



ATTENUATOR TECHNICAL SUBMISSION

Highgate Newtown Community Centre, Camden

TS-ME- 046
REV 00

PROJECT NAME	Highgate Newtown Community Centre		
PROJECT NO	M1104 / E1418		
SUBMISSION No	TS-ME-046		
DESCRIPTION	Attenuator Technical Submittal		
MAIN CONTRACTOR	Farrans Construction		
CONSULTING ENGINEER	FLOH		
HARVEY GROUP SUBMITTED BY:	MM	Date: 17.03.2022	
HARVEY GROUP REVIEWED BY:	MF	Date: 17.03.2022	
HARVEY GROUP APPROVED BY:	BH	Date: 17.03.2022	
CLIENT APPROVAL SECTION BELOW			
DATE COMMENTS DUE			
CONSULTANTS COMMENTS	Ensure all room design criteria is met and selections are in accordance with outline specification.		
Indicate appropriate box below:		Date:	
A	B	C	

Technical submission

Contents

1.0 Consultant Schedule

2.0 Manufacturers information

1.0 Consultant Schedule

Highgate Newtown Community Centre

Attenuator Schedule

Status: S4 Issued for Stage Approval



Document History

Version	Issued	Comments
P01	02/03/2021	Preliminary Issue
P02	09/07/2021	Revised as Per Schedule
P03	16/07/2021	Revised as Per Schedule
P04	23/07/2021	Schedules Separated
P05	16/08/2021	Attenuators Revised
P06	28/09/2021	Attenuators Revised
P07	11/03/2022	Attenuators Revised in line with revised acoustic report

General Attenuators

TYPE Various

APPLICATION General Ventilation Attenuation

	Ref.	Description	Type and Model Code	Dimensions (mm)			Vol (m³/s)	PL (Pa)	Qty	Noise Criteria
				W	H	L				
1	ATT1/1/I	MVHR FAI - 1 BED Atmosphere side	Whole house ventilation	204	120	600	0.03	10	20	31dB at 1m
2	ATT1/1/S	MVHR SUPPLY - 1 BED Room side	Rectangular	204	120	900	0.03	10	20	NR25
3	ATT1/1/R	MVHR RETURN - 1 BED Room side	Whole house ventilation	204	120	600	0.03	10	20	NR25
4	ATT1/1/E	MVHR EXHAUST - 1 BED Atmosphere side	Rectangular	204	120	900	0.03	10	20	31dB at 1m
5	ATT1/2/I	MVHR FAI - 2 BED Atmosphere side	Whole house ventilation	222	120	600	0.04	10	14	31dB at 1m
6	ATT1/2/S	MVHR SUPPLY - 2 BED Room side	Rectangular	222	120	900	0.04	10	14	NR25
7	ATT1/2/R	MVHR RETURN - 2 BED Room side	Whole house ventilation	222	120	600	0.04	10	14	NR25
8	ATT1/2/E	MVHR EXHAUST - 2 BED Atmosphere side	Rectangular	222	120	900	0.04	10	14	31dB at 1m
9	ATT1/3/I	MVHR FAI - 3 BED Atmosphere side	Whole house ventilation	222	120	600	0.04	10	5	31dB at 1m
10	ATT1/3/S	MVHR SUPPLY - 3 BED Room side	Rectangular	222	120	900	0.04	10	5	NR25
11	ATT1/3/R	MVHR RETURN - 3 BED Room side	Whole house ventilation	222	120	600	0.04	10	5	NR25
12	ATT1/3/E	MVHR EXHAUST - 3 BED Atmosphere side	Rectangular	222	120	900	0.04	10	5	31dB at 1m
13	ATT1TH/I	MVHR FAI - TOWN HOUSE Atmosphere side	Whole house ventilation	222	120	900	0.05	15	2	31dB at 1m
14	ATT1TH/S	MVHR SUPPLY - TOWN HO Room side	Rectangular	222	120	1200	0.05	15	2	NR25
15	ATT1TH/R	MVHR RETURN - TOWN HO Room side	Rectangular	222	120	900	0.05	15	2	NR25
16	ATT1TH/E	MVHR EXHAUST - TOWN H Atmosphere side	Rectangular	222	120	1200	0.05	15	2	31dB at 1m
17	ATT5	00-HRU01 FAI Atmosphere side	Circular	250	dia	900	0.18	5	1	Note 4 Below
18	ATT6	00-HRU01 SUPPLY Room side	Rectangular	400	305	900	0.18	15	1	40dB(A) Laeq
19	ATT7	00-HRU01 EXTRACT Room side	Circular	250	dia	900	0.18	5	1	40dB(A) Laeq
20	ATT8	00-HRU01 EXHAUST Atmosphere side	Circular	250	dia	600	0.18	15	1	Note 4 Below
21	ATT9	00-HRU02 FAI Atmosphere side	Circular	200	dia	900	0.06	5	1	Note 4 Below
22	ATT10	00-HRU02 SUPPLY Room side	Rectangular	304	255	900	0.06	10	1	40dB(A) Laeq
23	ATT11	00-HRU02 EXTRACT Room side	Rectangular	304	255	900	0.06	10	1	40dB(A) Laeq
24	ATT12	00-HRU02 EXHAUST Atmosphere side	Circular	200	dia	900	0.06	5	1	Note 4 Below
25	ATT13	03-HRU01 FAI Atmosphere side	Circular	200	dia	900	0.06	5	1	Note 4 Below

