Report compiled by

BOATMAN MECHANICAL SERVICES
Unit 10 & 11a,
ABBEY TRADING ESTATE,
BELL GREEN LANE,
SYDENHAM,
LONDON
SE26 5TW

OPERATION & MAINTENANCE MANUAL

For

Zambrero Restaurant

59 Cross Street

Manchester

M2 4JW

Contract No:.....**J586**.....

BOATMAN MECHANICAL SERVICES LIMITED
Unit 10a, ABBEY TRADING ESTATE, BELL GREEN LANE, SYDENHAM, LONDON SE26 5TW
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BOATMAN MECHANICAL SERVICES LIMITED
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SECTION ONE

MANUFACTURERS LITERATURE

1.1 GENERAL EXTRACT FAN ASSEMBLY

ELTA SH-315



HIDEAWAY SH

Low Profile Box Fan

» **Select** models available for next day delivery

HIDEAWAY SH

Product Overview



- 6 standard sizes from 100mm to 315mm
- Air volume flow rates up to 0.832 m³/s
- Static pressures up 451 Pa
- Suitable for operating temperatures up to +60°C
- Redesigned casing to improve airflow and reduce specific fan powers.
- Acoustically lined internally to reduce breakout noise levels.
- Low Specific Fan Powers
- Available in **EC**

The Hideaway SH low profile box fan is perfect for applications where space is a premium. The Hideaway incorporates a high efficiency jet design double mixed flow impeller.

Low Noise
Each unit is acoustically lined internally with Class O rated (BS 476 Parts 6 and 7) fire resistant acoustic foam lining minimising breakout noise levels.

Easy Commissioning
Integrated commissioning control allowing single speed selection and also limiting maximum speed if used with an external potentiometer.

Space saving
Ideal for very shallow ceiling voids or where space is at a premium.

Efficient Performance
Low power consumption at high performance resulting in Low Specific Fan Powers for Building Regulation Compliance.

Controllability
EC motors providing precise speed control via potentiometer, 0-10VDC or PWM Circuit. A potentiometer controller is available for manual control. Reduced fan speed can provide significant cost-savings through lower energy consumption in both mechanical energy of motors and also on the conditioning of replacement air.

Construction
A robust 1.2mm galvanised mild steel sheet casing. Each casing provides spigots to suit standard circular ducting. A removable lid is provided as standard to allow easy maintenance and cleaning.

Motor
A brushless EC motor is fitted as standard. The IPX4 motor contains sealed for life bearings. All motors are suitable for use in ambient air conditions up to +60°C.

Impeller
High efficiency jet design double mixed flow impeller, directly driven by the motor to provide a smooth airflow through the unit.

Typical Applications
- Bathroom and Kitchen Extract in Apartments
- Hotels
- Residential Properties
- Libraries
- Offices

Warranty
Each SH has a 12 month warranty.

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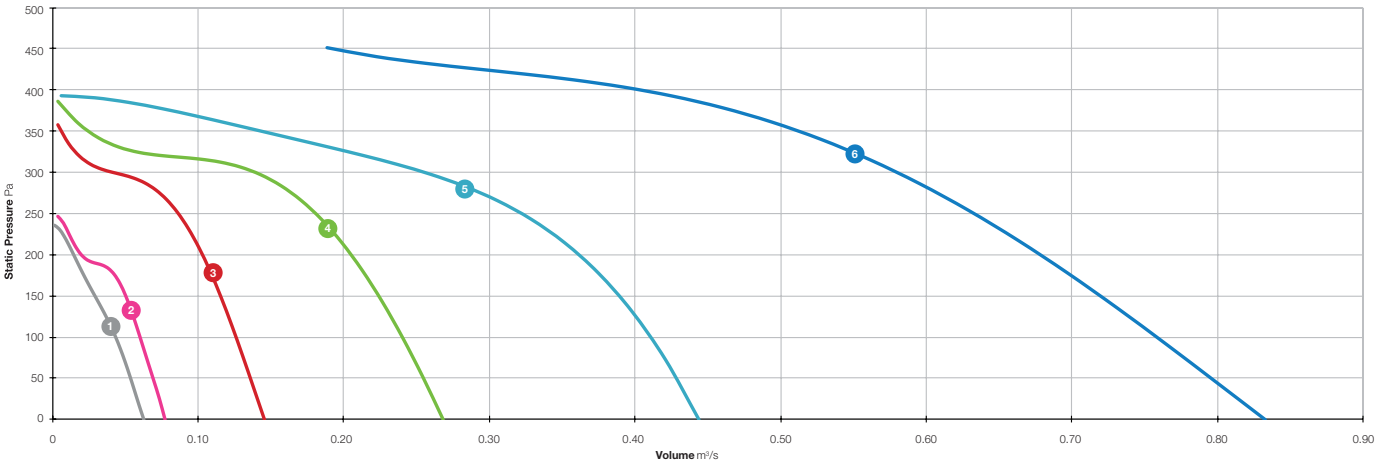
Product Coding

Code	Reference
SH	Product Range
125	Duct Connection (diameter mm)
–	
1	Voltage Supply (Single Phase / Three Phase)
L	Acoustically Lined
C	Model Release
e.g.	**SH125-1LC**

