



## DESIGN DESTRATIFICATION FANS



### APPLICATION

Axial destratification ceiling mounted fans, suitable to optimize energy saving and to maintain the indoor thermal comfort in buildings with high ceiling when a silent running operation is required. Ideal to be installed in commercial and industrial buildings such as warehouses, sports halls, show rooms, shops, etc...

### CONSTRUCTION

- The fire-resistant ABS (5VB) housing, UV resistant, provides a long lasting and robust construction.
- Innovative impeller made from high performance composite material providing enhanced aerodynamic properties and reliability.
- Dynamically balanced impellers to ISO 14694 Grade G6.3.
- Highly efficient motors, mounted on long life ball bearings, for a top silent operation, with integral thermal protection, available in the following models:
  - AC (220-240V, 50/60Hz)
  - EC (200-277V, 50/60Hz).
- IP54 terminal box fitted as standard.

### FEATURES & BENEFITS

- The elegant design integrates with any type of environment.
- Special impeller configuration guarantee the top efficiency and silent operation.
- Energy and costs saving, optimization of the efficiency of HVAC systems and CO2 reduction, thanks to the destratification process, by mixing and uniforming the indoor air temperature.
- Winter destratification: they redistribute warm air towards floor level, so to uniform the air temperature and to avoid the continued and pro-long usage of heaters.
- Summer comfort: the gentle breeze across skin, as a result of an efficient and continuous air circulation, creates a natural evaporative cooling effect on people, and eliminates hot and cool spots in the building. Fans are suitable for operating temperatures up to +70°C.
- Tested to the latest standards, meaning accurate, up to date information on electrical safety, performance and noise level that can be relied upon.

- Designed and manufactured in accordance with Machinery Directive (MD), Low Voltage Directive (LVD), and Electromagnetic Compatibility Directive (EMC).

### ACCESSORIES

- Electronic speed controller.
- Transformer controller.
- Speed controller for EC motors.

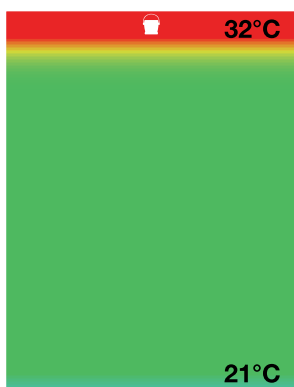


Figura 1

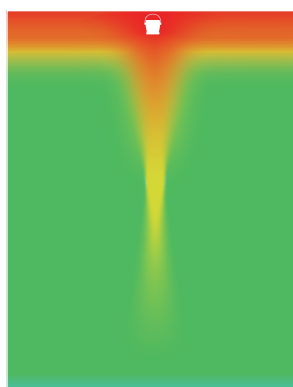


Figura 2



Figura 3

**Figura 1:** temperature stratification when the SDF fan is off or absent.

**Figura 2:** effect immediately after the SDF fan has been switched on.

**Figura 3:** temperature uniformity thanks to the SDF fan.

The above thermal image is from a CFD (Computational Fluid Dynamics) computer model of a 12.2m<sup>2</sup> space with a 7.6m flat ceiling deck and a ceiling-mounted heat source with a thermostat affixed 1.5m above the floor, set at 21°C.

## Performances

Description	Max Rotation Speed	Freq.	P <sub>el</sub>	I <sub>nom</sub>	I <sub>start</sub>	T <sub>max</sub>
	rpm					
SDF250/4-1AC	1370	50	0,048	0,24	0,40	55

Description	Code	Eff.	FMEG	Q max	Lp	
					%	N
		m³/h	Inlet	Outlet		
SDF250/4-1AC	CTR00035	-	-	960	37	38

Description	Max Rotation Speed	Freq.	P <sub>el</sub>	I <sub>nom</sub>	I <sub>start</sub>	T <sub>max</sub>
	rpm					
SDF300/4-1AC	1230	50	0,095	0,41	0,63	60

Description	Code	Eff.	FMEG	Q max	Lp	
					%	N
		m³/h	Inlet	Outlet		
SDF300/4-1AC	CTR00039	-	-	1920	43	42

Description	Max Rotation Speed	Freq.	P <sub>el</sub>	I <sub>nom</sub>	I <sub>start</sub>	T <sub>max</sub>
	rpm					
SDF250/4-1EC	2568	50	0,113	0,77	-	60