26	ATT14	03-HRU01 SUPPLY Room side	Rectangular	340	255	1200	0.06	10	1	30dB(A) Laeq
27	ATT15	03-HRU01 EXTRACT Room side	Rectangular	340	255	900	0.06	10	1	30dB(A) Laeq
28	ATT16	03-HRU01 EXHAUST Atmosphere side	Circular	200	dia	900	0.06	5	1	Note 4 Below
29	ATT17	03-HRU02 FAI Atmosphere side	Circular	300	dia	900	0.23	5	1	Note 1 Below
30	ATT18	03-HRU02 SUPPLY Room side	Rectangular	450	355	900	0.23	15	1	45dB(A) Laeq
31	ATT19	03-HRU02 EXTRACT Room side	Rectangular	450	355	900	0.23	15	1	45dB(A) Laeq
32	ATT20	03-HRU02 EXHAUST Atmosphere side	Rectangular	450	355	900	0.23	20	1	Note 1 Below
33	ATT21	D-00-HRU01 FAI Atmosphere side	Circular	200	dia	900	0.13	5	1	Note 4 Below
34	ATT22	D-00-HRU01 SUPPLY Room side	Rectangular	340	255	900	0.13	15	1	45dB(A) Laeq
35	ATT23	D-00-HRU01 EXTRACT Room side	Rectangular	340	255	900	0.13	15	1	45dB(A) Laeq
36	ATT24	D-00-HRU01 EXHAUST Atmosphere side	Circular	200	dia	900	0.13	5	1	Note 4 Below
37	ATT25	RF-HRU-01 FAI Atmosphere side	Rectangular	600	500	900	0.85	30	1	Note 3 Below
38	ATT26	RF-HRU-01 SUPPLY Room side	Rectangular	600	500	900	0.85	30	1	35dB(A) Laeq
39	ATT27	RF-HRU-01 EXTRACT Room side	Rectangular	600	500	900	0.85	30	1	35dB(A) Laeq
40	ATT28	RF-HRU-01 EXHAUST Atmosphere side	Rectangular	600	500	900	0.85	30	1	Note 2 Below
41	ATT29	RF-KEF-01 EXHAUST Atmosphere side	Rectangular	450	450	1200	0.50	40	1	Note 2 Below
42	ATT30	RF-KEF-01 RETURN Room side	Rectangular	450	450	1800	0.50	40	1	45dB(A) Laeq
43	ATT31	RF-KSF-01 FAI Atmosphere side	Rectangular	861	348	900	0.40	10	1	Note 3 Below
44	ATT32	RF-KSF-01 SUPPLY Room side	Rectangular	861	348	900	0.40	10	1	45dB(A) Laeq
45	ATT33	RF-KEF-02 EXHAUST Atmosphere side	Rectangular	450	450	1200	0.52	40	1	Note 2 Below
46	ATT34	RF-KEF-02 RETURN Room side	Rectangular	450	450	1800	0.52	40	1	45dB(A) Laeq
47	ATT35	RF-KSF-02 FAI Atmosphere side	Rectangular	861	348	900	0.42	40	1	Note 3 Below
48	ATT36	RF-KSF-02 SUPPLY Room side	Rectangular	861	348	900	0.42	40	1	45dB(A) Laeq
49	CTA01	00-HRU-01	Rectangular	340	255	900	0.06	10	2	Dntw 45dB

