

Craftmanship in air

AirCraft Air Handling Ltd

# AIR HANDLING UNITS & ANCILLARIES





# WHY CHOOSE AIRCRAFT AIR HANDLING

### EXPERIENCE, KNOWLEDGE, AND QUALITY MANUFACTURING

In a highly competitive market where product specification is governed by regulatory standards and the environment in which it is being used, selecting a manufacturing partner with both technical and sector experience is essential for the success of any Air Handling Units (AHU) project.

For over 25 years, AirCraft Air Handling have been proudly manufacturing high-quality standard and bespoke AHUs for use across multiple sectors, including healthcare, shopping centres, pharmaceutical, food processing, manufacturing and catering establishments.

We work with our customers to help, with our specialist knowledge of the environments where our equipment is being used and how it interfaces with both existing and new equipment.



# YOUR AHU PARTNER

We are recognised as one of the UK's leading manufacturers of Air Handling Units and are well known for our ability to deliver technically complex air handling and ventilation solutions. The AHUs we manufacture deliver controlled fresh, filtered, chilled, warmed and humidity-controlled air.

Located in Stafford, close to the M6, our 10,000 sq. ft. of industrial premises provides the ideal base for our project team, design facilities and manufacturing.

The AHUs we manufacture are suitable for both internal and external installation. Depending upon size and purpose they can be floor or ground-mounted or suspended. For environments that are exposed to extreme or corrosive environments, like those typically found where salt content is in the air, we offer a range of options, including stainless steel and epoxy coatings.

With today's increasing demands on energy consumption, our project team works with you to focus on optimising the energy efficiency of our AHUs and their ongoing running costs. We are also fully focused on ensuring that the durability and reliability of our products that we are well known for continue to be built within our products.

Depending upon size, the AHUs we manufacture can be delivered fully assembled or broken down for flat pack delivery to any location. We deliver across the UK, and have a team of fully qualified and skilled engineering installers who can help with on-site assembly and commissioning.

# NEW SYSTEMS, REFURBISHMENT AND UPGRADES

Although AirCraft Air Handling have many relationships with end-user customers, much of our work is undertaken in collaboration with M&E Consultancies, HVAC installers and Building Services Providers.



#### **NEW SYSTEMS**

Our project team are always happy to assist with a site survey to help with decisions regarding imminent replacement, feasibility or budgetary evaluation. After project commissioning, our design team will work with you to produce the designs required for the manufacturer of your AHU to work within the limitations of your chosen installation location.

Once delivered and assembled, our fully qualified engineers will liaise with your representative to ensure all elements of the AHU are calibrated and demonstrated where necessary. We work alongside other commissioning trades such as BMS, refrigeration or gas contractors and airside commissioning engineers to help ensure your AHU performs as intended.



#### REFURBISHMENTS

As an AHU manufacturer of more than 25 years, we have already satisfactorily refurbished many of the earlier AHUs we have supplied. However, refurbishment is generally only possible in instances where the frame and casing permit. We also have experience in refurbishing AHUs that have been manufactured by other companies.

A refurbishment or upgrade could provide the opportunity to reduce the amount of energy consumption by replacing less energy-efficient items like fans, gas heaters, thermal wheels and recuperators.

In certain situations, refurbishments and upgrades have the potential to provide significant savings against the cost of installing a new AHU, in particular when comparing the costs for some buildings that have to comply with Part L2 of the building regulations relating to new installations.

Our hauliers provide a nationwide delivery service with a choice of vehicles that include flat-bed/open-back trucks and, when required, either Hiab, Tail-lift, or Moffatt-type vehicles. We are also able to offer FORS-accredited hauliers.



# **OUR PRODUCTS**

# **BESPOKE AHU**

The vast majority of AirCraft Air Handling's AHUs are bespoke, designed and manufactured to meet the specific site requirements and environments in which they are intended to be used. We pride ourselves on our ability to solve difficult site constraints through excellent design and unique manufacture.

AirCraft Air Handling's AHUs can be specified with heat recovery systems, various heating sources from indirect gas heaters, Low Pressure Hot Water (LPHW) or Steam coils.

