



11 Burrenreagh Road
 Castlewellan | Co. Down | BT31 9HH
 tel 028 4377 8484 | fax 028 4377 8116
 INFO@KANEGROUPBS.COM
 WWW.KANEGROUPBS.COM

Project: Herbal House

Document Number: PTS-SL-01-TS77

Document Title: Technical Submission 77
Attenuators

	NAME	DATE
PREPARED BY:	CDeegan	27.01.17
APPROVED BY:	MMcMullan	27.01.17

PROPOSED STATUS: For approval

REVISION	DATE OF ISSUE	REASON / HISTORY
A	27.01.17	First Issue

C0665	PTS	SL	01	A
JOB CODE	DOCUMENT TYPE	FLOOR / AREA	SHEET	REVISION

Technical Submittal Compliance Sheet-

Technical Submittal TS 77 Attenuators

- Products complies with Waterman Mechanical Specification Part 1 Scope of Work Stage 4 WBS-SPC-M100_C01
- Products complies with all relevant BS Codes
- Attenuators selected to meet the requirements of Waterman Acoustic Report- RIBA Stage 4 September 2015
- Attenuators selected against the procured Fans and Air Handling Units



Technical Submittal

Project: Herbal House		Contractor: McLaren Group		
Job No: C0665		Package No:		
Technical Submission No: 77		Issue Date: 27/01/17		
		Approval Required By Date: ASAP		
Description of Equipment:		Attenuators		
Location of Equipment:		Throughout (As indicated on the Ventilation schematics)		
Manufacturer/Supplier:		Allaway Acoustics		
Equipment Type and Reference:		A02F and A10F		
Specification References:				
Deviations to Above				
Drawing Details:				
Specification/Samples Attached:		Technical Submittal Sheets		
Approval Status A B C		Comments:		
Company:		Reviewer	Comments	Date
Consultant:				
Architect:				



Item	System Reference	Code	Suffix	DWG	L1	L2/ID	W	H/Dia	Vol	PD	Wt	No.	IL	Performance, dB							
					mm	mm	mm	mm	m ³ /s	Pa	kg	Off.		63	125	250	500	1k	2k	4k	8k
1	AHU5 INLET	SP3035	G	A02F	1200		1800	600	4.7	50	156	1	IL	10	17	25	34	43	33	27	19
2	AHU5 OUTLET	SP3050	GH1L	A10F	870		1800	450	4.7	20	43	1	IL	6	9	14	17	23	13	10	7
3	ATT601 - EF06/01 WC EXHAUST	SP3020	GZ211	A02F	2100		1500	1500	3.79	60	490	1	IL	19	35	51	55	55	55	55	51
4	ATT602 - EF06/02 WC EXTRACT*	SP2033	G	A02F	1500		1200	900	3.79	60	183	1	IL	9	19	30	46	55	51	50	38
5	AHU1 INLET	SP2033	GH1L	A10F	870		900	550	1.541	50	38	1	IL	7	13	19	31	48	41	35	25
6	AHU1 OUTLET	SP2033	GH1L	A10F	870		900	850	1.541	50	55	1	IL	7	13	19	31	48	41	35	25
7	EFB01/02 - INLET A**	SP2033	GH1LXZ211	A10F	1740		1100	300	1.016	50	58	1	IL	10	22	34	52	55	55	53	40
8	EFB01/02 - INLET B**	SP3030	GH1LXZ211	A10F	1740		1200	1200	4.249	50	168	1	IL	15	26	39	51	53	52	48	32
9	EFB01/02 - OUTLET**	SP3035	GH1LXZ211	A10F	2340		1600	800	5.264	75	154	1	IL	15	27	40	50	53	50	48	29
10	SFB01 INLET	SL640	GH1L	A10F	570		500	200	0.39	30	6	1	IL	4	8	12	16	20	15	13	7
11	SFB02 OUTLET*	SL538	GH1LXZ211	A10F	2040		400	400	0.39	50	26	1	IL	11	22	34	48	50	47	42	28
12	GENERATOR COOLING INTAKE - DUCT MOUNTED	SP3030	GD	A02F	1500		1200	1000	2.5	30	319	1	IL	14	23	34	46	50	48	39	28
13	GENERATOR COOLING EXHAUST - PRIMARY DISCHARGE#	SP2040	GDX	A02F	1200		1100	1100	2.5	10	243	1	IL	6	12	21	35	50	40	35	21
14	GENERATOR COOLING EXHAUST - SECONDARY DUCT MOUNTED	SP3030	GDXZ311	A02F	2700		1200	1000	2.5	30	609	1	IL	19	35	48	55	55	55	55	38