Acoustic Report Insertion Losses

	Attenuator Location	Insertion Loss (dB)					
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz
Note 1	AA205LS ASHP Attenuator Kit (ASHP)	8	12	18	20	19	18
	EF01 (HRU Inlet & Outlet)	2	6	12	15	15	15
Note 2	KEF/AHU Exhaust (KEF01, KEF02 & AHU Exhaust)	10	17	22	22	22	19
Note 3	KSF/AHU Intake (KSF01, KSF02 & AHU Intake)	10	19	20	20	20	15
Note 4	All Internal Plant (Inlet and Outlet)	2	6	12	15	15	15

Table 2.3: Indicative Proposed Attenuator Insertion Losses

2.0 Manufacturers Information

Item	System Reference	Code	Suffix	DWG	L1	L2/ID	W	H/Dia	Vol	PD	Wt	No.		Performance, dB							
					mm	mm	mm	mm	m ³ /s	Pa	kg	Off.		63	125	250	500	1k	2k	4k	8k
1	ATT1/1/I MVHR FAI 1 BED	SL	GR6TS	A07G	600		204	120	0.029	10	10	20	IL	2	4	8	16	32	29	26	15
2	ATT/1/1/S MVHR SUPPLY 1 BED	SL	GR6TS	A07G	900		204	120	0.029	10	12	20	IL	2	5	11	24	46	42	36	22
3	ATT/1/1/R MVHR RETURN 1 BED	SL	GR6TS	A07G	600		204	120	0.029	10	10	20	IL	2	4	8	16	32	29	26	15
4	ATT/1/1/E MVHR EXHAUST 1 BED	SL	GR6TS	A07G	900		204	120	0.029	10	12	20	IL	2	5	11	24	46	42	36	22
5	ATT/1/2/I MVHR FAI 2 BED	SL	GR9TS	A07G	600		222	120	0.037	10	10	14	IL	2	4	8	16	32	29	26	15
6	ATT/1/2/S MVHR SUPPLY 2 BED	SL	GR9TS	A07G	900		222	120	0.037	10	13	14	IL	2	5	11	24	46	42	36	22
7	ATT/1/2/R MVHR RETURN 2 BED	SL	GR9TS	A07G	600		222	120	0.037	10	10	14	IL	2	4	8	16	32	29	26	15
8	ATT/1/2/E MVHR EXHAUST 2 BED	SL	GR9TS	A07G	900		222	120	0.037	10	13	14	IL	2	5	11	24	46	42	36	22
9	ATT/1/3/I MVHR FAI 3 BED	SL	GR9TS	A07G	600		222	120	0.037	10	10	5	IL	2	4	8	16	32	29	26	15
10	ATT/1/3/S MVHR SUPPLY 3 BED	SL	GR9TS	A07G	900		222	120	0.037	10	13	5	IL	2	5	11	24	46	42	36	22
11	ATT/1/3/R MVHR RETURN 3 BED	SL	GR9TS	A07G	600		222	120	0.037	10	10	5	IL	2	4	8	16	32	29	26	15
12	ATT/1/3/E MVHR EXHAUST 3 BED	SL	GR9TS	A07G	900		222	120	0.037	10	13	5	IL	2	5	11	24	46	42	36	22
13	ATT1TH/I MVHR FAI TOWN HOUSE	SL	GR9TS	A07G	900		222	120	0.05	15	13	2	IL	2	5	11	24	46	42	36	22
