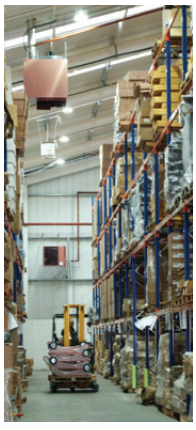
Maximizor Series

DE-STRATIFICATION FANS





Abercorn HEATING

REZNOR®

Maximizor Series

DE-STRATIFICATION FANS

Introduction

With any conventional air heating system warm air will rise to roof level by natural convection. In high buildings such as factories, warehouses and sports centres, this can result in high temperature gradients and consequently increased energy usage.

Maximizor de-stratification fans reverse the natural convection process, re-circulating warm air back to working level providing a permanent reduction in roof space temperature and uniform temperature distribution.

For new buildings the energy savings of a correctly designed de-stratification system are calculated within the SBEM compliance software in order to achieve the carbon reductions required for building regulations approval.

Features

- Heat recovery by re-circulating high level hot air back to occupancy level
- Reduced fuel bills by eliminating excess temperature at roof level
- Heat reclaim from lighting and machinery
- Improved comfort levels for occupants
- Reduced pre-heat time

Model Range

Maximizor fans are available in four sizes:

- Models 2100 & 3000 have a square casing and are suitable for lower mounting heights between 3 and 8 metres. The 2100 unit has outlets on four sides for horizontal discharge for installation in lower buildings where reduced air movement and noise levels may be required.
- Models 4500 & 9000 have a cylindrical design to create a venturi effect, this significantly increases secondary air induction to re-circulate more warm air back to working level. The precise air jet allows increased mounting heights with effective air re-circulation, making the units ideal for higher factory or warehouse buildings.

2100 model

3000 model

4500 & 9000 models

Installation

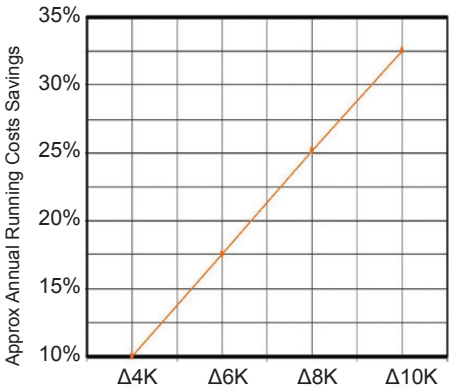
Maximizor fans are supplied ready for automatic operation with installation only requiring mounting and connection to a single phase electrical supply.

Standard units are supplied with an integral thermostat to operate the fans as soon as the roof space temperature rises.

For frost protection applications units are supplied without thermostats to be linked to frost protection controls.

The adjustable outlet blades allow air direction and terminal velocity to be set to suit the application and mounting height.

Potential savings of reducing excess stratification



For effective de-stratification, sufficient fans must be installed to re-cycle heat from the full roof area.

Design Data

Select the Maximizor unit to suit the mounting height required, ideally the units should be installed approximately 1 metre below the apex.

For 2100 or 3000 models required calculate the volume of the building and multiply by two to determine the amount of air that needs to be re-circulated for effective de-stratification. Divide by the primary air volume of the unit to determine the number of units required.

For 4500 & 9000 models use the formula below:

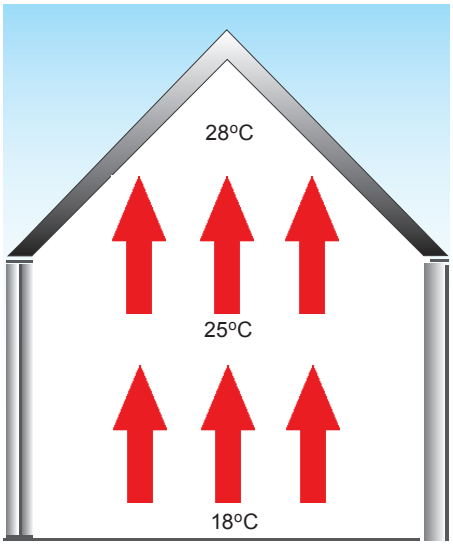
$$\frac{N=V \times 2}{Vp \times F}$$

N = number of units required
V = volume of building
Vp = primary air volume of unit
F = induction factor