NOTES:

LABEL WITH ITEM NO. & SYSTEM REF.
IL = STATIC INSERTION LOSS (dB)

G - SELF FINISH PRE-GALVANISED STEEL CONSTRUCTION.
H1 - HIGH TEMPERATURE APPLICATION (2 HOUR/300°C).
L - LOOSE SPLITTER ELEMENTS.
Z - ATTENUATOR SUPPLIED IN MODULAR SECTIONS INDICATED.
X - SPECIAL CONSTRUCTION, REFER TO EQUIPMENT SCHEDULE FOR DETAILS.
D - DOUBLE SKIN CASING (CASING SIZE W+50 x H+50).

L = ITEMS 2, & 5-11 ARE LOOSE SPLITTERS ONLY, FOR INSTALLATION BY OTHERS INTO THEIR SPECIALIST FIRE RATED DUCTWORK CASINGS.
TO BE INSTALLED VERTICALLY IN WIDTH DIMENSION.
H DIMENSION IS INTERNAL CASING SIZE.
MANUFACTURED DIM. OF SPLITTERS IS H - 5MM.
WRAPPED & BANDED TO PALLETS FOR TRANSIT.
CHANNELS, SUPPORTS, FIXINGS, CASINGS & INSTALLATION BY OTHERS.
X = SPLITTERS SUPPLIED IN 2 SECTIONS ON THE LENGTH - CLEINTO TO CONFIRM SECTIONAL LENGTHS PRIOR TO RELEASING FOR MANUFACTURE.

*UNABLE TO MATCH REQUESTED SIZE - SUITABLE TRANSFORMATION SECTIONS/MATING FLANGES ETC TO BE PROVIDED BY OTHERS AS NECESSARY TO ACCOMMODATE OUR SELECTIONS.

Cont...



ALLAWAY ACOUSTICS LTD

EQUIPMENT SCHEDULE

PROJECT NAME: HERBAL HOUSE FARRINGTON
DATE: 27/01/2017

PROJECT No: 49881
SCHEDULE No: 14049881Q9

**EFB01/02 - SELECTIONS BASED ON 2 INLET AND 1 OUTLET ATTENUATOR SERVING THE PAIR OF FANS (ASSUMING ONLY 1 RUNNING AT ANY TIME) AS DRAWINGS PREVIOUSLY RECEIVED. SELECTIONS AGAIN BASED ON SIZES GIVEN, AMENDED AS NECESSARY TO SUIT THE PERFORMANCE REQUIRED (TRANSFORMATIONS ETC BY OTHERS).

#PRIMARY ATTENUATOR LOCATED AT END OF GENERATOR HOUSING.

X - ITEM 13 = 900MM L SPLITTERS STOPPED 150MM SHORT EACH END WITHIN 1200MM LONG CASING. BEND/TURNING SECTION AND ASSOCIATED DUCTWORK ALONG WITH ALL NECESSARY ATTENUATOR SUPPORTS/FIXINGS ETC TO BE PROVIDED BY OTHERS (NB. ANY DUCTWORK WITHIN THE GENERATOR PLANTROOM (INTAKE OR EXHAUST) SHOULD HAVE A DOUBLE SKINNED CASING TO MATCH THAT OFFERED ON THE INTAKE/EXHAUST ATTENUATORS.

