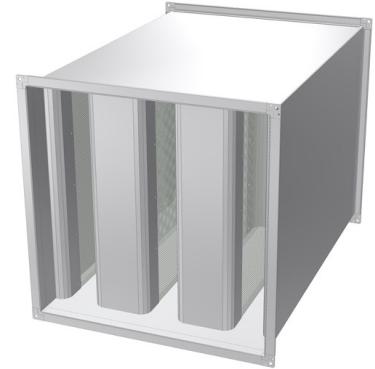


R02 Rectangular Silencers

R02 - 2 - Attenuator

Available in seven standard lengths R02 2 Rectangular Duct Mounted Silencers have excellent attenuation properties, achieved with sound absorbing infill splitters, retained in the attenuator casing by a perforated liner. The resistance to airflow is a function of the face velocity and length. It is not recommended to select the R02 2 Silencers with a face velocity above 2.5 metres per second without asking advice regarding re-generated self noise. We can advise on the selections and can perform system analysis to ensure the correct unit is specified.

- High performance rectangular duct silencer
- Seven standard lengths
- Many connection options
- Cross section dimensions in 1mm increments
- System pressure within ducted systems to 1500 Pa
- Special lengths on request



Insertion Loss (dB) - Centre Band Frequency

Product Code	Length (mm)	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
R02 - 2 - 600	600	7	12	20	31	39	40	38	27
R02 - 2 - 900	900	9	16	25	42	50	50	50	41
R02 - 2 - 1200	1200	11	20	20	50	50	50	50	48
R02 - 2 - 1500	1500	13	24	25	50	50	50	50	50
R02 - 2 - 1800	1800	15	30	20	50	50	50	50	50
R02 - 2 - 2100	2100	16	33	25	50	50	50	50	50
R02 - 2 - 2400	2400	7	38	20	50	50	50	50	50

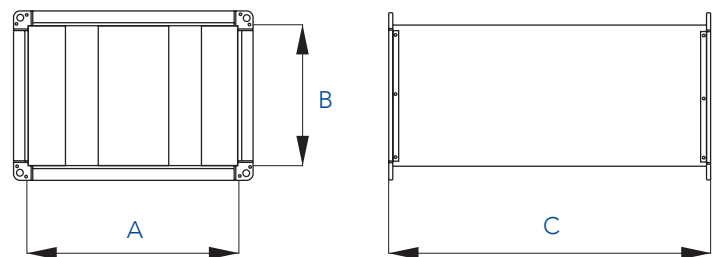
Insertion loss data is derived from continual testing to BS4718 and other standards in independent UKAS certified laboratories, which includes where appropriate, re-generated or self noise testing in both forward and reverse flow conditions. If you request system analysis from our technicians all predictions will be assessed using the relevant certified insertion loss data together with relevant dynamic corrections.

Dimensional Data

Code	A Min	A Max	B Min	B Max	C Min	C Max
R01 - 2	100	1200	100	1200	400	2400

Resistance to Airflow (Pa)

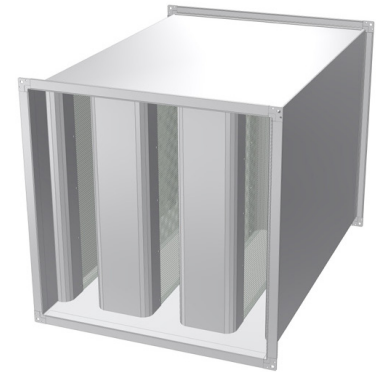
Product Code	1.0m/s	1.5m/s	2.0m/s	2.5m/s	3.0m/s
R02 - 2 - 600	9	29	52	80	108
R02 - 2 - 900	9	30	54	82	111
R02 - 2 - 1200	10	31	55	84	114
R02 - 2 - 1500	10	31	56	85	116
R02 - 2 - 1800	11	32	57	88	119
R02 - 2 - 2100	11	34	57	90	123
R02 - 2 - 2400	12	36	60	95	133