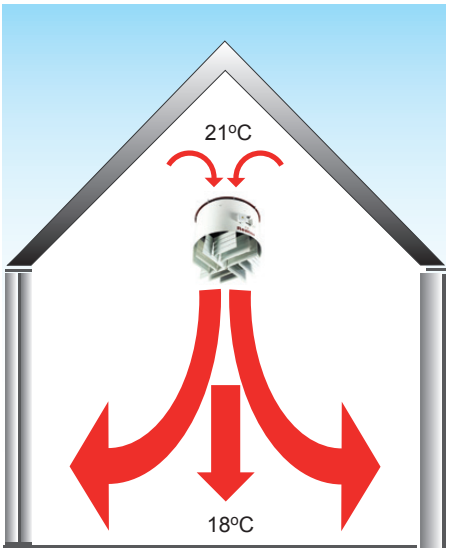
Induction Factor

4500 Series				
Approx mounting height (m)	5	6	7-9	11-16
Induction factor 'F'	1.3	1.35	1.4	1.5
9000 Series				
Approx mounting height (m)		6-8	9-11	12-23
Induction factor 'F'		1.35	1.4	1.5

Benefits



Heat rises resulting in poor distribution, increased heat loss and running costs



Maximizor units return heat to the working zone for improved comfort and reduced running costs.

Performance Data

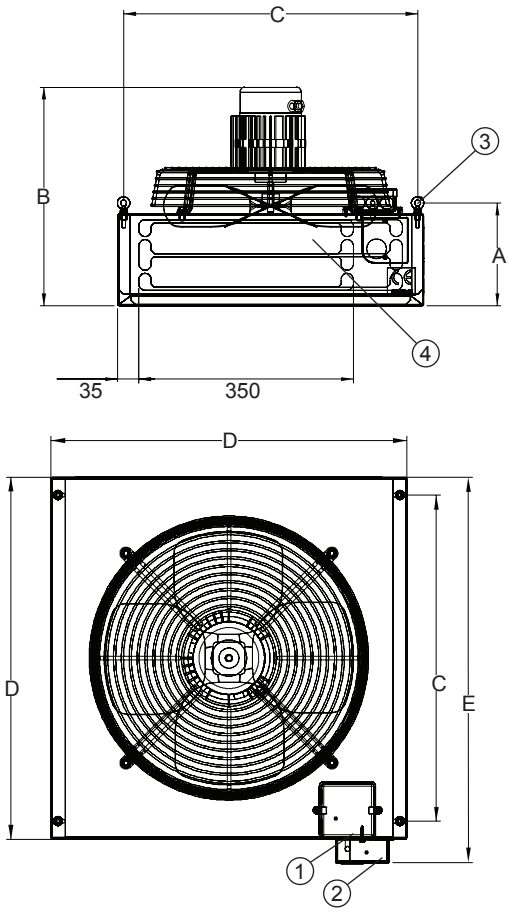
Louvre setting angle lº	Primary air volume V^{prim} m^3/h			Mounting height to floor H (m)			Effective area covered A x A (m)		
Model	**3000**	**4500**	**9000**	**3000**	**4500**	**9000**	**3000**	**4500**	**9000**
0º	3000	4400	8840	12.0	19.5	27.0	3.0	4.0	6.0
15º	2900	4300	8620	6.5	10.5	13.5	5.0	6.0	9.0
30º		4150	8400	5.5	9.0	11.0	8.0	13.0	19.0
45º		4000	8180	4.5	7.0	8.5	10.0	17.0	25.0
60º		3800	7960	3.5	5.5	6.0	11.0	19.0	29.0
75º		3600	7740	3.0	4.0	4.0	11.0	19.8	29.0

