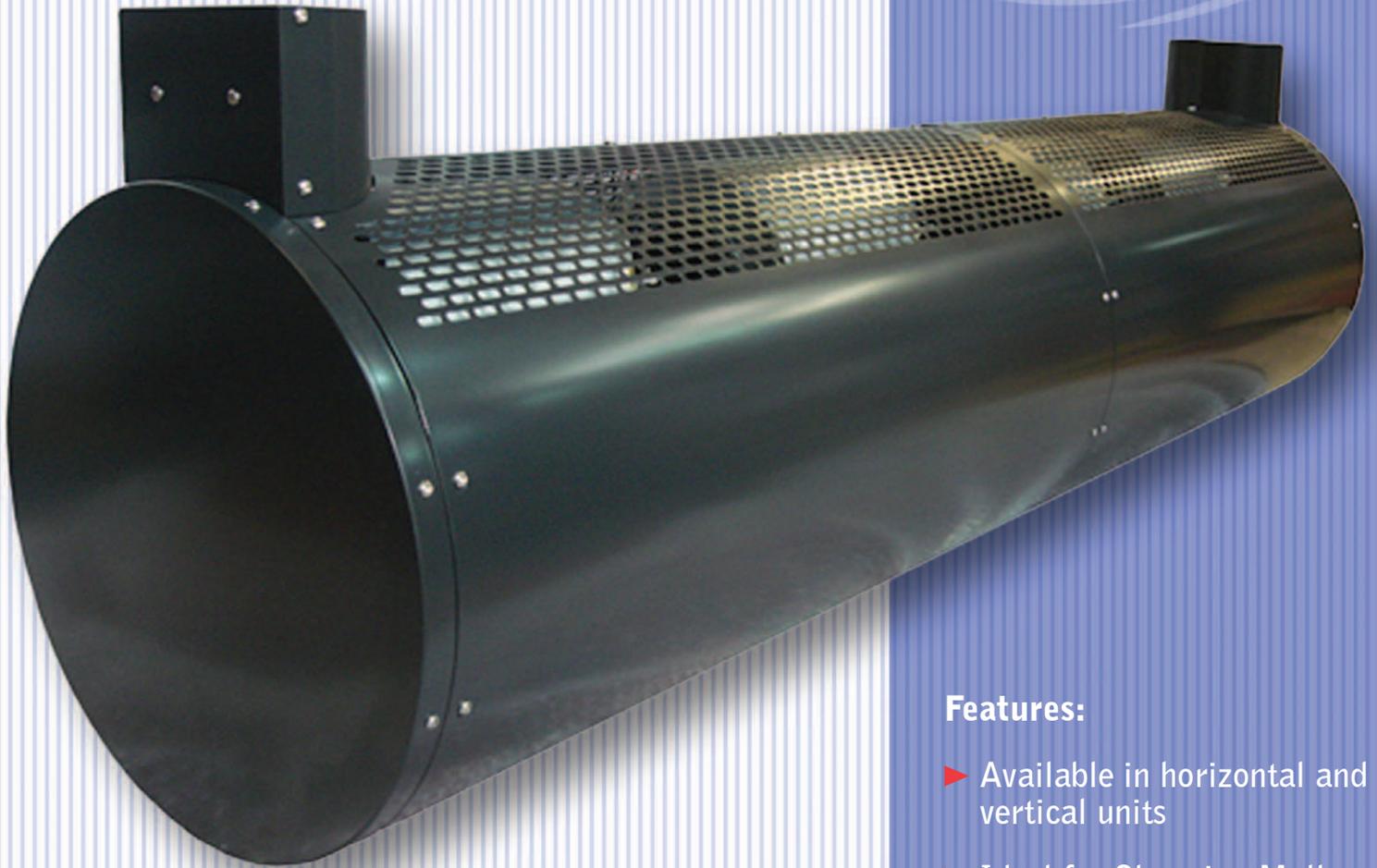


Chameleon

Air Curtain



Features:

- ▶ Available in horizontal and vertical units
- ▶ Ideal for Shopping Malls, Retail Outlets and Office Receptions
- ▶ Can be supplied in a large range of colours and finishes
- ▶ Numerous mounting bracket arrangements available
- ▶ Available in electric and water versions
- ▶ 400mm and 500mm diameter versions available



The Chameleon overdoor warm air heater horizontal version with non-standard top fixings

Chameleon

Air Curtain

Applications

The Diffusion Chameleon warm air curtain heater range is an ideal choice for reception areas, shopping malls, large retail outlets, supermarkets, hotels and hospitals. With the stylish appearance and a choice of casing colours available, it will meet most aesthetic considerations. The flexibility of water or electric heating, together with horizontal or vertical mounting options, enables use in existing or new buildings.