R02 Rectangular Silencers

R02 - 3 - Attenuator

Available in seven standard lengths R02 3 Rectangular Duct Mounted Silencers have excellent attenuation properties, achieved with sound absorbing infill splitters, retained in the attenuator casing by a perforated liner. The resistance to airflow is a function of the face velocity and length. It is not recommended to select the R02 3 Silencers with a face velocity above 3.5 metres per second without asking advice regarding re-generated self noise. We can advise on the selections and can perform system analysis to ensure the correct unit is specified.



- High performance rectangular duct silencer
- Seven standard lengths
- Many connection options
- Cross section dimensions in 1mm increments
- System pressure within ducted systems to 1500 Pa
- Special lengths on request

Insertion Loss (dB) - Centre Band Frequency

Product Code	Length (mm)	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
R02 - 3 - 600	600	6	9	13	25	31	32	24	20
R02 - 3 - 900	900	7	12	18	33	42	42	37	28
R02 - 3 - 1200	1200	8	15	25	42	50	50	46	34
R02 - 3 - 1500	1500	9	18	30	47	50	50	50	40
R02 - 3 - 1800	1800	10	20	35	49	50	50	50	52
R02 - 3 - 2100	2100	12	23	40	50	50	50	50	49
R02 - 3 - 2400	2400	13	26	40	50	50	50	50	50

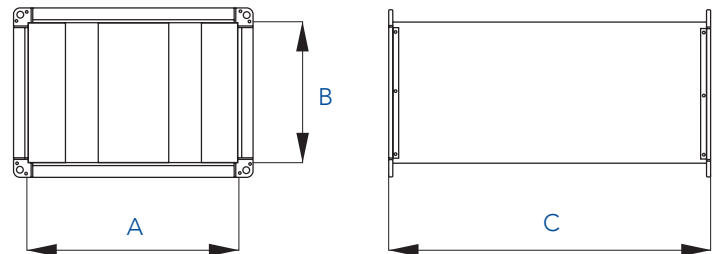
Insertion loss data is derived from continual testing to BS4718 and other standards in independent UKAS certified laboratories, which includes where appropriate, re-generated or self noise testing in both forward and reverse flow conditions. If you request system analysis from our technicians all predictions will be assessed using the relevant certified insertion loss data together with relevant dynamic corrections.

Dimensional Data

Code	A Min	A Max	B Min	B Max	C Min	C Max
R02 - 3	100	1200	100	1200	400	2400

Resistance to Airflow (Pa)

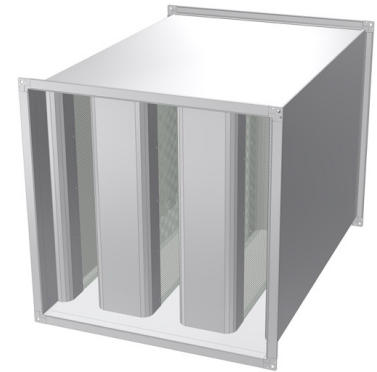
Product Code	1.0m/s	1.5m/s	2.0m/s	2.5m/s	3.0m/s
R02 - 3 - 600	13	24	40	54	78
R02 - 3 - 900	14	26	41	55	81
R02 - 3 - 1200	15	27	42	56	86
R02 - 3 - 1500	15	27	44	56	88
R02 - 3 - 1800	16	28	44	57	90
R02 - 3 - 2100	16	29	45	59	92
R02 - 3 - 2400	16	30	47	62	95



R02 Rectangular Silencers

R02 - 4 - Attenuator

Available in seven standard lengths R02 4 Rectangular Duct Mounted Silencers have excellent attenuation properties, achieved with sound absorbing infill splitters, retained in the attenuator casing by a perforated liner. The resistance to airflow is a function of the face velocity and length. It is not recommended to select the R02 4 Silencers with a face velocity above 3.5 metres per second without asking advice regarding re-generated self noise. We can advise on the selections and can perform system analysis to ensure the correct unit is specified.



