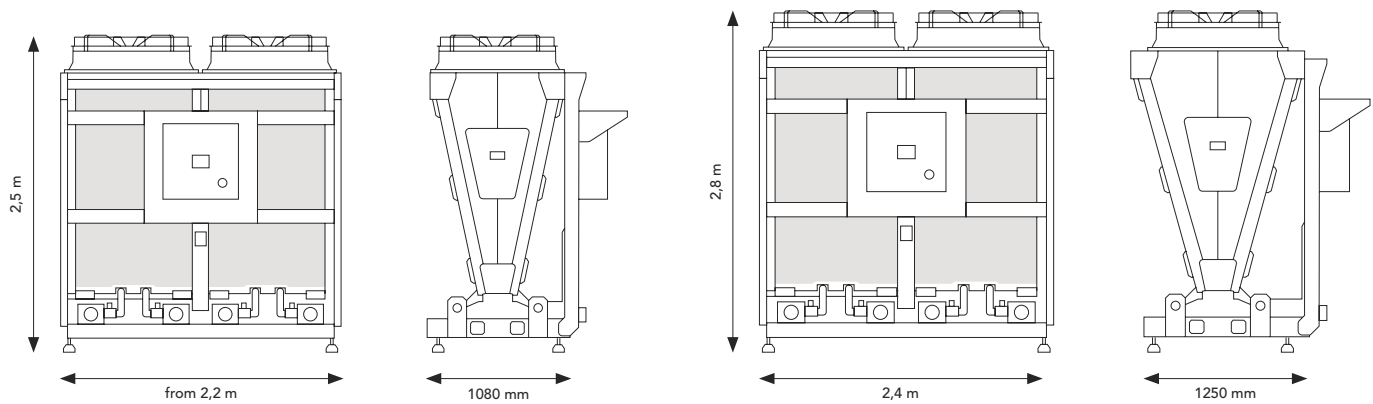
# Low noise level

The design ensures low air-side pressure drops and high airflow uniformity, improving aerodynamic efficiency.

This reduces fan power consumption and achieves noise reduction of up to -4 dB(A).



## CONFIGURATION AND DIMENSIONS



### FANS

Fan diameter	ø 800 / 910 / 1000 mm
Fan type	AC / EC
Unit height	Container, Super Jumbo

### HEAT EXCHANGERS

Fin type	Louvered
Fin spacing	1.27 mm (standard) with option of 1.1 mm
Tube geometries	MPE25(HP), MPE32(HP), MPE32(LP)

### CONTROL OPTIONS

Smart control with EC fans	Electrical panel with: <ul style="list-style-type: none"> <li>EC Manager "Q2E" or "Q4E" or FC400 controllers for Modbus control</li> <li>FC300/ECP/UN for 0-10V control</li> </ul>
Smart control with AC fans	Electrical panel + Phase cut speed controller

### CUSTOMIZATION

- Hot swappable components with manual valve system
- Option to connect modules in series
- Single pass version for lower pressure drops
- Containerizable and non-containerizable version
- Available in all standard electrical panel configurations
- Available with AC High Temperature, EC with Axitop or ZA PLUS
- UL certification available (cores and electrical equipment)

### MATERIALS

Fins and tube materials	Aluminium
Casing	Galvanised steel and Galvanised steel painted RAL 7035, Stainless steel (option)
Connections material	Copper or Stainless steel
Connections diameter	From 2" to 6"
Fans	Guard grille: Steel painted, Stainless steel Impeller + Blades: Aluminium, Painted, Steel painted
Electrical box	Pvc, Steel painted, Stainless steel, Fiber Glass
Shock absorbers	Galvanised Steel, Stainless steel
Surface treatments	TK Pro, Electrofin, Blygold PoluAl MC

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