14	ATT1TH/S MVHR SUPPLY TOWN HOUSE	SL	GR9TS	A07G	1200		222	120	0.05	15	15	2	IL	3	7	14	30	55	53	46	28
15	ATT1TH/R MVHR RETURN TOWN HOUSE	SL	GR9TS	A07G	900		222	120	0.05	15	13	2	IL	2	5	11	24	46	42	36	22
16	ATT1TH/E MVHR EXHAUST TOWN HOUSE	SL	GR9TS	A07G	1200		222	120	0.05	15	15	2	IL	3	7	14	30	55	53	46	28
17	ATT5 00-HRU01 FAI	PL	G	A13G	900	250			0.18	5	12	1	IL	2	3	7	18	25	19	17	13
18	ATT6 00-HRU01 SUPPLY	SL	GE	A18G	900	250	400	305	0.18	15	30	1	IL	6	11	18	26	35	30	25	16
19	ATT7 00-HRU01 EXTRACT	PL	G	A13G	900	250			0.18	5	12	1	IL	2	3	7	18	25	19	17	13
20	ATT8 00-HRU01 EXHAUST	PLP	G	A13G	600	250			0.18	15	14	1	IL	3	10	15	24	30	30	28	24
21	ATT9 00-HRU02 FAI	PL	G	A13G	900	200			0.06	5	10	1	IL	1	3	7	19	28	23	20	15
22	ATT10 00-HRU02 SUPPLY	SL	GE	A18G	900	200	340	255	0.06	10	24	1	IL	5	9	17	27	39	33	28	17
23	ATT11 00-HRU02 EXTRACT	SL	GE	A18G	900	200	340	255	0.06	10	24	1	IL	5	9	17	27	39	33	28	17
24	ATT12 00-HRU02 EXHAUST	PL	G	A13G	900	200			0.06	5	10	1	IL	1	3	7	19	28	23	20	15
25	ATT13 03-HRU01 FAI	PL	G	A13G	900	200			0.06	5	10	1	IL	1	3	7	19	28	23	20	15
26	ATT14 03-HRU01 SUPPLY	SL	GE	A18G	1200	200	340	255	0.06	10	31	1	IL	10	18	28	41	47	43	39	30
27	ATT15 03-HRU01 EXTRACT	SL	GE	A18G	900	200	340	255	0.06	10	25	1	IL	8	14	22	32	42	40	33	25
28	ATT16 03-HRU01 EXHAUST	PL	G	A13G	900	200			0.06	5	10	1	IL	1	3	7	19	28	23	20	15
29	ATT17 03-HRU02 FAI	PL	G	A13G	900	300			0.23	5	14	1	IL	2	3	7	18	25	19	17	13
30	ATT18 03-HRU02 SUPPLY	SL	GE	A18G	900	300	450	355	0.23	15	35	1	IL	9	13	20	28	33	30	24	16
31	ATT19 03-HRU02 EXTRACT	SL	GE	A18G	900	300	450	355	0.23	15	35	1	IL	9	13	20	28	33	30	24	16
32	ATT20 03-HRU02 EXHAUST	SL	GE	A18G	900	300	450	355	0.23	20	35	1	IL	9	13	20	28	33	30	24	16
33	ATT21 D-00-HRU01 FAI	PL	G	A13G	900	200			0.13	5	10	1	IL	1	3	7	19	28	23	20	15
34	ATT22 D-00-HRU01 SUPPLY	SL	GE	A18G	900	200	340	255	0.13	15	24	1	IL	5	9	17	27	39	33	28	17
35	ATT23 D-00-HRU01 EXTRACT	SL	GE	A18G	900	200	340	255	0.13	15	24	1	IL	5	9	17	27	39	33	28	17
36	ATT24 D-00-HRU01 EXHAUST	PL	G	A13G	900	200			0.13	5	10	1	IL	1	3	7	19	28	23	20	15

