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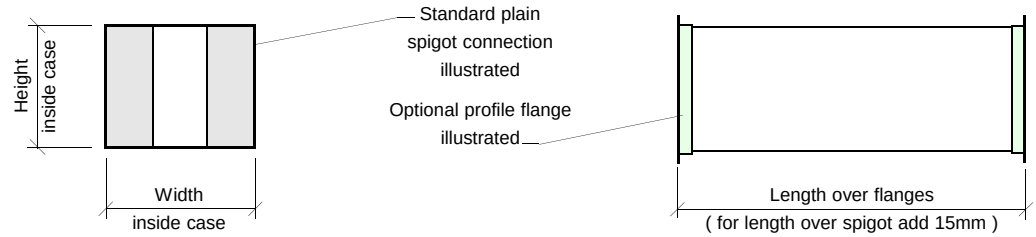
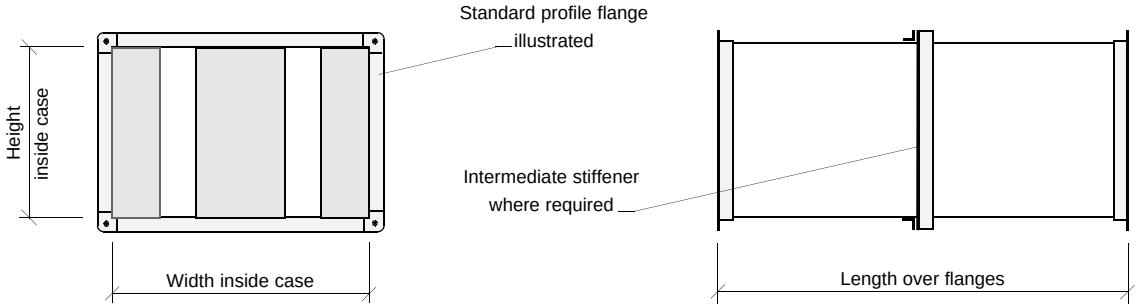
THE RECTANGULAR DUCT ATTENUATOR RANGE

