

V TYPE DRY COOLER

Design Features



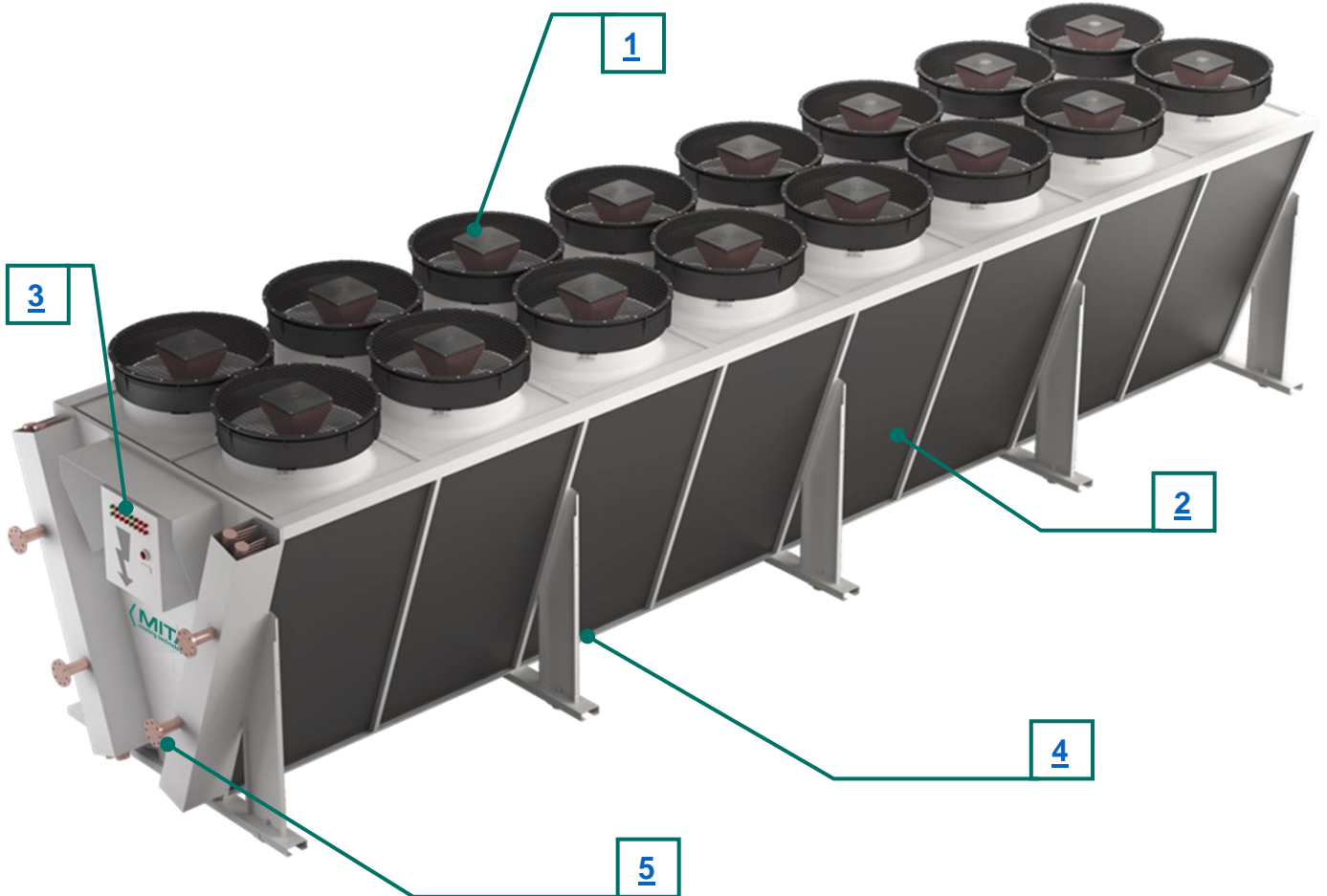
MDC-V Series



WATER SAVING



RELIABILITY AND QUALITY



Axial Fan Dry Cooler	
Factory Assembled - Modular V-configuration Design	
1	EC / AC Motor(s) directly coupled with fan
2	Heat exchange coils
3	Control Panel
4	Casing & support structure
5	Inlet/outlet connections
6	Factory assembled, plug and play configuration



MITA Cooling Technologies S.r.l. – Società a Socio Unico – Direzione e Coordinamento MITA Group S.p.A.
 Via del Benessere, 13 – 27010 Siziano (PV) – Italy – Ph. +39 0382 67599 – Fax +39 0382 617640 – info@mitact.it
 R.E.A. MI 1299175 – C.F. / Reg. Imp. MI n. 08973680153 – EU VAT: IT 05112560155 – Cap. Soc. i.v. Euro 1.000.000
 Sede Legale: Via F. Casati, 1/A – 20124 Milano (MI) – Italy
www.mitacoolingtechnologies.com

OPERATING DESCRIPTION

Dry coolers are simple and reliable equipment.