Item	System Reference	Code	Suffix	DWG	L1	L2/ID	W	H/Dia	Vol	PD	Wt	No.		Performance, dB							
37	ATT25 RF-HRU-01 FAI	SP	G	A02G	900		600	500	0.85	30	55	1	IL	9	15	21	29	37	32	24	17
38	ATT26 RF-HRU-01 SUPPLY	SP	G	A02G	900		600	500	0.85	30	48	1	IL	7	13	19	31	48	41	35	25
39	ATT27 RF-HRU-01 EXTRACT	SP	G	A02G	900		600	500	0.85	30	48	1	IL	7	13	19	31	48	41	35	25
40	ATT28 RF-HRU-01 EXHAUST	SP	G	A02G	900		600	500	0.85	30	55	1	IL	9	15	21	29	37	32	24	17
41	ATT29 RF-KEF-01 EXHAUST	SL	GH1MJ	A02G	1200		450	450	0.5	40	44	1	IL	11	19	22	30	29	24	21	15
42	ATT30 RF-KEF-01 RETURN	SL	GH1MJZ211	A02G	1800		450	450	0.5	40	72	1	IL	15	26	30	38	36	28	25	19
43	ATT31 RF-KSF-01 FAI	SP	G	A02G	900		861	348	0.4	10	52	1	IL	8	13	20	27	35	28	22	15
44	ATT32 RF-KSF-01 SUPPLY	SP	G	A02G	900		861	348	0.4	10	52	1	IL	8	13	20	27	35	28	22	15
45	ATT33 RF-KEF-02 EXHAUST	SL	GH1MJ	A02G	1200		450	450	0.52	40	44	1	IL	11	19	22	30	29	24	21	15
46	ATT34 RF-KEF-02 RETURN	SL	GH1MJZ211	A02G	1800		450	450	0.52	40	72	1	IL	15	26	30	38	36	28	25	19
47	ATT35 RF-KSF-02 FAI	SP	G	A02G	900		861	348	0.42	40	52	1	IL	8	13	20	27	35	28	22	15
48	ATT36 RF-KSF-02 SUPPLY	SP	G	A02G	900		861	348	0.42	40	52	1	IL	8	13	20	27	35	28	22	15
49	CTA01 00-HRU-01	SL	GE	A18G	900	200	340	255	0.06	10	25	2	IL	8	14	22	32	42	40	33	25

NOTES

LABEL WITH ITEM NO. & SYSTEM REF.

IL = INSERTION LOSS (dB)

TS - TOP SPIGOT.

G - SELF FINISH PRE-GALVANISED STEEL CONSTRUCTION.

E - RECTANGULAR ATTENUATOR SUPPLIED C/W CIRCULAR SPIGOT END CONNECTIONS. SPIGOT SIZE IN L2/D COLUMN ABOVE.

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

J - SPLITTERS ARRANGED HORIZONTALLY.

M - MELINEX ENCAPSULATED INFILL.

Z - ATTENUATOR SUPPLIED IN MODULAR SECTIONS INDICATED. REFER TO DATA SHEET A09H & A20H.

DATA SHEET A02g

RECTANGULAR ATTENUATOR

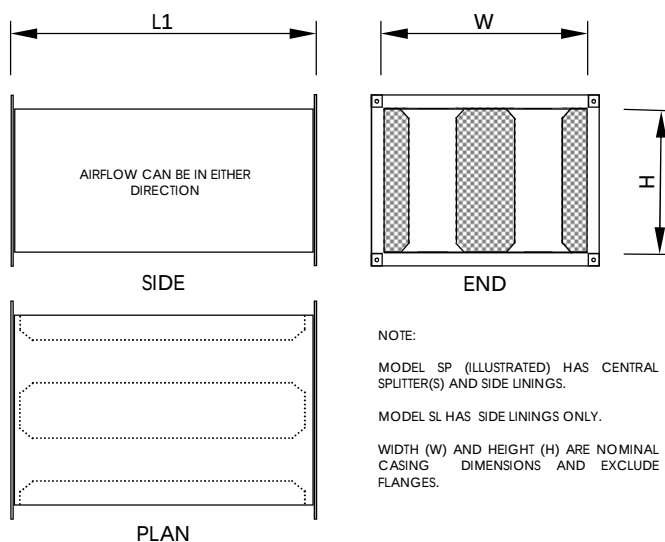
FLANGED

MODEL SP / MODEL SL



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DIMENSIONS



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 (SEE DATA SHEET A09 FOR DETAILS).

