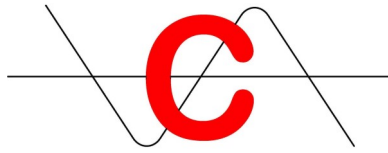


INTRODUCTION

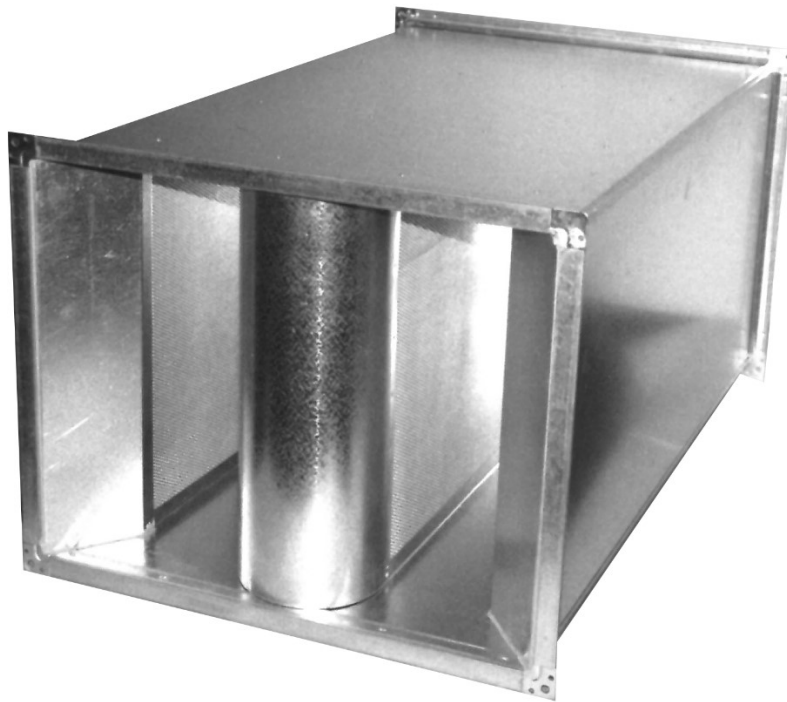


Type **KSD50** Series Rectangular Attenuators are used for ducted systems or medium to large items of plant, to provide a high level of attenuation, whilst allowing passage of air to or from the equipment being treated.

Whilst all **KSD50** Series attenuators are selected to suit particular criteria, in general these are used to provide a better level of attenuation at low to medium frequencies due to the thicker, 250mm, splitter configuration.

The **KSD50** Series attenuators are very efficient at providing Plant Noise Attenuation, as well as being suitable for larger duct cross sectional areas.

All attenuators are designed to suit your individual project, and our Team of Sales Engineers can assist with the design of the attenuation package for the optimum product selection.



DESIGN AND MANUFACTURE

The **KSD50** Series Rectangular Attenuators are designed and fabricated to suit particular projects to take into account the specific sound reduction requirements with regard to both Octave and Broad Band noise, regenerated noise and airflow characteristics, such as the effect on other equipment and pressure drop.

The attenuators are fabricated in line with DW144 and can be varied to suit high pressure or industrial grade systems, as well as bespoke applications.

CONABEARE ACOUSTICS

PERFORMANCE DATA

Type KSD5010 - 300mm Module

Length (mm)	Insertion (dB) at Octave Band Centre Frequencies (Hz)								'K' (Face)
	63	125	250	500	1000	2000	4000	8000	
600	8	12	23	33	43	45	30	22	33.17
900	10	16	28	40	53	51	39	27	36.19
1200	11	20	33	47	55	55	47	33	39.21
1500	13	25	38	54	55	55	55	39	42.23
1800	14	29	43	55	55	55	55	45	45.26
2100	16	33	48	55	55	55	55	51	48.28
2400	18	38	53	55	55	55	55	55	51.30

Type KSD5015 - 325mm Module

Length (mm)	Insertion (dB) at Octave Band Centre Frequencies (Hz)								'K' (Face)
	63	125	250	500	1000	2000	4000	8000	
600	7	11	20	29	38	37	26	20	14.55
900	9	14	25	35	48	47	33	24	15.93
1200	10	18	30	42	55	55	40	28	17.31
1500	12	21	34	48	55	55	48	33	18.68
1800	13	25	39	55	55	55	55	37	20.06
2100	15	28	44	55	55	55	55	41	21.44
2400	16	32	49	55	55	55	55	46	22.82

Type KSD5020 - 350mm Module

Length (mm)	Insertion (dB) at Octave Band Centre Frequencies (Hz)								'K' (Face)
	63	125	250	500	1000	2000	4000	8000	
600	7	10	18	26	33	32	22	17	7.95
900	8	13	22	33	40	39	28	20	8.79
1200	9	16	27	39	48	47	35	24	9.63
1500	11	19	31	46	55	55	41	27	10.47
1800	12	22	36	52	55	55	47	30	11.31
2100	14	25	40	55	55	55	54	34	12.15
2400	15	29	45	55	55	55	55	37	12.99

Type KSD5025 - 375mm Module

Length (mm)	Insertion (dB) at Octave Band Centre Frequencies (Hz)								'K' (Face)
	63	125	250	500	1000	2000	4000	8000	
600	6	9	16	24	29	27	20	16	4.82
900	7	12	20	30	36	33	24	19	5.41
1200	9	14	24	36	42	39	28	21	6.00
1500	10	17	29	43	49	45	32	24	6.59
1800	11	20	33	49	55	50	36	26	7.19
2100	13	22	37	55	55	55	40	29	7.78
2400	14	25	41	55	55	55	45	32	8.37

