

DESTRATIFICATION UNITS



Quietly cutting costs...while you work!

The Problem

It is common knowledge that heat rises, escaping through the windows, walls and roof. This creates two major problems:

- 1. Energy losses.**
- 2. Difficulty in heating the air at ground level.**

Stratification of humidity occurs in the opposite sense, with higher moisture levels towards the lower areas of the building. This can create uncomfortable working and living conditions at certain times of the year.

Problems associated with this include:

- 1. Deterioration of the structure and fittings due to:**
 - a. Condensation**
 - b. Oxidation**
- 2. Environmental discomfort.**

Standard helical destratifiers are thermostatically controlled to avoid the flow of cold air towards floor level after the initial mass of hot air has been expelled. It follows that the operation of traditional destratifiers is intermittent, with the unit idle until there is a build up of hot air in the roof area. This type of operation generates unsatisfactory conditions at ground level. Furthermore, heat recuperation is discontinuous and incomplete.

In addition, the movement of air in a vertical direction does not generate uniform distribution horizontally. There is therefore still a problem of varying conditions in different zones within the building.

The Solution

Eliturbo is a breakthrough in electric fan design; it has been engineered to provide constant mixing of air in a large environment. This process eliminates the stratification of temperature and humidity in industrial and commercial buildings.

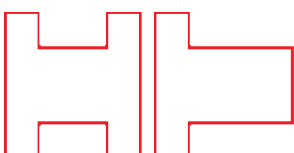
To ensure the correct mixing of air a specially designed helicentrifugal rotor has been developed. This utilises an innovative 'convergent-divergent' mixing process.

The continual mixing of air layers creates a zonal equilibrium in terms of temperature, humidity and pressure. The Eliturbo helicentrifugal rotor permits uniform mixing of the air without pronounced air draughts. Its action is continuous and facilitates consistent microclimatic conditions.

Eliturbo is a preventative system not a corrective one. It replaces traditional destratifiers (helical blades) which transfer hot air from ceiling to ground level, creating downward draughts which can cause discomfort to personnel.

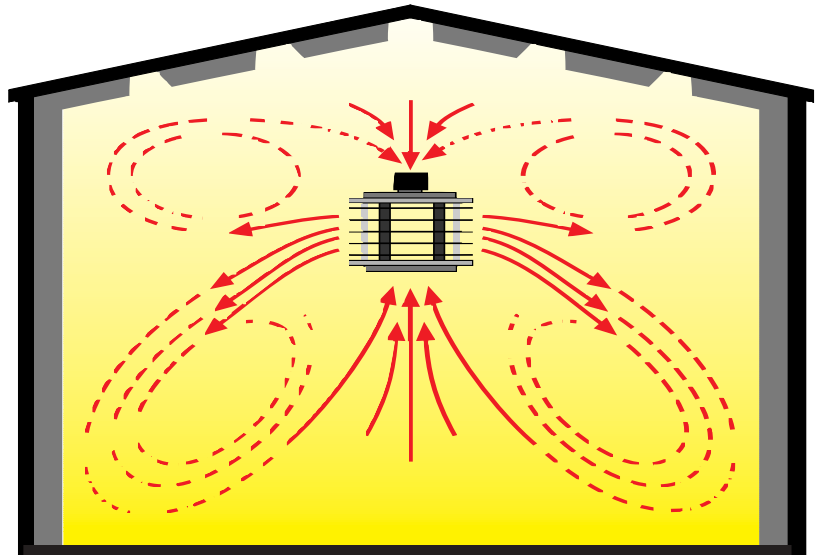
The Eliturbo unit mixes and recirculates warm air produced by heaters. This inhibits stratification and achieves thermal equilibrium throughout the building.

From the company with the know - how



Harry Taylor of Ashton Limited

SAVE UP TO 30% ON HEATING COSTS
 Results from a large number of installations in varied conditions indicate an average reduction in heating costs of 20-30%.



Eliturbo in operation in a typical industrial unit. NOTE the unique total mixing of air by the patented helicentrifugal rotor design.

The Benefits

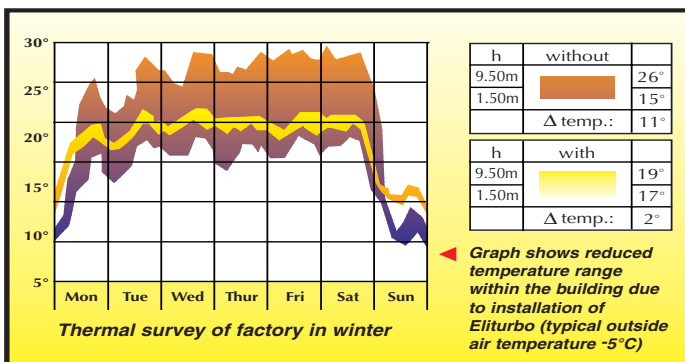
Global mixing of air in a large building produces the following effects:

WINTER SEASON

1. Elimination of thermal gradient.
2. Reduction in heat loss.
3. Increase in ground level temperature.
4. Uniform temperature within the building.
5. Improvement in environmental conditions.
6. Utilisation of heat produced by operations and/or machinery.
7. Energy savings.

SUMMER SEASON

1. Universal and uniform ventilation throughout the building.
2. Reduces corrosion of the building structures.
3. Dispersion of fumes and odours.
4. Reduction in building humidity.



The Applications

♦ INDUSTRY - FACTORIES

Eliturbo can be used in industrial and commercial buildings to improve the efficiency of the heating plant, and improve working conditions. Heat produced by machinery and production processes is dispersed and used to heat the building in winter. During summer the unit ventilates the building using external air, helping to disperse fumes, odours and humidity.

♦ SPORTS AND LEISURE - HALLS AND POOLS

The Eliturbo installation reduces the high heat losses characteristic of this sector. Humidity and chlorine vapour are also reduced at pool level. Low velocities (<0.1m/s) minimise draughts and discomfort.

♦ FARMING - GREENHOUSE, STABLES

Greenhouses are subject to high heat losses which prevent the correct distribution of temperature for cultivation.

Eliturbo selection guide: ♦

	MODEL TYPE	
	ELC 2000	ELC 2002
Diameter (mm)	680	680
Height (mm)	500	500
Weight (kg)	16	18
Typical Coverage Area (m ²)	200	250
Max Building Height (m)	8	18
Noise (dBA)	30	30
Motor Absorbed Power (W)	150	220
Motor Rotational Speed (RPM)	4-700	4-700
Motor Type	Single phase (3-phase special order)	Single phase (3-phase special order)
Power Supply (V)	220/240	220/240
(Hz)	380/415 50	380/415 50



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