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.

INSERTION LOSS, PRESSURE LOSS AND FLOW NOISE ARE DERIVED FROM TESTS CARRIED OUT IN ACCORDANCE WITH ISO 7235 AND MAY VARY DEPENDING ON INSTALLED CONDITIONS.

MANUFACTURING DIMENSIONAL TOLERANCE < 1.0 %.

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 (SEE DATA SHEET A09 FOR DETAILS).

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.

WEIGHT

WEIGHTS ARE GIVEN ON THE EQUIPMENT SCHEDULE.

MODULAR CONSTRUCTION

ATTENUATORS MANUFACTURED IN ONE SECTION WILL HAVE NO "Z" SUFFIX IN THE CODE.

WHEN ATTENUATORS ARE SUPPLIED IN MODULAR FORM, THE ACTUAL NUMBER OF SECTIONS IN THE LENGTH, WIDTH AND HEIGHT DEFINED BY THE "Z" SUFFIX. REFER TO DATA SHEET A09 FOR DETAILS.

Z

#

#

#

A "Z" SUFFIX IN THE ATTENUATOR CODE DENOTES THAT THE ATTENUATOR WILL BE SUPPLIED IN MODULES.

NUMBER OF MODULES IN LENGTH.

NUMBER OF MODULES IN WIDTH.

NUMBER OF MODULES IN HEIGHT.