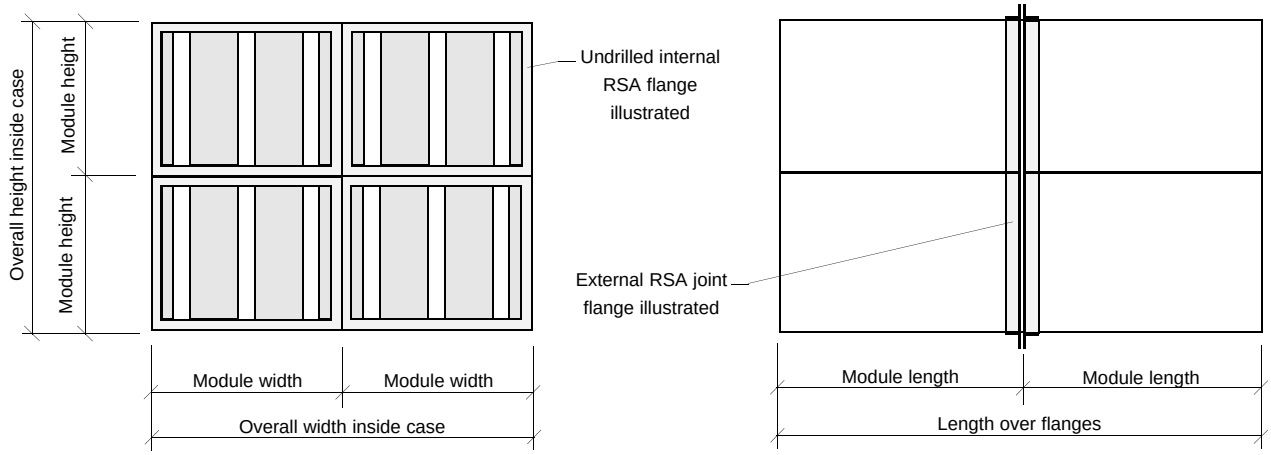
SDA - SMALL DUCT ATTENUATORS



MDA - MID-RANGE DUCT ATTENUATORS



LDA - LARGE DUCT ATTENUATORS



ATTENUATOR MODEL	TYPICAL APPLICATIONS	STANDARD SIZE RANGE		
		WIDTH	HEIGHT	LENGTH
SDA	Crosstalk, terminal or duct mounted attenuation	150 - 450mm in 50mm increments	150 - 450mm in 50mm increments	600 - 1800mm in 300mm increments
MDA	Duct or equipment mounted attenuation	300 - 2400mm in 50mm increments	300,450,600,750,900,1050, 1200, 1500,1800,2100 & 2400mm	600 - 2400mm in 300mm increments
LDA	Major duct or builders-work opening attenuation	1500mm upwards in 100mm increments	1500mm upwards in 300mm increments	600mm upwards in 300mm increments

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CONSTRUCTION :

Model Codes are used to define the specific constructional properties of each product. The coding system for rectangular attenuators operates as follows :

PRIMARY CODE / OPTIONAL FEATURES / OPTIONAL EXTRAS

The coding definitions are as follows :

PRIMARY CODE : **SDA, MDA or LDA**

- galvanised sheet steel casing with mastic sealed lockformed joints
- Intermediate stiffeners are fitted where required for rigidity on MDA and LDA attenuators only
- side attenuator elements fitted as standard to reduce noise breakout and assist in smooth airflow
- all attenuator elements faced with perforated sheet steel for mechanical protection and to enable airway velocities of up to 25m/s.
- controlled density mineral wool infill with tissue facing to reduce fibre egress
- all attenuator elements fitted with aerodynamic fairings at both ends

OPTIONAL FEATURES :

Casing pressure and leakage options :

1 - DW/TM1 Class B leakage and up to +2000 / -750 Pa pressure rating

Casing end connection options :

P - Plain spigot ends to DW144 (provided as standard on SDA attenuators only)
S - Profile flanges to DW144 (provided as standard on MDA attenuators and offered as an option on SDA)
A - Rolled Steel Angle flanges finished in galvafroid paint (provided as standard on LDA attenuators and offered as an option on MDA)

Internal attenuator element orientation :

V - vertical as standard
H - horizontal optional

OPTIONAL EXTRAS :

M - melinex wrapped infill suitable for grease, diluted chemical or moisture laden air and also to ensure zero fibre egress for hospital or clean room applications
W - wrapped casing ends with polythene to prevent ingress of rubble on site
X - denotes special optional extra, some examples of these are shown below

EXAMPLE CODING : **MDA / 1SV / MW**

SPECIAL OPTIONAL EXTRAS :

The following are some of the special optional extras which are available if required :

- internal flanges or special flange arrangements.
- uprated casing thicknesses.
- double skin construction to reduce noise breakout through the attenuator casing.
- internal or external paint finishes for chemical resistance, weatherability, corrosion protection etc.
- PVC or polypropelene construction for varying degrees of chemical resistance with GRP reinforcement on larger attenuator sizes.
- stainless steel construction for chemical resistance or high temperature applications.
- welded construction for very high pressure applications.
- integral inlet or outlet plenums.
- integral weather louvres for intake or exhaust to atmosphere.

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ATTENUATOR PERFORMANCE DATA

20.0% FREE AREA

Length	Vc	Static insertion loss data dB							
(mm)	(m/s)	63	125	250	500	1k	2k	4k	8k
600	1.77	9	12	21	28	37	35	32	20
900	1.77	11	17	26	35	44	42	37	25
1200	1.77	12	21	31	42	50	48	43	30
1500	1.77	14	26	36	49	50	50	48	35
1800	1.77	16	30	40	50	50	50	50	40
2100	1.77	17	35	45	50	50	50	50	45
2400	1.77	19	39	50	50	50	50	50	50

22.5% FREE AREA

Length	Vc	Static insertion loss data dB							
(mm)	(m/s)	63	125	250	500	1k	2k	4k	8k
600	2.09	9	12	20	26	35	33	29	19
900	2.09	11	16	25	33	42	40	35	24
1200	2.09	12	20	30	40	49	46	40	29
1500	2.09	14	24	35	47	50	50	46	34
1800	2.09	16	28	39	50	50	50	50	38
2100	2.09	17	32	44	50	50	50	50	43
2400	2.09	19	36	49	50	50	50	50	48

