

# ELIC-D

## IMPULSE AXIAL SCATTER



### FIELD OF APPLICATION

Scatters of ELIC-D 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.

### SERIES

ELIC-D 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. The use of low energy consumption motors, low speed and adjustable, the design of the diffuser, impeller and casing, allow the best possible solution to the above mentioned problems.

ELIC-D, if compared with the centrifugal systems, has the advantage of fewer installations (less connections and electrical consumptions), due to the greater area of influence. The design of ELIC-D and the speed adjustable motors avoid the arising of troublesome cold airflows and pulsations.

### ARRANGEMENT

- 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 21940-11.
- Asynchronous electric motor three and single phase with thermal protection, speed adjustable, protection IP 55, Class F insulated, service S1.
- Arrangement 5 (impeller directly coupled to motor shaft).

### TECHNICAL DETAILS

ELIC-D standard

- Conveyed air: clean, not abrasive.
- Temperature of conveyed air: -20°C / +50°C.
- Voltage:
  - three-phase version (T) 400 - 415V - 3Ph - 50Hz
  - single-phase version (M) 230 - 240V - 1Ph - 50Hz speed adjustable.
- Air flow from motor to impeller, position A (AMI).

### OPTIONALS

- Speed regulator (ESR-M).
- Temperature feeler with thermostat (EF).
- Electric panels for automatic control of the temperature and speed (ECP).
- Service switch (SW).

### ON DEMAND

- Versions for very high buildings with ELIC-D for from more than 8/9 metres to the ground.
- Special voltage and frequency



# ELIC-D Characteristics

Performance shown in the selection diagrams refer to air at 15°C temperature and 0 mt a.s.l. altitude, and they were obtained in installation type "D" with no grid nor accessories.

single-phase (230 - 240V - 1Ph - 50Hz)

Model	Flow rate (m <sup>3</sup> /h)	Speed (rpm)	Pm (kW)	In max (A)	kg
80 M	9.000	500	0,12	2,3	32

Sound pressure level (Lp) in free field at 6 m

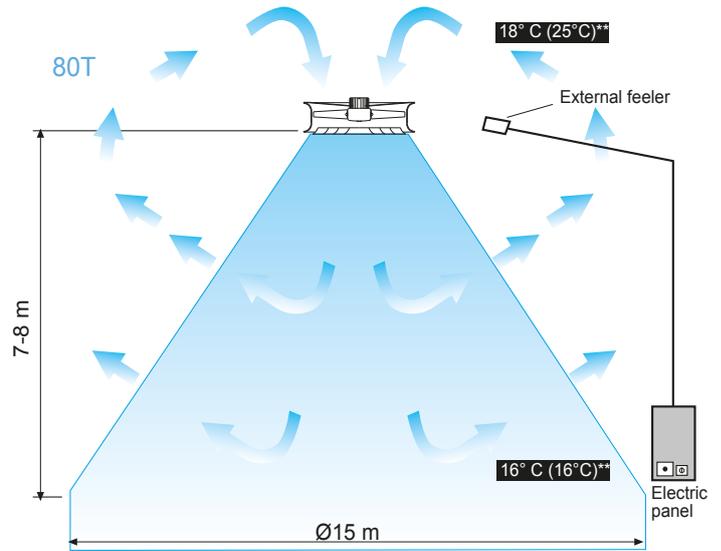
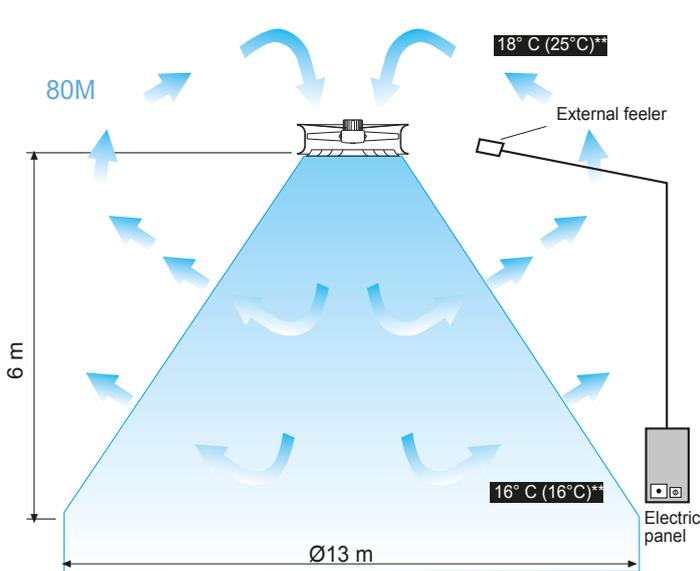
80 M	rpm	500	340	250
	dB (A)	54	46	40

three-phase (400 - 415V - 3Ph - 50Hz)

Model	Flow rate (m <sup>3</sup> /h)	Speed (rpm)	Pm (kW)	In max (A)	kg
80 T	10.500	650	0,12	0,7	27