Description

The Diffusion Chameleon warm air curtain heater range is now available in 400 & 500mm diameter units and has been designed, through the use of colour and shape, to harmoniously integrate into the aesthetics of modern reception areas and entrances.

For areas requiring longer than standard lengths of coverage, horizontal units can be linked together using purpose made joining bands to give the appearance of a single continuous heater.

The unit can be supplied with top, rear or floor mounting bracket arrangements to suit all applications.

Chassis

The chassis shall be manufactured from a minimum of 1.2mm thick galvanised mild steel and 2.0mm thick mild steel. All mild steel items shall be powder coated and all galvanised mild steel items shall be self finished. The chassis shall be suitably stiffened to prevent flexing and distortion.

Horizontal chassis units shall have suitable integral hanging brackets to allow for the unit to be supported via drop rods. The vertical chassis units shall be provided with a support plinth.

The casing shall be manufactured from a minimum of 1.2mm thick zintec. The casing shall have suitable full length removable access panels for maintenance purposes.

Fan Assembly

The unit shall be fitted with a high output permanent split phase capacitor, continuously rated and complete with a built in thermal overload protection, complying with BS 2048 1961 part 1 and BS 5000. The fans shall be double inlet, double width centrifugal type dynamically balanced in two planes according to DIN standards ISO 1940. The motors shall be insulated to BS 2757 (class B).

Heat Exchanger (LPHW Version)

The coil shall be manufactured from solid drawn copper tubes, mechanically expanded into accurately pre-formed collars in rippled plate type aluminium fins. Each coil shall be arranged for multi-circuit operation complete with headers and suitable for a LPHW 2 pipe system. Each coil assembly shall be fitted with air vents and drain connections. The coil shall be pressure tested to 40 bar and be suitable for operation with a static head of up to 30 metres. Coil tails are 22mm plain copper.

Electric Elements

Each element shall be manufactured from 8mm fully sheathed stainless steel rods, with 4mm pitched spiral fins. A manual re-set high temperature cut-out shall be fitted in accordance with standard safety requirements.

Discharge Grille

The discharge grille shall be manufactured from extruded aluminium and shall be finished to match casing. Inlet air will be via pre-punched holes within the unit casing.

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.

Energy Controls (optional)

Our award winning MODBUS compatible 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

Low water temperature cut out: Provides automatic shutdown of the fan/motor when boilers have been switched off (standard controls only).

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 (standard controls only).

Remote thermostat: Available in adjustable or tamperproof (standard & Energy saving controls).

BMS interface relay: 24vac relay and base (standard controls only).

Fault indication relay: current sensitive relay to indicate fault alarm from unit (standard controls only).

2 or 3 port valves (standard controls only).

Return air sensor: Mounted integral to the unit (energy controls only).

Outside temperature 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).



Chameleon

Air Curtain

Chameleon 400

Chameleon 400 - Horizontal

Model	Output (Kw)	Coil Pressure (kpa)	Water Flowrate (l/s)	SC (A)	FLC	Supply	Maximum Air Volume (m³/s)	Maximum Velocity (m/s)	Noise Level (NR)	Weight (kg)
-------	-------------	---------------------	----------------------	--------	-----	--------	---------------------------	------------------------	------------------	-------------

LPHW

1000	8.0	3.0	0.18	2.1	1.3	230/1PH/50HZ	0.14 - 0.30	8.0	38 - 58	47
1500	12.9	5.0	0.29	3.1	2.0	230/1PH/50HZ	0.21 - 0.45	8.0	40 - 59	54
1800	15.7	8.0	0.35	4.2	2.6	230/1PH/50HZ	0.28 - 0.54	8.0	40 - 58	82
2000	17.9	11.2	0.40	4.2	2.6	230/1PH/50HZ	0.30 - 0.61	8.0	40 - 59	96
2500	22.5	20.0	0.50	5.3	3.3	230/1PH/50HZ	0.40 - 0.75	8.0	40 - 59	125
3000	28.1	32.1	0.62	6.2	4.0	230/1PH/50HZ	0.45 - 0.95	8.0	43 - 62	148

