



(Specialist Services) Ltd

Delivering efficient, smart, reliable
AHU and HVAC solutions





AHS Specialist Services Expert Solutions



Delivering efficient, smart and reliable Air Handling Unit Refurbishment and HVAC Solutions. Commercial and Industrial ventilation, heating or cooling installation and servicing.

AHS Specialist Services design, build, install and maintain a wide range of low energy, highly efficient AHU systems; this allows us to deliver the best, tailored solution for you and your chosen application.

AHS Specialist Services offer a variety of tailored energy efficient ventilation solutions from large industrial operation to small commercial companies, developed for individual facility needs, which deliver smooth, uninterrupted operations, reduce operational costs, prevent unexpected downtime and increase efficiency.

Our dedicated team of reactive support experts can help reduce unplanned downtime, increase asset life and reliability, and ensure productive environments are a major part of our planned maintenance and predictive and diagnostic services.

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AHU Repair, Refurbishment and Replacement

Ageing ventilation equipment can often be refurbished, which can extend the life of air handling units and other components by 15 years.

Immediate repairs can be undertaken to ensure ventilation to critical or sensitive areas is maintained. AHS Specialist Services can advise the most economical and beneficial solution whether to refurbish or replace, taking into account the condition of the existing equipment and complexity of replacement. It can be the case that partial replacement plus refurbishment is the recommended solution.

The case for refurbishment

- Cost - there is a major saving in capital outlay, along with significant savings in future running cost due to the much more efficient components installed.
- Time - reduced down time compared with complete replacement.
- Energy saving - reduced electrical consumption with lower carbon emissions.
- Future proofing - incorporate the latest innovations.
- Lifespan - extended by 10 to 15 years.
- Installation - no need for craneage or major plant movements.
- Plant space is retained, whereas new equipment is invariably larger.

An initial AHS Specialist Services survey will address the following issues:

- Corrosion, often present at the AHU inlet, and at leaking heating or cooling coils. Corrosion can be treated or removed and the metalwork replaced and repainted as necessary.
- New roofs and access panels fitted as necessary.
- Filter frame replacement, plus new filters and pressure gauges.
- Fans and motors can be replaced like for like, although the preferred option would be to fit single inlet direct drive backward curved 'plug' fans with inverter or EC fans with electronic control, providing reduced maintenance with immediate energy saving with easy and accurate airflow commissioning.
- Larger double inlet backward curved fans can be fitted with new bearings to considerably extend their life.
- Replacement of AV mounts and flexible connections.
- Deep clean of units inside and out, with repair and repainting as necessary.
- Heating and cooling coil repair or replacement including pipe work connections to the coils. Large coils can be assembled in situ. Aluminium fins on coils often disintegrate over time due to atmospheric pollution or saline atmosphere; there are replacement options to ensure long life.
- Overflowing cooling coil drain pans can be caused by traps of insufficient size or depth which can be investigated and remedied.
- Humidifiers replaced including low energy evaporative type.
- Gas burner's to include latest condensing energy type.
- Access panels, door fasteners, door seal replacement.
- Thermal wheel replacement, installed in kit form if necessary.
- Damper repair or replacement, including fire and smoke, plus new actuators.
- Duct and pipe work repair and insulation.
- Clean or replacement of external air intake louvres or cowls.
- Controls assessment to check functions and upgrade to minimise future energy consumption.
- Sensors replaced as necessary.
- Fan coil refurbishment including fans, coils and controls.
- Due to component size, space constraints or restricted access, it is often necessary to install items in flat pack form or by using specialist handling equipment for the installation.





A Complete range of HVAC Solutions

We are engineers specialising in the repair, refurbishment and replacement of ventilation systems.

We have considerable experience in solving ventilation problems. These might include too hot, too cold, too much air, too little air, noise problems, reliability problems, as well as problems with the ventilation equipment itself. We are happy to work with other experts and trades to provide a successful outcome to complex issues in building services.

The main office is based in Ringwood in Hampshire; with engineers also based in Scotland, Newcastle, Shildon, Manchester, Midlands and Dartford. We work throughout the UK on commercial, public and industrial building ventilation systems. Our people have a wide range of skills including electrical, mechanical, controls, commissioning.

