

# ▶ ECOSTRAT - AIR, HEAT & TEMPERATURE DISTRIBUTION SYSTEM



The most effective destratification solution, minimising energy use and reducing space heating cost.

## BENEFITS

Minimising energy usage by redistribution of high level warm air.

Ecostrat utilizes the total heat available however generated, and redistributes it counteracting the natural tendency of the hot air to rise to the underside of the roof.

System design utilising Ecostrat as the 'prime air mover' will reduce heat input requirements and generally maintain air stratification to within + or -1°C, providing comfortable working conditions throughout the building.

Ecostrat can be integrated into any type of space heating system, old or new, to minimise air stratification and provide total air distribution, without the use of ductwork.

In terms of Energy conservation no other de-stratification fan can match Nuaire Ecostrat for performance and efficiency. Up to 20% fabric related heat loss saving.

- **Exceptional Performance in a compact design**

De-stratification to within 1°C.

- **Energy Efficient**

Minimising energy usage by redistribution of high level warm air. Up to 20% saving in fabric related heat loss.

- **Controlled Environmental Conditions**

Improvement of environment conditions at low level, reducing the risk of 'cold spots'.

- **Easy Installation**

Simple mounting arrangement and no requirement for ductwork, making the unit quick and easy to install.

- **Low Noise**

Fully speed controllable for low noise levels.

- **Flexible Control**

All units are speed controllable making commissioning of the system quick and efficient.

- **Easy Maintenance**

Low level mounting of units means easy accessibility.

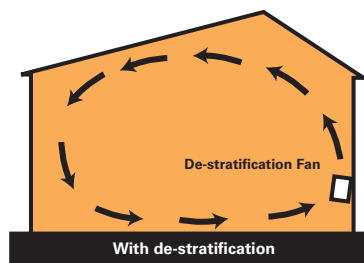
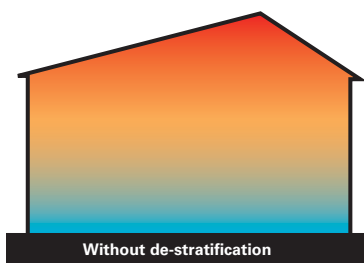
- **Full Design Support**

An experienced technical team providing product assistance and support.

- **Warranty**

Ecostrat has a 3 year warranty.

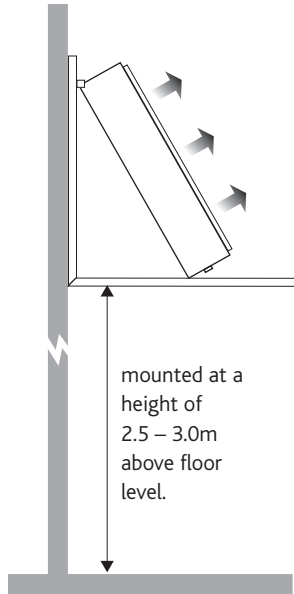
### Energy Efficient



Typical installation..

### Installation of Ecostrat

For most installations, the units should be mounted at a height of 2.5 - 3.0m above floor level. Steel brackets or other suitable suspension arrangements (by others), should be used to secure each fan at the required height. Ecostrat should be set at an angle on the brackets to project air towards the roof of the building. See illustration opposite for typical mounting arrangement.



For taller buildings, or where wall space is taken for other purposes, the fans can be positioned higher. Please consult our technical team for advice.

When used together with any form of space heating system, Ecostrat fans should be electrically 'interlocked' with the heating control to provide continuous operation during the heating period. A motor-rated fused spur should be installed alongside each fan to isolate the units during maintenance procedures.

To control noise emission, where necessary, Nuair 'auto-transformer' speed controllers should be used.

System commissioning services are available via a specialist contractor. Please ask for details

Casing



Code description

### ECOSTRAT

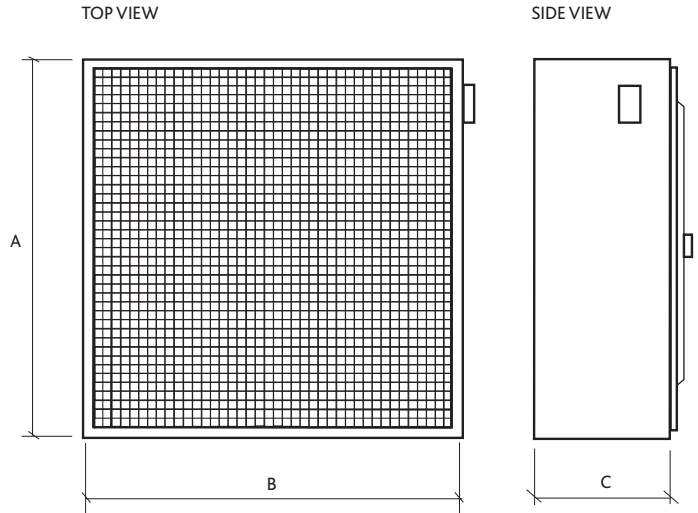
### Ecostrat

**ELECTRICAL, SOUND & WEIGHT**

Unit Code	m <sup>3</sup> /s	Phase	RPM	Motor Power (kW)	FLC (Amps)	SC (Amps)	dBA @ 3m	Speed Controller	Weight Kg
ECOSTRAT1/1	2.22	1	880	0.43	1.95	4.6	58	SPCON3.5	35
ECOSTRAT1/3	2.15	3	860	0.39	0.81	1.75	59	3SPCON4.0	35
ECOSTRAT2/1	3.08	1	880	0.60	2.7	5.3	63	SPCON3.5	40
ECOSTRAT2/3	3.12	3	880	0.70	1.5	3.6	64	3SPCON4.0	40
ECOSTRAT3/3	4.44	3	890	1.10	2.2	6.4	68	3SPCON4.0	55
ECOSTRAT4/3	7.5	3	530	1.50	2.7	9.5	74	3SPCON4.0	95