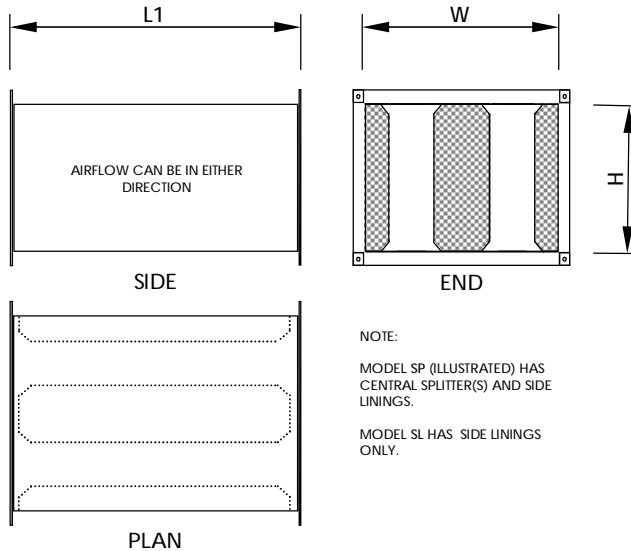
DATA SHEET A02F RECTANGULAR ATTENUATOR FLANGED MODEL SP / MODEL SL

THIS IS NOT A STAND ALONE DOCUMENT AND UNLESS REFERRED TO IN A DATED EQUIPMENT SCHEDULE IS SUBJECT TO REVISION WITHOUT NOTICE.



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DIMENSIONS



WIDTH (W) AND HEIGHT (H) ARE NOMINAL CASING DIMENSIONS AND EXCLUDE FLANGES.

SPECIFICATION

ATTENUATORS ARE CONSTRUCTED IN ACCORDANCE WITH DW 144 SPECIFICATION FOR MEDIUM PRESSURE (CLASS B) DUCTWORK.

CASES ARE STIFFENED AND FITTED WITH PROPRIETARY FLANGES.

MODEL SP - HAS SOUND ABSORBENT SPLITTERS ARRANGED VERTICALLY WITHIN THE CASING TO FORM A SERIES OF CENTRAL ELEMENTS AND SIDE LININGS.

MODEL SL - HAS SOUND ABSORBENT SPLITTERS ARRANGED VERTICALLY WITHIN THE CASING TO FORM SIDE LININGS ONLY.

SPLITTERS AND SIDE LININGS CONTAIN A SOUND ABSORBENT INFILL THAT IS ENCAPSULATED WITH GLASS CLOTH AND PLAIN/PERFORATED STEEL.

SPLITTERS HAVE AERODYNAMIC FAIRINGS AT EACH END.

NOTES

THIS DATA SHEET IS TO BE READ IN CONJUNCTION WITH THE EQUIPMENT SCHEDULE.

LARGER ATTENUATORS WILL BE OF MODULAR CONSTRUCTION FOR EASE OF HANDLING AND MAY BE SPLIT ON THE LENGTH, WIDTH, HEIGHT OR COMBINATION THEREOF.

ATTENUATORS WILL BE SUPPLIED WITHOUT SUPPORT STEELWORK, BRACKETS, FIXINGS, GASKET, MASTIC OR OTHER SUCH ITEMS, UNLESS OTHERWISE STATED.

IT IS THE INSTALLERS RESPONSIBILITY TO PROVIDE THE FLANGE SEAL TO THE CONNECTING DUCT.

PRESSURE LOSSES STATED ON THE EQUIPMENT SCHEDULE ARE DERIVED FROM TESTS CARRIED OUT IN ACCORDANCE WITH ISO 7235 AND MAY VARY DEPENDING ON INSTALLATION CONDITIONS.

DIMENSIONAL TOLERANCE TO SHEET METAL MANUFACTURING STANDARDS OF +/- 3 mm.

WEIGHT

WEIGHTS ARE GIVEN ON THE EQUIPMENT SCHEDULE.

SUFFIX

THE SUFFIX TO THE ATTENUATOR MODEL DEFINES THE MATERIAL OF FABRICATION AND ANY ADDITIONAL FEATURES OR SPECIAL CONSTRUCTIONAL DETAILS.