Electric heater batteries and cooling options such as Direct Expansion (DX) and Chilled Water, as well as Humidifiers, Attenuation can all be specified. AHU airflow is dependent on case size and can range from 0 to 20m<sup>3</sup>/s.



#### **Typical Specification:**

- Casings 50 mm aluminum with cast corner pieces, aluminium penta posts and either anodised aluminium or rolled steel channel base
- Double skinned case panels to help reduce operational noise levels
- Hinged access doors with lockable handles

#### **Bespoke Options:**

- Indirect gas fired burners or electric heaters
- Single inlet direct drive 'Plug' type fans
- Choice of panel and filters including HEPA, Activated Carbon, Ultraviolet (UV) filters, or Electro-static Precipitator
- Coils, LPHW Fog / Frost / Heating / Reheat Cooling Water & DX and chilled water
- Recuperators
- Thermal wheels
- Attenuators
- Humidifiers
- Dampers
- AHU Control Panels

# **FRESH AIR AHU**

AirCraft Air Handling's Fresh Air AHUs use a single or secondary, direct drive plug fan: these draw in the air from the outside environment and then push it over the filters to remove dust and contaminants. Heating and/or cooling, as required, is provided by either electric, LPHW, or an indirect gas-fired heat source, chilled water or direct expansion cooling source.

A Fresh Air AHU provides one of the most economical ways of addressing the need for clean fresh air in enclosed areas like kitchens, restaurants, and catering facilities.



#### **Typical Specification:**

- Casings 50 mm aluminum with cast corner pieces, aluminium penta posts and either anodised aluminium or rolled steel channel base
- Double skinned case panels to help reduce operational noise levels
- Hinged access doors with lockable handles

- Fans
  - Filters
- Dampers optional stainless steel or painted finish
- AHU Control Panels

## HTM-03.01 COMPLIANT HOSPITAL AHU

AirCraft Air Handling's HTM-03.01 (2021) Compliant AHUs are designed to incorporate all the necessary access and maintenance provisions of the directive and are constructed to the specified material requirements as detailed.





## EXTERNAL WEATHERPROOF HTM-03.01 AIR HANDLING UNITS

To fully comply with the construction and application requirements for HTM-03.01 external weatherproof AHUs, AirCraft Air Handling are now producing external AHUs with an integral plant room. This allows engineers to safely maintain the equipment in all weathers.

#### Typical Specification: (Internal HTM 03.01)

- Casings 50 mm aluminum with cast corner pieces, aluminium penta posts and either anodised aluminium or rolled steel channel base
- Double skinned case panels to help reduce operational noise levels and thermal transmittance via the unit Casing
- Hinged access doors with lockable handles

# Additional Specifications relating to External HTM 03.01

- Integral weather poof service corridor
- Entire unit to have a cross-pitched roof
- Options, costal envi ronments painted, or stainless-steel dampers / epoxy painted or coated recuperator or thermal wheel

#### Options compliant with HTM 03.01:

- Single inlet direct drive 'Plug' type fans with either AC or EC motors
- Choice of panel and filters, including HEPA, Activated Carbon, filters
- Coils, LPHW Fog / Frost / Heating / Reheat Cooling Water
   & DX Reverse Cycle and Runaround (Heat Recovery) Coils
- Indirect gas fired burners or electric heaters
- Recuperators
- Thermal wheels
- Attenuators
- Humidifiers
- Inlet louvers fitted with bird mesh screen
- Dampers
- AHU Control Panels



# **OUR PRODUCTS**

# **INDIRECT GAS-FIRED AHU**

Commonly used for heating within larger volume buildings, such as warehouses or manufacturing factories, they can be used for either fresh air or recirculating air applications.

AirCraft Air Handling manufactures both bespoke and pre-specified indirect gas-fired AHUs, offering a range of duties with airflows from 0 - 20 m3/s, and heating outputs up to 600 kW.