- High performance rectangular duct silencer
- Seven standard lengths
- Many connection options
- Cross section dimensions in 1mm increments
- System pressure within ducted systems to 1500 Pa
- Special lengths on request

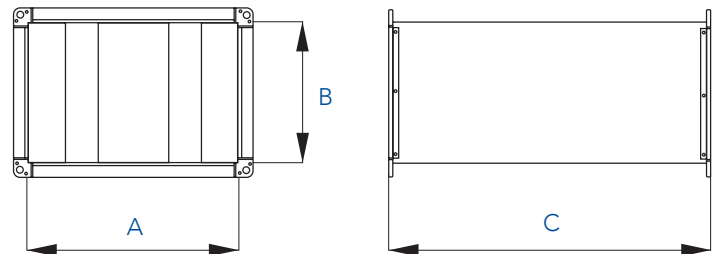
Insertion Loss (dB) - Centre Band Frequency

Product Code	Length (mm)	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
R02 - 4 - 600	600	5	8	12	23	30	30	23	18
R02 - 4 - 900	900	6	10	16	30	37	37	30	24
R02 - 4 - 1200	1200	7	13	22	38	47	47	40	29
R02 - 4 - 1500	1500	8	16	26	42	49	49	45	32
R02 - 4 - 1800	1800	9	18	31	46	50	49	47	34
R02 - 4 - 2100	2100	11	20	36	50	50	50	50	41
R02 - 4 - 2400	2400	12	22	40	50	50	50	50	47

Insertion loss data is derived from continual testing to BS4718 and other standards in independent UKAS certified laboratories, which includes where appropriate, re-generated or self noise testing in both forward and reverse flow conditions. If you request system analysis from our technicians all predictions will be assessed using the relevant certified insertion loss data together with relevant dynamic corrections.

Dimensional Data

Code	A Min	A Max	B Min	B Max	C Min	C Max
R02 - 4	100	1200	100	1200	400	2400



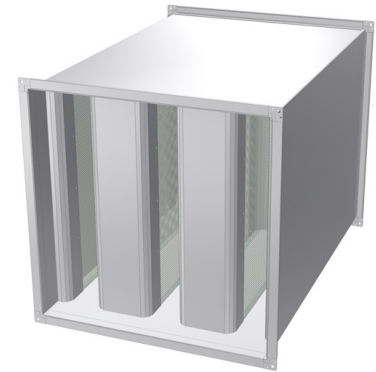
Resistance to Airflow (Pa)

Product Code	1.0m/s	1.5m/s	2.0m/s	2.5m/s	3.0m/s
R02 - 4 - 600	15	23	33	43	60
R02 - 4 - 900	15	23	34	44	61
R02 - 4 - 1200	16	24	35	46	63
R02 - 4 - 1500	16	25	35	48	67
R02 - 4 - 1800	17	25	35	50	68
R02 - 4 - 2100	18	26	36	51	68
R02 - 4 - 2400	18	26	38	52	69

R02 Rectangular Silencers

R02 - 5 - Attenuator

Available in seven standard lengths R02 5 Rectangular Duct Mounted Silencers have excellent attenuation properties, achieved with sound absorbing infill splitters, retained in the attenuator casing by a perforated liner. The resistance to airflow is a function of the face velocity and length. It is not recommended to select the R02 5 Silencers with a face velocity above 3.5 metres per second without asking advice regarding re-generated self noise. We can advise on the selections and can perform system analysis to ensure the correct unit is specified.