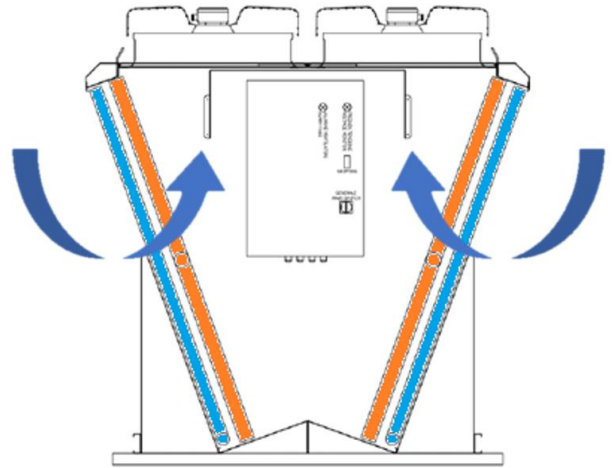
Their operating principle relies on an air/water sensible heat transfer via air pulled by the fans through a finned coil heat exchanger. Water or a mixture of water and glycol flows through the pipes that make up the coils and cools down as cooler ambient air brushes it. Fins are used to increase the overall heat exchange surface so that the equipment can be as compact and efficient as possible.

The water loop is closed and never in contact with the elements.

The only consumption is electricity to run the fans that moves air. Fans can be AC or EC type while fan control is guaranteed by a controller or a frequency converter that modulates fan RPM according to actual operating conditions.

Their performance and return temperature are a consequence of the place of installation.

The approach temperature is usually about 5°C.



PRODUCT RANGE & NOMENCLATURE

Length: Up to 12,5m

Versions: Single row fans or twin row fans

Coil type: Cu/Al, Cu/Coated Al / AISI/Al

Fin spacing 2,1 – 2,4 – 3,6 mm.

Capacity: from 20kW to 2000kW*

Fan size: Ø 800 – 900 – 1000mm

Fan type: AC or EC

Number of fans: 1 - 18

*dT 15°C at 25°C ambient

M D C - V - 6 - 2 x 4 EC			
<u>Product line</u>			<u>Fan type</u>
			EC AC
<u>Coil arrangement</u>			<u>Number of fans inline</u>
Twin coils in V	V		1-9
Single coil	F		
<u>Cooler lenght</u>			
		<u>Number of fan rows</u>	
		1-2	

1. EC AXIAL FAN

Axial fan with electronic control is positioned centrally with respect to the two V-shaped coils, for homogeneous air distribution.

ErP 2015 energy efficiency requirements compliant.

Variant: AC motor.

Optional: Individual Switch-Off for each fan to cut power without affecting any other fan ensuring continuous operation.



2. HEAT EXCHANGE COILS

Heat exchange coils arranged in a V layout inside the cooler are made of copper pipes and aluminum fins. Angle between coils, diameter of pipes, thickness and pitch of fins are designed to ensure the best heat exchange performance with suitable fluid and airflow pressure drops.

Optional:

- Flanged inlet connections
- Precoated fins



3. CONTROL PANEL (Optional)

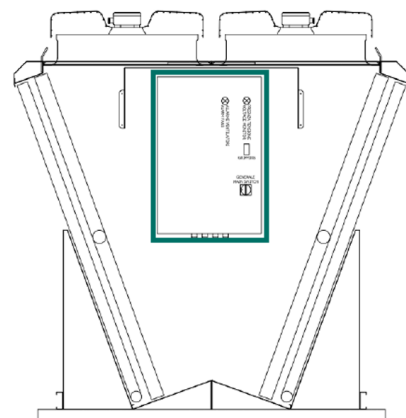
Electric box with protections for each fan and differential thermal breaker.

The electronic controller automatically regulates fans speed (from 10 to 100%) to keep a constant outlet fluid temperature.

Speed control together with EC fans allows for energy savings when ambient temperatures or thermal load are below nominal; also reducing noise levels.

Temperature probe is pre-installed and wired.

Variant: in case of AC motors a phase-cut controller is installed, regulating the fan speed rotation (down to 40% of rpm) according to the temperature probe signals.



4. CASING & SUPPORT STRUCTURE

Support structure made of press-folded galvanized metal sheets designed to properly support the heat exchange coils.



Supply of the cooler is limited to the parts listed above. Building and electrical works, pumps, collectors external to the cooler, valves, hoisting gear and any scaffolding and labor are therefore excluded. Accessories and/or constructional variants are available on request. MITA Cooling Technologies S.r.l. may carry out constructional improvements without notice. Images for illustration purposes only.