



## Heat Energy Recovery

In manufacturing processes involving high temperatures; curing ovens or incinerators, large amounts of Heat Energy can be expelled to atmosphere through exhaust stacks.

Some industrial processes require cooling by the introduction of water or liquid cooling circuits.

This heat energy can either be dissipated to atmosphere using 'dry coolers' – force ventilated large radiator total loss systems.

Alternatively by introducing a 'Heat Exchanger' into the circuit to recoup the energy, that energy can be used to provide a secondary heating source for the building's ventilation system. Heat exchangers can be incorporated into our designs to reduce gas consumption by recovering heat energy.

Benefits:

- Reduce plant running costs.
- Environmentally friendly with a reduction in gas consumption/heat waste.
- Can be incorporated into ventilation systems.
- Increased efficiency of energy usage.

Integrated Air Systems Ltd fabricates and installs pump skids/pumping systems for use in the mentioned processes. We can supply bare-shaft pumps through to complete pump systems. The packaged units come pre wired, pre piped, are easy to install, and sizes can range from small to large flows depending on requirements.

Companies which have utilised our services previously include Ball Packaging and Rexam PLC.



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**AIR SYSTEMS LTD**

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## Oil Mist Eliminators

Thousands of litres of oil can be lost from an installation over a period of a year due to oil mist emissions.

The cost of replacing expensive turbine oil can be greatly reduced by returning the recovered oil back to the system.

Integrated Air Systems Ltd can provide a bespoke design, manufacture and installation package for your facility.

With an oil mist eliminator you will:

- Improve the air quality in the vicinity of the air intake, maintaining power output whilst reducing filter replacement frequency.
- Reduce capital cost of an installation by minimising the need for complex venting and pipework.
- Eliminate all visible oil mist and stains, reducing environmental pollution.
- Save on running costs by reducing amount of oil lost.
- Ensure clean air discharges to atmosphere, improving health & safety.

Common Uses: Decorator Ink Mist Extraction, Body Maker Oil Mist Extraction

Companies which have utilised our services previously include Ball Packaging, Crown Holdings, Rexam PLC and many more around the world.

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## Air & Materials Conveying Systems

### Waste Extraction

### Fume Extraction

### Mist Extraction

### Heat Recovery

### Dust Control

### Ventilation

### Filtration

### Heating

### Cooling



# Scrap & Waste Removal

Integrated Air Systems Ltd has over 80 years collective experience designing, manufacturing and installing material conveyance systems, providing a “one stop shop” service for your Project.

A typical system utilises extraction points to efficiently remove the scrap waste material at it's source of production. Once entrained in the air stream, the material and dust is conveyed through a correctly design duct work system to a central collection point ready for reclamation or recycling.

At the reclamation point the material is removed from the air stream using an Air Separator, typically discharging the waste into a Horizontal Baler or Waste Compactor. Dependent upon the dust levels, the conveying air can either be discharged to atmosphere or filtered and returned to the factory – saving energy.

Effective extraction across the industrial process reduces downtime of operations and increases production output.

With a Scrap/Waste removal system you will:

- Increase efficiency of processes.
- Ensure a clean and safe working environment.
- Create one centralised waste collection area.
- Reduce machine maintenance costs.

Common Industries: Corrugated Board and Carton, Food and Beverage Can manufacturing, Commercial printing, Book and Magazine production, Paper and Tissue manufacture.

Companies which have utilised our services previously include Ball Packaging, Can Pack, Crown Holdings, Rexam PLC, Smurfit Kappa, Tata Global Beverages and many more around the world.



# Heating, Cooling & Ventilation

Often in industrial processes, excess heat can create the need for good ventilation and cooling facilities. In contrast, facilities can get below the recommended temperature by the HSE of 16°C during the winter months if an effective temperature control system is not employed. Integrated Air Systems Ltd provide a cost effective solution which is based solely around your requirements in providing

- Remove heat from manufacturing processes.
- Ensure clean air throughout facility.
- Re-use heat energy from one point to another (see energy recovery).
- Temperature control for product quality.
- De-stratification systems.

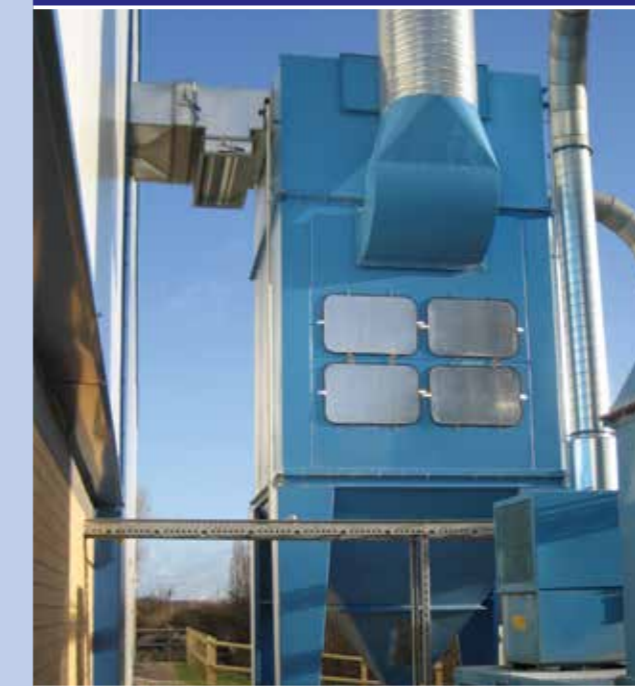
Typically, an air handling unit (AHU) is mounted either within or on top of the roof space and by using a correctly designed ducting system, clean cooled or heated air can be distributed to where it is required.

By designing and supplying the correct rate of ventilation, the work place will remain fresh and at an even temperature.

In cases where the heat load is too high for ambient air only, the introduction of evaporative coolers can reduce the external temperature and provide a cost effective solution at a substantial reduction to traditional method of refrigeration.

Common Uses: Any production or manufacturing process where heat & temperature causes discomfort or issues with personnel or machinery.

Companies which have utilised our services previously include Ball Packaging, Rexam PLC, DS Smith, De La Rue and Craftec.



# Dust & Fume Extraction

In many industries dust or fumes (some being potentially explosive) are evident at different stages of the production process, creating both environmental and health & safety issues.

Local Exhaust Ventilation (LEV)\* systems:

- Remove hazardous material from atmosphere.
- Ensure healthy and safety regulations are met.
- Provide a safe and clean working environment.
- Eliminate possibility of health issues relating to contaminants.
- Reduce chance of explosions through volatile fumes.

Dust or fumes are removed at source via extraction points designed to extract the contaminant as it is created. By utilizing a correctly designed system the dust problem is removed and the contaminate is safely collected in purpose designed filter plant.

Filters handling dusts that have the potential for explosion are designed in-house and feature explosion relief or suppression meeting the applicable standards as published by the HSE.

Common Use: Paper & Cardboard Dust, Metallic Dust, Lacquer Dust

Companies which have utilised our equipment and services previously include Ball Packaging, Crown Holdings, Rexam PLC, De La Rue, Johnson Controls, Perrys Recycling, Smurfit Kappa and many more successful installations around the world.

\*To find out more about LEV in the workplace, visit [www.hse.gov.uk/lev](http://www.hse.gov.uk/lev)