- High performance rectangular duct silencer
- Seven standard lengths
- Many connection options
- Cross section dimensions in 1mm increments
- System pressure within ducted systems to 1500 Pa
- Special lengths on request

Insertion Loss (dB) - Centre Band Frequency

Product Code	Length (mm)	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
R02 - 5 - 600	600	4	6	11	19	24	23	18	12
R02 - 5 - 900	900	4	6	12	26	30	31	22	16
R02 - 5 - 1200	1200	5	9	18	32	40	39	28	19
R02 - 5 - 1500	1500	7	11	23	37	45	45	32	22
R02 - 5 - 1800	1800	8	13	25	44	50	50	37	24
R02 - 5 - 2100	2100	9	16	28	50	50	50	45	29
R02 - 5 - 2400	2400	11	19	33	50	50	50	50	32

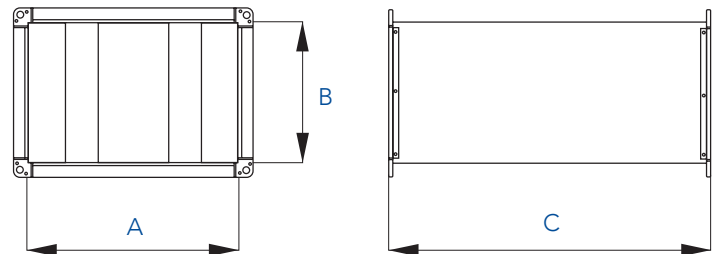
Insertion loss data is derived from continual testing to BS4718 and other standards in independent UKAS certified laboratories, which includes where appropriate, re-generated or self noise testing in both forward and reverse flow conditions. If you request system analysis from our technicians all predictions will be assessed using the relevant certified insertion loss data together with relevant dynamic corrections.

Dimensional Data

Code	A Min	A Max	B Min	B Max	C Min	C Max
R02 - 5	100	1200	100	1200	400	2400

Resistance to Airflow (Pa)

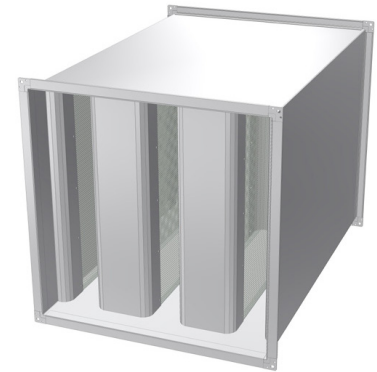
Product Code	1.0m/s	1.5m/s	2.0m/s	2.5m/s	3.0m/s
R02 - 5 - 600	10	16	22	39	60
R02 - 5 - 900	10	16	23	40	62
R02 - 5 - 1200	11	16	24	40	64
R02 - 5 - 1500	11	17	25	40	66
R02 - 5 - 1800	11	18	26	42	67
R02 - 5 - 2100	12	19	26	43	69
R02 - 5 - 2400	13	19	28	48	71



R02 Rectangular Silencers

R02 - 6 - Attenuator

Available in seven standard lengths R02 6 Rectangular Duct Mounted Silencers have excellent attenuation properties, achieved with sound absorbing infill splitters, retained in the attenuator casing by a perforated liner. The resistance to airflow is a function of the face velocity and length. It is not recommended to select the R02 6 Silencers with a face velocity above 6 metres per second without asking advice regarding re-generated self noise. We can advise on the selections and can perform system analysis to ensure the correct unit is specified.



- High performance rectangular duct silencer
- Seven standard lengths
- Many connection options
- Cross section dimensions in 1mm increments
- System pressure within ducted systems to 1500 Pa
- Special lengths on request

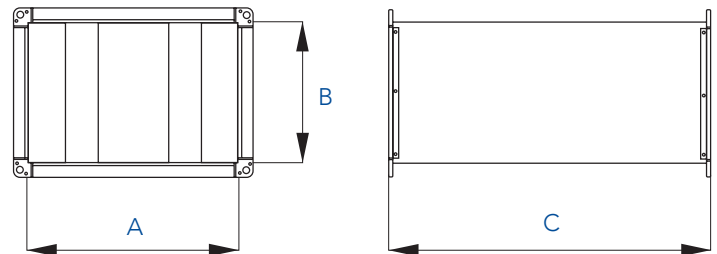
Insertion Loss (dB) - Centre Band Frequency

