

Adiabatic Retrofit Packages

Maximise system efficiencies and minimise downtime

Maximise system efficiencies and minimise downtime with our Adiabatic Retrofit Packages (ARP). Many industrial products and processes such as dry air coolers and air-cooled chillers operate at excessive efficiency when their inlet air temperature is lower. The Adiabatic Retrofit Package will greatly reduce the input power of mechanical components such as compressors and fans and is easily installed onto existing dry coolers or can be supplied with new installations.

The Adiabatic Retrofit Package is designed to be applied in either of the following two instances:

1: The specifying and installation of new equipment: The capital cost, on-going running costs and carbon footprint of various cooling equipment can be massively reduced. Equipment designed without an adiabatic kit will be more costly to purchase and operate. With an adiabatic kit, the capital cost, running costs and carbon footprint will be much lower. The application of an Adiabatic Retrofit Package can also allow cooler water temperatures which can, in turn, improve the efficiency of the piece of plant equipment being cooled.

2: Retrofitting on existing equipment: Often, as years pass, additional heat load is put into systems, be it industrial manufacturing process or air conditioning applications, meaning existing cooling equipment is no longer able to cope. Adding an adiabatic retrofit package to the existing cooling equipment can solve this problem and avoids the need to spend large sums of money on the strip out of old equipment and the purchase and installation of new equipment.



Installation:

Due to the lightweight design, attaching the adiabatic spray nozzle pipes is straightforward. Pipe clamps are attached to the piece of cooling equipment and the spray nozzle pipes clip directly into them.

The adiabatic wet box and control panel are supplied bolted together, meaning that only a single power supply is required. Depending on site requirements they can be supplied as a loose item for fitting to the piece of cooling equipment or to a wall etc. or, with optional galvanised supports, they can be supplied as a free-standing item.

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We have 30+ years experience controlling temperature for the world's most demanding industries.



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Options

Adiabatic retrofit packages can be configured with multiple options to suit any application. Systems can be configured for:

- ▶ Energy efficiency
- ▶ Minimum water consumption
- ▶ To serve multiple systems
- ▶ For critical applications, a run and standby UV system and spray booster pump can be supplied



Legionella Control

Having met with and received a report from the leading Legionella experts at the HSE (British Health and Safety Executive) the manufacturer states, with confidence, that the Adiabatic Retrofit Packages do not need to be registered with local authorities under the 'Notification of Cooling Towers and Evaporative Condensers Regulations 1992' act. This is due to the combination of unique safety features and control functionality including, amongst others, UV sterilisation (99.99%+ effective at killing all known strains of Legionella bacteria), regular purging and control interlocks to ensure Legionella bacteria cannot develop or be distributed.

Environmental Impact - Minimal Waste Usage

Water is a precious resource and should be used sparingly wherever possible. As well as being the safest on the market, this system also uses the least water. Unlike traditional systems, the adiabatic retrofit operates based on an air thermostat and sprays above a set air temperature. Unlike the integrated adiabatic system the adiabatic retrofit package does not receive any feedback from the systems it is applied to and as a result is unable to utilise the pulse system associated with the standard adiabatic system that we offer. Additionally, a low air temperature cut out is included so that the system does not operate needlessly during cooler parts of the year. Multiple spray nozzles inject moisture into the incoming airstream in a counter-flow pattern to ensure an even coverage, with no 'hotspots', in order to maximise efficiency.

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