25.0% FREE AREA

Length	Vc	Static insertion loss data dB							
(mm)	(m/s)	63	125	250	500	1k	2k	4k	8k
600	2.44	8	12	19	25	33	31	26	18
900	2.44	10	16	24	32	40	37	32	23
1200	2.44	11	19	29	39	47	44	37	27
1500	2.44	13	23	34	46	50	50	43	32
1800	2.44	15	26	38	50	50	50	48	36
2100	2.44	16	30	43	50	50	50	50	41
2400	2.44	18	33	48	50	50	50	50	45

27.5% FREE AREA

Length	Vc	Static insertion loss data dB							
(mm)	(m/s)	63	125	250	500	1k	2k	4k	8k
600	2.81	8	11	18	23	31	29	23	17
900	2.81	10	14	23	30	38	35	28	21
1200	2.81	11	17	27	37	45	41	34	25
1500	2.81	13	21	32	44	50	47	39	29
1800	2.81	14	24	37	50	50	50	44	33
2100	2.81	16	27	41	50	50	50	50	37
2400	2.81	17	30	46	50	50	50	50	41

30.0% FREE AREA

Length	Vc	Static insertion loss data dB							
(mm)	(m/s)	63	125	250	500	1k	2k	4k	8k
600	3.21	8	11	17	22	29	26	21	16
900	3.21	9	14	22	29	36	32	26	20
1200	3.21	11	17	26	35	43	38	31	23
1500	3.21	12	20	31	42	50	44	36	27
1800	3.21	13	22	35	49	50	49	40	30
2100	3.21	15	25	40	50	50	50	45	34
2400	3.21	16	28	44	50	50	50	50	37

32.5% FREE AREA

Length	Vc	Static insertion loss data dB							
(mm)	(m/s)	63	125	250	500	1k	2k	4k	8k
600	3.63	7	10	16	21	26	23	19	15
900	3.63	8	13	20	28	33	29	23	18
1200	3.63	10	15	25	34	40	34	28	21
1500	3.63	11	18	29	41	47	40	32	24
1800	3.63	12	21	33	47	50	46	36	27
2100	3.63	14	23	38	50	50	50	41	30
2400	3.63	15	26	42	50	50	50	45	33

35.0% FREE AREA

Length	Vc	Static insertion loss data dB							
(mm)	(m/s)	63	125	250	500	1k	2k	4k	8k
600	4.09	7	10	15	20	24	20	17	14
900	4.09	8	12	19	26	31	26	21	17
1200	4.09	9	15	23	33	38	31	25	19
1500	4.09	11	17	28	39	45	37	29	22
1800	4.09	12	19	32	45	50	42	32	24
2100	4.09	13	22	36	50	50	48	36	27
2400	4.09	14	24	40	50	50	50	40	29

37.5% FREE AREA

Length	Vc	Static insertion loss data dB							
(mm)	(m/s)	63	125	250	500	1k	2k	4k	8k
600	4.58	7	9	14	19	22	18	15	13
900	4.58	8	11	18	25	29	23	19	15
1200	4.58	9	13	22	31	35	28	22	17
1500	4.58	10	16	26	37	42	34	26	19
1800	4.58	11	18	30	43	49	39	29	21
2100	4.58	12	20	34	49	50	44	33	23
2400	4.58	13	22	38	50	50	49	36	25

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ATTENUATOR PERFORMANCE DATA

40.0% FREE AREA

Length	Vc	Static insertion loss data dB							
(mm)	(m/s)	63	125	250	500	1k	2k	4k	8k
600	5.12	6	9	14	18	20	16	14	12
900	5.12	7	11	18	24	27	21	17	14
1200	5.12	8	13	21	29	33	26	20	15
1500	5.12	9	15	25	35	40	31	23	17
1800	5.12	10	17	28	41	46	35	26	19
2100	5.12	11	19	32	46	50	40	29	20
2400	5.12	12	21	35	50	50	45	32	22

