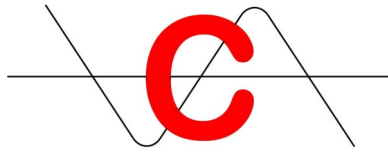


INTRODUCTION

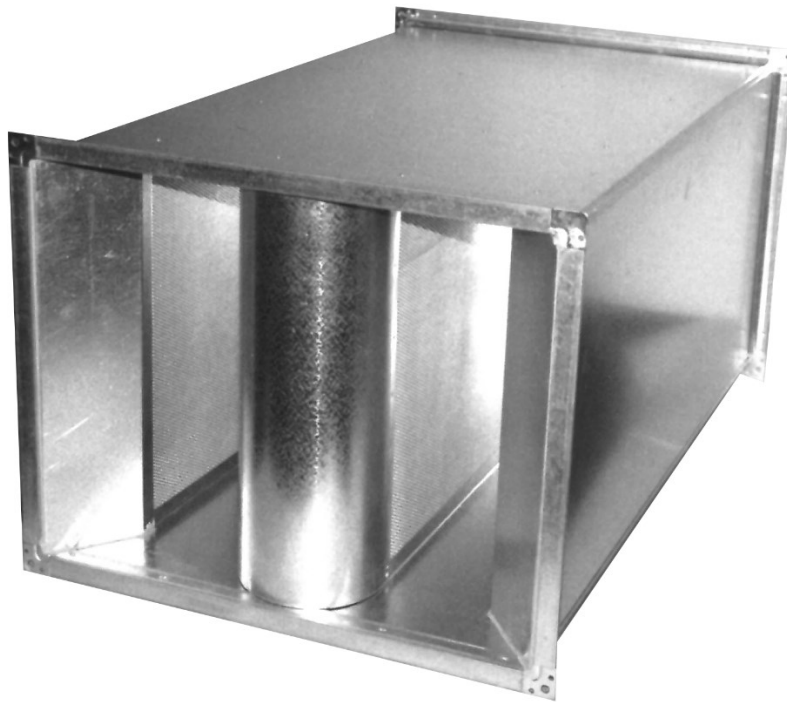


Type **KSD40** Series Rectangular Attenuators are used for ducted systems, or medium to large items of plant, to provide a medium to high level of attenuation, whilst allowing passage of air to or from the equipment being treated.

Whilst all **KSD40** Series attenuators are selected to suit particular criteria, in general these are used to provide a high level of Broadband attenuation due to the 200mm thick splitter configuration.

The **KSD40** Series attenuators are also very efficient at providing Cross Talk protection, as well as being suitable for small to large 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 **KSD40** 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

Data Sheet - KSD40 - 20.03

Rectangular Attenuator - KSD40

PERFORMANCE DATA

Type **KSD4010** - 250mm Module Insertion (dB) at Octave Band Centre Frequencies (Hz)

Length (mm)	63	125	250	500	1000	2000	4000	8000	'K' (Face)
600	6	10	18	30	38	38	26	24	19.25
900	7	13	24	39	48	48	35	30	21.21
1200	8	16	30	49	55	55	44	37	23.17
1500	10	20	36	55	55	55	53	44	25.13
1800	11	23	42	55	55	55	55	50	27.08
2100	12	26	48	55	55	55	55	55	29.04
2400	14	30	54	55	55	55	55	55	31.00

Type **KSD4015** - 275mm Module Insertion (dB) at Octave Band Centre Frequencies (Hz)

Length (mm)	63	125	250	500	1000	2000	4000	8000	'K' (Face)
600	5	9	16	24	33	30	22	21	8.34
900	6	11	21	32	44	44	28	25	9.08
1200	7	14	27	40	55	55	35	29	9.81
1500	8	16	32	48	55	55	42	34	10.55
1800	9	19	38	55	55	55	49	38	11.29
2100	10	21	43	55	55	55	55	42	12.03
2400	12	24	49	55	55	55	55	47	12.77

Type **KSD4020** - 300mm Module Insertion (dB) at Octave Band Centre Frequencies (Hz)

Length (mm)	63	125	250	500	1000	2000	4000	8000	'K' (Face)
600	5	8	14	22	28	26	18	17	4.59
900	6	10	19	29	36	34	23	20	4.98
1200	7	12	24	37	45	43	29	23	5.37
1500	8	15	29	45	53	51	34	26	5.76
1800	9	17	34	52	55	55	40	29	6.15
2100	10	19	39	55	55	55	46	32	6.54
2400	11	22	44	55	55	55	51	35	6.93