Sound pressure level (Lp) in free field at 6 m

80 T	rpm	650	480	270
	dB (A)	59	51	43

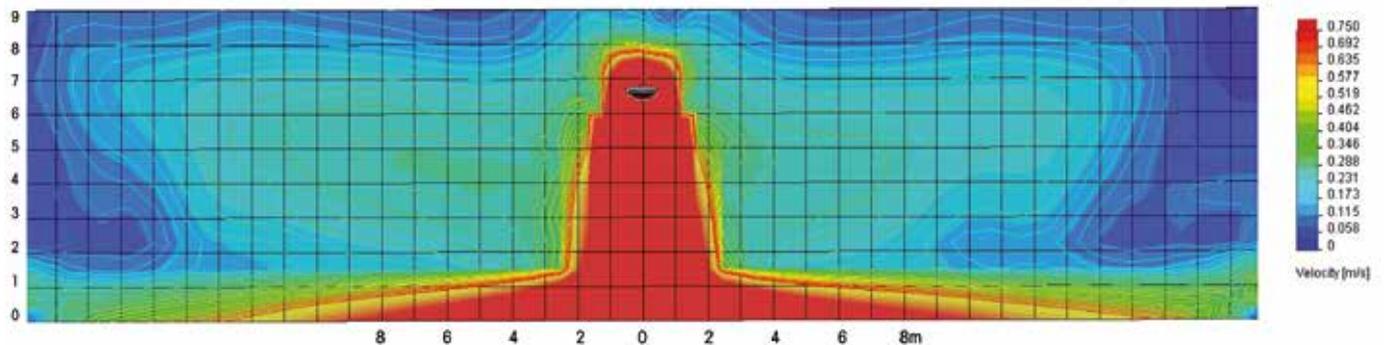


Air temperature in operation and stopped conditions.

**Tolerances:** performances and sound power levels within the tolerances allowed by the DIN 24166 standard for Class 2

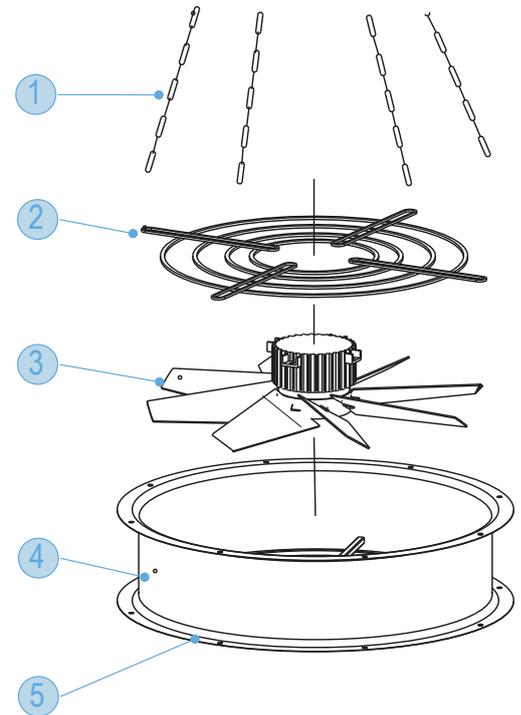
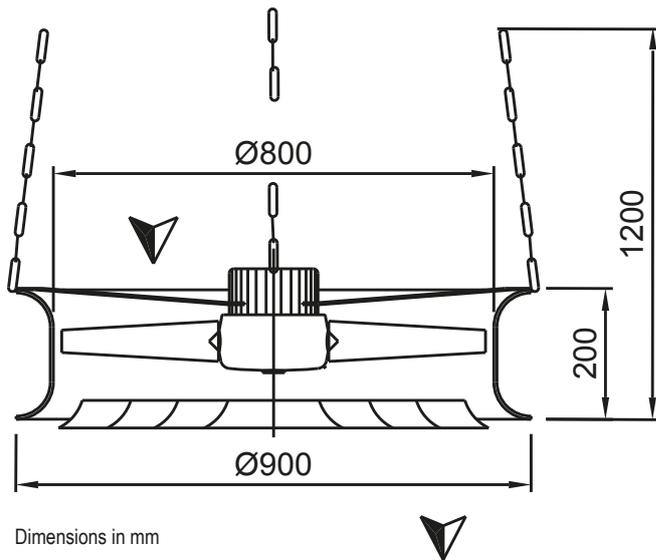
## ELIC-D 80 T

Velocity distribution cfd analysis - fan placed at 7 mt from the floor.  
Residual velocity (colored area).



"Graphical representation of the velocity profile, taken from at least 8 meter from the axial scatter axis"

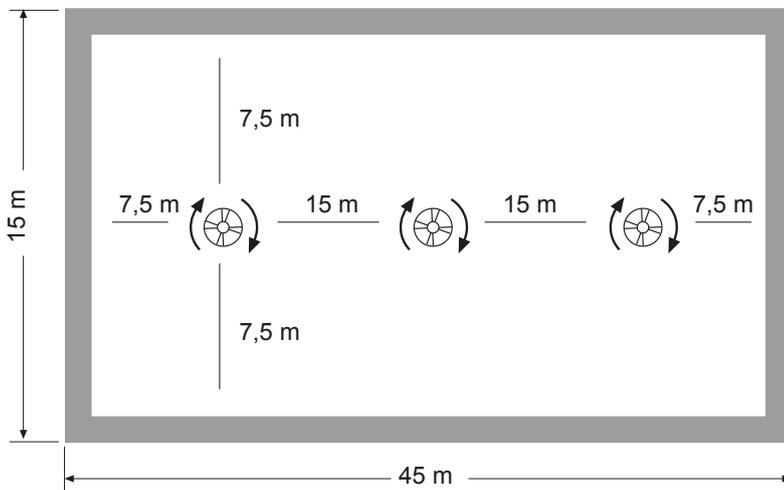
## ELIC-D Dimensions



- 1 - Fixing chains
- 2 - Motor support
- 3 - Motor - impeller assembly
- 4 - Casing
- 5 - Diffuser

### Installation

The ideal installation consists to place one ELIC-D 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: 7-8 meters from the ground. We suggest to install ELIC-D 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.



Remark: for safety reasons they shall be installed at a minimum height of 4 m in order to avoid the access of the rotating parts.

## CONTROLLERS

ESR-M



ECP