### Dimensions - Ecostrat

DIMENSIONS (mm)			
Unit Code	A	B	C
ECOSTRAT1/1	730	730	240
ECOSTRAT1/3	730	730	240
ECOSTRAT2/1	820	820	230
ECOSTRAT2/3	820	820	230
ECOSTRAT3/3	890	890	310
ECOSTRAT4/3	1200	1200	560



### Wiring - Ecostrat

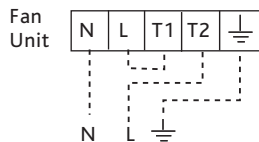
Units are not supplied with electrical isolators, their selection and provision is the responsibility of the installer.

Ensure that the electrical supply is suitable for the fan and that all wiring, fuse and overload protection etc is appropriately sized by comparing with the rating plate.

Electrical connection is made direct to the motor termination box on all fans.

Where transformer speed controls are used please see relevant control connection diagram below.

#### Single Phase (1 ph)

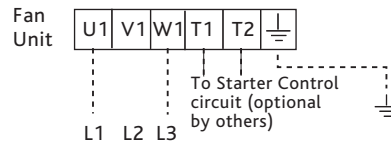


230V 1 Phase 50Hz Supply

Note: If starter control fitted, failure to connect Thermal Protection T1 or T2 as shown will invalidate warranty.

#### Three Phase (3 ph)

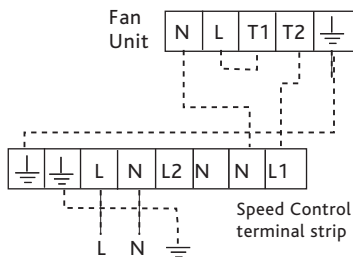
(Interchange any two Fan Supply phases to reverse rotation)



400V 3 Phase 50Hz Supply

Note: If starter control fitted, failure to connect Thermal Protection T1 or T2 as shown will invalidate warranty.

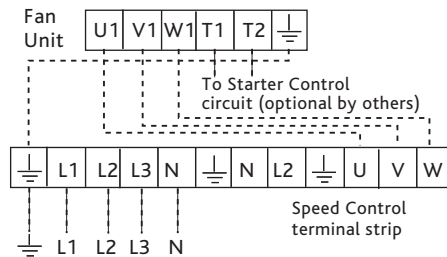
#### Controller Connections Single Phase (1 ph) SPCON



230V 1 Phase 50Hz Supply

Note: If starter control fitted, failure to connect Thermal Protection T1 or T2 as shown will invalidate warranty.

#### Controller Connections Three Phase (3 ph) SPCON



400V 3 Phase 50Hz Supply

Note: If starter control fitted, failure to connect Thermal Protection T1 or T2 as shown will invalidate warranty.

## ECOSTRAT

### Consultants Specification

Air distribution and de-stratification shall be provided by the use of Nuair Ecosmart Destratifier fans, type Ecostrat Destratifier.

Calculation of fan numbers and models shall be obtained from Nuair design engineers.

Ecostrat fans shall be installed at a height of 2.5 - 3m above floor level, in positions agreed with the client, consultant, and Nuair engineer. Each Ecostrat Destratifier fan shall be securely mounted on 'custom-built' support brackets (by others), and set at an angle to project air towards the roof of the building. The exact installation angle shall be confirmed by the Nuair engineer.

Nuair 'speed controllers' type SPCON shall be installed in agreed positions, one controller for each Ecostrat Destratifier fan unit. The speed controllers shall be electrically connected in accordance with Nuair wiring diagram for either 1 Phase and 3 Phase fan units. The electrical connection shall provide for continuous operation of the fans during the 'timed' heating periods, or as specifically required by the consultant.

### Unit Specification

Unit consists of a high performance axial flow fan housed within an aluzinc steel cabinet fitted with an aluminium alloy distribution grille.

Fan is directly driven by an electrical motor.

Impeller has precision moulded, thermoplastic or aluminium aerofoil blades.

Fan plate manufactured in steel and shaped to provide optimum flow conditions at the fan outlet.

Unit to have integrated finger guards fitted to the inlet side.

Motors to have inbuilt thermal protection.

Fan assembly to be balanced to ISO 1940 Grade GR6.3.

Ecostrat has a 3 year warranty.

### Control

Transformer Speed Controls (SPCON/3SPCON) are used to provide discrete voltage steps. All models have class 'F' insulation and fitted with suitable fuses for short-circuit protection. The controller casing is

manufactured from plastic pre-coated steel or impact resistant polycarbonate. All models are suitable for indoor installations only. All controllers meet LVD and EMC directives for safety and electromagnetic compatibility.



Transformer speed controls produce a pure sine wave output resulting in quiet motor operation, therefore preferred for noise sensitive applications.