DATA SHEET A07G

RECTANGULAR ATTENUATOR

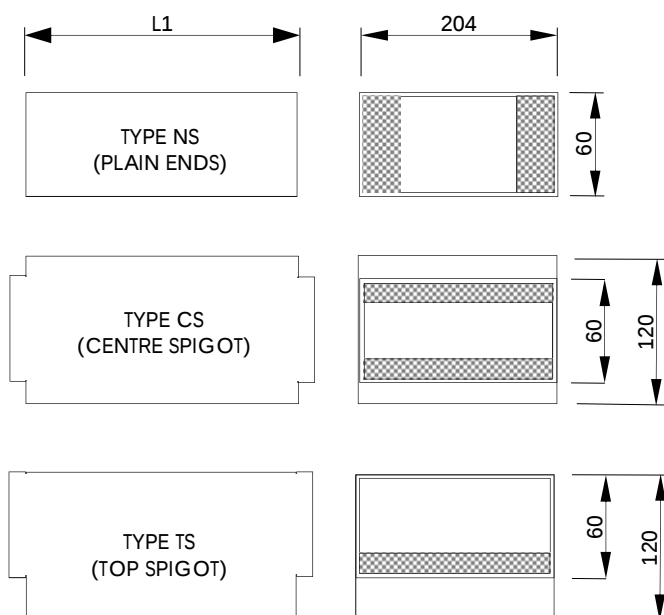
RECTANGULAR SPIGOT

MODEL R6 / MODEL R9

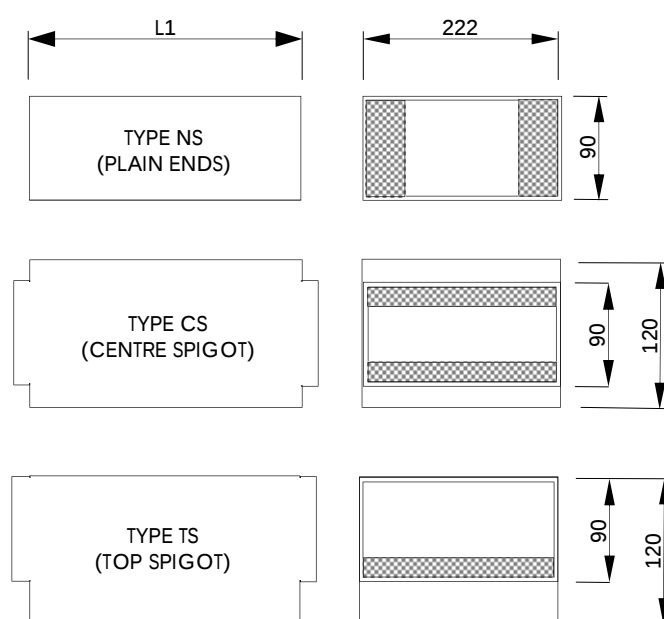


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DIMENSION R6



DIMENSION R9



SUFFIX

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

NS - PLAIN ENDS

CS - CENTRE SPIGOT

TS - TOP SPIGOT

G - PRE-GALVANISED STEEL CONSTRUCTION.

S - GRADE 316 STAINLESS STEEL CONSTRUCTION.

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

D - DOUBLE SKIN CASING (OVERALL DIMENSION DOES NOT CHANGE).

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.

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

STANDARD SIZES

LENGTH (L1) - 600, 900, 1200 & 1500 mm (EXCLUDING SPIGOTS).

WIDTH (W) - AS SHOWN.

HEIGHT (H) - AS SHOWN.

ALL ATTENUATORS ARE MADE TO ORDER. NON STANDARD ATTENUATORS AVAILABLE.

WEIGHT

WEIGHTS ARE GIVEN ON THE EQUIPMENT SCHEDULE.

SPECIFICATION

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

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

NOTES

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

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

IT IS THE INSTALLERS RESPONSIBILITY TO SEAL THE ATTENUATOR TO THE CONNECTING DUCT.

INSERTION LOSS, PRESSURE LOSS AND FLOW NOISE DERIVED FROM TESTS CARRIED OUT IN ACCORDANCE WITH ISO 7235 AND MAY VARY DEPENDING ON INSTALLED CONDITIONS.

MANUFACTURING DIMENSIONAL TOLERANCE < 1.0 %.

DATA SHEET A13G

CIRCULAR ATTENUATOR

SPIGOT CONNECTION

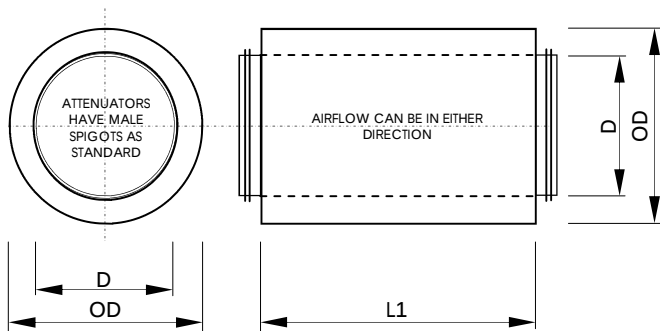
MODEL PL (WITHOUT POD)

MODEL PLP (WITH POD)



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

DIMENSIONS



NOMINAL DIAMETER (D)

BETWEEN 100 - 500 mm
ABOVE 500 mm

MAX OUTSIDE DIAMETER (OD)

D + 110 mm.
D + 170 mm.

LENGTH (L1) IS NOMINAL CASING DIMENSION, EXCLUDING SPIGOTS.

SPECIFICATION

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

CASES ARE STIFFENED AND FITTED WITH MALE SPIGOTS WITH INTEGRAL SEALS.

SOUND ABSORBENT INFILL IS ENCAPSULATED WITH GLASS CLOTH AND PERFORATED STEEL.

CENTRAL PODS (TYPE PLP) HAVE AERODYNAMIC FAIRINGS AT EACH END.

NOTES

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

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

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

IT IS THE INSTALLERS RESPONSIBILITY TO SEAL THE ATTENUATOR TO THE CONNECTING DUCT.