G - PRE-GALVANISED STEEL CONSTRUCTION.

S - GRADE 316 STAINLESS STEEL CONSTRUCTION.

H1 - HIGH TEMPERATURE APPLICATION (2 HOUR/300°C).

D - DOUBLE SKIN CASING (CASING SIZE W+50 x H+50).

C - HIGH PRESSURE APPLICATION (DW 144, CLASS C).

K - PROTECTIVE PAINT FINISH TO VISIBLE INTERNAL METAL SURFACES.

J - SPLITTERS AND/OR SIDE LININGS ARRANGED HORIZONTALLY.

M - MELINEX ENCAPSULATED INFILL.

Z(*) - MODULAR CONSTRUCTION (* NUMBER OF MODULES).

X - SPECIAL CONSTRUCTION, REFER TO EQUIPMENT SCHEDULE FOR DETAILS.

FLANGE DETAILS

ATTENUATORS ARE FITTED WITH 30 mm PROFILE FLANGES COMPLYING WITH DW144 AND DW/TM1.

STANDARD SIZES

LENGTH (L1) - 600, 900, 1200, 1500, 1800, 2100, 2400, 2700, & 3000 mm.

WIDTH (W) - ANY DIMENSION ABOVE 149 mm.

HEIGHT (H) - ANY DIMENSION ABOVE 99 mm.

ALL ATTENUATORS ARE MADE TO ORDER.

NON STANDARD ATTENUATORS ARE AVAILABLE.

DATA SHEET **A10f**

RECTANGULAR ATTENUATOR

LOOSE SPLITTER ELEMENTS

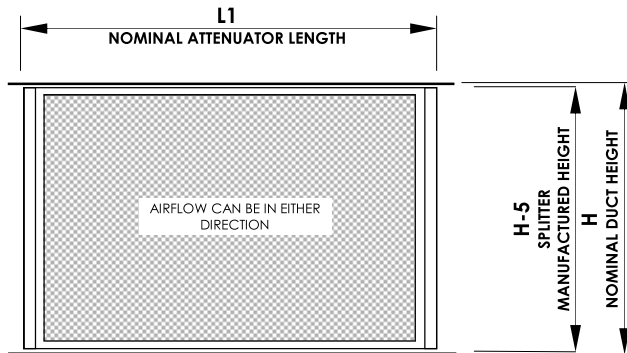
MODEL **SP-L** / MODEL **SL-L**

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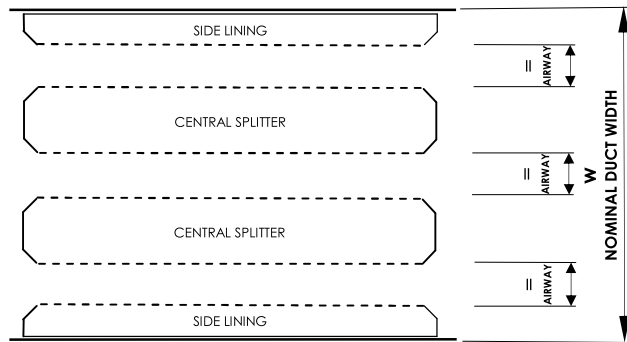


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DIMENSIONS



SIDE



PLAN

MODEL **SP-L** (ILLUSTRATED) HAS CENTRAL SPLITTER(S) AND SIDE LININGS.

MODEL **SL-L** HAS SIDE LININGS ONLY.

SPECIFICATION

SPLITTER ELEMENTS ARE CONSTRUCTED IN ACCORDANCE WITH DW 144 SPECIFICATION FOR MEDIUM PRESSURE (CLASS B) DUCTWORK.

SPLITTERS ELEMENTS CONTAIN A SOUND ABSORBENT INFILL THAT IS ENCAPSULATED WITH GLASS CLOTH AND PERFORATED STEEL AND HAVE AERODYNAMIC FAIRINGS AT EACH END.