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HIDEAWAY SH

Performance Range Curves



1 SH100-1LC
2 SH125-1LC
3 SH150-1LC
4 SH200-1LC
5 SH250-1LC
6 SH315-1LC

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HIDEAWAY SH

Performance, SFP & Electrical Data

EC

Single Phase 220V to 240V / 50Hz or 60Hz

Product Code	Control Voltage V	Speed r/min	Airflow SFP	Airflow m³/s @ Static Pressure Pa											At Best Efficiency Point		Electrical Data	dBA @ 3m	
				0	25	50	75	100	150	200	250	300	350	400	Overall Eff %	Input kW	Peak Amps		
SH100-1LC	10	5000	m³/s	0.063	0.058	0.053	0.049	0.043	0.029	0.014	-	-	-	-	29.4	0.021	0.30	Inlet	46
			W/(L/s)	0.34	0.36	0.40	0.44	0.50	0.68	1.39	-	-	-	-				Outlet	47
																		Breakout	45
	7.5	3750	m³/s	0.054	0.049	0.043	0.037	0.029	0.012	-	-	-	-	-	27.8	0.014	0.15	Inlet	42
			W/(L/s)	0.27	0.30	0.34	0.39	0.48	1.08	-	-	-	-	-				Outlet	43
																		Breakout	41
	5	2500	m³/s	0.040	0.032	0.023	0.012	0.002	-	-	-	-	-	-	23.0	0.007	0.08	Inlet	36
			W/(L/s)	0.17	0.22	0.30	0.54	2.71	-	-	-	-	-	-				Outlet	36
																		Breakout	35
SH125-1LC	10	5000	m³/s	0.077	0.073	0.068	0.064	0.060	0.050	0.020	-	-	-	-	30.1	0.027	0.25	Inlet	47
			W/(L/s)	0.31	0.33	0.36	0.39	0.44	0.54	1.10	-	-	-	-				Outlet	48
																		Breakout	36
	7.5	3750	m³/s	0.064	0.060	0.056	0.051	0.045	0.012	-	-	-	-	-	33.5	0.018	0.18	Inlet	43
			W/(L/s)	0.23	0.26	0.30	0.34	0.40	1.13	-	-	-	-	-				Outlet	44
																		Breakout	34
	5	2500	m³/s	0.048	0.042	0.035	0.023	0.001	-	-	-	-	-	-	28.9	0.009	0.09	Inlet	37
			W/(L/s)	0.16	0.20	0.25	0.35	5.18	-	-	-	-	-	-				Outlet	37
																		Breakout	28
SH150-1LC	10	4980	m³/s	0.145	0.140	0.135	0.130	0.125	0.115	0.102	0.086	0.040	0.005	-	53.7	0.051	0.42	Inlet	50
			W/(L/s)	0.28	0.30	0.32	0.35	0.37	0.43	0.49	0.59	1.01	7.46	-				Outlet	51
																		Breakout	39
	7.5	3735	m³/s	0.127	0.120	0.113	0.106	0.099	0.083	0.057	0.010	-	-	-	50.4	0.032	0.27	Inlet	46
			W/(L/s)	0.22	0.24	0.26	0.29	0.32	0.39	0.53	2.44	-	-	-				Outlet	47
																		Breakout	36
	5	2490	m³/s	0.095	0.082	0.071	0.061	0.049	-	-	-	-	-	-	42.9	0.015	0.14	Inlet	40
			W/(L/s)	0.14	0.17	0.21	0.24	0.30	-	-	-	-	-	-				Outlet	40
																		Breakout	30
SH200-1LC	10	3770	m³/s	0.268	0.261	0.254	0.247	0.240	0.224	0.205	0.180	0.138	0.024	-	56.8	0.099	0.76	Inlet	51
			W/(L/s)	0.28	0.30	0.32	0.34	0.36	0.42	0.48	0.55	0.67	3.02	-				Outlet	52
																		Breakout	35
	7.5	3225	m³/s	0.229	0.222	0.215	0.207	0.198	0.178	0.149	0.025	-	-	-	56.0	0.063	0.59	Inlet	48
			W/(L/s)	0.20	0.22	0.24	0.27	0.29	0.34	0.42	1.78	-	-	-				Outlet	49
																		Breakout	33
	5	2505	m³/s	0.174	0.166	0.156	0.144	0.127	-	-	-	-	-	-	57.2	0.029	0.25	Inlet	43
			W/(L/s)	0.13	0.15	0.17	0.20	0.23	-	-	-	-	-	-				Outlet	43
																		Breakout	28

Data provided is at standard air density of 1.2 kg/m³.
ErP data in accordance with Regulation (EU) 1253/2014. Product category is NRVU. Measurement category used to determine energy efficiency: D.
A variable speed drive is integrated within the fan.
Peak Amps @ 230V / 1PH / 50Hz.
The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20μPa and is presented for comparative purposes only.
Breakout levels are calculated from the tested inlet and outlet sound power levels using the ASHRAE breakout sound transmission calculation procedure.

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HIDEAWAY SH

Performance, SFP & Electrical Data

EC

Single Phase 220V to 240V / 50Hz or 60Hz

Product Code	Control Voltage V	Speed r/min	Airflow SFP	Airflow m³/s @ Static Pressure Pa											At Best Efficiency Point		Electrical Data	dBA @ 3m	
				0	25	50	75	100	150	200	250	300	350	400	Overall Eff %	Input kW	Peak Amps		
SH250-1LC	10	3200	**m³/s**	**0.443**	**0.436**	**0.428**	**0.420**	**0.410**	**0.389**	**0.361**	**0.322**	**0.255**	**0.144**	-	56.9	0.178	1.31	Inlet	55
			W/(L/s)	0.30	0.31	0.33	0.34	0.36	0.41	0.47	0.55	0.66	0.96	-				Outlet	56
																		Breakout	40
	7.5	2725	**m³/s**	**0.383**	**0.373**	**0.363**	**0.352**	**0.340**	**0.313**	**0.276**	**0.186**	-	-	-	59.3	0.108	1.00	Inlet	51
			W/(L/s)	0.21	0.23	0.24	0.26	0.28	0.34	0.40	0.52	-	-	-				Outlet	52
																		Breakout	39
	5	2040	**m³/s**	**0.285**	**0.269**	**0.253**	**0.234**	**0.212**	**0.028**	-	-	-	-	-	61.9	0.046	0.37	Inlet	45
			W/(L/s)	0.13	0.14	0.16	0.19	0.22	1.38	-	-	-	-	-				Outlet	45
																		Breakout	32
SH315-1LC	10	3000	**m³/s**	**0.832**	**0.814**	**0.795**	**0.777**	**0.758**	**0.719**	**0.678**	**0.632**	**0.579**	**0.512**	**0.403**	55.9	0.389	2.72	Inlet	62
			W/(L/s)	0.38	0.40	0.42	0.44	0.46	0.50	0.55	0.61	0.67	0.75	0.90				Outlet	62
																		Breakout	63
	7.5	2250	**m³/s**	**0.721**	**0.697**	**0.674**	**0.651**	**0.628**	**0.580**	**0.528**	**0.464**	**0.365**	-	-	55.8	0.255	1.82	Inlet	58
			W/(L/s)	0.30	0.31	0.33	0.35	0.38	0.42	0.48	0.55	0.67	-	-				Outlet	58
																		Breakout	60
	5	1500	**m³/s**	**0.538**	**0.503**	**0.469**	**0.435**	**0.402**	**0.331**	-	-	-	-	-	56.1	0.110	0.89	Inlet	52
			W/(L/s)	0.18	0.20	0.22	0.24	0.27	0.33	-	-	-	-	-				Outlet	52
																		Breakout	53

Data provided is at standard air density of 1.2 kg/m³.
ErP data in accordance with Regulation (EU) 1253/2014. Product category is NRVU. Measurement category used to determine energy efficiency: D.
A variable speed drive is integrated within the fan.
Peak Amps @ 230V / 1PH / 50Hz.
The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20μPa and is presented for comparative purposes only.
Breakout levels are calculated from the tested inlet and outlet sound power levels using the ASHRAE breakout sound transmission calculation procedure.