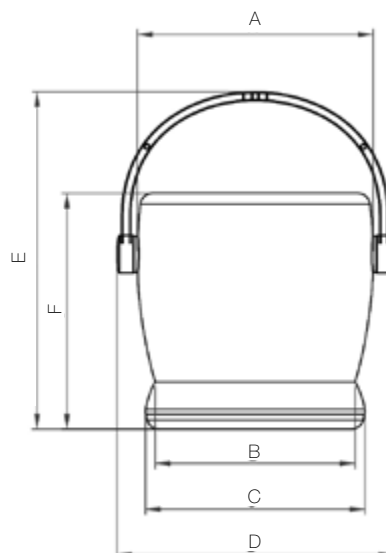
Description	Code	Eff.	FMEG	Q max	Lp	
					%	N
		m³/h	Inlet	Outlet		
SDF250/4-1EC	000450	-	-	1520	53	53

Description	Max Rotation Speed	Freq.	P <sub>el</sub>	I <sub>nom</sub>	I <sub>start</sub>	T <sub>max</sub>
	rpm					
SDF300/4-1EC	1640	50	0,150	1,01	-	60

Description	Code	Eff.	FMEG	Q max	Lp	
					%	N
		m³/h	Inlet	Outlet		
SDF300/4-1EC	002711	-	-	2360	51	49

## Dimensions (mm) and Weight (kg)






Description	A	B	C	D	E	F	Weight
SDF250	359	300	352	445	545	375	6,8
SDF300	452	367	421	533	656	460	10,5

The SDF fans are outside the scope of ErP legislation.

Data provided at standard air density of 1.2kg/m³.

The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20µPa and is presented for comparative purposes only.

## Accessories

Description	 Electronic speed controller		 Transformer controller		 Speed controller for EC motors	
	233		233		233	
Page	Description	Code	Description	Code	Description	Code
SDF250/4-1AC	REL-1A-P	PRV00000	R-E-1.5G	003081	-	-
	REL-1A-I	PRV00001	R-E-2G	003083	-	-
SDF300/4-1AC	REL-1A-P	PRV00000	R-E-1.5G	003081	-	-
	REL-1A-I	PRV00001	R-E-1.5G	003083	-	-
SDF250/4-1EC	-	-	-	-	CTRL-M-P	003682
	-	-	-	-	CTRL-M-I 2M	003683
SDF300/4-1EC	-	-	-	-	CTRL-M-P	003682
	-	-	-	-	CTRL-M-I 2M	003683

### Electronic speed controller

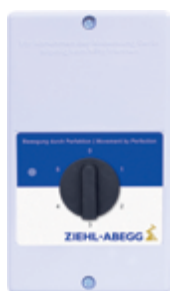


- Electronic speed controller with front adjusting knob and on/off switch.
- Yellow front led to indicate the load is active.
- 230V 50/60Hz.
- Max load 1A.
- For surface mounting (REL-1A- P) or recessed (REL-1A-I 2M).

Description	max Amp	H	L
REL-1A	1	80	80

Dimensions in mm

### Transformer controller



- Transformer controller for single/three-phase motors.
- Provided with 5 speed steps.
- Complete with on/off flashing indicator.
- Single-phase controller: 230V.
- Output voltage: 65-110-135-170-230V.
- Maximum ambient temperature: +40°C.

Description	I nom (A)	Max fuse (A)	Max heat dissipation (W)	IP	Weight (kg)	Dimensions (WxHxD)	SDF 250/4	SDF 300/4
R-E-1.5G	1,5	4	20	IP54	1,74	105x180x98	fino a 5	fino a 3
R-E-2G	2	4	20	IP54	2,20	166x230x118	fino a 7	fino a 4

Dimensions in mm

### Speed controller for EC motors



- Remote potentiometer for EC brushless motors with front knob to adjust the motor speed.
- Provided of two-pole on/off switch.
- Front yellow led to indicate the load is active.
- 230V ~ 50/60Hz.
- For surface mounting (CTRL-M-P) or recessed (CTRL-M-I 2M).

Description	max Amp	H	L
CTRL-M	-	80	80

Dimensions in mm