Product Code	Length (mm)	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
R02 - 6 - 600	600	2	3	6	7	12	14	11	10
R02 - 6 - 900	900	3	6	11	19	24	24	15	11
R02 - 6 - 1200	1200	4	7	15	26	29	32	20	14
R02 - 6 - 1500	1500	5	8	19	33	39	39	25	17
R02 - 6 - 1800	1800	6	10	21	36	45	45	28	19
R02 - 6 - 2100	2100	7	13	25	43	50	50	33	21
R02 - 6 - 2400	2400	7	15	28	49	50	50	38	25

Insertion loss data is derived from continual testing to BS4718 and other standards in independent UKAS certified laboratories, which includes where appropriate, re-generated or self noise testing in both forward and reverse flow conditions. If you request system analysis from our technicians all predictions will be assessed using the relevant certified insertion loss data together with relevant dynamic corrections.

Dimensional Data

Code	A Min	A Max	B Min	B Max	C Min	C Max
R02 - 6	100	1200	100	1200	400	2400



Resistance to Airflow (Pa)

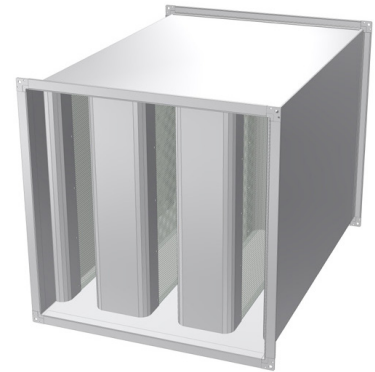
Product Code	1.0m/s	1.5m/s	2.0m/s	2.5m/s	3.0m/s
R02 - 6 - 600	12	16	23	43	63
R02 - 6 - 900	12	16	24	44	64
R02 - 6 - 1200	13	17	25	45	67
R02 - 6 - 1500	13	17	25	46	68
R02 - 6 - 1800	13	18	26	47	72
R02 - 6 - 2100	14	19	27	51	74
R02 - 6 - 2400	15	19	28	54	78

R02 Rectangular Silencers

R02 - 7 - Attenuator

Available in seven standard lengths R02-7 Rectangular Duct Mounted Silencers have excellent attenuation properties, achieved with sound absorbing infill splitters, retained in the attenuator casing by a perforated liner. The resistance to airflow is a function of the face velocity and length. It is not recommended to select the R02-7 Silencers with a face velocity above 7 metres per second without asking advice regarding regenerated self noise. We can advise on the selections and can perform system analysis to ensure the correct unit is specified.

- High performance rectangular duct silencer
- Seven standard lengths
- Many connection options
- Cross section dimensions in 1mm increments
- System pressure within ducted systems to 1500 Pa
- Special lengths on request



Insertion Loss (dB) - Centre Band Frequency

Product Code	Length (mm)	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
R02 - 7 - 600	600	2	5	9	13	18	17	12	6
R02 - 7 - 900	900	2	6	10	15	20	20	14	7
R02 - 7 - 1200	1200	3	6	12	20	26	27	17	8
R02 - 7 - 1500	1500	4	8	14	26	33	34	22	10
R02 - 7 - 1800	1800	6	9	17	33	40	40	25	12
R02 - 7 - 2100	2100	6	11	21	37	48	48	27	14
R02 - 7 - 2400	2400	7	14	23	44	50	50	32	15