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Confirmation of dimensions and data will be supplied on request.

HIDEAWAY SH

Sound Data

Single Phase 220V to 240V / 50Hz or 60Hz

Product Code	Control Voltage V	Speed r/min		Sound Power Level dBW @ Octave Band Hz								Total dB
				63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
SH100-1LC	10	5000	Inlet	50	47	53	62	59	60	58	57	67
			Outlet	47	47	55	63	60	60	60	58	68
			Breakout	28	29	41	53	56	59	60	60	65
	7.5	3750	Inlet	43	44	51	58	55	57	54	53	63
			Outlet	47	44	52	59	55	57	56	53	64
			Breakout	24	26	39	49	51	56	56	55	61
	5	2500	Inlet	49	42	49	52	49	52	48	47	58
			Outlet	45	41	48	52	49	51	50	47	58
			Breakout	26	24	36	42	45	51	50	49	56
SH125-1LC	10	5000	Inlet	51	48	54	63	60	61	59	58	68
			Outlet	48	48	56	64	61	61	61	59	69
			Breakout	33	28	33	50	50	48	49	51	57
	7.5	3750	Inlet	44	45	52	59	56	58	55	54	64
			Outlet	48	45	53	60	56	58	57	54	65
			Breakout	28	25	32	47	48	47	48	47	54
	5	2500	Inlet	50	43	50	53	50	53	49	48	59
			Outlet	46	42	49	53	50	52	51	48	59
			Breakout	30	23	29	40	42	42	42	41	49
SH150-1LC	10	4980	Inlet	54	51	57	66	63	64	62	61	71
			Outlet	51	51	59	67	64	64	64	62	72
			Breakout	34	30	37	52	50	52	54	52	59
	7.5	3735	Inlet	47	48	55	62	59	61	58	57	67
			Outlet	51	48	56	63	59	61	60	57	68
			Breakout	28	29	36	49	49	50	51	49	57
	5	2490	Inlet	53	46	53	56	53	56	52	51	62
			Outlet	49	45	52	56	53	55	54	51	62
			Breakout	30	27	33	42	43	45	45	43	51
SH200-1LC	10	3770	Inlet	73	56	57	66	65	66	65	62	76
			Outlet	58	55	61	67	65	67	66	63	73
			Breakout	42	29	40	51	49	50	48	47	56
	7.5	3225	Inlet	57	50	57	61	62	63	61	57	69
			Outlet	52	53	60	64	62	64	62	59	70
			Breakout	33	29	42	51	47	47	44	43	55
	5	2505	Inlet	46	47	56	55	58	59	55	52	64
			Outlet	48	48	58	58	57	59	56	52	65
			Breakout	25	25	40	45	43	42	38	37	50
SH250-1LC	10	3200	Inlet	72	58	65	72	70	69	48	65	78
			Outlet	77	60	67	72	70	70	49	67	80
			Breakout	57	35	45	58	57	52	50	51	63
	7.5	2725	Inlet	54	57	64	66	66	66	64	60	73
			Outlet	53	58	70	66	66	67	65	62	75
			Breakout	32	37	47	53	55	53	50	49	60
	5	2040	Inlet	48	51	60	59	60	60	56	52	67
			Outlet	51	53	61	59	60	61	57	53	67
			Breakout	28	31	41	46	49	47	42	41	53
SH315-1LC	10	3000	Inlet	82	88	86	78	76	73	69	63	91
			Outlet	84	88	86	79	76	75	69	63	92
			Breakout	70	77	84	82	79	75	65	59	88
	7.5	2250	Inlet	80	87	79	74	74	69	65	59	89
			Outlet	81	87	79	74	73	71	65	59	89
			Breakout	67	76	76	78	77	71	61	54	83
	5	1500	Inlet	75	84	75	67	66	61	57	50	85
			Outlet	76	82	75	68	65	63	56	49	84
			Breakout	62	72	72	72	69	63	53	45	78

Data provided at standard air density of 1.2 kg/m³.
Tests and preparation of the sound data have been carried out in accordance with BS 848 Part 2:1985 at 50% peak pressure.
The Sound Power Level Spectra are in dB re-1pW.
The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20μPa and is presented for comparative purposes only.
Breakout levels are calculated from the tested inlet and outlet sound power levels using the ASHRAE breakout sound transmission calculation procedure.

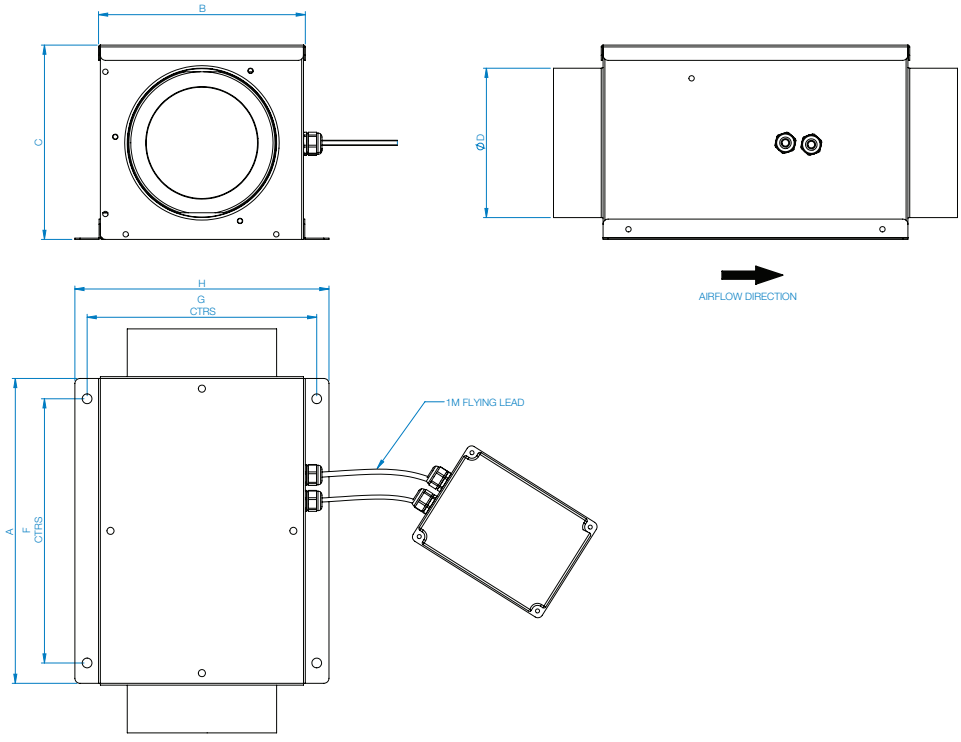
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HIDEAWAY SH