42.5% FREE AREA

Length	Vc	Static insertion loss data dB							
(mm)	(m/s)	63	125	250	500	1k	2k	4k	8k
600	5.70	6	8	13	17	18	14	13	11
900	5.70	7	10	16	22	24	19	16	13
1200	5.70	8	12	20	28	30	23	18	14
1500	5.70	9	14	23	33	37	28	21	16
1800	5.70	9	16	26	38	43	32	23	17
2100	5.70	10	18	30	44	49	37	26	19
2400	5.70	11	20	33	49	50	41	28	20

45.0% FREE AREA

Length	Vc	Static insertion loss data dB							
(mm)	(m/s)	63	125	250	500	1k	2k	4k	8k
600	6.33	6	8	12	16	17	13	12	10
900	6.33	7	10	15	21	23	17	14	11
1200	6.33	7	12	19	26	28	21	16	13
1500	6.33	8	14	22	31	34	25	18	14
1800	6.33	9	15	25	36	39	28	20	15
2100	6.33	9	17	29	41	45	32	22	17
2400	6.33	10	19	32	46	50	36	24	18

47.5% FREE AREA

Length	Vc	Static insertion loss data dB							
(mm)	(m/s)	63	125	250	500	1k	2k	4k	8k
600	7.03	5	7	11	15	16	12	11	9
900	7.03	6	9	14	20	21	15	13	10
1200	7.03	6	11	18	24	26	18	14	11
1500	7.03	7	13	21	29	31	22	16	13
1800	7.03	8	14	24	34	35	25	17	14
2100	7.03	8	16	28	38	40	28	19	15
2400	7.03	9	18	31	43	45	31	20	16

50.0% FREE AREA

Length	Vc	Static insertion loss data dB							
(mm)	(m/s)	63	125	250	500	1k	2k	4k	8k
600	7.79	5	7	10	14	15	11	10	9
900	7.79	6	9	13	18	19	14	11	10
1200	7.79	6	11	17	23	23	16	12	11
1500	7.79	7	13	20	27	28	19	14	12
1800	7.79	8	14	23	31	32	22	15	12
2100	7.79	8	16	27	36	36	24	16	13
2400	7.79	9	18	30	40	40	27	17	14

52.5% FREE AREA

Length	Vc	Static insertion loss data dB							
(mm)	(m/s)	63	125	250	500	1k	2k	4k	8k
600	8.64	4	6	9	13	14	10	9	8
900	8.64	5	8	12	17	18	12	10	9
1200	8.64	5	10	16	21	21	14	11	9
1500	8.64	6	12	19	25	25	17	12	10
1800	8.64	7	13	22	28	29	19	13	11
2100	8.64	7	15	26	32	32	21	14	11
2400	8.64	8	17	29	36	36	23	15	12

55.0% FREE AREA

Length	Vc	Static insertion loss data dB							
(mm)	(m/s)	63	125	250	500	1k	2k	4k	8k
600	9.58	4	5	8	12	13	9	8	7
900	9.58	5	7	11	16	16	11	9	8
1200	9.58	5	9	15	19	20	13	10	8
1500	9.58	6	11	18	23	23	15	11	9
1800	9.58	6	12	21	26	26	16	11	9
2100	9.58	7	14	25	30	30	18	12	10
2400	9.58	7	16	28	33	33	20	13	10

PERFORMANCE DATA NOTES:

1) Data derived from tests in accordance with BS4718:1971 “Methods of test for silencers for air distribution systems”.
2) Vc is the face velocity constant under laminar airflow conditions where an attenuator pressure loss of 50 Pascals will occur. Pressure losses will increase substantially in turbulent airflow.
3) Attenuator generated noise data is available upon request.
4) Data is applicable to SDA, MDA, LDA and RAE attenuator models.
5) If in doubt refer to CAICE design engineers for selection advice.
6) Melinex derates insertion losses by the following factors:

63	125	250	500	1k	2k	4k	8k
1.00	1.00	0.95	0.85	0.80	0.65	0.55	0.50