

HOT-AIR CURTAINS, COR MODELS

Keeping doors open leads to considerable energy costs in most buildings. The proper installation of an air curtain can reduce energy lost through open doors by 90%. In addition to the considerable energy saving, the curtains improve the healthiness in the environment and make it possible to keep doors open even in winter, which makes it easier for customers to go into commercial stores.

COR air curtains come in three lengths of 900, 1200, and 1500 mm, which can be fitted alongside each other to adapt to any door width on industrial or commercial premises. All the curtains include a remote-control handset.



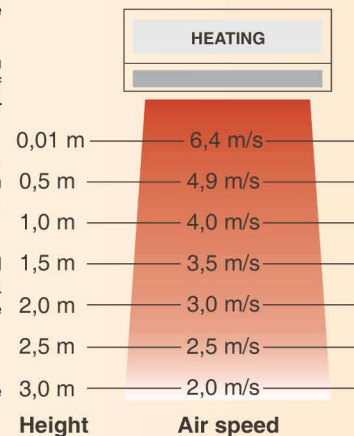
General characteristics

- Metal casing
- Several sizes from 90 to 150 cm
- Controlled by microprocessor
- Remote control
- High speed
- Maximum air renewal
- Low noise level
- Single-phase or three-phase supply voltage of ~220 V and 3-380 V respectively

Why an air curtain?

Open doors and store entrances create energy loss, as well as causing air-current problems. Installing an air curtain can reduce energy loss and improve comfort levels. There are three factors that affect the air current passing through an open door:

- Difference between interior and exterior pressure. The difference between interior and exterior pressure can be eliminated by using balanced ventilation.
- Difference between interior and exterior temperature. Hot air is less dense than cold air. This means that cold air from outside penetrates the entrance at the bottom part of the opening, pushing the hot air outside through the top part of the opening. This exchange of air is caused by thermal currents and is due to the fact that masses of cold and hot air have different densities.
- Wind speed against the opening. The flow of air passing through the entrance is strengthened by the effect of the wind. If we were to assume that the wind blows uniformly through the entire opening, after a while, the store would have an overpressure so great that the air current would be limited to what is filtered outside through the cracks in the buildings.



FITTING AIR CURTAINS

An air curtain creates an effective barrier at the entrance, preventing cold air penetrating from the outside. The air speed of the curtain must be enough for the resulting air to be directed downwards. The air curtain should be placed so that a small part of the air current is directed outside the opening, while the rest blows inside. In this way, the cold air outside stays outside of the barrier, while the warm air inside stays inside.

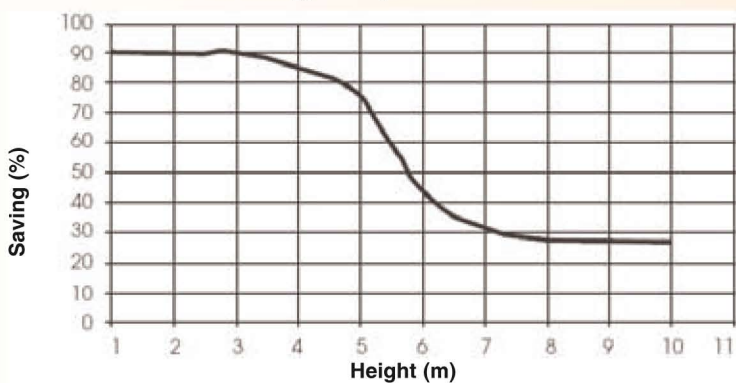
POSITION

For the best possible result, the air curtains must be fitted as close as possible to the opening, and should take up the entire width of the entrance.

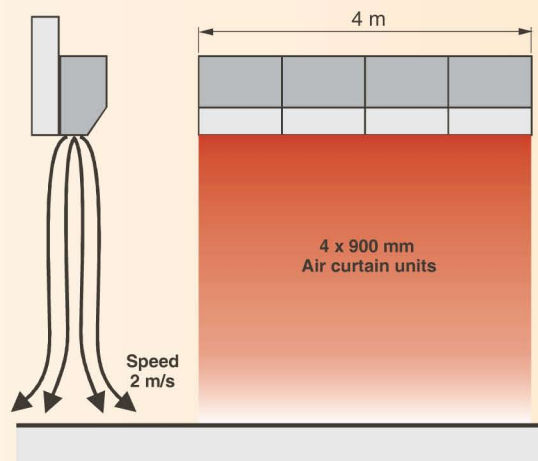
POTENTIAL ENERGY SAVING

The potential energy saving depends on the height of the door. Measurements show that when doors up to 3.5 high are used, the air curtains reduce energy loss by about 90%. For doors higher than 3.5 m, the savings decrease consistently in proportion to the height of the door. For doors 7 m high, the potential energy saving is reduced to approximately 30%. The following graph shows the correlation:

Normal energy saving with hot-air curtain



The graph shows us that by fitting air curtains on a 5 m high door it is possible to reduce energy loss by approximately 75%.



Fitting hot-air curtains

Standard models

Code	Model	Air flow rate (m³/h)	Heat power (KW)	Supply voltage V	Output speed (m/s)	Applicable height (m)	Ventilation consumption W	Heating consumption W	Control	Noise level (dB)	Dimensions in mm			Net weight kg
											Height	Width	Depth	
EC06414	CORM001	912	6	~230	6,5	3	120	6120	Remote and manual	55	221	900	183	15,5
EC06415	CORM002	1280	7,2	~230	6,5	3	180	7380		57	221	1200	183	19,5
EC06416	CORM003	1670	9	~230	6,5	3	250	9250		59	221	1500	183	23,5
EC06417	CORT001	912	6	3 ~ 400	6,5	3	120	6120		55	221	900	183	15,5
EC06418	CORT002	1280	7,2	3 ~ 400	6,5	3	180	7380		57	221	1200	183	19,5
EC06419	CORT003	1670	9	3 ~ 400	6,5	3	250	9250		59	221	1500	183	23,5