Dimensional Data

Single Phase

Product Code	A	B	C	D	E	F	G	H	Weight kg
SH100-1LC	304	204	180	97	398	260	226	250	5
SH125-1LC	304	204	180	122	398	260	226	250	5
SH150-1LC	304	204	191	147	398	260	226	250	6
SH200-1LC	404	255	236	197	498	306	277	301	9
SH250-1LC	404	304	301	247	498	360	326	350	9
SH315-1LC	404	369	361	312	498	360	391	415	19



Dimensions are in mm.

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HIDEAWAY SH

Accessories

EC

Single Phase

Product Code	EC Electronic Controller	Fast Clamps (each)	Damper	Panel Filter	Electric Heater Battery	Wiring Diagram
SH100-1LC	149-POT-10-MI	018-100-CLAMP	018-100-DAMPER	018-0100-FILT-P	018-CV10-06-1M	152-554
SH125-1LC	149-POT-10-MI	018-125-CLAMP	018-125-DAMPER	018-0125-FILT-P	018-CV12-12-1M	152-554
SH150-1LC	149-POT-10-MI	018-150-CLAMP	018-150-DAMPER	018-0150-FILT-P	018-CV15-27-1M	152-554
SH200-1LC	149-POT-10-MI	018-200-CLAMP	018-200-DAMPER	018-0200-FILT-P	018-CV20-30-1M	152-554
SH250-1LC	149-POT-10-MI	018-250-CLAMP	018-250-DAMPER	018-0250-FILT-P	018-CV25-30-1M	152-554
SH315-1LC	149-POT-10-MI	018-315-CLAMP	018-315-DAMPER	018-0315-FILT-P	018-CV31-30-1M	152-554
					018-CV31-45-1M	
					018-CV31-90-3M	

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EC ELECTRONIC CONTROLLER

Accessories



- EC Type fans
- Variable Speed Drives (Inverters)

EC

Product Code
149-POT-10-MI

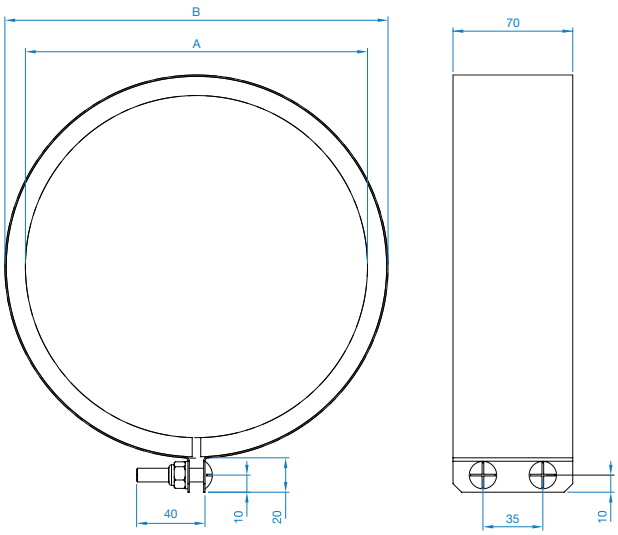
FAST CLAMPS

Accessories



- For quick connection of spigotted fans to circular duct or accessories
- Galvanised steel circular duct clamp with foam lining

Product Code	Fan Size	A Dia.	B Dia.	Weight kg
018-100-CLAMP	100	100	124	0.25
018-125-CLAMP	125	125	149	0.29
018-150-CLAMP	150	150	174	0.33
018-200-CLAMP	200	200	224	0.42
018-250-CLAMP	250	250	274	0.49
018-315-CLAMP	315	315	339	0.59



Dimensions are in mm.

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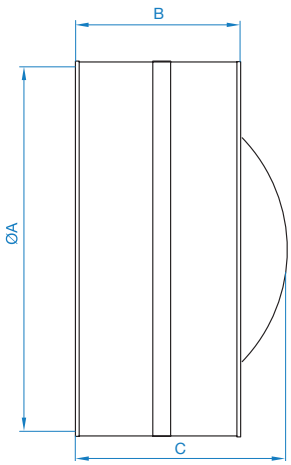
DAMPER

Accessories



- Prevents reverse flow of air when fan is not operating
- Galvanised sheet steel case
- Spring operated aluminium sheet blades

Product Code	Fan Dia. A	B	C	Weight kg
018-100-DAMPER	100	90	100	0.2
018-125-DAMPER	125	90	100	0.3
018-150-DAMPER	150	90	110	0.3
018-200-DAMPER	200	125	150	0.6
018-250-DAMPER	250	125	190	0.6
018-315-DAMPER	315	125	210	1.3



Dimensions are in mm.

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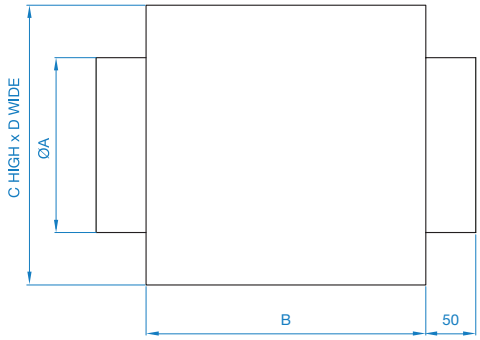
PANEL FILTER

Accessories



- Galvanised steel casing
- Filter media to ISO 16890 Coarse ePM10 < 50%
- Filter access with removable panel

Product Code	Fan Dia. A	B	C	D	Weight kg
018-0100-FILT-P	100	155	200	200	2
018-0125-FILT-P	125	155	200	200	2
018-0150-FILT-P	150	155	250	250	2
018-0160-FILT-P	160	155	250	250	2
018-0200-FILT-P	200	155	250	250	2
018-0250-FILT-P	250	200	300	300	3
018-0315-FILT-P	315	300	440	440	8

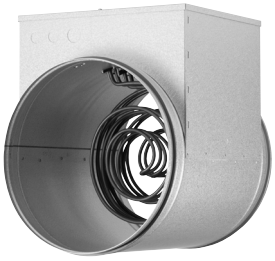


Dimensions are in mm.

