Eclipse Recessed Air Curtain

Features:

- Concealed installation.
- Compact design.
- Available in electric, LPHW or ambient.
- Grille can be supplied in a large range of colours.
- Energy saving controls option available.

DIFFUSION

Eclipse
Recessed Air Curtain

Application
The Diffusion Eclipse recessed air curtain has been designed for a vertical concealed application where the client does not want to see a unit within the area. The unit shall be vertical mounted within a recess/ bulkhead construction only showing the discharge & the optional return air grille. The unit can be supplied in water heating, electric heating or ambient. The unit comes in standard heights of 1700, 2100, 2600 & 3000mm, however we do offer a bespoke service allowing us to adjust the unit size to fit any building application.

Chassis
The chassis shall be manufactured from heavy gauge galvanised mild steel sheet, with burr free edges and a natural finish, formed and strengthened to provide a rigid and distortion free construction. The cladding shall have a black painted finish. Maintenance access shall be via the removable return air filters.

Fan assembly
The fans shall be double inlet, double width centrifugal type dynamically balanced in two planes according to DIN standards BS ISO 1940. Each fan & motor assembly shall be fitted with a continuously rated single phase motor with built in overload protection to DIN IEC38. The external rotor motor shall be rated to IP44 and fitted with sealed for life ball bearings. The insulation shall be class "B" and complaint to BS 20481961 part 1 and BS5000.

Heat Exchanger (LPHW Version)
Heat exchanger matrixes shall be manufactured from solid drawn copper tubes; mechanically expanded into accurately pre-formed collars in rippled plate type aluminium fins. Multi circuit designs shall be incorporated ensuring maximum thermal performance efficiency, headers unifying the circuits shall terminate in plain tail connections. Circuit headers shall incorporate manually operated key pattern air vents and drains. Heat exchangers shall be suitable for operating at system pressures up to 12 bar, and are tested to 30 bar dry air / nitrogen at manufacture.

Electric Elements
Electric heating elements shall be manufactured from 8mm fully sheathed stainless steel rods, with spiral fin on a 4mm pitch. A manual re-set high temperature cut-out shall be fitted in accordance with standard safety requirements.

The element construction shall comply with BS7351 – 1990.

Filters
Fitted as standard the Diffusion "eco" filter shall be made of a fine woven mesh manufactured from galvanised steel wire, welded to a rigid galvanised steel support frame; retained on the unit with thumb screws. The "eco" filter shall be capable of being vacuum cleaned whilst fitted to the fan coil and removable for cleaning elsewhere if required.

Quality testing
When fully assembled each unit shall be subjected to thorough mechanical examination, be run tested and function tested where possible; and need to have passed a series of electrical compliance checks prior to being QC approved in accordance with our BS EN ISO 9001:2000 quality standards; ready for packing and dispatch.

Function Tests
Each unit shall be function tested at our factory to ensure correct operation. All electrical components shall be tested to ensure each unit and its associated wiring complies with the 16th edition of IEE. The unit shall be manufactured in accordance with BS EN ISO 9001:2000 quality standards.

Standard Controls
Electric version: Supplied with a remote control plate housing on/ off, speed high/low, heat off, low and high, finished in satin chrome as standard, suitable for fitting onto a standard two gang, recessed or surface mount, electrical back box. The unit can be used in ambient mode, by using the fans only setting.

LPHW version: Supplied with a remote control plate housing 4 speeds/ off, finished in satin chrome as standard, suitable for fitting onto a standard two gang, recessed or surface mount, electrical back box.

Optional Extras for Standard Controls
Low water temperature cut out: Provides automatic shutdown of the fan/motor when boilers have been switched off.

Summer/Winter switch (manual): Used in conjunction with the room thermostat and/or low water temperature cut out, this will allow the fan only to run for air movement.

Remote thermostat: Available in adjustable or tamperproof.

BMS interface relay: 24vac relay and base.

Fault indication relay: current sensitive relay to indicate fault alarm from unit.

2 or 3 port valves.