All warm air heaters within our air handling units that are used to provide comfort for the occupants of the heated space are required to meet minimum standards of 'seasonal' efficiency as determined by the Ecodesign regulation (EU) 2015/1188, Directive 2009/125/EC – Lot 21 Tier 1.

#### **Typical Specification:**

- Casings 50 mm aluminum with cast corner pieces, aluminium penta posts and anodised aluminium or a rolled steel channel base
- Double skinned case panels for insulation, thermal conductivity of 0.04 w/m3 between skins
- Hinged access seated into compression rubber seals
- Access panels with lockable handles

#### **Options:**

- Indirect gas fired burners
   Fans
- Filters
  - Heating & cooling coils, suitable for DX EVAP and chilled water
- Electric heater batteries
- Recuperators
- Thermal wheels
- Attenuators
- Dampers
- AHU controllers

# **HEAT RECOVERY AHU**

AirCraft Air Handling's heat recovery AHUs recover upwards of 73% of the thermal energy from the extract air stream and input this directly back into the fresh air supply prior to it being distributed via the building's ventilation system.

Our heat recovery AHUs typically have either a Rotary Thermal Wheel, Crossflow Plate Recuperator or Run-around Coils.



#### **Typical Specification:**

- Casings 50 mm aluminum with cast corner pieces, aluminium penta posts. Hinged access panels with lockable handles
- Double skinned case panels to reduce operational noise levels and thermal transfer
- Optional for external installations rolled steel
   channel base

- Single inlet direct drive 'Plug' type fans with either AC or EC motors
- Choice of panel and filters, including HEPA, Activated Carbon, filters
- Coils, LPHW Fog / Frost / Heating / Reheat Cooling Water & DX Reverse Cycle and Runaround (Heat Recovery) Coils
- Indirect gas fired burners or electric heaters
- Recuperators
- Thermal wheels
- Attenuators
- Humidifiers
- Inlet louvres fitted with bird
   mesh screen
- Dampers
- AHU Control Panels

# **CLEANROOM AHU**

Our cleanroom AHUs will typically recirculate 90% of the air to achieve the room filtration rate requirement, which is generally higher than the fresh air required for occupancy. In doing so, the AHU also provides a positive pressure regime for the clean room it is serving.

AirCraft Air Handling's cleanroom AHUs can be designed to incorporate Panel & Bag filters, HEPA filters and activated carbon filters, along with various Cooling and heating options.



#### **Typical Specification:**

- Casings 30mm or 50 mm aluminum with cast corner pieces, aluminium penta posts and either anodised aluminium or a rolled steel channel base
- Hinged access panels with lockable handles
  Double skinned case panels to reduce
- Double skinned case pan operational noise levels

#### **Options:**

- Single inlet direct drive 'Plug' type fans with either AC or EC motors
- Choice of panel and filters, including HEPA, Activated Carbon, filters
- Coils, LPHW Fog / Frost / Heating / Reheat Cooling Water & DX Reverse Cycle and Runaround (Heat Recovery) Coils Indirect gas fired burners or electric heaters
- Indirect gas fired burners
- Recuperators
   Thermal wheels
- Attopuctoro
- Humidifiers
- Inlet louvers fitted with bird mesh screen
- Dampers
- AHU Control Panels

# SWIMMING POOL AHU

We design and manufacture high-quality standard and bespoke AHUs suitable for a wide range and size of pools and spas. They can be supplied for either internal or external installation and connected to the pool or spa's air duct distribution system.

Our swimming pool AHU air supply & extract is configured with a high-efficiency heat recovery plate recuperator that provides significant reductions in heating costs over older types of systems.