Tel **01384 275800** Fax **01384 275810** Email **info@eltafans.co.uk** Website **eltafans.com**

ELECTRIC HEATER BATTERY

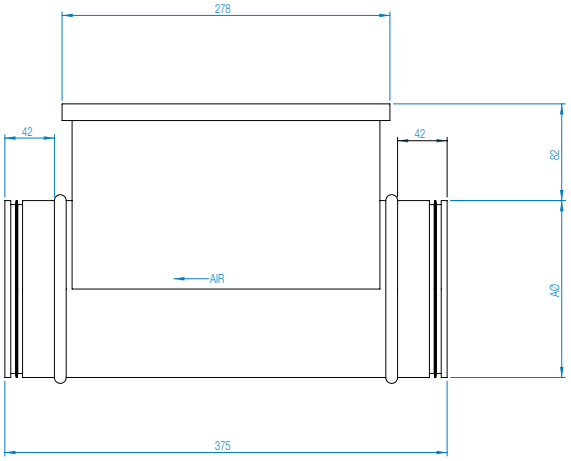
Accessories

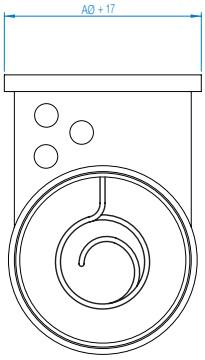


Type

CV – (E/M) duct heater with casing of Aluzinc-coated sheet steel and stainless steel heater element to EN 1.4301. The duct heaters conform to air tightness class C to EN 15727. Control takes place by an external regulator and sensor that must be ordered separately.

Product Code	kW	Phase	Airflow @ m³/s		A	Weight kg
			Min	Max		
018-CV10-06-1M	0.6	1	0.012	0.046	100	2.3
018-CV12-12-1M	1.2	1	0.019	0.093	125	3.0
018-CV15-27-1M	2.7	1	0.031	0.208	150	4.2
018-CV20-30-1M	3.0	1	0.047	0.231	200	5.9
018-CV25-30-1M	3.0	1	0.075	0.231	250	7.8
018-CV31-30-1M	3.0	1	0.115	0.231	315	8.3
018-CV31-45-1M	4.5	1	0.115	0.347	315	8.3
018-CV31-90-3M	9.0	3	0.115	0.694	315	8.3





Dimensions are in mm.

Elta Fans Limited has a policy of continuous product development and improvement and therefore reserves the right to supply products which may differ from those illustrated and described in this publication. Confirmation of dimensions and data will be supplied on request.

HIDEAWAY SH

Notes

Tel **01384 275800** Fax **01384 275810** Email **info@eltafans.co.uk** Website **eltafans.com**

HIDEAWAY SH

Notes

Elta Fans Limited has a policy of continuous product development and improvement and therefore reserves the right to supply products which may differ from those illustrated and described in this publication. Confirmation of dimensions and data will be supplied on request.

Building Services

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West Midlands, DY6 7US United Kingdom

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SHLC-08-2021 Issue A

BS EN ISO 9001:2015 FM 556465

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SECTION ONE

MANUFACTURERS LITERATURE

1.2 ODOUR AND GREASE CONTROL

XTRACK 2100

BOATMAN MECHANICAL SERVICES LIMITED
Unit 10a, ABBEY TRADING ESTATE, BELL GREEN LANE, SYDENHAM, LONDON SE26 5TW
TEL: 0208 7788877 FAX : 0208 6595687 E-MAIL: info@boatmanmechanical.co.uk

Xtract Series
Odour Control

Remove smells with a single unit

Short of space? Our small-footprint Xtract system releases ozone directly into the kitchen ventilation system.



*Plasma Clean Air is continuously improving its products and services and reserves the right to alter designs without prior notice

Chlorine bleach is powerful at removing odour and infection. But ozone is more powerful still.

Some competitor units simply mask smells with a chemical perfume. But our Xtract system releases natural ozone directly into the kitchen ventilation system.

Ozone is a superb disinfectant and odour neutraliser that eliminates cooking smells at source, using ozonolysis. And it works around the clock – just change the filters every few months.

Safety when working with Ozone:

If the extract duct discharges at low level or there are receptors within 5 meter radius of the discharge point activated carbon (minimum 0.1 second dwell/residence time) is required to absorb residual ozone before reaching atmosphere.

The Xtract 2100 series is designed to remove cooking odours from the kitchen extract system before reaching atmosphere.

If grease and smoke removal equipment are also required then the following products are available to provide a full odour control solution.



Coil Filters
Grease removal at the canopy
Find out more



ESPs
Grease and smoke control
Find out more

Benefits

- Affordable, space-efficient and robust
- Easy to install – no disruption to business
- Chemical-free
- Quiet
- Environmentally friendly and tested to EN13725:2003

Consult with a Plasma Clean Air representative to find out the most suitable odour control solution for your application.

Xtract 2100 v.2
Odour Control

Introduction to Kitchen Ventilation from Plasma Clean

Grease, odour and smoke emissions produced by commercial kitchens are an increasing concern both for existing establishments and for new build projects. Therefore, it is essential to implement a suitable grease and odour control strategy - as a matter of urgency - to ensure that the kitchen emissions comply with DW/172 and DEFRA guidance. This is not just about protecting the environment from nuisance emissions, but also reducing grease build up in the ductwork, which could present a fire risk if left untreated.

Plasma Clean's Kitchen Ventilation range consists of a range of modular solutions for grease, smoke and odour control which can be used alone or can be combined to provide a site-specific solution. For example, a pizza restaurant will not require the same level of grease, odour and smoke control equipment as a char-grill steak house.

Starting at the canopy, our Coil Filters are designed to capture 95% of grease particles; between 55-70% more than traditional baffle-type filters. Our Xtract range releases natural ozone - a superb disinfectant and odour neutraliser - directly into kitchen ventilation systems. Our Techniclean range includes the canopy mounted **Techniclean CM**, combining high intensity UV-C light with ozone technology to break down odour and grease in the air, as well as the **Techniclean Mini**, **5000** and **7500** models; perfect for new projects or retrofitting into existing ductwork. High levels of grease and smoke particulate are treated by the Electrostatix and combining Electrostatic Precipitation with UV-c, are our ESP UV units, provide highly efficient removal of grease, smoke and odour from a compact unit.