Energy Controls
Our award winning energy saving controls system offers state of the art technology that allows the end user closer control of the equipment. The controls function by using an off coil sensor which will restrict the leaving air temperature (solid state relays on electric & 2 or 3 port valves on LPHW) to a set value (40°C as standard but this is adjustable). Return and outside temperature sensors can be added into the system making it fully automatic, thus not needing manual changeover of summer/ winter operation.

The controller also offers as standard inputs for remote BMS monitoring, common fault signal, BMS on/off, BMS summer/winter, BMS speed control, occupancy sensor/door switch and high heat temperature trip. The LCD remote control plate houses speeds, on/off control, plus fault indications.

Optional Extras for Energy Controls
Return air sensor: Mounted integral to the unit (energy controls only).

Outside sensor: To detect outside conditions (energy controls only).

PIR Sensor: To offer automatic on/off control of the unit (energy controls only).

BMS Fault Signal Relay: 12VDC relay and base to indicate fault alarm from unit (energy controls only).

Remote thermostat: Available in adjustable or tamperproof.

*Please note that if our energy controller is utilized on our electric units, the above noise levels can be significantly reduced, as the air volumes can be lowered.

DIFFUSION

Performance Details

Eclipse LPHW

MODEL	SPEED	AIR VOL. m^3/s	DUTY Kw	AIR ON °C	WATER FLOW TEMP °C	WATER RETURN TEMP °C	WATER PRES. DROP-kpa	WATER FLOW RATE-l/s	ELECTRICAL SUPPLY	SC-A	FLC-A	WEIGHT KG	NR	DBA	PIPE SIZE mm	LITRES
1700 - 3Row	Low	0.20	7.8	20	82	71	2.3	0.17	230/1PH/50HZ	4.2	2.6	70	40	44	22	1.4
	Medium	0.28	9.9	20	82	71	3.4	0.22	230/1PH/50HZ	4.2	2.6	70	47	51	22	1.4
	High	0.35	11.6	20	82	71	4.5	0.26	230/1PH/50HZ	4.2	2.6	70	52	57	22	1.4
	Boost	0.45	13.7	20	82	71	6.1	0.31	230/1PH/50HZ	4.2	2.6	70	59	63	22	1.4
2100 - 3Row	Low	0.29	11.4	20	82	71	5.4	0.25	230/1PH/50HZ	5.2	3.3	90	40	44	22	1.7
	Medium	0.39	14.0	20	82	71	7.9	0.31	230/1PH/50HZ	5.2	3.3	90	46	50	22	1.7
	High	0.48	16.2	20	82	71	10.4	0.36	230/1PH/50HZ	5.2	3.3	90	52	56	22	1.7
	Boost	0.60	19.0	20	82	71	13.5	0.42	230/1PH/50HZ	5.2	3.3	90	58	62	22	1.7
2600 - 3 Row	Low	0.35	15.3	20	82	71	7.6	0.34	230/1PH/50HZ	6.3	3.9	140	40	44	22	2.4
	Medium	0.46	18.6	20	82	71	10.8	0.41	230/1PH/50HZ	6.3	3.9	140	46	50	22	2.4
	High	0.57	21.8	20	82	71	14.2	0.48	230/1PH/50HZ	6.3	3.9	140	52	56	22	2.4
	Boost	0.70	25.4	20	82	71	19.3	0.56	230/1PH/50HZ	6.3	3.9	140	59	63	22	2.4
3000 - 3 Row	Low	0.40	18.2	20	82	71	12.2	0.41	230/1PH/50HZ	6.3	3.9	160	40	44	22	2.6
	Medium	0.60	24.4	20	82	71	21.0	0.54	230/1PH/50HZ	6.3	3.9	160	47	51	22	2.6
	High	0.75	28.7	20	82	71	28.4	0.67	230/1PH/50HZ	6.3	3.9	160	52	56	22	2.6
	Boost	0.90	32.8	20	82	71	36.0	0.73	230/1PH/50HZ	6.3	3.9	160	59	63	22	2.6