#### **Typical Specification:**

- Casings 30mm or 50 mm aluminum with cast corner pieces, aluminium penta posts and either anodised aluminium or a rolled steel channel base
- Double skinned case panels to reduce operational noise levels and thermal heat transfer
- Hinged access panels with lockable handles
- Internal and external weather-proof options

- Single inlet direct drive 'Plug' type fans with either AC or EC motors
- Choice of panel and filters, including HEPA, Activated Carbon, filter Coils, LPHW Fog / Frost / Heating / Reheat Cooling Water & DX
- Reverse Cycle and Runaround (Heat Recovery) Coils Indirect gas fired burners or electric heaters
- Recuperators
- Thermal wheels
- Attenuators
- Humidifiers
- Inlet louvers fitted with bird mesh screen
- Dampers
- AHU Control Panels

# **VERTICAL AHU**

Our vertical AHUs are designed for floor installation, to work with ducted ventilation and for installation either externally or within a building. This makes their small size ideal for clean rooms, restaurants, civic buildings, hotels, smaller office complexes and residential properties.

Units can be configured to operate in a recirculating air capacity or to provide fresh air into a building. Components can comprise all levels of filtration, and also cooling and or heating as required, from either electric, LPHW, or indirect gas-fired heat source, or chilled water or direct expansion cooling source.



#### **Typical Specification:**

- Casings 30mm or 50 mm aluminum with cast corner pieces, aluminium penta posts and either anodised aluminium or rolled steel channel base
- Double skinned case panels to help reduce operational noise levels and thermal heat transfer
- Hinged access doors with lockable handles

#### **Options:**

- Fans, Single inlet direct drive 'Plug' type
- Choice of panel and filters, including HEPA, Activated Carbon, Ultraviolet (UV) filters, or Electro-static Precipitator
- Coils, LPHW Fog / Frost / Heating / Reheat Cooling Water & DX and chilled water
- Indirect gas fired burners
- Electric heater batteries
  - Recuperators
- Thermal wheels
- Attenuators
- Dampers
- AHU Control Panels

# **KITCHEN SUPPLY AHU**

AirCraft Air Handling's kitchen supply AHUs are designed to provide fresh, filtered, tempered and potentially cooled air to the kitchen and restaurant They can also incorporate a heat recovery system that will reuse thermal energy from the extract airflow, thus helping to reduce a building's energy consumption.

# **KITCHEN EXTRACT AHU**

Our range of standard and bespoke kitchen extract AHUs can be designed and manufactured for each specific installation to help managers and operators of commercial kitchens and restaurants have to meet strict guidelines to comply with the UK's strict building and HSE regulations & standards. Our extract AHUs can be supplied with a range of filers and bags see options below.



#### **Typical Specification:**

- Casings 30mm or 50 mm aluminum with cast corner pieces, aluminium penta posts and either an anodised aluminium or rolled steel channel base
- Double skinned case panels to help reduce
   operational noise levels and thermal heat transfer
- Hinged access doors with lockable handles

- Indirect gas fired burners or electric heaters
- Single inlet direct drive 'Plug' type fans
- Choice of panel and filters, including HEPA, Activated Carbon, Ultraviolet (UV) filters, or Electro-static Precipitator
- Coils, LPHW Fog / Frost / Heating / Reheat Cooling Water & DX and chilled water
- Recuperators Thermal wheels
- Attopustore
  - Attenuators
- Humidifiers
- Dampers
- AHU Control Panels

# **CEILING MOUNTED AHU**

AirCraft Air Handling's ceiling AHUs can be provided as full fresh air units or also as a combined supply and extract unit complete with a heat recovery system. Mechanical Ventilation Heat Recovery (MVHR) unit that recovers thermal energy from the stale extract air and inputs this directly back into the fresh air supply prior to it being distributed via the building's ventilation system.

Our ceiling AHUs are designed and manufactured to meet today's requirements for energy and sound reduction; caseworks are tested to ISO 91.120.20 for sound insulation. They also are designed to assist with indoor air quality to meet with Breathing Building Standards 2018 BB101.

#### **Typical Specification:**

- Casings tested to ISO 91.120.20 for sound insulation
- Casings 30mm or 50mm aluminum penta posts with with cast corner pieces
- Double skinned case panels to help reduce operational noise levels
- · Hinged access doors with lockable handles

#### **Options:**

- Fans, Single inlet direct drive 'Plug' type
- Choice of panel and filters, including HEPA Carbon, Ultraviolet (UV) filters, or Electro-static Precipitator

- Run-around coil to assist with the recovery of thermal energy
- Attenuators
- Dampers
- AHU Control, unit or floor mounted
- Plate Recuperators / NVHR

# PACKAGED AHU

Where a turnkey installation is desired, generally for external rooftop applications, AirCraft Air Handling can offer a packaged AHU that incorporates Controls with Condensers or Heat Pumps mounted onto the chassis frame and pre-piped to the DX coil.

