

Air Curtains

Quiet and Compact Air Barrier – For a Comfortable Indoor Environment



GK Series Air Curtains – the energy efficient way to protect your indoor environment

Mitsubishi Electric Air Curtains are the perfect way to create an invisible downward airflow barrier to keep outside air separate from temperature controlled indoor air. Reduce energy wastage and keep out pests, odours and dust at the same time.

Economic Benefits

Not only does the installation of an air curtain help to maintain a constant comfortable indoor temperature, it saves energy too. Install an automatic door to achieve even more economical operation and a more pleasant indoor environment.

Compact Design

Compact and stylish, the Mitsubishi Electric Air Curtain is able to be installed vertically or horizontally according to the available space; blending perfectly with your interior design.

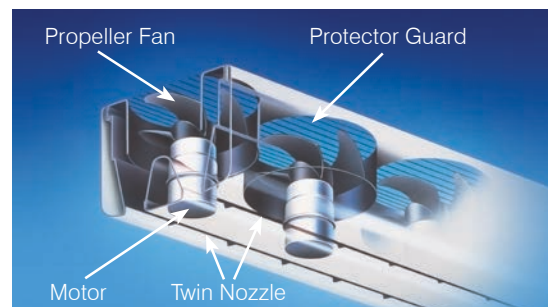
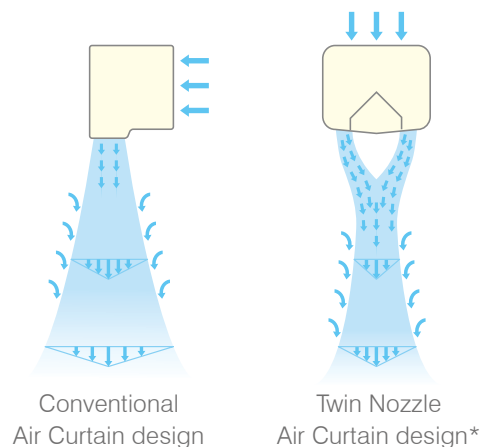
By adjusting the installation angle of the air curtain, the airflow angle can be altered both internally and externally.

Propeller Fan – Powerful Airflow, Less Noise, More Efficient

New innovations in high-tech hydromechanics have enabled Mitsubishi Electric's Propeller Fan to run with unparalleled quietness. The Propeller Fan not only reduces noise, it is also the secret behind the GK Series' powerful, high-volume airflow.

The Propeller Fan is a major improvement over the Line Flow Fan; driven by an energy efficient motor that results in decreased operating costs.

The use of an Axial Fan (Propeller Fan) makes it easier to maintain the unit and keep the air curtain in the best condition at all times. Moreover, the improvements that have resulted from the change to the Axial Flow Fan from the Line Flow Fan mean that fan life is now even longer.



* Twin Nozzle air curtain takes in air from above. (Please allow a minimum distance 100mm~150mm between the air curtain and the ceiling.)

Shut-out Functions

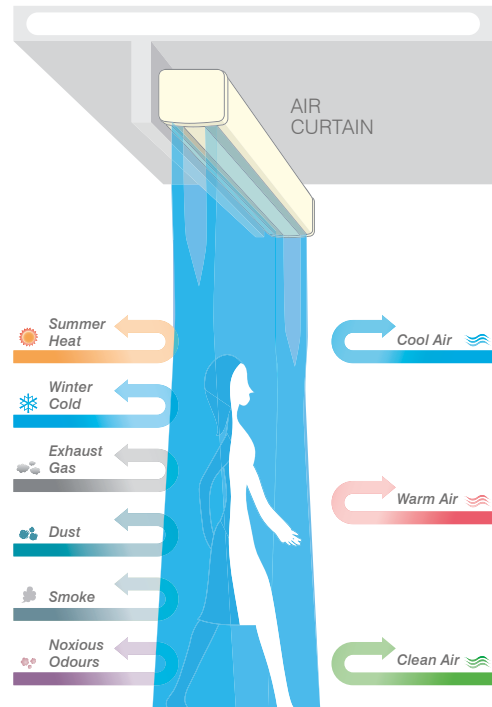
Increased Cold Storage Efficiency and Shut-Out Effect Test

This test ascertained the effectiveness of Mitsubishi Electric Air Curtains in reducing temperature increases in a cold storage facility. Without an air curtain, the inside temperature increased from -5 to +4°C in as little as two minutes. With an air curtain installed this time was extended to about 10 minutes, or approximately five times as long. If the door was left open for five minutes, the temperature increased up to 10°C if no air curtain was used, as opposed to 2°C when one was used. It was established that 50% less energy was required to reduce the inside temperature to -5°C when an air curtain was used.

Insect* Shut-Out Test

This night time test ascertained the effectiveness of Mitsubishi Electric Air Curtains in shutting out insects. A 40W mercury lamp was placed inside an air curtain and ejected from a 4cm-wide vent at a velocity of 8m/sec. The insect shut-out rate was 70-80%.

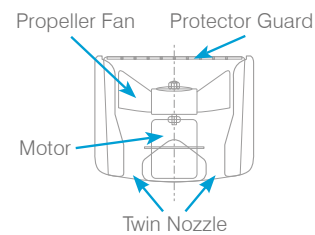
*Insects such as flies which have high flying power may fly into the room along the surface of the floor where wind velocity is comparatively low.



