AMBIRAD

ENERGY EFFICIENT HEATING SYSTEMS

WARM AIR

DESTRATIFICATION FAN

Introduction

With any conventional heating system, natural convection gives rise to roof space temperatures which are higher than the design temperature at occupancy level. The cost effective way to overcome this stratification of heat and also to recover 'free heat' from lighting and machinery etc. is to fit a system of destratification fans.

Description

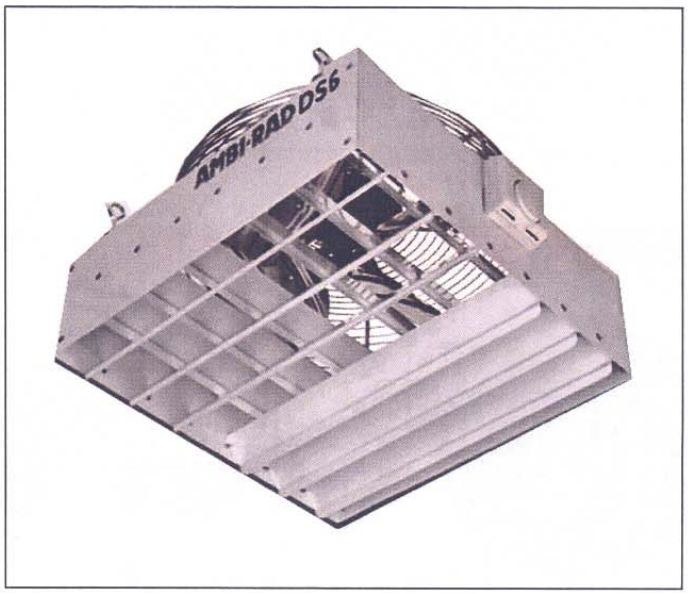
Ambi-Rad destratification fans units are available in three sizes, DS3, DS6 and DS10. They are self contained and incorporate adjustable horizontal and vertical louvres to give maximum flexibility of air distribution. A high efficiency axial fan, provides large volumes of recirculated air back to the working zone. An integral thermostat operates the fan when roof space temperatures rise.

In well insulated modern buildings with low thermal inputs the destratification fans form an essential part of the air distribution system.

For frost protection applications special units are available. These should be linked into the heater control system to operate when temperatures fall below a preset point.

Application

Ambi-Rad destratification fan systems are suitable for most commercial and industrial applications. Care should be taken to ensure that they are not sited in areas where it would be undesirable to recirculate high level air because of fumes, etc, or where corrosive atmospheres may attack the fan unit.To obtain maximum benefit, destratification fans should be sited in the higher part of the building, close to the apex, approximately one metre below the peak. Fans located over heat generating machinery or lighting



maximise the benefits of 'free heat' whilst fans positioned close to doorways help to quickly restore comfortable conditions after door operation.

Fans should not be sited adjacent to large expanses of wall or roof glazing, or in close proximity to open flued heater units, as the airflow could adversely affect flue performance.

Design

Sufficient air destratification fan units should be installed to provide at least 2 volume turnovers. The air volumes are the primary air provided by the fans; in practice, the induction affect at the fan outlet ensures considerable mixing of the primary air with air from the working environment to provide air distribution without excess draughts.

Fans should be positioned symmetrically across the building; the number of fans chosen should always be sufficient to meet the design criteria for each bay.

Installation

The Ambi-Rad destratification fan is equipped with 4 suspension points and may be suspended using chains or wires.

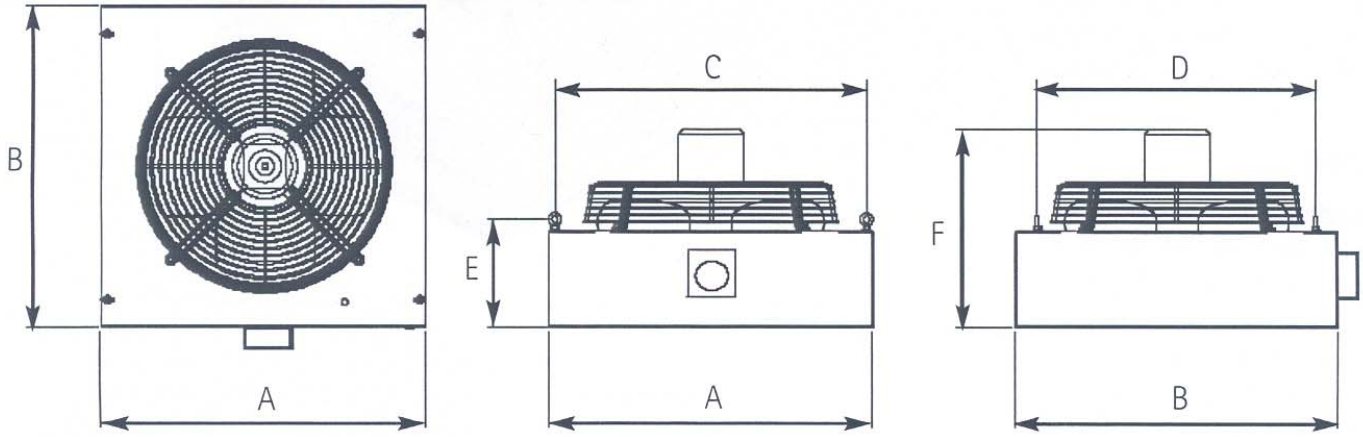
All installations should be in accordance with the relevant requirements of Building Regulations, Local Authority Byelaws and I.E.E. Regulations and Units should be wired by a competent, qualified Electrician.

Technical details

Technical details		DS3	DS6[1]	DS10[1]
Electrical Supply		230V 50Hz 1Pha		
Air Volume	m^3 /h	3000	6500	10250
	c.f.m	1750	3100	6030
Mounting Height	m	3 - 8	5 - 12.5	10 - 18
	ft	10 - 33	18 - 45	33 - 75
Motor Size	W	120	180	370
Operating Current	A	1.0	1.3	3.0
Starting Current	A	2.1	2.4	6.0
Thermostatic Control		Included		
Net Weight	kg	16.5	14.4	45
Sound Pressure Level	Lp db (A)[2]	51	56	64

[1] For destratification fans with frost protection and suffix F after part number ie. DS6-F
[2] @5m

Dimensions



Model	A	B	C	D	E	F
DS3	500	500	465	480	167	420
DS 6	500	500	475	365	170	275
DS 10	660	660	605	460	170	430

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