UK EXCHANGERS LTD
the heat transfer specialists

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# Air to Air Heat Exchangers

## Type 1- Air to Air Plate Heat Exchangers

**Air to Air Plate Heat Exchangers, or Air Plates as they are also known, are an extremely effective and low-cost way of reducing the heating or cooling loads on the treatment of process air and air conditioning systems. A reduced heat-ing or cooling load means lower energy bills and carbon emissions.**

**Air Plates use the exhaust air to pre-heat or pre-cool the in-coming supply air, without the two air streams ever mixing.**

**The box-like construction of the heat exchanger can be supplied with flanges that can be drilled through for connecting to adjacent ductwork for permanent installation. Alternatively, they can be mounted on "Y" section or rails to enable easy removal for cleaning.**

## Typical Applications

- Heat recovery from flue stacks, ovens extracts and process areas, to pre-heat incoming air for process heating and drying applications.
- Heat recovery from exhaust air for space heating for factories, offices and warehouses.
- Pre-heating of combustion air within gas boilers.
- Pre-cooling of incoming air for air-conditioning units using exhaust cool air.
- De-humidification or humidification of air streams.
- Electrical equipment cooling.

## Efficiency

Energy recovery can be as high as 70%, depending upon operating conditions.

## Plate Types

- Corrugated plate surfaces, for high efficiency and energy recovery.
- Smooth surface plates that can be easily cleaned for dirty air streams.


## Materials

- Aluminium – non-corrosive air streams. Max. temperature 200 °C.
- Epoxy coated aluminium – adds protection to the aluminium for air streams containing salts etc.
- Mild steel – high temperature, dry non corrosive air streams. Maximum temperature 500 °C.
- Stainless steel – moist or corrosive air streams. Maximum temperature 500 °C.

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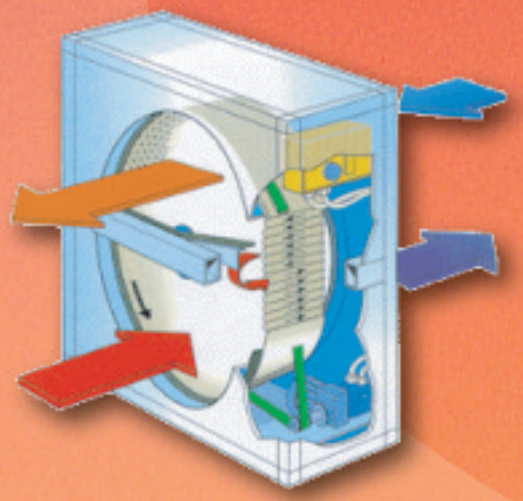
## Type 2 - Thermal Wheels

**Thermal Wheels are installed across hot and cold air ducts. As the Thermal Wheel rotates, the extended surface is heated by the hot air stream. When the rotation passes through the cold air duct, the wheel cools down, thereby transferring heat to warm up the incoming air.Wheel diameters range from 500 to 2,500 mm.**



## Applications

- Heat recovery.
- De-humidification of air streams.

## Efficiency

Efficiency per volume unit is generally higher than the equivalent Air Plate. In addition, for high air flows Thermal Wheels take up less space.

## Materials

- Aluminium.
- Epoxy coated aluminium.
- Aluminium with Hygroscopic surface.

## UK Exchangers – Expertise on Tap

The UK Exchangers team brings many years of wide-ranging experience and technical know-how to bear on your heat transfer needs.These skills are yours to tap into. Whether you have a new project or replacement in mind, we're here to help.

## Other Products from UK Exchangers

As well as Air to Air Heat Exchangers, UK Exchangers offer a comprehensive range of heat exchangers, designed to meet the majority of applications:-

- Plate Heat Exchangers – gasketed, brazed, all-welded, spares & service
- Finned Tube Coils both new installations and replacements
- Corrugated Tube in Tube Heat Exchangers
- Heat Transfer Panels – for in-tank heating and cooling
- Instant Hot Water Packaged Systems – steam-to-water and water-to-water

## CONTACT

To contact UK Exchangers, or for further information on any of our products:–

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