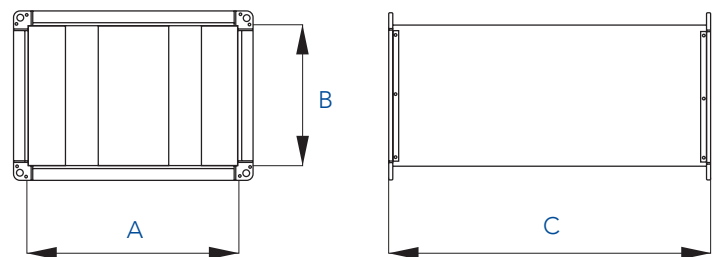
Insertion loss data is derived from continual testing to BS4718 and other standards in independent UKAS certified laboratories, which includes where appropriate, re-generated or self noise testing in both forward and reverse flow conditions. If you request system analysis from our technicians all predictions will be assessed using the relevant certified insertion loss data together with relevant dynamic corrections.

Dimensional Data

Code	A Min	A Max	B Min	B Max	C Min	C Max
R02 - 7	100	1200	100	1200	400	2400

Resistance to Airflow (Pa)

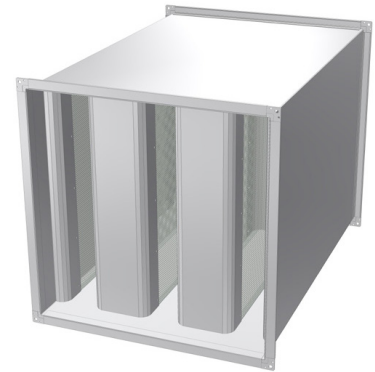
Product Code	1.0m/s	1.5m/s	2.0m/s	2.5m/s	3.0m/s
R02 - 7 - 600	11	19	32	43	58
R02 - 7 - 900	12	20	34	44	60
R02 - 7 - 1200	12	21	35	45	62
R02 - 7 - 1500	12	21	35	46	64
R02 - 7 - 1800	13	22	36	48	68
R02 - 7 - 2100	13	22	36	50	70
R02 - 7 - 2400	15	24	38	52	72



R02 Rectangular Silencers

R02 - 8 - Attenuator

Available in seven standard lengths R02-8 Rectangular Duct Mounted Silencers have excellent attenuation properties, achieved with sound absorbing infill splitters, retained in the attenuator casing by a perforated liner. The resistance to airflow is a function of the face velocity and length. It is not recommended to select the R02-8 Silencers with a face velocity above 7 metres per second without asking advice regarding re-generated self noise. We can advise on the selections and can perform system analysis to ensure the correct unit is specified.



- High performance rectangular duct silencer
- Seven standard lengths
- Many connection options
- Cross section dimensions in 1mm increments
- System pressure within ducted systems to 1500 Pa
- Special lengths on request

Insertion Loss (dB) - Centre Band Frequency

Product Code	Length (mm)	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
R02 - 8 - 600	600	2	2	5	12	12	11	7	4
R02 - 8 - 900	900	2	4	7	15	19	18	10	5
R02 - 8 - 1200	1200	3	5	10	19	24	23	14	6
R02 - 8 - 1500	1500	3	7	12	24	30	30	19	7
R02 - 8 - 1800	1800	4	8	16	27	35	36	20	8
R02 - 8 - 2100	2100	5	9	20	33	42	42	26	10
R02 - 8 - 2400	2400	5	10	23	38	45	45	28	12

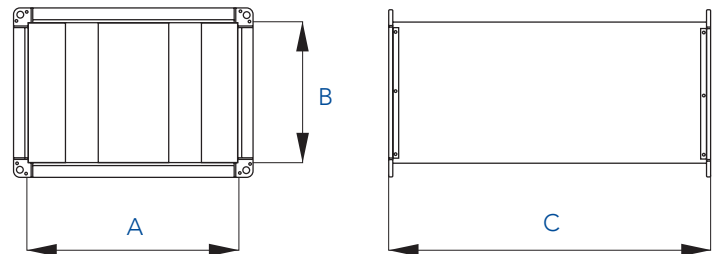
Insertion loss data is derived from continual testing to BS4718 and other standards in independent UKAS certified laboratories, which includes where appropriate, re-generated or self noise testing in both forward and reverse flow conditions. If you request system analysis from our technicians all predictions will be assessed using the relevant certified insertion loss data together with relevant dynamic corrections.

