



## Axial scatter fans type Diffuser

- Axial scatter fans

### Application

- Scatters of type **Diffuser** line are designed to mix the air wherever there is the need to eliminate heat and humidity stratification, with consequent wastes of energy and discomfort for the people. For instance in industrial and commercial buildings, sporting halls, warehouses, stores, stock-farms etc.

### Advantages

- **Diffuser** provides the mixing of the air, even in big size environments, allowing a uniform temperature in any point and height. It is known that during the winter season, the hot air has the tendency to rise up to the top dispersing through the roof covering and windows
- An industrial environment heated with thermal appliances could have up to 15° C difference in temperature between the floor and the ceiling. A great amount of energy is therefore wasted to guarantee a satisfactory temperature to the ground. During the summer season there is a stratification of the dumpy air towards the ground, therefore the mixing of this air, together with the opening of the windows, consent the renewal improving the living conditions

### Composition

- Ring casing, with double wide round shaped nozzles, and diffuser resistant to atmospheric agents
- Chains and fixing bracket
- Inlet grid in steel rod, protected against the atmospheric agents
- Impeller with high efficiency air foil blades in plastic materials and hub in die-cast aluminum. Balancing according to UNI ISO 1940
- Asynchronous electric motor three and single phase with thermal protection, speed adjustable, protection IP 55, Class F insulated, service S1
- Impeller directly coupled to motor shaft
- Temperature of conveyed air: -20°C / +50°C
- Supply:
  - 1ph 230V 50 Hz (80 M) speed adjustable
  - 3ph 400V 50 Hz (80 T)
- Air flow from motor to impeller

**Options**

- Standard version suitable for working temperature: -25°C / +50°C
- ATEX94/9/CE flameproof version

**Text for tender**

- Axial scatter fans for mixing of the air, allowing a uniform temperature in any point and height
- **ATC** type **Diffuser**

**Order example**
**Diffuser 80 T**

Explanation:

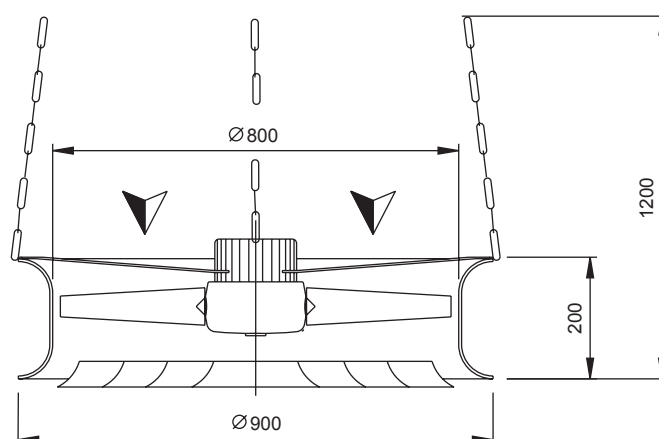
**Diffuser** - type fan

**T** - 3-phase (**M** - 1-phase)

	Technical data			
	$Q_v$ [m <sup>3</sup> /h]	RPM [min <sup>-1</sup> ]	P [kW]	I [A]
80 M	8000	450	0.14	2
80 T	10500	650	0.18	0.7

**Notes**

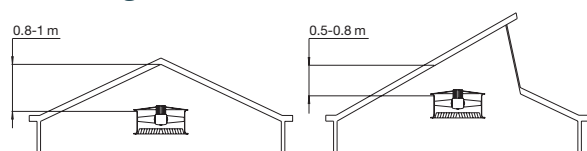
- $Q_v$  = Air flow rate
- P = Motor power
- I = Current rate

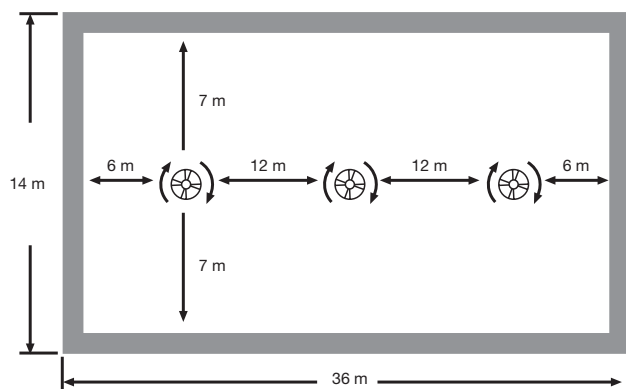


Sound levels			
80 M		80 T	
RPM [min <sup>-1</sup> ]	Lp [dB(A)]	RPM [min <sup>-1</sup> ]	Lp [dB(A)]
450	54	530	59
310	46	400	51
220	40	260	43

**Notes**

- $L_p$  = Sound level

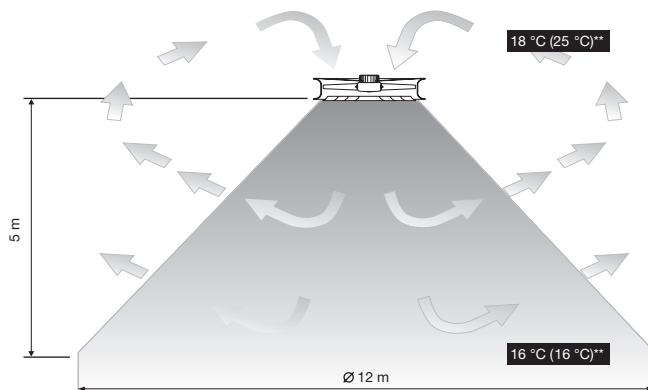
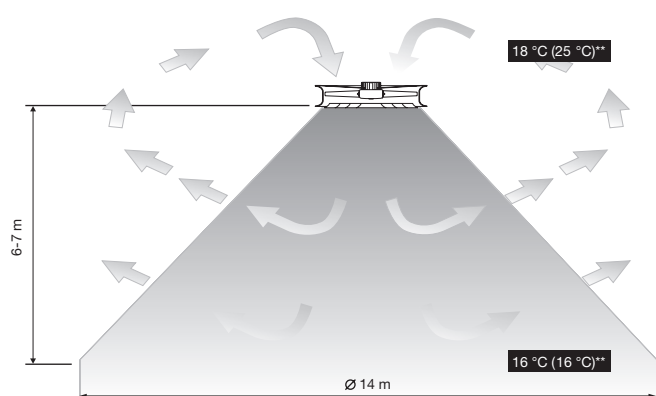
**Mounting**




### Mounting

- The ideal installation consists to place one Diffuser each 200-250 m<sup>2</sup> covering all the flooring, paying attention not to overlap the ventilation areas and keeping distance from perimeter walls, so to avoid troublesome vertical airflow currents. Maximum height of installation: 6-7 meters from the ground. We suggest to install the Diffuser with an automatic regulation panel, or in alternative with a speed regulator with (or without) thermostat and feeler. We also recommend setting thermostat with a temperature not lower than 20°C, to avoid the movement of "cold" air.

### Working principles



### Notes

\*\* - Air temperature in operation (and stopped) conditions