



# ZOO fans

**Better destratification  
for large (and high) spaces**

- > Improves thermal comfort
- > Air flow angle is easy to change
- > Can be speed controlled
- > Available with AC and EC motors

The stylish **ZOO** (Zone Of Occupancy) Fan destratifies the space to create a more pleasant and comfortable indoor environment for occupants. It also helps to lower operating costs by reducing the energy consumption of a heating system in cooler weather.



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# A versatile and effective fan

ZOO Fans destratify the air, eliminate hot and cold spots, increase overall air circulation and create a noticeable improvement in comfort and energy savings.

The unique design of the ZOO Fan can be installed so its air flow avoids, or targets particular areas such as workstations and high traffic areas. They are also particularly effective when used in aisles because of their narrow band of air and variable speed control motor that provides air flow adjustment.

The ZOO units can also be used as a safe and unobtrusive cooling fan when positioned closer to the occupant. Its ceiling hung mounting position eliminates the need for dangerous power leads and extension cords at floor level.





# Creates a more comfortable and productive environment

During the winter season when heaters are used to add warmth to a space, the heat rises causing thermal stratification and the area near the ceiling to become hot. As a result the building's heaters are used excessively to maintain a comfortable temperature at floor level. This overheating results in significantly more energy being used and often creates hot and cold spots in a building.

The ZOO Fan creates a concise column of air that brings warm air down to floor level. This can create a more productive, more comfortable environment, and has the potential to reduce energy consumption.



*Fire Stations*



*Gymnasiums*



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## Choice of AC and Energy Efficient EC motors

The Zoo Fan is available in an AC configuration, or can be fitted with an EC motor for further savings in running costs.

Zoo Fans with EC technology feature fully integrated, infinitely variable speed control which eliminates the need for an external VSD, current overload and motor phase protection. Optional matching sensors monitor the temperature and provide real time feedback to the fan. The fan's on-board microprocessor then adjusts its speed to match the specific requirements of the area.

## Where can a **ZOO Fan** be installed

The ZOO Fan is ideal for buildings that are heated or cooled and have high ceilings. These buildings include warehouses, airports, car dealerships, school theatres, gymnasiums and shopping centres.

The range is available in 2 sizes, 250mm and 300mm outlets and have been tested to ISO 5801:2007 for air flow performance and BS848 Part 2:1985 for sound performance.

## Downstream Guide Vanes

ZOO Fans are fitted with downstream guide vanes to help maximise fan efficiency by converting the fan's air swirl into straightened air flow. This results in the delivery of a concise air column with powerful air speed and significant throw.



*Shopping centres*



*Warehouses*



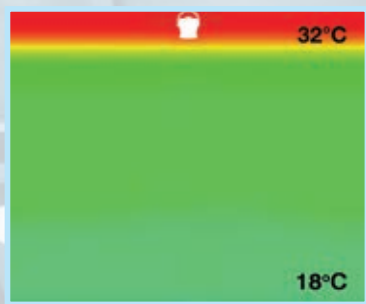


Downstream Guide Vanes

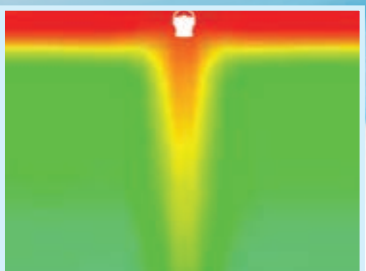


## CFD showing effect of ZOO fan

The thermal image is from a CFD (Computational Fluid Dynamics) computer model of a 12.2 metre x 12.2 metre space with a 7.6 metre flat ceiling deck and a ceiling mounted heat source with a thermostat affixed 1.5 metres 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.



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



# Manual / Auto EC Speed Controller and Sensors

This intuitive EC ZOO controller can be used to manually control fan speed, or create a flexible demand control destratification system. When set to auto operation it will adjust air flows according to the temperature difference between two temperature sensors typically placed near the floor and the ceiling.

- Dynamic control for quiet, variable speed operation
- Automatically controlled fan speed and air flow is based on the delta T and entered ceiling height
- Dynamic management of fan speed via the auto function typically results in fans running at lower speeds overall, while still maintaining thermal equilibrium in the space



Zoo Fan EC Controller (Code: ZF-BRT-F606)



Temperature Sensors (Code: ZF-BRT-T601)



# Manual EC Speed Controller

Manually adjustable speed controller provides stepless speed adjustment of EC Zoo fans through a 0-10V control signal.



Manual EC Speed Controller (Code: DCV-POT10K-WM)

# Creates a uniform temperature throughout the space



## Technical Data

Model Number	Fan size (mm)	Suggested Install Heights (m)	Fan Speed (rev/min)	Max. Air Flow (m <sup>3</sup> /s)	Motor Type	Electrical Supply	Input Power (kW)	Amps
ZFH25EC(G)	250	Up to 25	2150	0.31	EC	230V/1Ph/50Hz	0.057	0.50
ZFH30(G)	250	Up to 30	1590	0.32	AC	230V/1Ph/50Hz	0.046	0.23
ZFH50EC(G)	300	Up to 50	1850	0.59	EC	230V/1Ph/50Hz	0.089	0.87
ZFH60(G)	300	Up to 60	1500	0.54	AC	230V/1Ph/50Hz	0.077	0.68

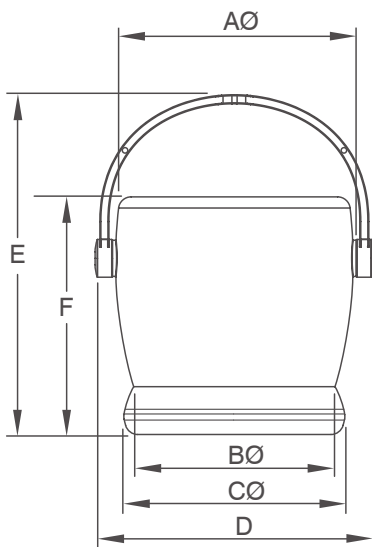
\* (G) Indicates guard option

## Sound Data

Model Number	Sound Levels (dBA) @ Ceiling Height					
	6m	8m	10m	12m	15m	18m
ZFH25EC(G)	55.4	52.9	51.0	-	-	-
ZFH30(G)	44.4	41.9	40.0	-	-	-
ZFH50EC(G)	-	-	-	49.4	38.5	36.9
ZFH60(G)	-	-	-	40.4	46.9	45.9

\* Based on non-reflective area

## Dimensional Data



Model Number	AØ	BØ	CØ	D	E	F	Weight kg
ZFH25EC(G)	359	300	352	445	545	375	9.1
ZFH30(G)							6.8
ZFH50EC(G)	452	367	421	533	656	460	11
ZFH60(G)							10

\* (G) Indicates guard option



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FAN0098 05/19