OTHER AIRFLOW PRODUCTS

**Cermalloy Coating**
Titanium blades used in high-speed turbines are sprayed with a Cermalloy Coating, then cured at 260°C to provide anti-corrosion resistance and an improved ability to withstand wear and impact.

**Sub Sea Pipework Coatings**
In the petrochemical industry, pipelines that carry aggressive liquids are given an interior lining of chemical resistant resin containing glass particles. These resins are cured in Airflow ovens at 320°C to provide an extended life in the harshest of environments.

**F.B.E.**
Exterior FBE (Fusion Bonded Epoxy) coating to resist corrosion and weathering are applied to the exterior of pipes that are to be laid onto the seabed. The Oven ramping controller takes the pipe section, which can be in excess of 15m long and weigh over 40 tonnes, up to 280°C in controlled stages to avoid stresses and distortion in the metal. The pipe is then withdrawn and the powdered epoxy coating is fused onto the hot metal before returning to the oven for the post-curing cycle.

**Heat Treatment**
The aerodynamic aluminium profiles that form the air inlets on aero engines are subjected to massive extremes of temperature and pressure. To ensure their reliability and durability the shaped structures undergo Heat Treatment in an Airflow Oven at temperatures exceeding 275°C. This relieves the stresses built up during manufacture, and ensures that they remain in optimum mechanical condition throughout their operational life.

**Surgical Dressing Manufacture**
At temperatures of 400°C surgical fabrics and high-tech plastic membranes are simultaneously bonded together and sterilised in Airflow high temperature Ovens.

**Higher Temperature Applications**
Airflow manufacture ovens for numerous higher temperature applications. Ovens uses include heat treatment ovens, suitable for annealing, stress relieving or tempering of aluminium, ferrous metals, brass, copper and glass. We are able to manufacture ovens to meet Boeing and Rolls Royce specifications. Ovens can also be manufactured as gas tight units to contain a nitrogen atmosphere.

**Clean Rooms**
Clean Rooms provide consistent and controlled working environments, including noise, humidity, temperature, light, particles & emissions, all monitored by sophisticated systems.

**Dry Filter Booths**
Airflow Dry Filter Booths available in standard height of 2.2 metres with widths from 2.2 to 6.6m. All Airflow Booths meet HSG178 regulations.

**Waterwash Booths**
Airflow offer a full range of Water Wash Spraybooths, Extract Chambers and Sprayrooms, complete with chemical & maintenance packages.

**Airflow Separators**
A unique Airflow product which works with any Water Wash Spraybooth to provide effective separation of overspray contamination resulting in a dry, bagged, waste product.

**Pre-Treatment Plant**
Airflow provides the full pre-treatment plant solution, from design to manufacture & installation.

**Cleanflow Separator**
A unique Airflow product which works with any Water Wash Spraybooth to provide effective separation of overspray contamination resulting in a dry, bagged, waste product.

**SPRAYROOMS**
Airflow offers a broad range of modular panel options for Spray Booth Extraction, Air Inlet Filters, Ambient & Heated Air Replacement Systems for spraying, drying & curing.

**Paint Degreasing Systems**
Airflow offer a full range of Water Wash Spraybooths, Extract Chambers and Sprayrooms, complete with chemical & maintenance packages.

**Powder Coating**
Airflow manufacture a comprehensive range of Powder Coating Plant including Booths, Powder Recovery Systems and Curing Ovens.

**Spare Parts and Consumables**
Airflow provide advice & a complete range of Booth chemicals for Water Wash Booths and Rooms.

**Service & Support**
Airflow offer their own range of high quality filters, including industry standard and high efficiency concertina paper type and open weave (soil and strip) media.

---

Airflow provide UK-wide support and service for all its products, including a total in-house design, manufacture and installation service as well as maintenance and consumable packages.

**Airflow Products Limited**
Northern Works Underhill Lane Sheffield S6 1NL
Tel: 0114 232 7788 Fax: 0114 232 7799
www.airflow-group.com e: sales@airflow-group.com

Airflow Products are designed and manufactured in the UK.
Airflow is Europe’s leading manufacturer of Process Ovens & Finishing Equipment. Our name is renowned throughout Industry for products of the highest quality and precise operating performance.

Our ability to understand and meet the specific requirements of our customers has enabled Airflow to build partnerships with the world's leading manufacturers. Applications include aerospace, automotive, furniture, marine and pharmaceuticals, to name but a few.

Working from a purpose built production facility, Airflow is a BS EN ISO 9001:2000 registered company, employing over 50 highly skilled staff who are all committed to total customer care.

**Decontamination**

Raw materials, fabrics or part-finished items imported from overseas frequently require decontamination using Airflow recirculated hot air ovens. This process ensures that insects and their larvae are removed from carpets and fabrics and is a common application for Airflow ovens, typically operating at around 100°C.

**Paint Curing**

Numerous modern-day paints, lacquers and varnishes benefit from being cured at elevated temperatures to achieve the required coating hardness in the shortest possible time. Depending on product volume and curing time, the process can be accomplished by using a batch oven fitted with a process timer or a conveyorised oven with a conveyor speed matched to the oven length.

**Product Drying**

Pre-treatment of materials, components or assemblies, to remove grease or anti-corrosion agents is often carried out by dipping or spraying using aqueous cleaning solutions. Airflow produces a range of drying ovens configured to integrate with cleaning process and produce a dry clean product.

**Garment Chemical Curing**

Clothing fabrics used for fashion and workwear are increasingly treated with chemicals to achieve various decorative effects. Following treatment the garments are placed in an Airflow Oven and cured at around 140°C. Nowadays, instead of the traditional stone washing of denim garments, the manufacturers coat the denim with a specially developed range of chemicals which, when cured, produce the same visual effect without degrading the fabric or reducing its life.

**Sheet Pre-Heating**

Before vacuum-forming or thermo-forming products from acrylic or plastic sheet Airflow Ovens are used to pre-heat the sheets to around 180°C. This is a highly temperature critical operation, as the sheet must retain uniform thickness and not display stress fractures. Ovens can be supplied to accommodate 4, 6, or 8 sheets in individual slots or a moving cage within the oven can present the heated sheets to a single door via plc control.

**Evaporation and Distillation**

The extraction of chemicals and pharmaceutical elements from their host resource (often plants or minerals) is increasingly achieved under controlled conditions in specially designed ovens. Airflow distillation ovens provide the product in liquid concentrate form, separated from the waste and by-products.

**Stress Relieving**

Pre-formed metal assemblies used in critical roles for industries such as aerospace and defence, are heat treated in Airflow Ovens at around 200°C, then cooled to a controlled profile to avoid the formation of stress characteristics.

**Composite Curing**

Carbon composite components used in Formula 1, aerospace and the high performance automotive industry are formed in Airflow Composite Curing Ovens.

The component and its former are encapsulated in a plastic sheet, then placed in the Oven which has an internal vacuum system. The Oven then shrinks the material onto the former and cures the component at up to 225°C. The heating and cooling processes are crucial to achieve the precise composite characteristics.

**Thermo-Setting**

Mandrel woven synthetic/rubberised and silicone fabric tubes, used as hoses in the automotive and marine industries, are cured at up to 225°C in Airflow process ovens. This provides the shape retention qualities that are needed to cope with situations such as extended heat exposure on turbocharger to intercooler hoses.