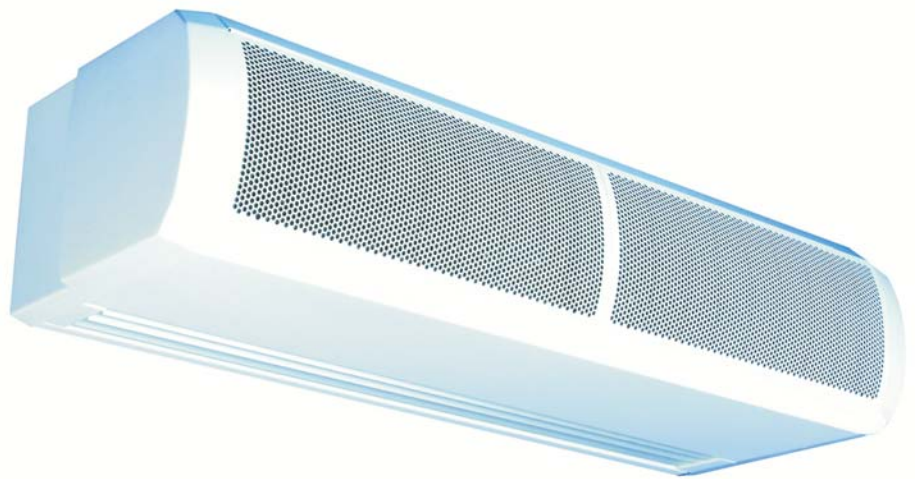


*the future of space conditioning*

# Air Curtain

surface mounted



# Surface Mounted Air Curtain

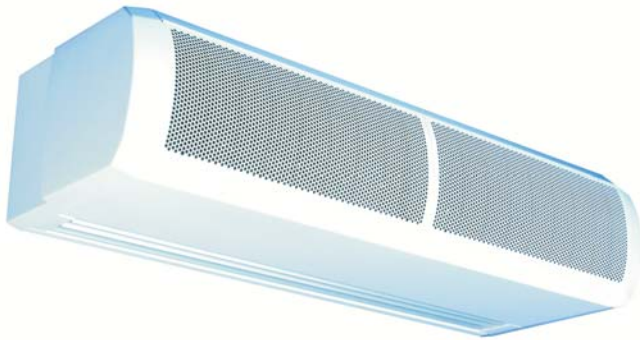


Fig 1. Surface mounted air curtain

## Introduction

These surface mounted Air Curtains create an air barrier, which helps to prevent cold draughts thus creating a comfortable indoor climate. Energy losses through openings are reduced, which means considerable savings.

When the doors are closed, the Air Curtain will contribute towards the heating around the entrance area if required. The heated air from the unit will also help to dry any water/sleet dragged into an entrance, as such assisting in creating a safer environment.

Although Air Curtains emit warm air, the main purpose of an Air Curtain is not to provide general heating in a space. For more information with regard to general heating products, please contact our sales team for advice and information.

All Frenger Air Curtains are designed with energy efficiency in mind and with the introduction of Ecopower technology, end users can now benefit from energy saving and climate enhancing innovation.

The Air Curtains are available in two models; Model A is suitable for mounting up to 3m from floor level and Model B up to 4m.

## Features

- Low sound levels
- Corrosion proof housing finished in RAL 9010
- Option of non-standard colours
- Optimized airflow technology
- Units can be mounted together to create longer runs
- IP21 Rated
- Available in electric, water or ambient versions
- Supplied tangential fans
- 3 way valve supplied with water units
- FRA model with optional filter on surface mounted water and ambient units
- FRA models includes low inertia high efficiency energy heating coils in electric heating units
- FRB models available with 82/71°C and 60/40°C low-grade water coils

# Design

## Finish

The Frenger surface mounted Air Curtain is designed for easy and discreet installation either with the included wall mounting brackets, or with drop rods (by others) from fixing points at the top of the heater.

The casing comprises of a sheet metal enclosure manufactured from decorative PVC coated 20G sheet steel with a perforated inlet grille and slot type discharge grille.

The decorative plastic end caps fitted to each end of the unit are push fit and do not require tools for removal.

The unit is finished in RAL9010 as standard, but other RAL colours can be accommodated upon request.