Eclipse Electric

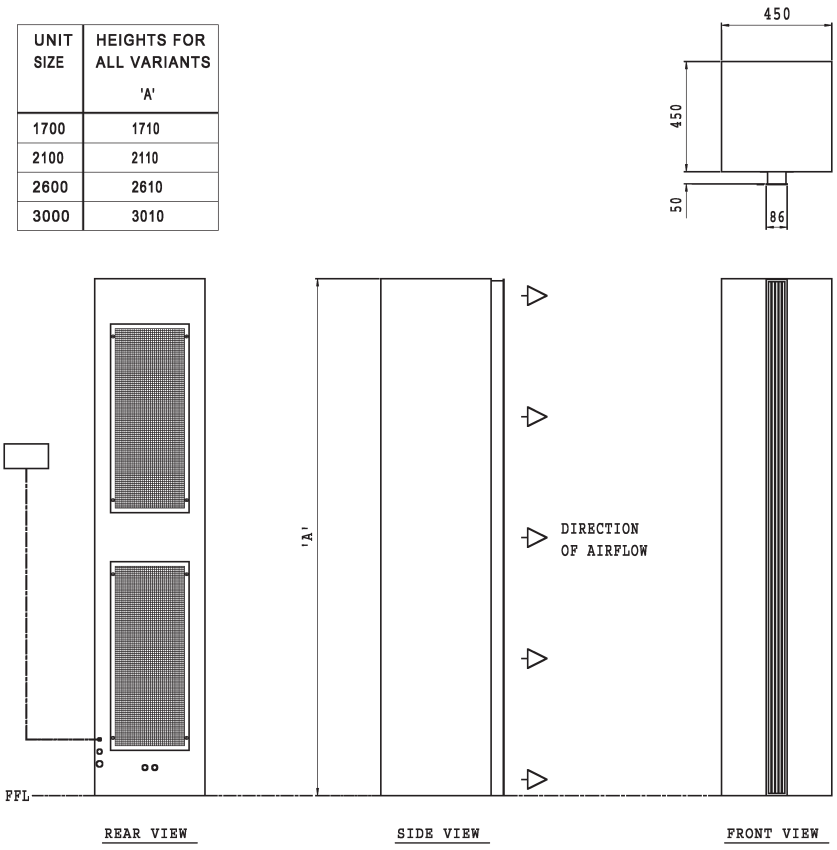
MODEL	SPEED	AIR VOL. m^3/s	DUTY Kw	ELECTRICAL SUPPLY	SC-A	FLC-A	WEIGHT KG	NR	DBA
1700	Low	0.28	12	415/3PH/50HZ	20.9	15.3	72	47	51
	High	0.45	12	415/3PH/50HZ	20.9	15.3	72	59	63
2100	Low	0.39	18	415/3PH/50HZ	30.3	28.4	92	46	50
	High	0.60	18	415/3PH/50HZ	30.3	28.4	92	58	62
2600	Low	0.46	18	415/3PH/50HZ	31.4	29	142	46	50
	High	0.70	18	415/3PH/50HZ	31.4	29	142	59	63
3000	Low	0.60	24	415/3PH/50HZ	39.6	37.3	162	47	51
	High	0.90	24	415/3PH/50HZ	39.6	37.3	162	59	63

NOTES Guide NR values given are based on 1 off unit mounted within a typical space and measured at 3.0m horizontally from the unit discharge grille.

dBA figures given are calculated from the sound pressure levels measured at 3.0m horizontally from the unit discharge grille.

***Please note** that if our energy controller is utilized, the above noise levels can be significantly reduced, as the air volumes can be lowered.

UNIT SIZE	HEIGHTS FOR ALL VARIANTS 'A'
1700	1710
2100	2110
2600	2610
3000	3010



NOTES:

1. GENERAL TOLERANCE ON OVERALL DIMENSIONS: +/-4mm.
2. OUTER CASING PAINTED WITH POWDERCOAT PAINT, COLOUR BLACK.
3. DISCHARGE GRILLE PAINTED WITH POWDERCOAT PAINT, (COLOUR SPECIFIED BY THE CUSTOMER, OR WHITE TO RAL9010 AS STANDARD).
4. THIS DRAWINGIS FOR SALES LITERATURE PURPOSES ONLY. FOR A MORE DETAILED DRAWING SEE A1/28876.

Established in 1960, Diffusion has over 50 years experience in producing environmental solutions via the manufacture of heating, air conditioning and ventilating products.

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