This approach enables minimal onsite installation, with power and ducting generally being the only requirement by the contractor. When provided as part of combined supply and extract AHU with heat recovery, this option can offer a high-efficiency, fully electric, zero carbon at point of use, solution.



#### **Typical Specification:**

- Casings 30mm or 50 mm aluminum with cast corner pieces, aluminium penta posts and either anodised aluminium or rolled steel channel base
- Double skinned case panels to help reduce
   operational noise levels and thermal heat transfer
- Hinged access doors with lockable handles

#### **Options:**

- Fans, Single inlet direct drive 'Plug' type
- Choice of panel and filters, including HEPA Carbon, Ultraviolet (UV) filters, or Electro-static Precipitator
- Heating & cooling coils, suitable for DX EVAP and chilled water
- Run-around coil to assist with the recovery of thermal energy
- Attenuators
- Dampers
- Recuperators
- Thermal wheels
- AHU Control Panels

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# **EXTRACT AHU**

AirCraft Air Handling's extract AHUs will assist with the removal of unwanted stale air from the area the AHU serves, a designated AirCraft Air Handling Extract AHU can be the perfect solution to remove odours, high CO2, high humidity or contaminated air.

The extract air can be filtered within the AHU by a combination of Panel & Bag filters, HEPA filters, Carbon filters, Ultraviolet (UV) filters, or Electro-static Precipitator (ESP), which are common components of Kitchen Extract AHUs manufactured by AirCraft Air Handling.



#### **Typical Specification:**

- Casings 50 mm aluminum with cast corner pieces, aluminium penta posts and either anodised aluminium or rolled steel channel base
- Double skinned case panels to help reduce
   operational noise levels. Hinged access doors with
   lockable handles

#### **Options:**

- Single inlet direct drive 'Plug' type fans
- Choice of panel and bag filters
- Run-around coil to assist with the recovery of thermal energy
- Attenuators
- Dampers

# **TWIN FAN TOILET AHU**

AirCraft Air Handling's twin fan AHU provides the perfect solution to remove odours and to comply with Part F of the UK's Building Regulations. Our Twin Extract AHUs have two high-efficiency direct drive plug fans, which operate on a run & standby or auto-changeover scenario for maximum redundancy, and the presence of non-return back draught dampers prevent the recirculation of air within the system to minimise energy usage.



#### **Typical Specification:**

- Casings 30mm or 50mm aluminum penta posts with with cast corner pieces
- Double skinned case panels to help reduce operational noise levels
- Hinged access doors with lockable handles

- Single inlet direct drive 'Plug' type fans
- Choice of panel and bag filters
- Run-around coil to assist with the recovery of thermal energy
- Attenuators
- Dampers

# QUALITY SPARES & REPLACEMENT PARTS

AirCraft Air Handling provide a rapid response to requests for replacement component parts, spares, and service items for air handling units by virtually all of the original manufacturers. We hold a large stock of high-quality consumables, component items and compatible products for speedy delivery to your premises or site location.

For older units that have become obsolete, AirCraft Air Handling may be able to help. If you know the manufacturer's name and failed component, we can assist with a non-OEM component or possibly fabricate one to help with your requirements.

#### **OPTIONS:**

- Indirect gas fired burners
- Fans
- Filters
- Hot & cooling coils, suitable for DX EVAP and chilled water
- Electric heater batteries
- Recuperators
- Thermal wheels
- Attenuators
- Dampers
- AHU controllers

#### COILS

We can help with a range of coils to assist with thermal transfer, including Heating via Low Pressure Hot Water (LPHW), Steam or Cooling via Chilled Water or Direct Expansion (DX).

