



DS Series

DE-STRATIFICATION FANS



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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.

AmbiRad 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.

Options

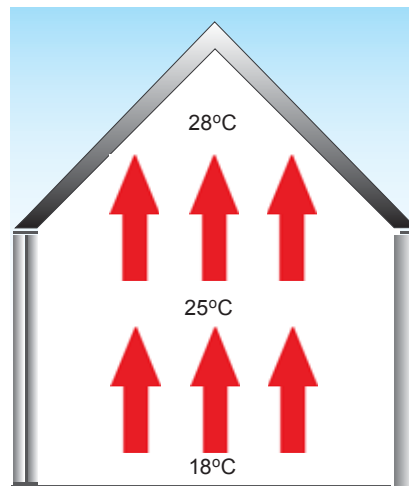
- Heat recovery by recirculating high level hot air back to occupancy level
- Reduced fuel bills by eliminating excess heat loss through the roof
- Heat reclaim from lighting and machinery
- Improved comfort level for occupants
- Reduced pre-heat time
- Manual or motorised inlet dampers

Model Range

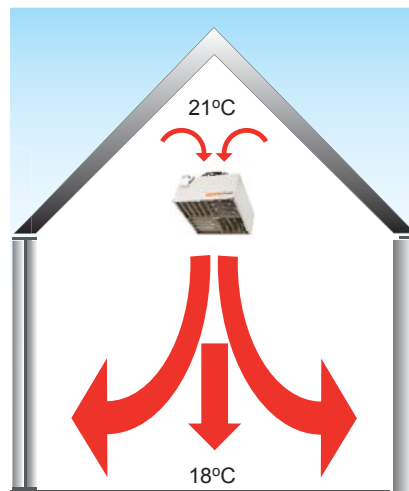
DS fans are available in three sizes, with mounting height ranging from 4m to 18m and air volumes 3000 m³/h and 11000 m³/h.

All units are supplied with a four-way discharge for improved air distribution.

Benefits



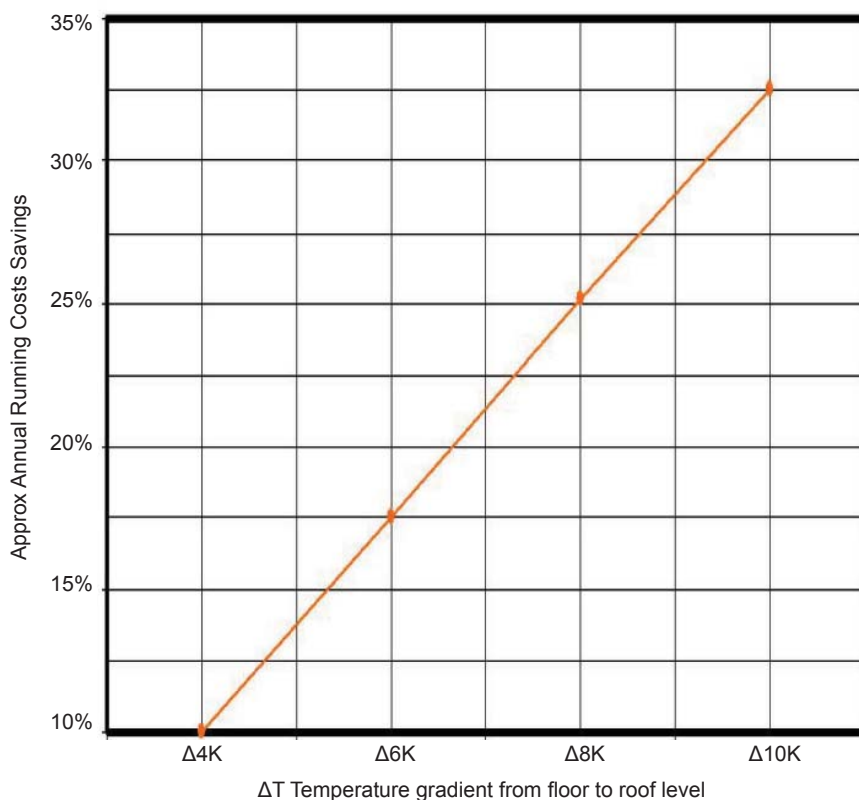
Without de-stratification heat rises resulting in poor distribution, increased heat loss and running costs



The DS fan returns heat to the working zone for improved comfort and reduced running costs.



Potential savings of reducing excess of heating stratification



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

Installation

DS 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 fan as soon as the roof space temperature rises above the set point.

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

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

Design Data

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

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.

TECHNICAL DATA

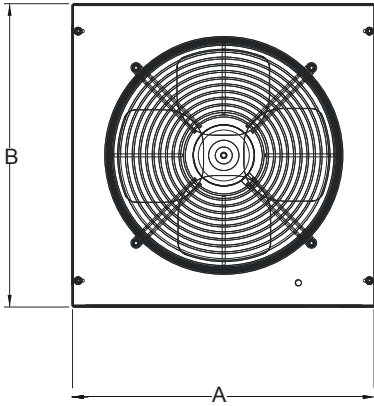
| Model | | DS3 | DS6 | DS10 |
|--------------------------------------|-------------------|----------------|---------|---------|
| Mounting height | m | 4 - 8 | 6 - 12 | 10 - 18 |
| Approx mounting centres ¹ | m | 13 - 60 | 15 - 20 | 17 - 23 |
| Air volume | m ³ /h | 3000 | 6500 | 11000 |
| Maximum throw | m | 8 | 12 | 18 |
| Velocity | m/s | 3.77 | 4.72 | 5.73 |
| Electrical supply | | 230V 50Hz 1Pha | | |
| Motor size | W | 160 | 245 | 725 |
| Operating current | A | 0.7 | 1.1 | 3.5 |
| Starting current | A | 1.2 | 2.4 | 6.7 |
| Fuse rating | A | 6 | 6 | 10 |
| Sound pressure level ² | Lp dB(A) | 51 | 56 | 65 |
| Net weight | kg | 12 | 20 | 30 |

¹ Mounting centres depend on mounting height

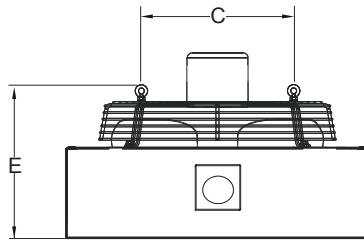
² Sound level @ 4m

DIMENSIONS

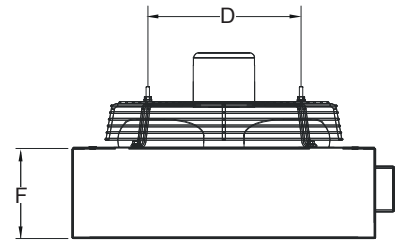
| Model | DS3 | DS6 | DS10 |
|-------|-----|-----|------|
| A | 470 | 570 | 720 |
| B | 470 | 570 | 720 |
| C | 358 | 370 | 602 |
| D | 358 | 370 | 462 |
| E | 300 | 400 | 400 |
| F | 200 | 260 | 260 |



Top view



Side view



Front view



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ENERGY EFFICIENT HEATING SYSTEMS

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