We manage all works to ensure work is completed on time, on budget and to the customers satisfaction. All works are performed by in-house AHS Specialist Services engineers.

Our services include

- Air handling unit and system refurbishments
- Supply and flatpack installation of AHU's
- Kitchen ventilation
- Energy saving upgrades
- Very low noise air handling units
- Ventilation problem solving
- Flood damage moisture removal and equipment repair
- Packaged DX and refrigeration problem solving
- Swimming pool ventilation system refurbishment
- Condition and performance surveys
- Small works, emergency repairs and maintenance
- Replacement of all types of coil including kit form
- Duct cleaning
- Complete turnkey system installations
- Pressure testing, commissioning and full diagnostic reporting
- Laser shaft and pulley alignment
- Condition and performance surveys
- Supply of HVAC components



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Energy Efficient Ventilation, Large or Small Scale

AHS Specialist Services offer a variety of tailored energy efficient ventilation solutions from large industrial operation to small commercial companies, developed for individual facility needs, which deliver smooth, uninterrupted operations, reduce operational costs, prevent unexpected downtime and increase efficiency.

New AHU's have to be designed to meet stringent regulations, the 2016 Building Regulations Part L2. These regulations demand a limit on the specific fan power (SFP) of each component in the AHU. As well as making the new AHU relatively expensive, it also has to be larger to limit the air pressure through each component. Where possible, existing AHU's can be refurbished and upgraded to make them considerably more economical to run, at the same time reducing maintenance costs.

The biggest savings can be achieved by replacing forward curved double inlet centrifugal fans with single inlet backward curved 'plug' fans or EC fans. These will usually have a smaller motor for the same duty requirement, and with inverter fan speed control or built in electronic control on EC fans, there is the possibility of demand led control of the ventilation, or accurate commissioning with the inimum power requirement. Night setback and air quality monitoring are possible with inverter installation, providing major opportunities for energy saving.

AHS Specialist Services can provide a spreadsheet illustration of the energy saving with the introduction of 'plug' fans into AHU's.

Full Installation from Existing Solution

AHS Specialist Services design, build, install and maintain a wide range of low energy, highly efficient AHU and HVAC systems; this allows us to deliver the best, tailored solution for you and your chosen application.

AHS Specialist Services undertake complete ventilation system installations. Commencing with a specification or project brief, AHS Specialist Services will submit a detailed quotation for the work required. Once the programme of work is agreed, we will undertake a detailed site survey, prepare drawings, project planning, requisition components, attend site meetings, submit risk assessments, method statements and organise labour. Initial site works usually necessitate site clearance including removal of old plant or preparing space for the new equipment. This may also include temporary removal of suspended ceilings etc in the space served. AHS Specialist Services will include all material movements and scrap removal.

Depending on the scale of the project, the installation phase may include delivery of new equipment including AHU's, condensers, chillers, silencers, controls, installation of pipe work, electrics, ductwork, dampers, duct or pipe work insulation, plus ceiling diffusers and any other components required. AHS Specialist Services are also happy to undertake small works such as installation of a fan or component to provide a solution to a specific problem.

All works is validated by testing, airflow balancing, pressure testing and commissioning. The project concludes with the presentation of Operating and Maintenance manuals and handover.

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Industrial and Commercial Solutions

From large industrial operations to small commercial companies, our experienced installation and support teams are specialists in a wide range of ventilation, air handling and heating installation and maintenance solutions.

AHS Specialist Services undertake large and small scale installations of air conditioning and ventilation systems. This includes new systems, refurbishment and repair of existing systems, energy saving upgrades and ventilation problem solving. AHS Specialist Services can advise on the most economical and beneficial solution for ventilation systems in commercial, public and industrial buildings. Our people have a wide range of skills including system design, electrical, mechanical, controls and commissioning. We manage all works to ensure the project is completed on time to customer satisfaction.

All works are carried out by in-house AHS Specialist Services engineers.

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Supported by our dedicated team of experts.

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