#### **GAS HEATERS**

The Gas Heaters AirCraft Air Handling supply are all ErP 2021 Lot 21 compliant, with a minimum seasonal efficiency of 78% and reduced NOx emission levels (gas 70mg/ kWh) as standard, with heating outputs ranging from 10kW to 600kW, when combined.

## FANS

AirCraft Air Handling carries a broad stock of direct drive (EC/AC) and Double Inlet Double Width (DIDW) fans.

#### THERMAL WHEELS

All of AirCraft Air Handling's Thermal Wheels are bespoke and selected to suit the individual site requirements, and can be constructed with Aluminum, Epoxy, Enthalpy or Sorption rotors and, where necessary, have segmented construction to assist transit on-site.

#### **FILTERS**

Clean air is critical to any ventilation system serving the built environment. AirCraft Air Handling can supply replacement filters for not only our Legacy AHUs, but also units by other manufacturers as well. These include Panel, Bag, HEPA & Activated Carbon cells, and are subject to confirmation of physical sizes.

#### **ELECTRIC HEATERS**

AirCraft Air Handling are able to offer bespoke electric heater batteries, suitable for either thyristor or stepped control and are available in 240- or 415-volts supply, with kW outputs to suit individual requirements in multiples of 3 kW elements.





# **OUR CASE STUDIES**

CASE STUDY Queen Elizabeth Hospital, Woolwich



In line with the latest NHS standards of compliance for Hospital AHUs (HTM-03.01) and specifically their unique requirement for external weatherproof units, AirCraft Air Handling have manufactured and delivered a packaged AHU with an integral plant room to Queen Elizabeth Hospital in Woolwich, London. HTM-03.01 not only relates to the AHU's construction but also its performance relating to air quality and energy efficiency.

Queen Elizabeth Hospital was opened in 2001. It has 521 beds, an A&E department and multiple specialist departments including major trauma and intensive care. The hospital has been undergoing an 80-week programme of infrastructure works including the replacement of its air handling units that serve the operating theatres, pathology, delivery suite, special care baby unit and ward areas.

Our team worked closely with Lewisham and Greenwich NHS Trust's M&E Services Contractor to design and supply this bespoke supply & extract heat recovery AHU c/w reverse cycle direct expansion (DX) coil, and energy-efficient EC plug fans.

We completed the AHU build in August 2022 and after final quality testing at our premises in Stafford, we broke the unit down for transporting and shipped the AHU in a modular form directly to the site for reassembly and installation. AirCraft Air Handling's Team were on-site for the reassembly and testing, prior to handing it over to our client for final installation.



Although Heathrow is principally known for passenger transit, it also provides maintenance facilities for a wide range of commercial passenger aircraft, one of the largest being the Airbus A380. This supersized aircraft, along with others, is being maintained in Heathrow's Grade 2 listed Technical Block A (TBA), operated by British Airways Engineering, in a hangar originally designed for smaller aircraft.

Along with other developments at Heathrow, ARUP, a multinational professional services firm, were given

the task of re-designing the hangar, which included the installation of new recirculation AHUs to filter the air and maintain the temperature within Technical Block A.

AirCraft Air Handling worked closely with the installation contractor on the specification, design and subsequent manufacture of eight identical 600kW indirect gas fired recirculation AHUs, that included extraction units which would filter and heat the air. AirCraft Air Handling engineers also undertook on-site testing and commissioning.



To address the need for well-controlled fresh air, Puttshack White City, an indoor social venue located in the Westfield Centre, London W12 required 4 fresh air AHUs, all to be suspended from the ceiling.

Working directly with Puttshack's contractor, AirCraft Air Handling designed and manufactured the four units, capable of filtering, heating and cooling the incoming air. Puttshack White City was London's first high-tech indoor mini-golf centre and social venue, highly stylised with a modern semi-industrial appearance. As a result, the fully exposed, suspended AHUs had a semi-matte black and aluminium finish to blend in with the industrial look.

AirCraft Air Handling technical engineers also attended the site for commissioning and testing, prior to the AHUs being placed into service.



