

Dry Coolers



Applications

- HVAC-R
- Data Center
- Industrial Cooling
- Energy & Process Cooling
- Cogeneration
- Power Plant

High-Efficiency Air Heat Exchangers

When efficiency and reliability matter, Wieland Dry Coolers set the standard. Designed for free cooling, process heat rejection and energy recovery applications, our range covers every need – from data centers and power plants to industrial and cogeneration systems. Every unit is engineered to minimise energy consumption, reduce environmental impact and deliver consistent performance throughout its entire service life.



High energy
efficiency



Low environmental
impact



Reliable
performance



Flexible design



Easy installation
& maintenance

Applications

Designed for Every Challenge

HVAC-R

Efficient and reliable cooling solutions for comfort applications.



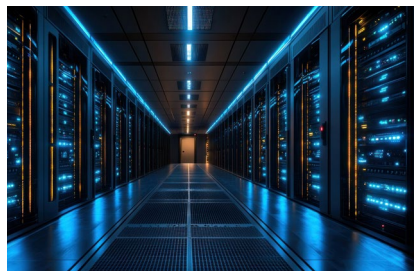
Industrial Cooling

Process cooling and heat recovery for industrial processes.



Data Center

High performance and redundancy for mission-critical systems.



Power Generation

High-capacity heat rejection for power and cogeneration plants.



Optimized Dry Cooling Solutions

Our dry coolers combine efficient heat exchange surfaces with a compact and robust design to ensure reliable performance. Each unit is adapted to its specific application, with a wide choice of materials and configurations to meet different operating requirements and environmental conditions.

Dry Coolers Range

Flat Configuration

FN

Optimized models for easy maintenance and long-term operation. Available in vertical or horizontal air flow configuration.

Capacity: from 20 kW to 1000 kW.
Fans: from 1 to 14 fans.



FND



V Shape Configuration

FLV

Maximum capacity with a reduced footprint.

Capacity: from 50 kW to 2000 kW.
Fans: from 1 to 20 fans.



GLV



FVD



MVD



Adiabatic Configuration

FVSM

Specifically created and optimised for adiabatic system.

Capacity: from 50 kW to 2500 kW.
Fans: from 1 to 11 fans.



DUAL STAGE



Adiabatic System

Smarter Cooling.
Lower Consumption.
Higher Performance.

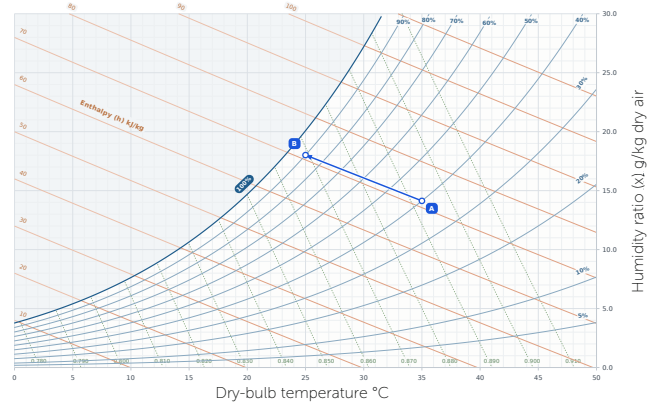
By pre-cooling the incoming ambient air through natural evaporation, the adiabatic cooling system significantly increases the efficiency and cooling capacity of the dry cooler while minimizing energy and water consumption.