Electric

1000	6.0	N/A	N/A	28.2	27.4	230/1PH/50HZ	0.14 - 0.30	8.0	48 - 59	48
1500	8.0	N/A	N/A	14.2	13.1	415/3PH/50HZ	0.21 - 0.45	8.0	48 - 60	57
1800	12.0	N/A	N/A	20.9	19.3	415/3PH/50HZ	0.28 - 0.54	8.0	40 - 58	84
2000	12.0	N/A	N/A	20.9	19.3	415/3PH/50HZ	0.30 - 0.61	8.0	50 - 59	99
2500	18.0	N/A	N/A	30.3	28.3	415/3PH/50HZ	0.40 - 0.75	8.0	40 - 59	127
3000	18.0	N/A	N/A	31.2	29.0	415/3PH/50HZ	0.45 - 0.95	8.0	50 - 60	151

Ambient

1000	-	N/A	N/A	2.1	1.3	230/1PH/50HZ	0.14 - 0.30	8.0	38 - 58	45
1500	-	N/A	N/A	3.1	2.0	230/1PH/50HZ	0.21 - 0.45	8.0	40 - 59	52
1800	-	N/A	N/A	4.2	2.6	230/1PH/50HZ	0.28 - 0.54	8.0	40 - 58	80
2000	-	N/A	N/A	4.2	2.6	230/1PH/50HZ	0.30 - 0.61	8.0	40 - 59	94
2500	-	N/A	N/A	5.3	3.3	230/1PH/50HZ	0.40 - 0.75	8.0	40 - 59	122
3000	-	N/A	N/A	6.2	4.0	230/1PH/50HZ	0.45 - 0.95	8.0	43 - 62	145

Chameleon 400 - Vertical

LPHW

1700	12.9	5.0	0.3	3.1	2.0	230/1PH/50HZ	0.21 - 0.45	8.0	40 - 59	65
2100	17.4	10.3	0.4	4.2	2.6	230/1PH/50HZ	0.30 - 0.60	8.0	40 - 59	82
2600	22.5	17.0	0.5	4.2	2.6	230/1PH/50HZ	0.30 - 0.63	8.0	41 - 60	140
3000	27.3	33.0	0.6	6.2	4.0	230/1PH/50HZ	0.45 - 0.9	8.0	30 - 59	165

Electric

1700	12.0	N/A	N/A	21.5	20.0	415/3PH/50HZ	0.21 - 0.45	8.0	48 - 60	60
2100	18.0	N/A	N/A	30.2	28.7	415/3PH/50HZ	0.30 - 0.60	8.0	50 - 59	102
2600	18.0	N/A	N/A	30.2	28.7	415/3PH/50HZ	0.30 - 0.63	8.0	51 - 60	146
3000	18.0	N/A	N/A	31.2	29.0	415/3PH/50HZ	0.45 - 0.9	8.0	50 - 60	170

Ambient

1700	-	N/A	N/A	3.1	2.0	230/1PH/50HZ	0.21 - 0.45	8.0	40 - 59	65
2100	-	N/A	N/A	4.2	2.6	230/1PH/50HZ	0.30 - 0.60	8.0	40 - 59	82
2600	-	N/A	N/A	4.2	2.6	230/1PH/50HZ	0.30 - 0.63	8.0	41 - 60	140
3000	-	N/A	N/A	6.2	4.0	230/1PH/50HZ	0.45 - 0.9	8.0	40 - 59	160

Chameleon 500

Chameleon 500 - Horizontal

Model	Output (Kw)	Coil Pressure (kpa)	Water Flowrate (l/s)	SC (A)	FLC	Supply	Maximum Air Volume (m ³ /s)	Maximum Velocity (m/s)	Noise Level (NR)	Weight (kg)
-------	-------------	---------------------	----------------------	--------	-----	--------	--	------------------------	------------------	-------------

LPHW

1000	11.2	6.3	0.25	2.1	1.3	230/1PH/50HZ	0.20 - 0.31	9.0	39 - 59	55
1500	17.7	7.5	0.39	3.1	2.0	230/1PH/50HZ	0.30 - 0.50	9.0	41 - 60	74
1800	19.3	10.6	0.43	4.2	2.6	230/1PH/50HZ	0.35 - 0.60	9.0	40 - 58	95
2000	24.0	16.0	0.53	4.2	2.6	230/1PH/50HZ	0.38 - 0.65	9.0	41 - 60	110
2500	31.2	23.0	0.69	5.3	3.3	230/1PH/50HZ	0.40 - 0.85	9.0	41 - 58	130
3000	37.0	33.6	0.81	6.2	4.0	230/1PH/50HZ	0.45 - 0.97	9.0	44 - 63	148

