

# FCX

## ESAC™ Evaporative coolers



ESAC FCX series offers a high performance cooler with enhanced control functionality. The 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. FCX is an efficient and environmentally friendly choice for climate control with low running, installation, and maintenance costs. Four standard sizes are available for cooling 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 FCX units can be used in parallel to increase 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.

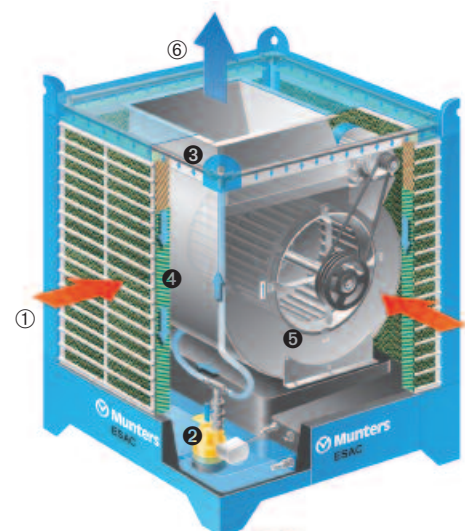
FCX evaporative coolers increase the latent heat and decrease the sensible heat, with very little need for external energy.

### EQUIPMENT

## FCX

- High cooling efficiency in a compact design
- Low installation and maintenance cost
- Extremely low running cost
- Suitable for a wide range of applications
- Simple, flexible installation
- Improved controller functionality
- Allows a consistent change of air
- Low noise
- Environmentally friendly

### Evaporative cooling principle.



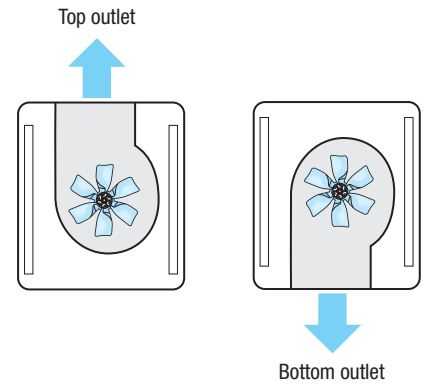
- |                             |                      |
|-----------------------------|----------------------|
| 1. Incoming warm air        | 2. Water pump        |
| 3. Water distribution pipes | 4. CELdek® media     |
| 5. Centrifugal fan          | 6. Outgoing cool air |

## How it works

ESAC™ evaporative coolers use CELdek® evaporative cooling pads as media. A system of water distribution and a pump keeps 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.

ESAC is equipped with a monitoring unit that regulates the desired temperature or humidity level and also renews the water used in the cooler, ensuring a constant high operational quality and efficiency.



## Order information

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

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

Code for air outlet version.

T = Top

B = Bottom

## Technical specifications

FCX 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	1,545×1,170×1,170	200
15B	15	2.0/5.1	1,545×1,170×1,170	200
22T	22	3.7/7.9	2,030×1,170×1,170	220
22B	22	3.7/7.9	2,030×1,170×1,170	220
30T	30	3.8/8.0	2,030×1,540×1,540	300
30B	30	3.8/8.0	2,030×1,540×1,540	300
35T	35	5.0/11.2	2,030×1,540×1,540	310
35B	35	5.0/11.2	2,030×1,540×1,540	310

\*) Weight with water: +60 kg for FCX 15 and 22, +80 kg for FCX 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	18.4	19.3	19.9	20.8	21.8	22.5	23.4	24.2	24.9
35	21.8	22.4	23.7	24.8	25.8	26.8	27.8	28.5	29.5
40	25.4	26.1	27.4	28.7	29.8	31.0	32.0	32.9	33.9

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



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