NOTES

THIS DATA SHEET IS TO BE READ IN CONJUNCTION WITH THE EQUIPMENT SCHEDULE.

THE SPLITTER ELEMENTS WILL BE MANUFACTURED 5 mm LESS IN THAN THE HEIGHT (H) DIMENSION SHOWN ON THE EQUIPMENT SCHEDULE SO AS TO ALLOW THE SPLITTER ELEMENTS TO BE POSITIONED IN THE DUCT. THE PURCHASER MUST ENSURE THAT THIS CLEARANCE IS ADEQUATE.

THE INSTALLERS ARE TO ARRANGE THE SPLITTER ELEMENTS TO GIVE EQUAL AIRWAYS AND MUST ENSURE THAT THESE ARE FITTED TIGHT TO THE DUCT CASING AT TOP, BOTTOM AND SIDES SO AS TO MAINTAIN THE ACOUSTIC PERFORMANCE.

EXCESSIVELY LARGE OR HEAVY SPLITTER ELEMENTS MAY BE MANUFACTURED IN MATING SECTIONS FOR EASE OF HANDLING.

SPLITTER ELEMENTS WILL BE SUPPLIED WITHOUT SUPPORT STEELWORK, BRACKETS, FIXINGS, GASKET, MASTIC OR OTHER SUCH ITEMS, UNLESS OTHERWISE STATED.

PRESSURE LOSSES STATED ON THE EQUIPMENT SCHEDULE ARE DERIVED FROM TESTS CARRIED OUT IN ACCORDANCE WITH ISO 7235 AND MAY VARY DEPENDING ON INSTALLATION CONDITIONS.

DIMENSIONAL TOLERANCE TO SHEET METAL MANUFACTURING STANDARDS OF +/- 3 mm.

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M - MELINEX ENCAPSULATED INFILL.

X - SPECIAL CONSTRUCTION, REFER TO EQUIPMENT SCHEDULE FOR DETAILS.

FLANGE DETAILS

NOT APPLICABLE

STANDARD SIZES

THERE ARE NO STANDARD SIZES. ALL SPLITTER ELEMENTS ARE MADE TO ORDER.

WEIGHT

WEIGHTS ARE GIVEN ON THE EQUIPMENT SCHEDULE.

DATA SHEET **A10f**

RECTANGULAR ATTENUATOR

LOOSE SPLITTER ELEMENTS

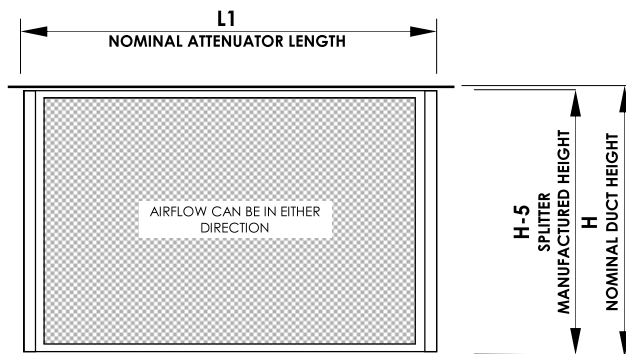
MODEL **SP-L** / MODEL **SL-L**

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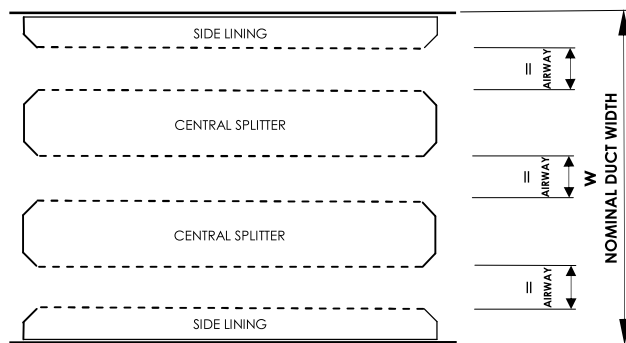


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FLANGE DETAILS

NOT APPLICABLE

STANDARD SIZES

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WEIGHT

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