Twin Nozzle

The twin nozzle design allows the Air Curtain to generate larger air-velocity distribution with less air intake.

Resistance to the influence of external airflow has been strengthened, greatly improving insulation against heat and cold.



Air Curtain Shut-out Effect – Economic Benefits				
	Cooling Mode – Load factors (kW)	Load Factor	Heating Mode – Load factors (kW)	Load factor
Open plan premises, doors kept open and no air curtain.	Energy loss due to other causes: 8.5 kW Energy loss from door area: 20.5 kW	29 kW	Energy loss due to other causes: 8.7 kW Energy loss from door area: 37.8 kW	46.5 kW
Open plan premises with air curtain or automatic door.	Energy loss due to other causes: 8.5 kW Energy loss from door area: 4.1 kW Energy saved: 16.4 kW	12.6 kW	Energy loss due to other causes: 8.7 kW Energy loss from door area: 11.3 kW Energy saved: 26.5 kW	20 kW
Open plan premises with air curtain and automatic door.	Energy loss due to other causes: 8.5 kW Energy loss from door area: 1 kW Energy saved: 19.5 kW	9.5 kW	Energy loss due to other causes: 8.7 kW Energy loss from door area: 2.8 kW Energy saved: 35 kW	11.5 kW

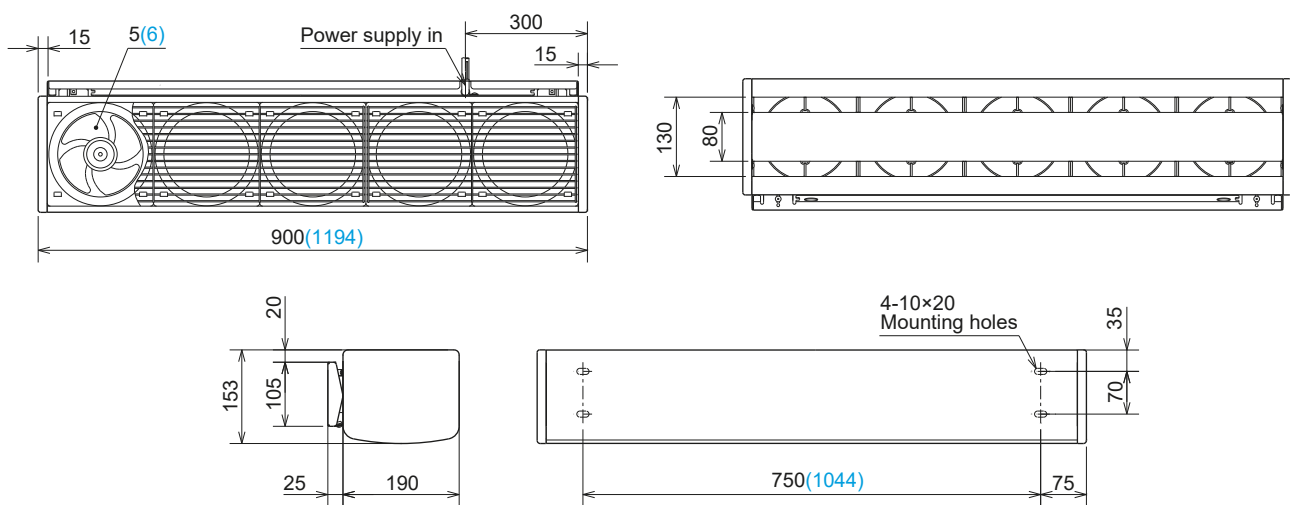
Assumptions for economic benefits calculations:
 Environmental factors – Floor space is 66.4m². Shop height 2.75m, depth 7.3m and width 9.1m. Two door openings of 0.5m (w) and 2.4m (h). Shop is housed in a two-story building surrounded by other buildings on 3 sides (back, left and right). Both the air conditioner and the air curtain have the specifications and characteristics of 50Hz. Cooling mode: indoor temperature 28°C and humidity 70%, outdoor temperature 32°C and humidity 60%. Heating mode: indoor temperature 18°C and outdoor temperature 0°C.

Specifications

Model	Fan Speed	Single-phase 50Hz 220-240V					Starting Current (A)	Weight (kg)
		Air Volume (m ³ /h)	Running Current (A)	Input Power (W)	Air Velocity Max. (m/sec)	Noise (dB)		
GK-2509 YS1-CE	High	1210-1230	0.25-0.26	54-61	9.5	43-44.5	0.43	10.5
	Low	980-1000	0.24-0.25	52-59	7	38-41		
GK-2512 AS1-CE	High	1420-1440	0.35-0.37	76-83	9.5	46-47	0.62	13.3
	Low	1150-1170	0.31-0.33	67-78	7	40.5-44		

Use conditions: The temperature should be between -10 and +45°C. The RH should be less than 90% at room temperature. Any condition outside of this range could result in burnout, deformed, malrotating or damaged parts.

Dimensions



*Figures in parentheses is the value of the GK-2512AS1-CE.

Unit (mm)

Certain ratings and specifications may change due to product improvements or modifications. Refer to the product manuals for safety precautions.



for a greener tomorrow

Eco Changes is the Mitsubishi Electric Group's environmental statement, and expresses the Group's stance on environmental management. Through a wide range of businesses, we are helping contribute to the realisation of a sustainable society.