Intelligent Control

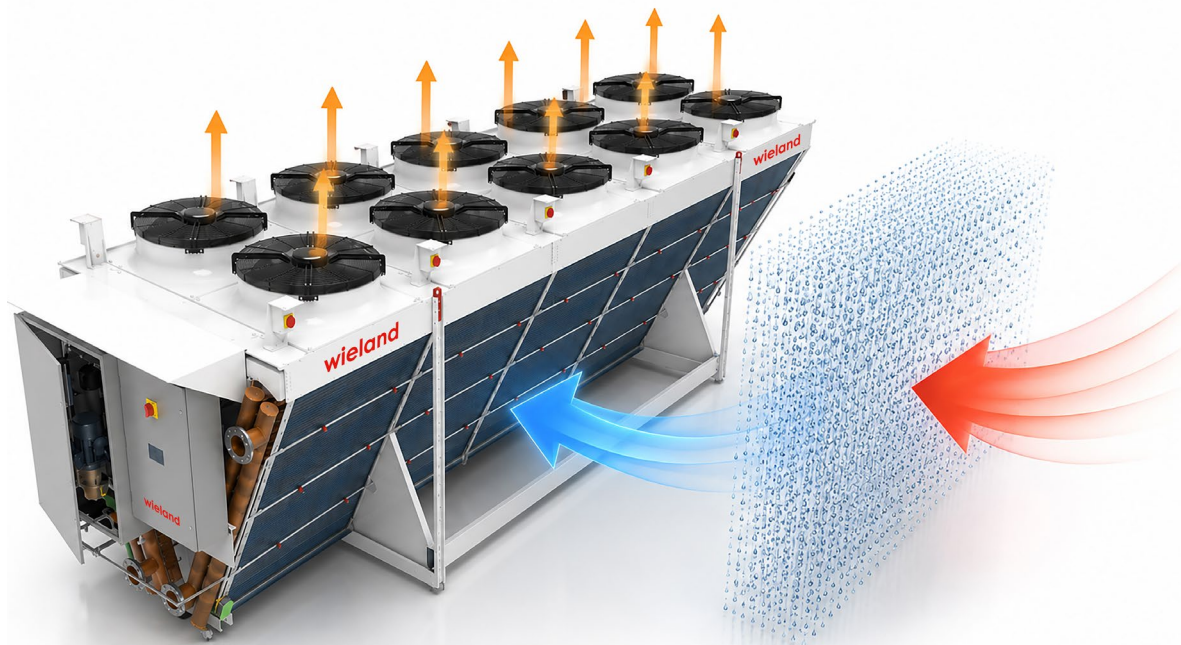
The adiabatic system is automatically activated only at high ambient temperatures. This minimizes both water consumption and operating costs.

Illustration of
Adiabatic Effect

Psychrometric chart



Adiabatic System: How it Works



Adiabatic Air Pre-Cooling: Before reaching the heat exchanger, ambient air is pre-cooled by water evaporation through either **spray** nozzles or an adiabatic media **PAD**, reducing the inlet air temperature.

Efficient Heat Exchange: The pre-cooled air flows across the heat exchanger coil, absorbing heat from the process fluid and enhancing heat rejection efficiency.

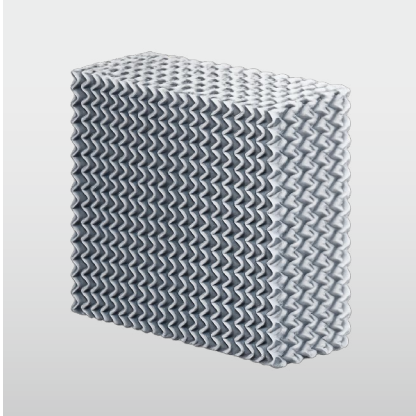
Process Fluid Cooling: The dry cooler removes heat from the process fluid, reducing its temperature before it is returned to the process or chiller system.

Adiabatic Solutions for Every Need



PD – Pad system

Cellulose or synthetic material pads wetted by water lowers inlet air temperature.



BS – Basic spray system

Nozzles spray water to pre-cool the incoming air before it reaches the heat exchanger.



OS – Spray system

with pump group 10 bar
Inlet air pre-humidification via atomisers.



Key benefits



Higher efficiency



Reduced environmental impact



Lower energy consumption



Operational reliability

Fan Speed Control & Regulation

Fan speed regulation allows optimisation of energy consumption and sound levels, adapting the unit's capacity to the instantaneous thermal load.



EC standard control panel

Dedicated panel for EC motors.
0 – 10V control, RS485/Modbus.
All EC motor applications



External analogue input

Analogue signal for BMS / supervisory system integration.
System automation



Modbus

Industrial communication protocol. Remote monitoring and regulation.
Supervised installations



Dry cooler



0 – 10 V MODBUS

Control Panel (EC)
Master / Slave

0 – 10 V
4 – 20mA MODBUS

BMS / Supervisory

Hydraulic Connections



Threaded connections
Quick connection for threaded-pipe systems.



Flanged connections
For flange systems PN16. High sealing integrity.



Air / vent valve
Automatic air removal from the hydraulic circuit.



3 Way Valve
A three-port valve that controls and diverts the flow of water between the free cooler and the chiller. Supplied with connection manifolds for easy chiller integration, it automatically switches to free cooling when conditions allow, reducing energy consumption.

Handling & Installation

Engineered for Safe Handling,
Easy Installation and Long-Term Reliability.



Lifting lugs

Eyebolts for safe lifting by crane.