In any congested city centre with limited access, lifting equipment onto a rooftop can present issues, and invariably requires the hire of a mobile crane and, in some cases, will also need a crane oversail licence.

As a result, when discussing the problem with our customer, we both agreed the best solution to avoid the expense of a crane the best option was to break down the new AHU into manageable flat-pack pieces, before shipping them to the site. The parts were broken down sufficiently so that they would fit within the on-site goods lift to enable transportation to the roof for subsequent reassembly.

With the problem solved, the AHU was assembled onsite and tested prior to handing it over to our customer for connection to the building's duct ventilation system. All completed within the programme and to the agreed budget.

# **OUR CASE STUDIES**

CASE STUDY Alderley Park



As a direct result of our previous work in manufacturing high-quality laboratory heat recovery AHUs, AirCraft Air Handling were approached by Sygnature Discovery's M&E contractor to help with the design and manufacture of 2 substantial heat recovery AHUs. The new AHUs were required to manage the air recovering the residual heat in the extract air, to assist in warming the intake of fresh air into the ventilation system. The equipment was also required to filter in the inbound air and chill, when needed, to ensure consistent air temperature in Sygnature Discovery's laboratories.

The systems were also manufactured to provide dual-duty points: a day 1 scenario and a day 2 scenario, where Sygnature Discovery's ventilation requirements could be modified.



AirCraft Air Handling worked in collaboration with Thomas Alleyne's High School's nominated contractor, with regard to the specification of a replacement fresh air displacement AHU. The new AHU was required to provide tempered fresh air into the Pool area and drive the humid/stale air out to the atmosphere via roof-mounted extract louvres, using the most energy-efficient manner. To assist in reducing running costs, AirCraft Air Handling manufactured an efficiency heat recovery AHU incorporating a plate recuperator that offers c.75% reduction in heating costs vs the original AHU, along with high-efficiency EC fans that save on electrical running costs and lowering maintenance costs by omitting the traditional belt-driven fans of the old unit.



Two of the UK's most iconic automotive names are Jaguar and Land Rover today these brands fall under one multinational automobile manufacturer Jaguar Land Rover Automotive PLC. The company operate manufacturing plants both in the UK and internationally.

The Solihull plant, which sits on a 300-acre site, operates production lines for three Land Rover models and the four-wheel drive Jaguar F-Pace.

AirCraft Air Handling was approached by the contractor who had been awarded the contract by Jaguar Land Rover for the full installation of a new AHU heating system for their latest production line. As with other bespoke systems, our design team collaborated with the contractor to ensure the specification and subsequent build achieved the results Jaguar Land Rover required. This required AirCraft Air Handling to build and supply four, identical 525kW Indirect Gas Fired systems along with extraction units that would filter and heat the air. We also provided a control solution for each unit that have full BMS connectivity.

To ensure build quality, we fully tested each of the fully assembled AHUs at our premises and subsequently prepared them for site delivery. AirCraft Air Handling engineers undertook on-site testing and commissioning.



The Grade II listed Battersea Power Station is one of London's most iconic buildings and has undergone major alterations, transforming it into a visitor destination that includes a new shopping centre, restaurants and cultural spaces. As part of the transformation, a new multi-floor shopping centre, found in the power station's original turbine halls, forms part of Battersea Power Station's Circus West Village.

Working with building services and environmental engineering consultancy Chapman BDSP, AirCraft Handling were asked to

design and manufacture an AHU system capable of filtering, recirculating, cooling and heating the air within the new main shopping mall area. Due to the size of the shopping mall, AirCraft Handling manufactured twelve vertical AHU units.

The AHUs were transported to the site and installed by the client's contractor. Commissioning and testing were undertaken by AirCraft Air Handling technicians before the units being placed into service.



#### Services

Bespoke Design Site Surveys AHU Manufacturing Flat-Packed AHU On-site Assembly Refurbishment & Upgrade Controls Commissioning Moorfields Industrial Estate, Cotes Heath, Stafford, ST21 6QY

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