Electric

1000	9.0	N/A	N/A	14.6	13.8	415/3PH/50HZ	0.20 - 0.31	9.0	43 - 60	60
1500	12.0	N/A	N/A	19.8	18.7	415/3PH/50HZ	0.30 - 0.50	9.0	49 - 61	77
1800	18.0	N/A	N/A	29.2	27.6	415/3PH/50HZ	0.35 - 0.60	9.0	40 - 59	98
2000	18.0	N/A	N/A	29.2	27.6	415/3PH/50HZ	0.38 - 0.65	9.0	48 - 60	110
2500	18.0	N/A	N/A	30.0	28.3	415/3PH/50HZ	0.40 - 0.85	9.0	41 - 59	135
3000	24.0	N/A	N/A	39.6	37.4	415/3PH/50HZ	0.45 - 0.97	9.0	49 - 61	160

Ambient

1000	-	N/A	N/A	2.1	1.3	230/1PH/50HZ	0.20 - 0.31	9.0	43 - 60	60
1500	-	N/A	N/A	3.1	2.0	230/1PH/50HZ	0.30 - 0.50	9.0	49 - 61	77
1800	-	N/A	N/A	4.2	2.6	230/1PH/50HZ	0.35 - 0.60	9.0	40 - 59	93
2000	-	N/A	N/A	4.2	2.6	230/1PH/50HZ	0.38 - 0.65	9.0	48 - 60	110
2500	-	N/A	N/A	5.3	3.3	230/1PH/50HZ	0.40 - 0.85	9.0	40 - 58	128
3000	-	N/A	N/A	6.2	4.0	230/1PH/50HZ	0.45 - 0.97	9.0	49 - 61	160

Chameleon 500 - Vertical

LPHW

1700	17.7	7.5	0.39	3.10	2.0	230/1PH/50HZ	0.30 - 0.50	9.0	41 - 60	74
2100	24.0	14.9	0.52	4.20	2.6	230/1PH/50HZ	0.38 - 0.65	9.0	41 - 60	93
2600	31.8	15.6	0.71	4.20	2.6	230/1PH/50HZ	0.38 - 0.675	9.0	42 - 61	151
3000	41.0	24.0	0.91	6.20	4.0	230/1PH/50HZ	0.45 - 1.0	9.0	41 - 59	170

Electric

1700	12.0	N/A	N/A	24.00	19.50	415/3PH/50HZ	0.30 - 0.50	9.0	49 - 61	77
2100	18.0	N/A	N/A	35.00	29.00	415/3PH/50HZ	0.38 - 0.65	9.0	48 - 60	110
2600	18.0	N/A	N/A	35.00	29.00	415/3PH/50HZ	0.38 - 0.675	9.0	50 - 61	154
3000	24.0	N/A	N/A	39.6	37.4	415/3PH/50HZ	0.45 - 1.0	9.0	49 - 59	175

Ambient

1700	-	N/A	N/A	3.10	2.0	230/1PH/50HZ	0.30 - 0.50	9.0	49 - 61	77
2100	-	N/A	N/A	4.20	2.6	230/1PH/50HZ	0.38 - 0.65	9.0	48 - 60	110
2600	-	N/A	N/A	4.20	2.6	230/1PH/50HZ	0.38 - 0.675	9.0	50 - 61	154
3000	-	N/A	N/A	6.20	4.0	230/1PH/50HZ	0.45 - 1.0	9.0	41 - 59	168

NOTES

- ▶ Selections are based on water temperatures of 82/71°C ▶ Selections are based on entering air temperatures of 20°C
- ▶ Guide NR values given are based on 1 off unit mounted at 3.0m above a typical door within a typical space and measured at 3.0m horizontally from the unit discharge grille. Guide NR values given are based on 1 off unit mounted 3.0m above a typical door 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.





Chameleon Dimensional Details

500 Horizontal Range

Unit	Length (mm)	Diameter (mm)
1000	1065	500
1500	1565	500
1800	1865	500
2000	2065	500
2500	2565	500
3000	3060	500

400 Horizontal Range

Unit	Length (mm)	Diameter (mm)
1000	1065	400
1500	1565	400
1800	1865	400
2000	2065	400
2500	2565	400
3000	3060	400

500 Vertical Range

Unit	Length (mm)	Diameter (mm)
1700	1700	500
2100	2100	500
2600	2600	500
3000	3000	500

400 Vertical Range

Unit	Length (mm)	Diameter (mm)
1700	1700	400
2100	2100	400
2600	2600	400
3000	3000	400

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



Diffusion Environmental Systems
47 Central Avenue, West Molesey, Surrey KT8 2QZ
Tel: (+44) 020 8783 0033 Fax: (+44) 020 8783 0140
Email: diffusion@etenv.co.uk www.diffusion-group.co.uk