Anti-vibration mounts

Reduce vibration and noise transfer to the structure.



Raised frame / feet

Custom height available to meet project requirements.



Protective guards

Protect coils from accidental impacts and external damage.



Built for easy installation



Save time

Smart design for quick and easy installation.



Reduce maintenance

Easy access and protection solutions extend unit life.



Improve safety

Robust construction for safe handling.



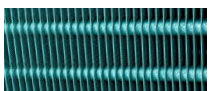
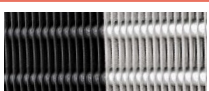
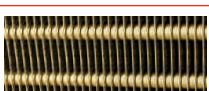
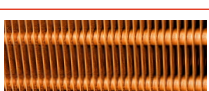
Increase reliability

High-quality details for demanding environments.

Coil Coating Solutions

The Right Protection for Every Environment.

Our range of protective coatings is engineered to ensure long-lasting performance and reliability of the heat exchanger in any operating condition, from standard HVAC to the most aggressive environments.

Coating / Treatment	Description	Key Benefits	Corrosion Resistance	Fin surface close-up
BARE Aluminium	Aluminium fins.	 Standard application.	 STANDARD	
HYDROPHILIC Aluminium	Hydrophilic coating that reduces water adhesion and improves drainage.	 Improved water drainage. Reduced frosting risk.	 STANDARD+	
PRE-PAINTED Aluminium	Aluminium fins pre-painted for enhanced protection.	 Additional protection.	 MEDIUM	
BLYGOLD® Epoxy-polyester	Epoxy-polyester coating with excellent corrosion resistance.	 High corrosion resistance. Long service life.	 HIGH	
HERESITE® Advanced polymer	Advanced polymer coating for superior protection in harsh environments.	 Very high corrosion resistance. Ideal for severe environments.	 VERY HIGH	
ELECTROFIN® Epoxy	Electrofin® coating with cathodic protection for extreme durability.	 Maximum corrosion protection. Extended durability.	 VERY HIGH	

Application guide



Commercial HVAC
Standard / Hydrophilic



Industrial facilities
Pre-Painted / Blygold®



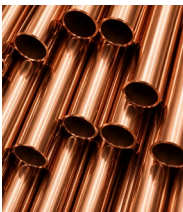
Coastal
Blygold®



Offshore &
Chemical industry
Heresite® / Electrofin®

Tube material options

Choose the optimal tube material to match your performance requirements and environmental conditions.



Copper tubes

Industry-standard solution combining excellent thermal conductivity and proven reliability.

Thermal efficiency
★★★★★
Corrosion resistance
★★★★★



AISI 304 stainless steel

Recommended for process applications and mildly aggressive fluids.

Thermal efficiency
★★★★★
Corrosion resistance
★★★★★



AISI 316L stainless steel

Maximum corrosion resistance for marine, chemical and demanding industrial applications.

Thermal efficiency
★★★★★
Corrosion resistance
★★★★★

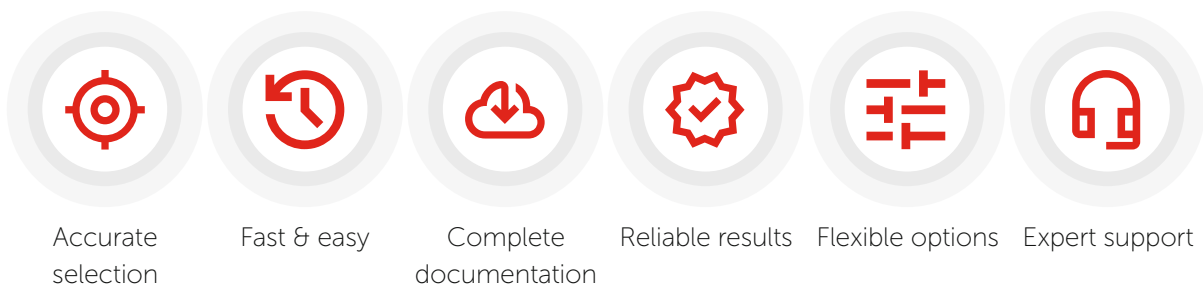
Software and Design

Wieland Selector Smart. Fast. Precise.

The online configurator that helps you find the ideal air-cooled solution for your project.

Wieland Selector is the user-friendly software designed to simplify the selection of the most suitable dry cooler.

In just a few steps, you can configure the unit that best matches your operating conditions and performance requirements.



wieland
wieland.com