Type **KSD4025** - 325mm Module Insertion (dB) at Octave Band Centre Frequencies (Hz)

Length (mm)	63	125	250	500	1000	2000	4000	8000	'K' (Face)
600	4	7	13	20	25	23	17	16	2.91
900	5	9	17	26	33	30	21	18	3.13
1200	6	11	22	33	42	38	25	20	3.36
1500	7	13	26	40	50	46	29	22	3.58
1800	8	15	31	47	55	53	33	24	3.81
2100	9	17	35	53	55	55	37	26	4.03
2400	10	20	40	55	55	55	42	29	4.26

Type **KSD4030** - 350mm Module Insertion (dB) at Octave Band Centre Frequencies (Hz)

Length (mm)	63	125	250	500	1000	2000	4000	8000	'K' (Face)
600	4	6	11	16	21	19	15	14	1.96
900	4	8	15	22	28	24	18	15	2.11
1200	5	10	19	29	35	30	21	16	2.25
1500	6	12	23	35	42	35	24	18	2.40
1800	7	14	27	42	49	41	27	19	2.54
2100	8	16	31	49	55	47	30	20	2.69
2400	9	18	36	55	55	52	33	22	2.83

Type KSD4035 - 375mm 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	3	5	10	15	19	16	13	12	1.47
900	3	6	13	22	26	21	15	13	1.58
1200	4	8	17	29	33	26	17	14	1.70
1500	5	10	21	36	40	31	20	16	1.81
1800	6	12	25	43	48	36	22	17	1.93
2100	7	14	29	50	55	41	24	18	2.04
2400	8	16	33	55	55	46	27	20	2.16

Type KSD4040 - 400mm 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	3	4	8	13	15	12	10	10	1.08
900	3	5	11	18	22	16	11	11	1.17
1200	4	7	15	24	29	20	13	12	1.27
1500	5	9	19	30	36	24	15	13	1.36
1800	6	10	22	35	43	28	17	14	1.45
2100	7	12	26	41	50	32	19	15	1.55
2400	8	14	30	47	55	37	21	17	1.64

Type KSD4045 - 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	3	3	6	11	11	8	7	8	0.78
900	3	4	9	15	17	11	8	9	0.86
1200	4	6	13	19	24	14	9	10	0.94
1500	5	7	16	24	31	18	11	11	1.02
1800	6	9	20	28	38	21	12	12	1.09
2100	7	10	23	32	45	24	13	13	1.17
2400	8	12	27	37	52	28	15	14	1.25

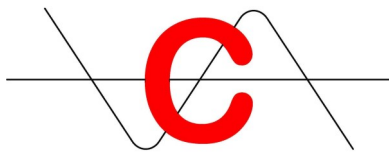
Type KSD4050 - 450mm Module Insertion (dB) at Octave Band Centre Frequencies (Hz)

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	3	2	4	9	7	4	4	6	0.55
900	3	3	7	12	12	6	5	6	0.62
1200	4	4	10	15	18	9	6	7	0.68
1500	5	6	14	18	23	11	8	8	0.75
1800	6	7	17	21	29	14	9	9	0.81
2100	7	8	20	24	34	16	10	10	0.87
2400	8	10	24	27	40	19	12	11	0.94

MELINEX

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

<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 **KSD40** Series Attenuator.

Manufacturer:	Conabeare Acoustics Limited - 0118 930 3650
Attenuator Type:	KSD40 Series Rectangular Attenuator.
Outer Skin:	Pre-Galvanised Steel Sheet Outer Skin throughout.
Splitters:	45kg/m ³ density mineral wool retained behind a 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 system/ 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

KSD4020 Attenuator at 1.2 metres wide x 0.9 metres high x 1.5 metres long having a duty of 4.0m³/s

Step 1 - Module size = 0.3m x number of modules = 4 (1.2/0.300) x height = 0.9m which = (0.3 x 4 x 0.9) = 1.08

Step 2 - (Airflow (m³/s) / step 1) squared = (4.0 m³/s / 1.08)² = 3.70² = 13.69

Step 3 - (step 2 x 'K' Factor) x 0.6 = (13.69 x 5.76) x 0.6 = Pressure drop of 47Pa

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