INSERTION LOSS, PESSION LOSS AND FLOW NOISE DATA ARE DERIVED FROM TESTS CARRIED OUT IN ACCORDANCE WITH ISO 7235 AND MAY VARY DEPENDING ON INSTALLED CONDITIONS.

MANUFACTURING DIMENSIONAL TOLERANCE < 1.0 %.

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).

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

K - PROTECTIVE PAINT FINISH TO VISIBLE INTERNAL METAL SURFACES.

M - MELINEX ENCAPSULATED INFILL.

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

FLANGE DETAILS

ATTENUATORS ARE FITTED WITH MALE SPIGOTS AS STANDARD.

STANDARD SIZES

DIAMETER(D) - 100, 125, 150, 160, 180, 200, 250, 300, 315, 355, 400, 450, 500, 560 & 630 mm.

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

ALL ATTENUATORS ARE MADE TO ORDER.

NON STANDARD SIZES AVAILABLE.

DATA SHEET A18G

RECTANGULAR ATTENUATOR

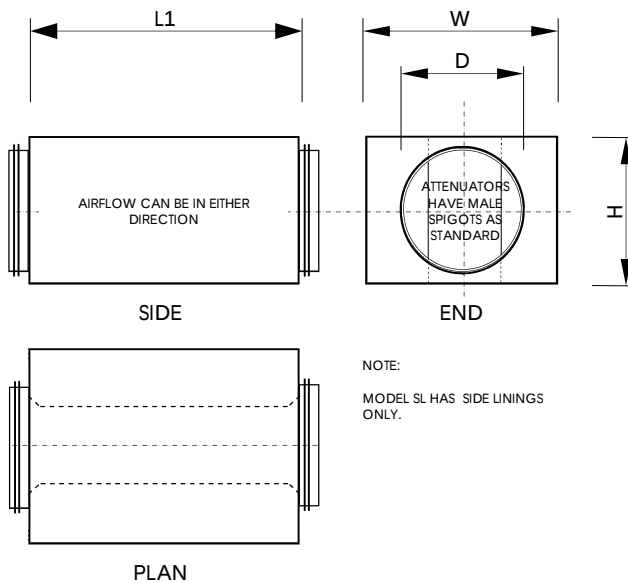
CIRCULAR SPIGOT

MODEL SL



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

DIMENSIONS



LENGTH (L1), WIDTH (W) AND HEIGHT (H) ARE NOMINAL CASING DIMENSIONS.

ATTENUATOR HAS MALE SPIGOT TO SUIT NOMINAL DUCT DIAMETER (D).

SPECIFICATION

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

CASES ARE STIFFENED AND HAVE MALE SPIGOTS WITH INTEGRAL SEALS.

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.

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

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

IT IS THE INSTALLERS RESPONSIBILITY TO SEAL THE ATTENUATOR TO THE CONNECTING DUCT.

INSERTION LOSS, PRESSURE LOSS AND FLOW NOISE DATA ARE DERIVED FROM TESTS CARRIED OUT IN ACCORDANCE WITH ISO 7235 AND MAY VARY DEPENDING ON INSTALLED CONDITIONS.

MANUFACTURING DIMENSIONAL TOLERANCE < 1.0 %.

SUFFIX

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

E - CIRCULAR SPIGOT.

G - PRE-GALVANISED STEEL CONSTRUCTION.

S - GRADE 316 STAINLESS STEEL CONSTRUCTION.

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

D - DOUBLE SKIN CASING (OVERALL DIMENSION DOES NOT CHANGE).

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 MALE SPIGOTS AS STANDARD.

STANDARD SIZES

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

DIAMETER(D) - 100, 125, 150, 160, 180, 200, 224, 250, 300, 315, 355, 400, 450 & 500 mm.

WIDTH (W) - SEE EQUIPMENT SCHEDULE.

HEIGHT (H) - SEE EQUIPMENT SCHEDULE.

ALL ATTENUATORS ARE MADE TO ORDER.

NON STANDARD ATTENUATORS ARE AVAILABLE.

WEIGHT

WEIGHTS ARE GIVEN ON THE EQUIPMENT SCHEDULE.