PAD-V
Sustainable adiabatic system for liquid cooling and gas condensing
STRENGTHENED... AND PATENTED: ADIABATIC ACCORDING TO MITA

LIKE VELVET TO RETAIN WATER

The humidifying pack for adiabatic operation stays damp for a long time, due to the “velvet effect” of the flocked PVC.

- Very short non-continuous wetting cycles: just a few seconds every 10-20 minutes instead of a constant “waterfall”
- Real water savings, also thanks to recovery and recycling.
- PVC pack and rayon fibre flocking (not organic-based) instead of the more common cellulose to prevent bacterial proliferation.

AIR INTAKE GRILLE

- Filters the air, but protects the adiabatic pack from light and foreign matter.
- Prevents water leaks, ensuring a clean environment around the machine.

Adiabatic operation in hot periods...

- The external air passes through the humidifier pack.
- The adiabatically cooled air is conveyed to the finned coils: the efficiency increases.
- Capable of working at lower ambient temperatures.
- No direct contact between water and finned coils.
A SAFE, DURABLE AND SUSTAINABLE SYSTEM

SMART FAN ADJUSTMENT
› The inverter on the motors adjusts the speed of the fans according to ambient temperature and thermal load.
› In adiabatic mode, the motors slow down during the wetting cycles; this prevents drops of water being dragged outside.
› The result: electricity savings and a healthy environment.

MAXIMUM FLEXIBILITY
› A completely parameter controlled system.
› Depending on thermal load needs, external temperatures, and water and energy consumption objectives, the system automatically adjusts fan rotation speed, wetting cycles and adiabatic/dry modes.
› Very low water and electricity consumption.

FLOCKED PVC ADIABATIC PACK
› Material does not deteriorate over time.
› Self-extinguishing.
› Recyclable at end of life.

NO NEED FOR TREATED WATER
› Programmed daily change of wetting water.
› Parts in contact with water are made of material that does not corrode and is easy to clean.
› The coils are not in contact with the wetting water.

... Dry operation in cold weather
› The external air is aspirated and conveyed directly to the coils.
› Humidification is deactivated: no water in the circuit.
› Fan speed modulated according to temperature.
› Guaranteed water and energy savings.
MITA’s secret for slashing consumption

Saving 1: the flocked PVC adiabatic pack is wetted to humidify the air only when needed and at intervals from 10 to 20 minutes (not continuously as occurs in other adiabatic packs).

Saving 2: once wet, the adiabatic pack releases only the water necessary to obtain an air temperature that will ensure the thermal performance (cooling) of the finned coil system. With other adiabatic packs, the quantity of water distributed on the pack is constant and independent of the condition of the air to be cooled.

Saving 3: the flocked PVC adiabatic pack just needs to be wet with non-pressurized water for a short time (about 15 seconds). In the most “extreme” wetting condition, with a wetting cycle every 10 minutes, the pump runs for just one and a half minutes every hour. A pump with 2 kW electric power thus consumes about 50 W/h: the equivalent of a low-power light bulb!
PERFORMANCE AND CONSUMPTION UNDER CONTROL

INDUSTRY 4.0
Four temperature probes to control the external temperature, the adiabatic section and the process fluid.

A PLC controls and automates the machine’s operation.

The data can be sent to a remote control panel.

OPTIMIZED EFFICIENCY
Obtained thanks to the electronically controlled fans that modulate speed according to various parameters.

WATER MANAGEMENT
Purging and replenishment are managed by a PLC.

MITA CONNECT
The data collected by the PLC can be sent to the MITA Connect platform for remote monitoring, record analysis and preventive maintenance.

MAINTENANCE HAS NEVER BEEN SO SIMPLE

The air intake grilles and adiabatic pack are easy to remove.

The outer doors make it easy to inspect the inner components.

Further, to minimize maintenance, the parts in contact with water are uncorrodable: AISI 304 stainless steel or PVC.
The experience of MITA Cooling Technologies with PAD-V and the other adiabatic systems ...

Examples of application of PAD-V

- PRODUCTION OF PLASTIC
- TRIGENERATION / COGENERATION
- DATACENTERS
- HVAC
- INDUSTRIAL REFRIGERATION
- FOOD & BEVERAGE
- HEAT TREATMENT

In plastic moulding systems

For trigeneration and cogeneration

In the power generation sector

In power plants

In dairies
You can always be sure to select the right product for your system thanks to a consultancy approach: the PAD-V adiabatic system complements the vast range of MITA Cooling Technologies coolers.

**Maximum adaptation** to customer needs: customization possible for complex environments.

You can be sure of reducing complexity and nasty surprises: **integrated Plug & Play solutions.**

**Optimized ROI** thanks to **water and energy** saving in real operating conditions.

**A choice that respects the environment:** We look for solutions to reduce noise and consumption constantly throughout the life of the product. Certification: ISO 14001 (environmental management) and EN 45001 (health and safety).

Since 1960, we have been a serious and reliable partner.
### DIMENSIONS AND WEIGHT

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<thead>
<tr>
<th>Model</th>
<th>Dimensions (mm)</th>
<th>Weight (kg)</th>
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<tbody>
<tr>
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<td>A</td>
<td>B</td>
</tr>
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### FANS AND WETTING PUMP

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<tr>
<th>Model</th>
<th>EC fans</th>
<th>Wetting pump</th>
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<td>Power intake (kW)</td>
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* Calculated according to ISO 3744

### HYDRAULIC CONNECTIONS

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