For a final polish - removing residual ozone - Activated Carbon filters are the ideal choice for low level extraction. Our Carbon Housing allows Activated Carbon filters to sit in 3, 6 or 9 easily mountable Sitesafe Discarb units.

When it comes to Control Panels, our **Air Flow Interlock** range is used to synchronise the operation of all of our Kitchen Ventilation products with detected air flow. The equipment is automatically turned off when the system is shut down, preventing accidental exposure to UV-C light and ozone, whilst ensuring energy efficiency for the system. Options are available for Lamp Life Indicators, Lamp Fault and BMS interface.

Treatment with Ozone from Plasma Clean

Oxidation using ozone and activated oxygen ions is used to treat odour emissions from commercial and industrial kitchen processes (DW/172: Specification for Kitchen Ventilation Systems and DEFRA, 2005: Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems). The unit has been specifically designed for use in commercial kitchens. The system injects ozone into the kitchen extraction canopy or ductwork where it reacts with odours.

It is recommended to locate the units with an injection point located closest to the source of odours in order to maximize dwell time. In any case the dwell time must be no less than 2 seconds. The system is powered via a fused spur which is to be interconnected to air flow or the main extraction fan control to ensure that the unit(s) only operate when the main fan is operating.

Installation

It is recommended to locate the units with an injection point located closest to the source of odours in order to maximize dwell time. In any case the dwell time must be no less than 2 seconds. The system is powered via a fused spur which is to be interconnected to air flow or the main extraction fan control to ensure that the unit(s) only operate when the main fan is operating. Multiple units can be joined together for increased volume or efficiency.

Accessories

Installation kit
Remote monitor

Maintenance

A Plasma Clean service contract is available (please enquire) and in any case Plasma Clean would recommend:

- Routine cleaning of the housing and exchange of the prefilter when spent
- A yearly service is recommended

Warranty

1 year Manufacturer's Warranty (subject to terms and conditions)
Extended 3 year Warranty (care plan available)

Terms

In accordance with our standard terms of business.

Technical Specifications & Data

Dimensions (H/W/D)	400 x 600 x 250 mm
Control lights	Air Flow and Service LED indicators
Capacity max.	Up to 1.5 m^3/s
Volume flow rate (through unit)	200 m^3/hr
Pre-filtration grade	G3
Supply	230Vac/ 1 phase / 50Hz
Power	190W
Weight	20k
Pressure drop	N/A (ozone injection)
Safety	Internal flow switch Recommended interlock to fan control
General	Multiple units can be used together for increased volume or efficiency
Finish	Powder coated
Approvals	Plasma Clean air cleaners comply with current CE requirements and EMC standards. Certificates are available on request.
	IP65 rated option available upon request

Ask us about LEASING
OPTIONS AVAILABLE
ENQUIRE TODAY

3 Year Warranty
Care Plan

Xtract 2100 v.2 Plus
Odour Control

Overview of Products in Commercial Kitchen Ventilation



Treatment with Ozone from Plasma Clean

Oxidation using ozone and activated oxygen ions is used to treat odour emissions from commercial and industrial kitchen processes (DW/172: Specification for Kitchen Ventilation Systems and DEFRA, 2005: Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems). The unit has been specifically designed for use in commercial kitchens. The system injects ozone into the kitchen extraction canopy or ductwork where it reacts with odours.

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Installation

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Accessories

Installation kit
Remote monitor

Maintenance

A Plasma Clean service contract is available (please enquire) and in any case Plasma Clean would recommend:

- Routine cleaning of the housing and exchange of the prefilter when spent
- A yearly service is recommended

Warranty

1 year Manufacturer's Warranty (subject to terms and conditions)
Extended 3 year Warranty (care plan available)

Terms

In accordance with our standard terms of business.

Technical Specifications & Data

Dimensions (HWD)	400 x 600 x 250mm
Control lights	Air Flow and Service LED indicators
Capacity max.	Up to 2.0 m^3/s
Volume flow rate (through unit)	200m^3/hr
Pre-filtration grade	G3
Supply	220V / 1 phase / 50Hz
Power	380 W
Weight	20kg
Pressure drop	N/A (ozone injection)
Safety	Internal flow switch Recommended interlock to fan control
General	Multiple units can be used together for increased volume or efficiency
Finish	Powder coated
Approvals	Plasma Clean air cleaners comply with current CE requirements and EMC standards. Certificates are available on request. IP65 rated option available upon request



Ask us about LEASING
OPTIONS AVAILABLE
ENQUIRE TODAY

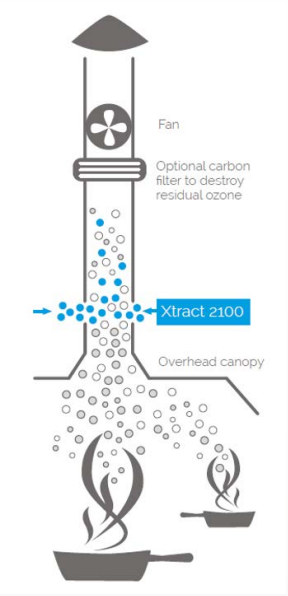
3 Year Warranty
Care Plan

Xtract 4200
Odour Control

How it works:

The system injects ozone into the kitchen extraction canopy or ductwork where it reacts with odours. The ozone itself is consumed during the process and is converted back into oxygen.

The system is powered via a fused spur, which is interconnected to the air flow or the main extraction fan, ensuring that the unit(s) only operate when the main fan is operating.



Treatment with Ozone from Plasma Clean

Oxidation using ozone and activated oxygen ions is used to treat odour emissions from commercial and industrial kitchen processes (DW/172: Specification for Kitchen Ventilation Systems and DEFRA, 2005: Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems). The unit has been specifically designed for use in commercial kitchens. The system injects ozone into the kitchen extraction canopy or ductwork where it reacts with odours.

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Installation

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Accessories

Installation kit
Remote monitor

Maintenance

A Plasma Clean service contract is available (please enquire) and in any case Plasma Clean would recommend:
- Routine cleaning of the housing and exchange of the prefilter when spent
- A yearly service is recommended

Warranty

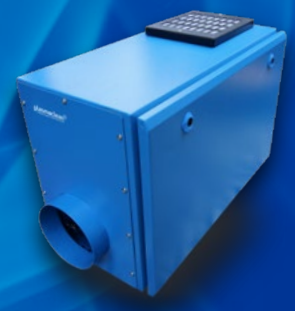
1 year Manufacturer's Warranty (subject to terms and conditions)
Extended 3 year Warranty (care plan available)

Terms

In accordance with our standard terms of business.

