

## EQUIPMENT

# FC

- Low installation and maintenance cost
- Extremely low running cost
- Very simple and economical maintenance
- Environmentally friendly
- Allows a consistent change of air
- Low noise

# FC

## ESAC™ Evaporative coolers



ESAC™ FC evaporative cooler series is based on the natural principle of using water to regulate the temperature and refresh the air. The system creates a comfortable indoor climate with the optimal combination of temperature and humidity. FC has a low running-, installation- and maintenance cost and is an environmentally friendly and efficient choice for climate control. Four standard sizes are available for cooling of small to large facilities. The unit can be placed standing on the floor, mounted on the wall, on the roof or on wheels for maximum flexibility. Multiple FC units can be used in parallel to increase the capacity.

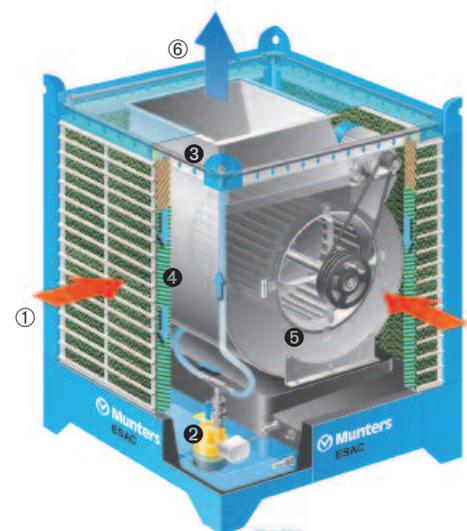
### Theoretical principle

Evaporative cooling is an adiabatic process at constant enthalpy. It utilises the exchange of energy between water and air; the energy needed to make the water evaporate is taken from the air, thus reducing the air temperature.

The energy in the air can be divided into two parts: Sensible heat, which is the one we perceive and is quantified by measuring the air temperature; Latent heat, the energy which is needed to allow the water in the air to evaporate.

The FC evaporative coolers system increases the latent heat and decreases the sensible heat, with very little need for external energy.

*Evaporative cooling principle.*

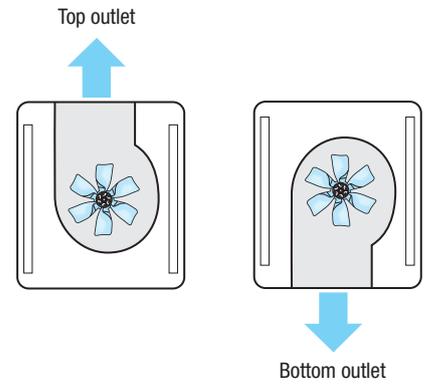


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|-----------------------------|----------------------|
| 1. Incoming warm air        | 2. Water pump        |
| 3. Water distribution pipes | 4. CELdek® media     |
| 5. Centrifugal fan          | 6. Outgoing cool air |

## How it works

ESAC™ evaporative coolers use CELdek® evaporative cooling pads as media. A system of water distribution and a pump keep the pad continuously wet. Inside the machine is a large centrifugal fan which

sucks the air from the outside through the pad. When the air goes through the pad which is saturated the air gets cooler. The cool air is then forced by the fan into the premises.



## Order information

FC-XX-X e.g., FC-30-T

Code for airflow in 1,000 m<sup>3</sup>/h.

Code for air outlet version.

T = Top

B = Bottom

## Technical specifications

FC code	Airflow range 1,000 m <sup>3</sup> /h	Electrical power consumption kW/A	Dimensions (H×W×D) mm	Weight (w/o water)* kg
15T	15	2.0/5.1	1,450×1,150×1,150	200
15B	15	2.0/5.1	1,450×1,150×1,150	200
22T	22	3.7/7.9	1,950×1,150×1,150	220
22B	22	3.7/7.9	1,950×1,150×1,150	220
30T	30	3.8/8.0	1,950×1,500×1,500	300
30B	30	3.8/8.0	1,950×1,500×1,500	300
35T	35	5.0/11.2	1,950×1,500×1,500	310
35B	35	5.0/11.2	1,950×1,500×1,500	310

\*) Weight with water: +60 kg for FC 15 and 22, +80 kg for FC 30 and 35.

The unit is equipped with an electrical wiring box for simple connection and installation.  
Electrical AC connections are for 400 V, 3 phase, 50 Hz.

## Cooling capacity

Ambient temp.	Ambient relative humidity								
	20%	25%	30%	35%	40%	45%	50%	55%	60%
	Temperature in °C after cooler								
30	20.4	21.2	21.6	22.4	23.2	23.8	24.5	25.2	25.8
35	24.1	24.5	25.6	26.5	27.4	28.2	29.0	29.6	30.4
40	27.9	28.4	29.5	30.6	31.6	32.5	33.4	34.1	34.9

ESAC is developed and produced by Munters Italy S.p.A., Italy.



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