Dimensional Data

Code	A Min	A Max	B Min	B Max	C Min	C Max
R02 - 8	100	1200	100	1200	400	2400

Resistance to Airflow (Pa)

Product Code	1.0m/s	1.5m/s	2.0m/s	2.5m/s	3.0m/s
R02 - 8 - 600	9	15	22	35	45
R02 - 8 - 900	9	15	24	35	46
R02 - 8 - 1200	9	16	25	36	48
R02 - 8 - 1500	9	16	24	36	48
R02 - 8 - 1800	10	17	27	37	49
R02 - 8 - 2100	11	18	26	38	50
R02 - 8 - 2400	12	18	28	40	52



Material & Finish

All components are manufactured from mill finish hot dip galvanised mild steel conforming to EN10327 (BS2989). To prevent erosion of absorbing materials, the R Series Silencers are fitted with perforated splitters manufactured from galvanised mild steel conforming to EN10327 (BS2989) R Series Silencers utilise acoustic grade mineral fibre absorbing infill and are manufactured to the HVCA specification DW144 class B and M&E 100 for sheet steel thickness and stiffening.

Pressure Up to 1500 Pascals positive and negative.

Temperature -12° to +100°C.

Location Internally & externally mountable.

Melinex Lining (Optional)

Where moist conditions exist (e.g. process systems) or for critically clean applications (e.g. hospitals) the sound absorbing material may be required to be fully sealed by Melinex lining to prevent fibre migration. This will however, effect the acoustic performance of the silencer. Please contact us to discuss your requirements.

Alternative Specification

The above specification refers to our standard, stock range. We can also supply custom materials such as 304 and 316 grade stainless steels, cold reduced (CR4) mild steel and aluminium.

Dimensional Data

Units smaller than the minimum and larger than the maximum with the same aero-acoustic performances are available, but may have different manufacturing methods and are therefore coded accordingly.

Connection Options	
MEX Flanges	20, 30 & 40mm
Ductmate Flanges	25 & 35mm
Circular Spigot	"SPIRAL FIT" circular spigots, can be offset.
Rectangular Spigot	Rectangular spigots, can be offset
Raw	Plan end for slip jointing etc.

Installation

For recommendations for the support of the fan the principles of Part Six (pages 43-46) of the HVCA DW144 standard should be followed. Always use the correct size bolts as specified in the dimensional data table above. The arcuate holes are sized to allow the metric thread sizes to be utilised, for example, for an M10 fixing, the slot is made 19mm long by 13mm wide. Please contact us to confirm the suitability of any fan manufacturers product.

Equipment	Location
Centrifugal Fans	Position at least one duct width from inlet or outlet.
Axial Fans	Position at least one duct width from inlet or outlet.
Mixed Flow Fans	Position at least one duct width from inlet or outlet.
Ductwork Bends	Position at least three duct widths from inlet or outlet. One duct width will increase resistance by 90%, two by 20%. Ensure splitters are in parallel plane to bend.
Ductwork Reducers	Direct couple only with reducers of maximum 15° cheek slope.
Finned Coils & Filters	Leave 500mm plenum between silencer and coil or filter, and suitable reducer as specified in HVCA DW/144 1998.

Cleaning & Maintenance

Should the product require routine cleaning we recommend low-pressure air blasting, vacuuming or wiping the exposed surfaces with a damp cloth. It is not unusual for "White Zinc Oxide" to develop on galvanised silencers when the zinc in the galvanising reacts electrolytically with moisture. Silencers are of a passive nature and as such require no routine maintenance or lubrication.