Technical Specifications & Data

Dimensions (HWD)	400 x 600 x 300mm
Control lights	Air Flow LED indicators
Capacity max.	Up to 3.0 m³/s
Volume flow rate (through unit)	0.066 m³/s
Pre-filtration grade	G4
Supply	230Vac/ 1 phase / 50Hz
Power	570W
Weight	25kg
Pressure drop	N/A (ozone injection)
Safety	I nternal flow switch Recommended interlock to fan control
Finish	Powder coated mild steel
Approvals	Plasma Clean air cleaners comply with current CE requirements and EMC standards. Certificates are available on request.



Ask us about LEASING
OPTIONS AVAILABLE ENQUIRE TODAY

3 Year Warranty Care Plan
All Plasma Clean products and all relatable parts

SECTION ONE

MANUFACTURERS LITERATURE

1.3 CARBON IMPREGNATED BAG FILTER

BOATMAN MECHANICAL SERVICES LIMITED
Unit 10a, ABBEY TRADING ESTATE, BELL GREEN LANE, SYDENHAM, LONDON SE26 5TW
TEL: 0208 7788877 FAX : 0208 6595687 E-MAIL: info@boatmanmechanical.co.uk

Carbon Impregnated Bag Filters



Applications

The Activated Carbon impregnated bag filter, can be utilised to remove the slight general odours associated with towns and cities.

When a Carbon Bag Filter is used in the extract systems of light duty catering establishments, such as coffee shops, the life of it will be very short, as the odour retention is directly proportional to the weight of activated carbon on the product.

Airclean will not recommend this product for new installations for odour removal.

Description

The fully cured coating of the activated carbon powder on the polyester non-woven bag filter material is formed into pockets which are stitched and tagged to minimise blinding from each other.

The formed pockets are supported by a copper coated rod assembly which, with the media, is sealed into the corrosion resistant galvanised steel header frame.

Technical

Filter Classification:
Maximum Operating Temperature : 40 Degrees Centigrade
Maximum Operating Humidity: 80% RH

STANDARD CARBON IMPREGNATED BAG FILTERS

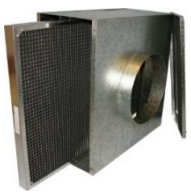
Dimensions					Flow Rate		Part Numbers
OT Inches		Actual mm			Flow	Pressure Drop	
H x W	D	H	W	D	m^3/s	Pa	
24 x 12	12	594	289	289	0.38	70	1410801
	20	594	289	492	0.47	70	1410804
24 x 20	12	594	492	289	0.50	70	1410802
	20	594	492	492	0.64	70	1410805
24 x 24	12	594	594	289	0.75	70	1410803
	20	594	594	492	0.94	70	1410806
NON STANDARD							1410899



Front Withdrawal Frame (1810)



MEZ Flanged Side Access Housing (1820)



Duct Mounted Filter Housing (1825)



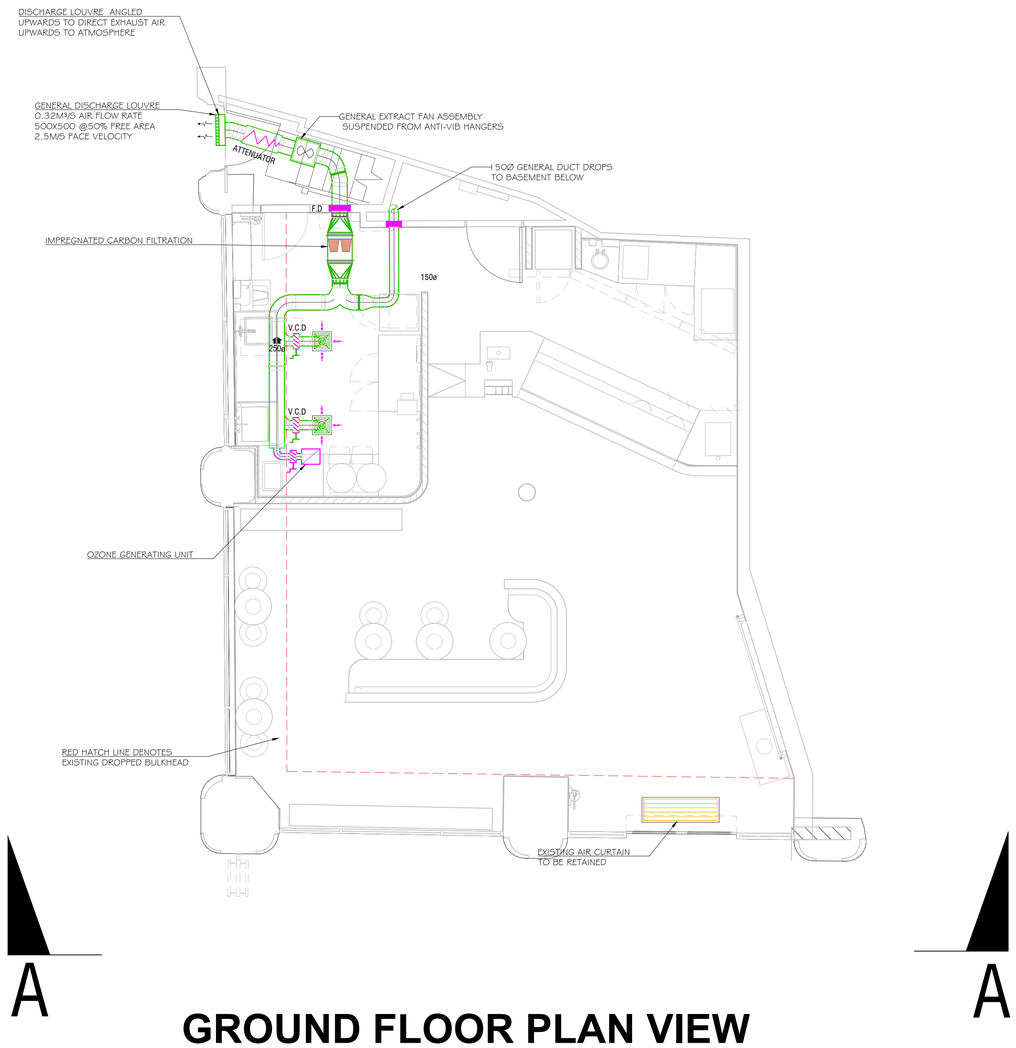
Fully Welded Side Withdrawal Filter Housing (1840)

