# Dry Coolers Range

## Flat Configuration

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.

**FN**

**FND**

## V Shape Configuration

Maximum capacity with a reduced footprint.

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

**FLV**

**GLV**

**FVD**

**MVD**

## Adiabatic Configuration

Specifically created and optimised for adiabatic system.

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

**FVSM**

**DUAL STAGE**

# 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.


- Accurate selection
- Fast & easy
- Complete documentation
- Reliable results
- Flexible options
- Expert support

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# 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.

**Data Center**
High performance and redundancy for mission-critical systems.

**Industrial Cooling**
Process cooling and heat recovery for industrial processes.

**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.

# Adiabatic System

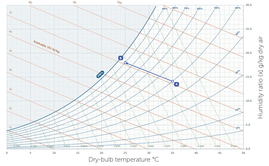
## Smarter Cooling. Lower Consumption. Higher Performance.

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.

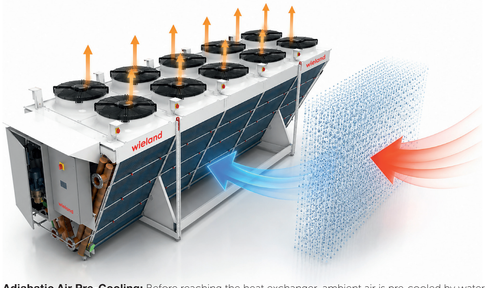
**Intelligent Control**
The adiabatic system is automatically activated only at high ambient temperatures. This minimizes both water consumption and operating costs.

## Illustration of Adiabatic Effect

**Psychrometric chart**




## Adiabatic System: How it Works



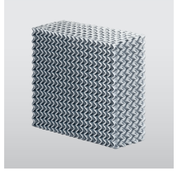

**Adiabatic Air Pre-Cooling:** Before reaching the heat exchanger, ambient air is pre-cooled by water evaporation through either **spray** nozzles or an adiabatic media **PAD**, reducing the inlet air temperature.

**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

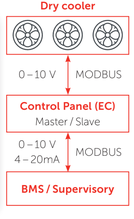
# Fan Speed Control & Regulation

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**




# 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.

NEW

**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 ★★★★★