# Technical Data

## Ambient Air Curtain

Part No.	Heat output (W)	Loading (A)	Max velocity (l/s)	Max air volume (m³/h)	Weight (Kg)	Size (LxWxH) mm	Supply (50Hz)	dB (A) @3m**	Mounting Height (m)
<b>Model A</b>									
FRA-100 A	-	0.7	9	1250	15	1137 x 275 x 198	230V ~1P&N	55	2-3
FRA-150 A	-	0.9	9	1800	21	1669 x 275 x 198	230V ~1P&N	55	2-3
FRA-200 A	-	1.1	9	2500	31	2200 x 275 x 198	230V ~1P&N	56	2-3
<b>Model B</b>									
FRB-100 A	-	1.3	12	2880	29	1196 x 377 x 255	230V ~1P&N	59	3-4
FRB-150 A	-	1.8	12	4020	43	1746 x 377 x 255	230V ~1P&N	60	3-4
FRB-200 A	-	2.7	12	5760	58	2296 x 377 x 255	230V ~1P&N	61	3-4

## Electric Air Curtain

Part No.	Heat output (W)	Loading (A)/phase	Max velocity (l/s)	Max air volume (m³/h)	Weight (Kg)	Size (LxWxH) mm	Supply (50Hz)	dB(A) @3m**	Mounting Height (m)
<b>Model A</b>									
FRA-100 E	4.5/9	13.7	9	1250	16	1137 x 275 x 198	400V ~ 3P&N	55	2-3
FRA-150 E	6/12	18.3	9	1800	23	1669 x 275 x 198	400V ~ 3P&N	55	2-3
FRA-200 E	9/18	27.2	9	2500	33	2200 x 275 x 198	400V ~ 3P&N	56	2-3
<b>Model B</b>									
FRB-100 E	6/12	18.7	12	2880	32	1196 x 377 x 255	400V ~ 3P&N	59	3-4
FRB-150 E	9/18	27.9	12	4020	45	1746 x 377 x 255	400V ~ 3P&N	60	3-4
FRB-200 E	12/24	37.5	12	5760	62	2296 x 377 x 255	400V ~ 3P&N	61	3-4

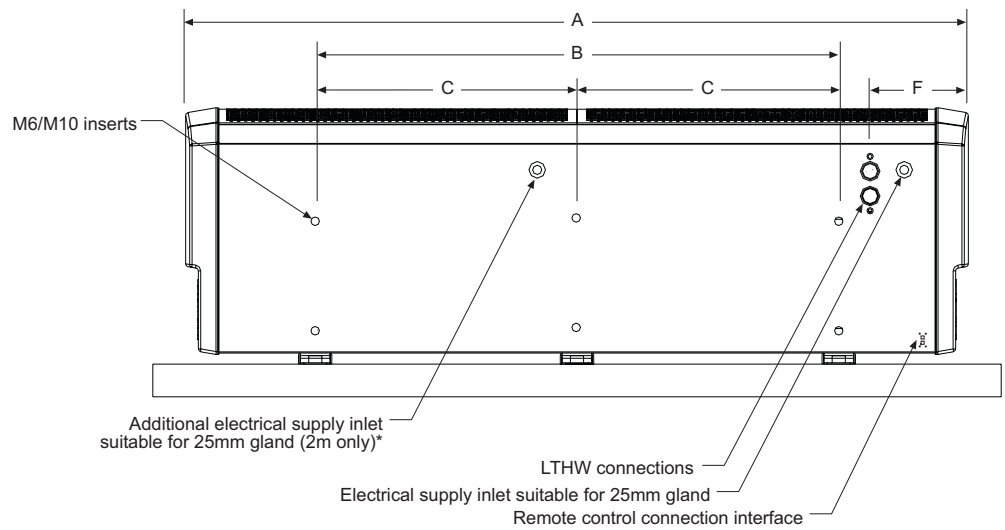
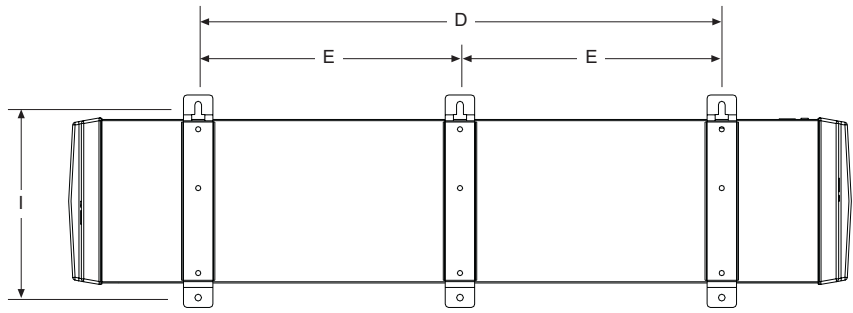
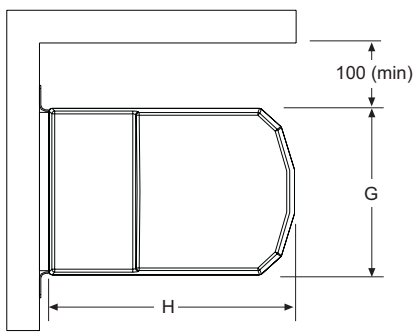
## LTHW Air Curtain