TECHNICAL DATA					
Model		**2100**	**3000**	**4500**	**9000**
Primary air volume	m^3/h	2100	3000	4440	8840
Electrical rating		230V 1N 50Hz			
Current rating	A	0.5	1.0	1.2	2.1
Absorbed power	kW	0.12	0.16	0.25	0.41
Sound pressure level[1]	dB(A)	44	51	52	62
Maximum mounting height	m	4	10	17	23
Minimum mounting height	m	2.5	3	5	6
Net weight	kg	10	16.5	16	27

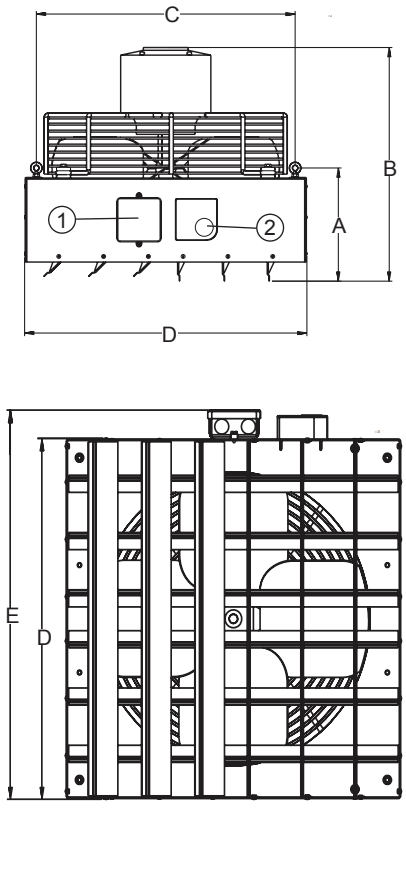
1 Distance of 5.0 metres, Q = 1, A = $160m^2$

DIMENSIONS						
Model			**2100**	**3000**	**4500**	**9000**
Suspension height		A	167	220	580	645
Overall height		B	357	417	560	635
Suspension points	position	C	480	465	495	645
	qty		4	4	3	4
Body diameter	OD	D	504	504	475	639
Overall diameter		E	534	-	515	665

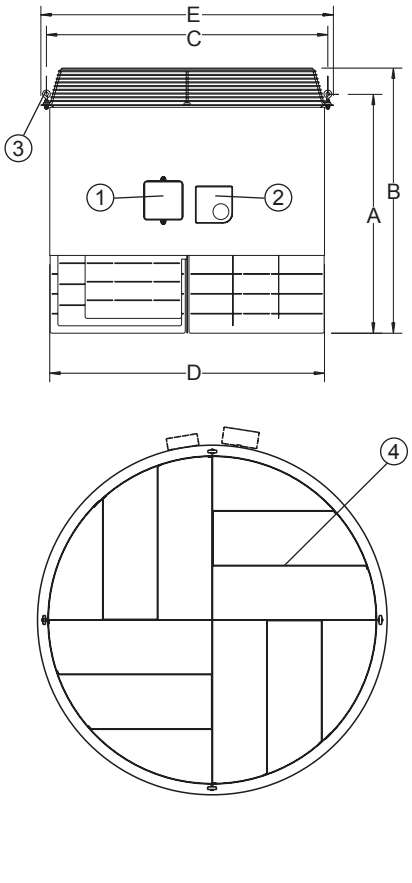
2100 Model



3000 Model



4500 & 9000 Model



Note : 1. Electric connections. **2.** Thermostat. **3.** Suspension points. (model 2100 & 3000 x4 ø10mm, model 4500 x3 at ø8mm, model 9000 x4 at ø8mm). **4.** Adjustable Louvres.

The AmbiRad Group

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