Type KSD5030 - 400mm Module

Length (mm)	Insertion (dB) at Octave Band Centre Frequencies (Hz)								'K' (Face)
	63	125	250	500	1000	2000	4000	8000	
600	4	6	11	16	21	19	15	14	3.06
900	4	8	15	22	28	24	18	15	3.51
1200	5	10	19	29	35	30	21	16	3.96
1500	6	12	23	36	42	36	24	18	4.41
1800	7	14	27	42	49	41	27	19	4.86
2100	8	16	31	49	55	47	30	20	5.31
2400	9	18	36	55	55	53	33	22	5.76

Type KSD5035 - 425mm Module Insertion (dB) at Octave Band Centre Frequencies (Hz)

Length (mm)	<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	<u>'K' (Face)</u>
600	5	8	13	18	23	19	15	13	2.21
900	6	10	17	25	29	24	18	15	2.55
1200	7	12	20	31	36	29	21	16	2.89
1500	9	14	24	38	42	34	24	18	3.23
1800	10	16	28	45	49	39	27	20	3.57
2100	11	18	31	51	55	44	30	21	3.91
2400	12	20	35	55	55	49	33	23	4.25

Type KSD5040 - 450mm Module Insertion (dB) at Octave Band Centre Frequencies (Hz)

Length (mm)	<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	<u>'K' (Face)</u>
600	5	7	12	16	19	15	13	12	1.61
900	6	9	15	22	26	20	15	13	1.87
1200	7	11	19	28	32	24	17	14	2.12
1500	8	13	22	34	39	29	20	16	2.38
1800	9	15	26	40	46	33	22	17	2.63
2100	10	17	29	46	52	38	24	19	2.89
2400	11	19	33	52	55	43	27	20	3.14

Type KSD5045 - 475mm Module Insertion (dB) at Octave Band Centre Frequencies (Hz)

Length (mm)	<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	<u>'K' (Face)</u>
600	5	6	10	14	16	13	11	11	1.23
900	6	8	13	19	22	16	12	12	1.43
1200	7	10	17	24	28	20	14	13	1.64
1500	8	12	20	29	34	24	16	14	1.85
1800	9	13	24	34	41	28	18	15	2.06
2100	10	15	27	39	47	32	20	16	2.27
2400	11	17	31	45	53	36	22	18	2.47

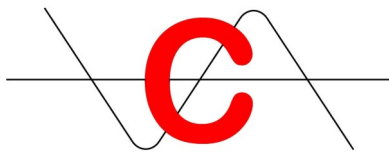
Type KSD5050 - 500mm Module Insertion (dB) at Octave Band Centre Frequencies (Hz)

Length (mm)	<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>	<u>'K' (Face)</u>
600	4	5	8	12	12	10	9	9	0.92
900	5	7	11	16	18	13	10	10	1.09
1200	6	9	14	21	24	16	12	11	1.26
1500	7	10	18	25	29	19	14	12	1.43
1800	8	12	21	29	35	22	15	13	1.60
2100	9	14	25	33	41	25	17	14	1.77
2400	10	16	28	38	47	28	19	15	1.94

MELINEX

When Melinex linings are used the following allowances should be made to the Insertion Loss

<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>
x 1	x 1	x 0.95	x 0.85	x 0.8	x 0.65	x 0.55	x 0.5



TYPICAL SPECIFICATION

Type **KSD50** Series Attenuator.

Manufacturer:	Conabeare Acoustics Limited - 0118 930 3650
Attenuator Type:	KSD50 Series Rectangular Attenuator.
Outer Skin:	Pre-Galvanised Steel Sheet Outer Skin throughout.
Splitters:	45kg/m ³ density mineral wool retained behind glass fibre tissue and expanded or perforated metal having a minimum of 30% free area.
Flanges:	Generally Mez20, Mez30 or Mez40 Flanges although other flange systems/types are available.
Finish:	Mill Finish as Standard.
Description:	Fabricated Steel Attenuator comprising pre-galvanised steel components throughout. Attenuator to be factory assembled using mechanical fixings and supplied in one section for incorporation into the works.

AVAILABLE OPTIONS

- MX - Melinex Lining to Splitters.
- HS - Horizontal Splitters.
- SP - Special Construction such as Double Skinned.
- CRP - Chlorinated Rubber Paint.
- HT - High Temperature.
- XT - Cross Talk Attenuator.
- VB or HB - Bend Attenuator - Contact Our Engineering department for Advice.
- Stainless Steel Fabrication.
- PVC Fabrication.

PRESSURE LOSS

To establish the pressure loss through the attenuator based on air on and off condition being straight length of duct as detailed within BS EN ISO 7535:2003. The following example should be used;

Example

KSD5020 Attenuator at 1.4 metres wide x .9 metres high x 1.5 metres long having a duty of 4m³/s



Step 1 - Module size = 0.35m x number of modules = 4 (1.4/0.35) x height = .9m which = (0.35 x 4 x .9) = 1.26



Step 2 - (Airflow (m³/s) / step 1) squared = (4 m³/s / 1.26)² = 3.17² = 10.08

Step 3 - (step 2 x 'K' Factor) x 0.6 = (10.08 x 10.47) x 0.6 = Pressure drop of 63Pa

CONABEARE ACOUSTICS LIMITED

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