SECTION TWO

AS INSTALLED RECORD DRAWINGS

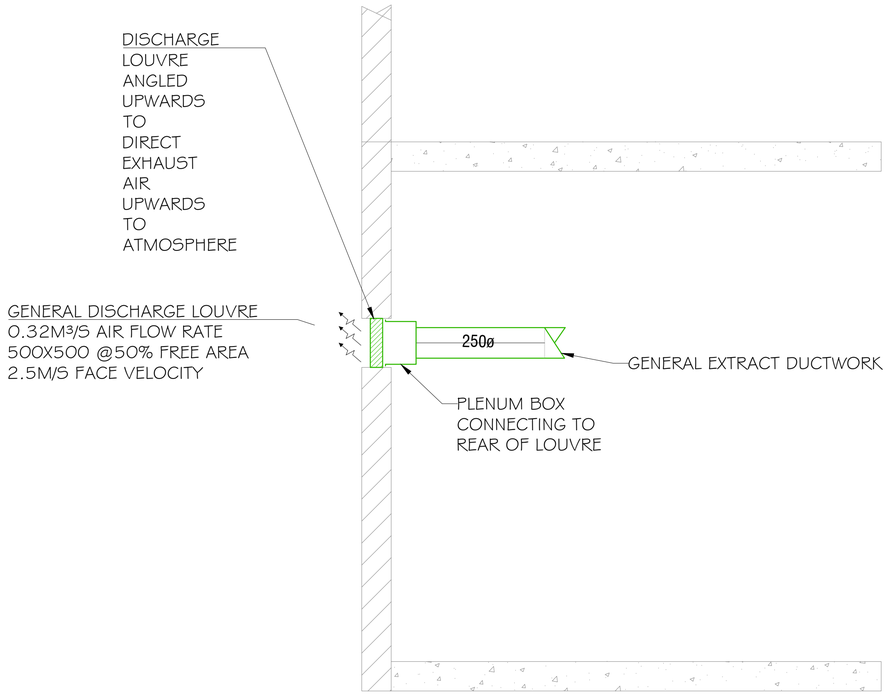
2.0 AS INSTALLED DRAWINGS

6363-03E RCP Installing Air Conditioning



GROUND FLOOR PLAN VIEW

Scale: 1:50



SECTION A-A

Scale: 1:25

GENERAL NOTES

1. DO NOT SCALE FROM THIS DRAWING, WORK TO MEASURED DIMENSIONS ONLY. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE.
2. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED
3. ALL KITCHEN EXTRACT DUCTWORK INSTALLED WITH ACCESS DOORS AT 1200MM CENTERS. BRACKETS INSTALLED NO GREATER THAN 1500MM APART.

LEGEND

VCD = VOLUME CONTROL DAMPER
SP = SUPPLY DIFFUSER
EG = EXTRACT GRILLE
FD = FIRE DAMPER
AD = ACCESS DOOR
PH = ELECTRIC PANEL HEATER

AC 01 = AIR CONDITIONING SUPPLY GRILLE
AC RA = AIR CONDITIONING RETURN AIR

AS INSTALLED

Rev	Description	Date
D	Odour Control Included	16/09/24
C	Internal Section included	11/09/24
B	Re-Position grilles and omit Fresh air intake	24/06/24
A	Re-Routed General Extract Discharge to above rear door	21/06/24

Boatman
Mechanical Services Limited

UNITS 10A-11A, ABBEY TRADING ESTATE
SYDENHAM, LONDON, SE26 5TW
TEL. 02087788877 ; FAX. 02087789500
E-MAIL: info@boatmanmechanical.co.uk

THE COPY RIGHT OF THIS DRAWING IS OWNED BY BOATMAN MECHANICAL SERVICES. THE CONTENTS OF THIS DRAWING MAY NOT BE COPIED NOR MANUFACTURED IN WHOLE OR IN PART WITHOUT PRIOR WRITTEN PERMISSION FROM BOATMAN MECHANICAL SERVICES.

PROJECT:
Zambrero Manchester

DESCRIPTION:
Proposed Mechanical Services
General Extract Detail

SCALE: 1:50	REVISION: E
PAPER SIZE: A1	DRAWN BY: Justin.B
DRAWING No: 6366-03	DATE: 11.09.2024

Rev	A	B	C	D	E			

SECTION THREE

TESTING AND COMMISSIONING

3.0 TESTING AND COMMISSIONING

3.1 General Extract Ventilation Air Flow Rates

Boatman
Mechanical Services Limited

Mechanical Ventilation Flow Rate Testing

Testing of Fixed System 1

Client details			Zambrero UK				
Job No.			J586				
Dwelling address			59 Cross St, Manchester, M2 4JW				
Test date			21/11/24	**Tested by**	Justin Boatman		
Boatman Mechanical Services Ltd. Certificate No			300 420 489				
Test equipment model, type			Rotating Vane anemometer LCA501				
Date of BSRIA calibration			15/03/2024		**Certificate number**	STD-135071	
System 1 – Mechanical extract – intermittent fans							
Test method used		**Check box**	**Refer to NHBC guidance notes for further information on methods.**				
Method A – unconditional method			Complete boxes a – b – c – d – g - h				
Method B – conditional method			Complete boxes a – b -c – d – e -f – g - h				
Method C minimum benchmark method		☒	Complete boxes a – b – c – d -g - h (15 l/s = **12 l/s**) (30 l/s = **24 l/s**)*				
a	**b**	**c**	**d**	**e**	**f**	**g**	**h**
Fan/ Grilles location	**Make**	**Model**	**Measured extract rate l/s**	**Fan correction factor**	**Corrected extract rate**	**Design extract rate l/s**	**Pass/Fail**
Ceiling Void	Elta	SH 315-1LC					
Extract Grille 1 – Prep Area	Systemair	Four Way Blow Diffuser 600x600	150.0 l/s			150 l/s	**Pass**
Extract Grille 2 – Prep Area	Systemair	Four Way Blow Diffuser 600x600	160.0 l/s			150 l/s	**Pass**
W/C 1	Systemair	Air Valve 150 Diameter	17.0 l/s			15 l/s	**Pass**

Boatman
Mechanical Services
Limited

Testing of Fixed System 1