

# ZOO - COOLING AND DE-STRATIFICATION FANS



## Description

The stylish ZOO (Zone Of Occupancy) Fan de-stratifies by producing a gentle, concise column of air that draws warm air from the ceiling and forces it down to floor level. By doing this it helps create a more pleasant and comfortable indoor environment for workers and customers. It can also help to lower a building's operating costs by reducing the energy consumption of a heating system in cooler weather. Available in 2 sizes, 250mm and 300mm.

### Typical Applications

Ideal for buildings that are heated and have high ceilings such as warehouses, airports, churches, school halls, green houses, and shopping centres. Particularly effective when used in aisles because of their narrow band of air and variable speed control motor that provides airflow adjustment. Can be also used as a quiet and unobtrusive cooling fan in warmer weather.

### Features

- Helps create a more productive, more comfortable environment that has the potential to reduce energy consumption.
- Can be installed so its airflow avoids or targets areas.
- Adjustable airflow using a VA speed controller.
- Model with finger guards on inlet and outlet available (See Additional Information). Codes: ZFH30G, ZFH60G.
- Pivoting handle allows quick change to airflow direction.
- Fire resistant (5VB) UV-treated PC ABS plastic.
- Fitted with Gripple attachments that make it quick and easy to install.

### Construction

UV-treated PC ABS plastic housing that is fire resistant (5VB). Fitted with an easy to reach IP54 terminal box.

### Motor

Type - external rotor, squirrel cage induction motor.  
Electricity supply - 220-240V, single-phase, 50/60Hz.  
Ball Bearing - sealed for life.  
Speed-controllable.  
Motor protection IP54.  
See pages O-2/3 for details on these motors.

### Internal thermal Protection

Auto-reset thermal protection

### Testing

Airflow tests to DIN24166, Class1

Noise tests to DIN3745, Class1

### Wiring Diagram

See page N-8, diagram ER4.

### Additional Information

Finger guards must be fitted to fans if being mounted less than 2.1 metres from floor level.

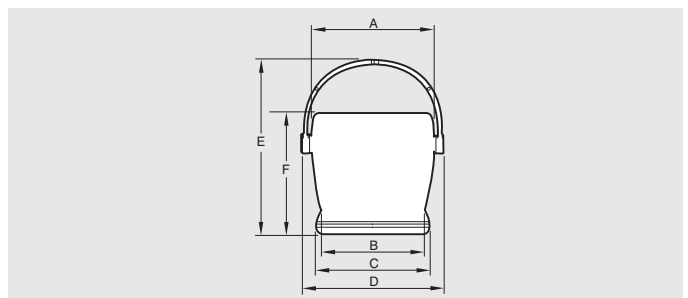
## Suggested Specification

The de-stratification fans shall be of the Zoo (Zone Of Occupancy) Series as supplied by Elta Fans and be of the model number shown on the schedule/drawings.

They shall be constructed from fire resistant (5VB), UV-treated PC ABS plastic and include a robust pivoting handle. They shall be fitted with a speed controllable motor and an IP54 terminal box. Wire finger guards (if fitted) shall be of zinc plated wire.

All models shall be fully tested to DIN24166, Class1 for airflow and DIN3745, Class1 for noise.

## Dimensions



Dimensions, mm

Model No.	A	B	C	D	E	F
ZFH30	379	300	352	445	539	378
ZFH60	453	367	421	533	656	460

Add G to the end of code if finger guards on inlet and outlet are required.

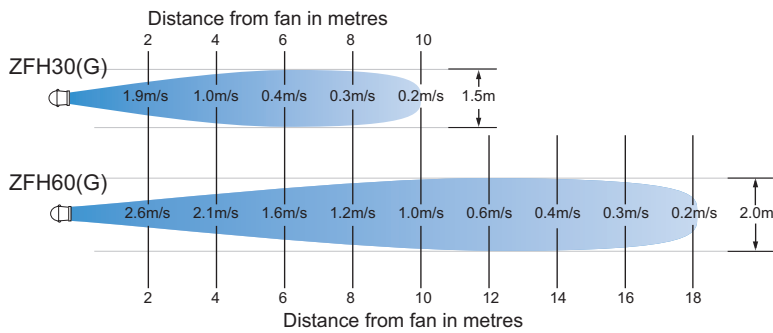
## Ancillary Equipment



VA - Speed controller  
Ref. Section M

# ZOO - COOLING AND DE-STRATIFICATION FANS

## Velocity Profile



## Technical Data

Model Number	Fan Size (mm)	Fan Speed rev/sec	Avg. dB(A) @ 3m	Free Air m³/s	Volts	kW	Amps	Max Operating Temp. °C	App Wt. kg
ZFH30(G)	250	23	Inlet	37	230	0.05	0.24	55	7
			Outlet	38					
ZFH60(G)	300	21	Inlet	43	230	0.09	0.38	55	9
			Outlet	42					

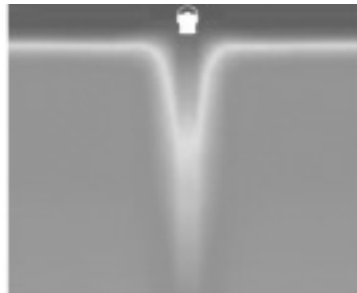
## Versatile & Effective

ZOO Fans move air within a narrow, easily discernible column and can be installed to target specific areas, such as workstations, or to avoid particular areas.

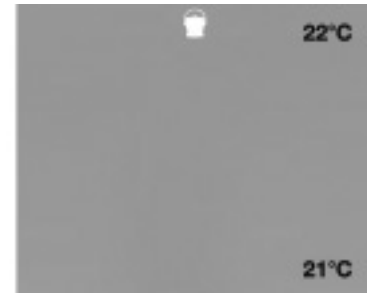
The difference in temperature between the floor and the ceiling can be significant: 0.25°C to 0.5°C per 300mm, or more, above 1.5m. The fans are simple to angle or rotate for infinite adjustment.



CFD showing the effects of Zoo Fans (Computational Fluid Dynamics). This shows a computer model of a 12.2 meter x 12.2 meter space with a 7.6 meter flat ceiling deck and a ceiling mounted heat source with a thermostat affixed 1.5 meters above the floor, set at 21°C.



The built-up heat at ceiling level is forced down when the ZOO Fan (represented by the white silhouette) is turned on.



Destratification results in a more even temperature throughout the Zone Of Occupancy. Creature comfort improves noticeably and energy consumption is reduced, often significantly.

### Easy To Control

Operate individually or together in zones.

BMS integration available .

Variable speed control allows fine tuning of airflow for ceiling heights from 2.6m to 30m or more.



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