Part No.	Heat output (W)*	Loading (A)	Max velocity (l/s)	Max air volume (m³/h)	Weight (Kg)	Size (LxWxH) mm	Supply (50Hz)	dB(A) @3m**	Mounting Height (m)
<b>Model A</b>									
FRA-100 W	6	0.7	8.5	1180	18	1137 x 275 x 198	230V ~ 1P&N	55	2-3
FRA-150 W	9	0.9	8.5	1700	26	1669 x 275 x 198	230V ~ 1P&N	55	2-3
FRA-200 W	12	1.1	8.5	2360	37	2200 x 275 x 198	230V ~ 1P&N	56	2-3
<b>Model B</b>									
FRB-100 W	12	1.3	11	2630	35	1196 x 377 x 255	230V ~ 1P&N	59	3-4
FRB-150 W	18	1.8	11	3670	47	1746 x 377 x 255	230V ~ 1P&N	60	3-4
FRB-200 W	24	2.7	11	5260	64	2296 x 377 x 255	230V ~ 1P&N	61	3-4

\*Output based on a Water Flow/Return Temperature of 82/71°C with an air entering temperature of 20°C

\*\* Sound pressure levels (dBA) at 3m, as given in our brochure, are for a single air curtain mounted at its maximum mounting height, operating in a room with average acoustic characteristics as defined in CIBSE Guide B5 (reverberation time 0.7s) and a room size equivalent to 8 air changes per hour (ac/h). Care needs to be taken when selecting air curtains for an installation as noise levels can be several dB higher if the mounting height is reduced, if the room is more "live" (i.e. hard surfaces, no furnishings or absorbent materials), if the room is smaller than 8 ac/h equivalent or a combination of these factors. Noise levels will also increase if more than one air curtain is installed at the same doorway (e.g. + 3dBA for 2 equal point sources: direct field).

# Mounting Details



Indicative only - not to scale  
\*Applies to B model only

## Model A

	FRA-100	FRA-150	FRA-200
A (mm)	1137	1669	2200
B (mm)	908	1408	1928
C (mm)	N/A	704	964
D (mm)	710	1208	1728
E (mm)	N/A	604	864
F (mm)	161	170	161
G (mm)	198	198	198
H (mm)	275	275	275
I (mm)	220	220	220

## Model B

	FRB-100	FRB-150	FRB-200
A (mm)	1196	1746	2296
B (mm)	800	1400	1896
C (mm)	N/A	700	948
D (mm)	800	1300	1824
E (mm)	N/A	650	912
F (mm)	150	194	225
G (mm)	255	255	255
H (mm)	377	377	377
I (mm)	295	295	295

# Mounting & Installation

Frenger Air Curtains Model A are designed for mounting over entry doors of heights from 2 up to 3m and Model B from 3 up to 4m from floor level. When deciding on the size of an Air Curtain it is vital that the Air Curtain covers the full width of the door for the optimum effect.

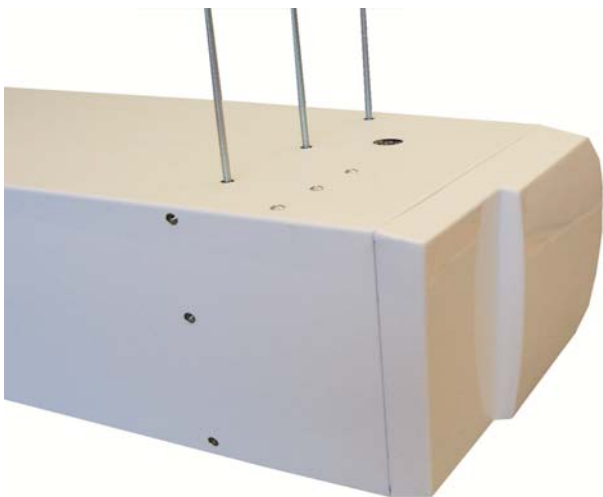
## Fixing

The Frenger Air Curtain can be wall mounted using the included wall mounting brackets or be ceiling suspended using 4-6 x M6 (Model A) or 4-6 x M10 (Model B) rods (by others) which can be fixed in the threaded inserts at the top of the unit.

For detailed fixing instructions, please refer to our O&M manual.



*Fig 2. Mounting bracket*



*Fig 3. Suspension rods (by others)*

\* Please note it is the sole responsibility of the installer to ensure that the building fixing points and suspension system used are suitable for the air curtain being installed.

# Controls

An easy to use controller is provided with Electric and Water Heated units (a manual fan speed controller with the Ambient units see figure 5).

The controller is quick and easy to install, as it incorporates a low voltage switch cabling, eliminating the need for mains rated conduit runs.

The controller is supplied with a 3m long data cable and plug to allow for easy connection to the Air Curtain as standard, but extension cables can be supplied upon request.

## Heating

The controller can be set in auto mode, to ensure consistent comfort levels are maintained by altering the output according to the air-in temperature. If set in manual mode the heating can be set to constant 50% or 100%, or zero heat output to provide an ambient air barrier to maintain a air conditioned environment in warmer weather.

## Fan Speed

Fan speeds can be set to slow, medium or high depending on the height of the curtain and the weather conditions outside.

Additional control options are available upon request, please contact our technical department for further details.



Fig 4. Air Curtain controller



Fig 5. Air Curtain controller for ambient models

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