

# Kelvion



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## Kelvion Adiabatic System

# COOLING PERFORMANCE INSPIRED BY NATURE



## SUSTAINABILITY

Kelvion can look back to a 30 year experience with adiabatic systems. This technology can offer major benefits to your system and is perfectly adapted to our versatile V-Bank range.

During our extensive testing in our own R&D facilities we verified several spray systems to get the best possible results with regard to water distribution, water mass flow and droplet formation. We also tested different pad systems from numerous suppliers in our labs to judge independently the claims made when used with our design.

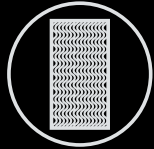
The result is a tailored adiabatic pad system with a new water distribution system for outstanding performance as well as an update to our existing spray system to offer improved performance and water efficiency. Both options will offer you a uniform, reliable cooling effect with a tested, verified air pressure drop.

## YOUR BENEFITS

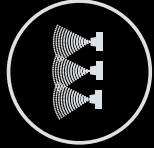
- ▶ Bespoke solutions for your specific requirements:
  - ▶ With more **free cooling** potential per year, energy and operating cost savings can be achieved
  - ▶ **Prolonged subcritical operation** when used for gas cooler operation provides additional energy and cost savings
  - ▶ **Decreasing condensing temperatures** when used on air cooled condensers leading to further energy and cost savings
  - ▶ **High peak load offset safety**
  - ▶ **Smaller footprint potential**
- ▶ New water distribution system for best performance
  - ▶ Minimal Pad Dry Spots
  - ▶ Reduction of water consumption with the same cooling effect
- ▶ 30-years of Expertise with Adiabatic Spray Systems

# TESTED AND VALIDATED IN OUR OWN R&D FACILITIES

Pad System **verified** and perfectly **aligned** to our V-Bank series and it's fanset



Various numbers of **spray nozzles** tested to get ideal water distribution, water mass flow and droplet formation



**28 R&D EXPERTS**  
**4 LOCATIONS**  
**2,000m<sup>2</sup> LAB AREA**

Spray Systems and Pads **verified** in our R&D facilities to ensure:

- ▶ Uniform **air-cooling effect** over the entire surface
- ▶ **Reliable** air cooling values
- ▶ Reliable **water consumption values**
- ▶ Validated **air pressure drop** of Pads
- ▶ Reliable operational **fan data**

## ADIABATIC **SPRAY** SYSTEM

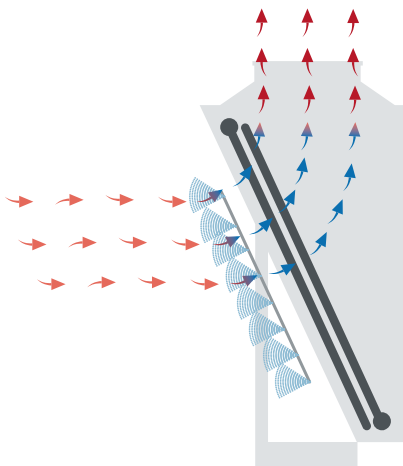


- ▶ The new spray nozzles use less water and produce smaller droplets. The result is 39% less water consumption with the same temperature cooling effect.
- ▶ The System is designed to evaporate 95% of the water in the air and not on the coil. This reduces coil fouling and potential corrosion.
- ▶ New pump box design improves maintenance
- ▶ With options for booster pumps and actuated flow valves, the system minimizes water consumption, varying with your needs.

## ADIABATIC **PAD** SYSTEM



- ▶ Our newly developed water distribution system on top of the pad combines standard systems, to make better use of the respective advantages.
- ▶ The system facilitates even air cooling with reduced water loss.
- ▶ Easy removal and installation of pads for periodic inspection and cleaning when required
- ▶ Optional meshes in front of the pad protect against dirt and debris depending on need. Easy to clean and extends the pad's service life.
- ▶ Bespoke solutions for every need: pre-mounted or mounted on site.



The evaporating energy of water is used to cool the incoming air.

This cooling effect can be used in a number of ways depending upon your design requirements

