

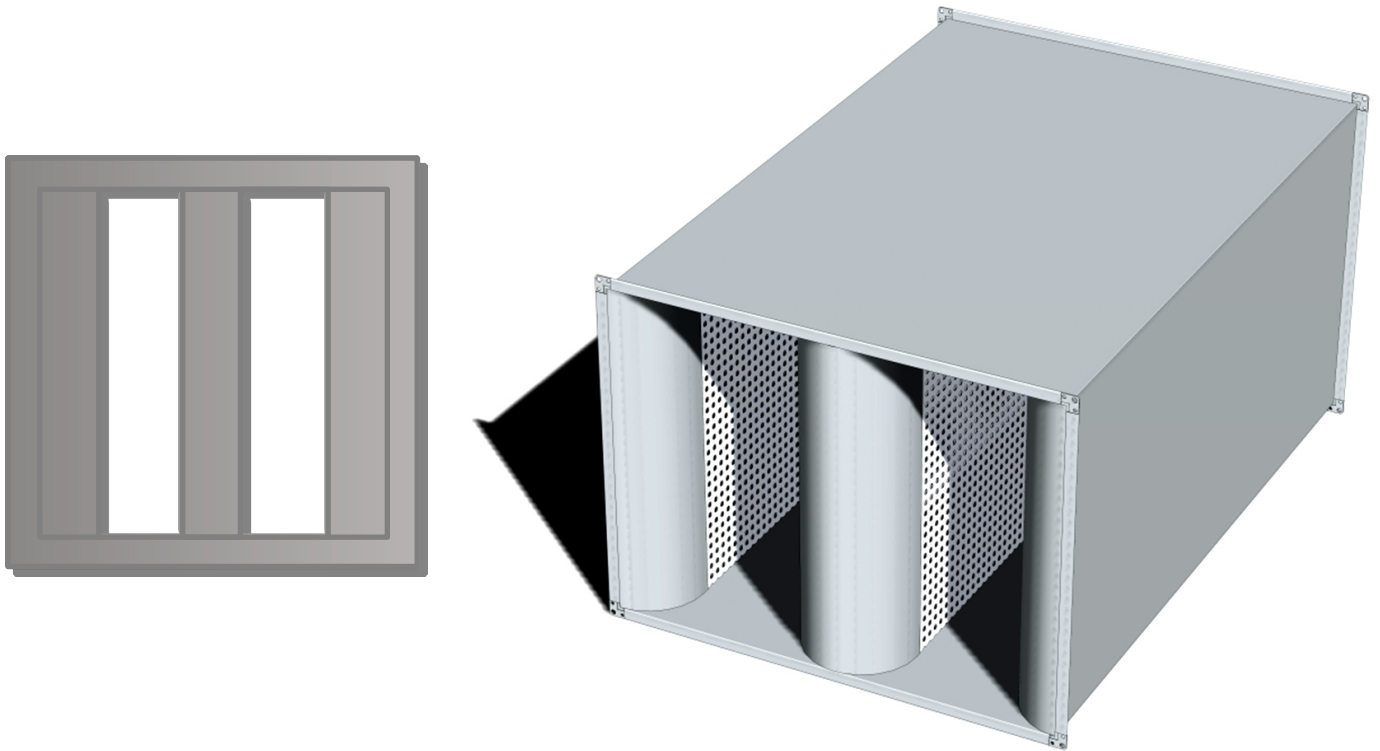
INTRODUCTION

Type **KSD40** Series Rectangular Attenuators are used for ducted systems or smaller 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 better level of attenuation at medium to higher frequencies 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 and 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.



PERFORMANCE DATA

Insertion (dB) at Octave Band Centre Frequencies (Hz)

TYPE	MOD SIZE (mm)	LENGTH (mm)	63	125	250	500	1000	2000	4000	8000	'K' (FACE)
KSD4010	250	600	6	10	18	30	38	38	26	24	19.25
	250	900	7	13	24	39	48	48	35	30	21.21
	250	1200	8	16	30	49	55	55	44	37	23.17
	250	1500	10	20	36	55	55	55	53	44	25.13
	250	1800	11	23	42	55	55	55	55	50	27.08
	250	2100	12	26	48	55	55	55	55	55	29.04
	250	2400	14	30	54	55	55	55	55	55	31

TYPE	MOD SIZE (mm)	LENGTH (mm)	63	125	250	500	1000	2000	4000	8000	'K' (FACE)
KSD4015	275	600	5	9	16	24	33	30	22	21	8.34
	275	900	6	11	21	32	44	44	28	25	9.08
	275	1200	7	14	27	40	55	55	35	29	9.81
	275	1500	8	16	32	48	55	55	42	34	10.55
	275	1800	9	19	38	55	55	55	49	38	11.29
	275	2100	10	21	43	55	55	55	55	42	12.03
	275	2400	12	24	49	55	55	55	55	47	12.77

TYPE	MOD SIZE (mm)	LENGTH (mm)	63	125	250	500	1000	2000	4000	8000	'K' (FACE)
KSD4020	300	600	5	8	14	22	28	26	18	17	4.59
	300	900	6	10	19	29	36	34	23	20	4.98
	300	1200	7	12	24	37	45	43	29	23	5.37
	300	1500	8	15	29	45	53	51	34	26	5.76
	300	1800	9	17	34	52	55	55	40	29	6.15
	300	2100	10	19	39	55	55	55	46	32	6.54
	300	2400	11	22	44	55	55	55	51	35	6.93

TYPE	MOD SIZE (mm)	LENGTH (mm)	63	125	250	500	1000	2000	4000	8000	'K' (FACE)
KSD4025	325	600	4	7	13	20	25	23	17	16	2.91
	325	900	5	9	17	26	33	30	21	18	3.13
	325	1200	6	11	22	33	42	38	25	20	3.36
	325	1500	7	13	26	40	50	46	29	22	3.58
	325	1800	8	15	31	47	55	53	33	24	3.81
	325	2100	9	17	35	53	55	55	37	26	4.03
	325	2400	10	20	40	55	55	55	42	29	4.26

TYPE	MOD SIZE (mm)	LENGTH (mm)	63	125	250	500	1000	2000	4000	8000	'K' (FACE)
KSD4030	350	600	4	6	11	16	21	19	15	14	1.96
	350	900	4	8	15	22	28	24	18	15	2.11
	350	1200	5	10	19	29	35	30	21	16	2.25
	350	1500	6	12	23	35	42	35	24	18	2.4
	350	1800	7	14	27	42	49	41	27	19	2.54
	350	2100	8	16	31	49	55	47	30	20	2.69
	350	2400	9	18	36	55	55	52	33	22	2.83



Insertion (dB) at Octave Band Centre Frequencies (Hz)

TYPE	MOD SIZE (mm)	LENGTH (mm)	63	125	250	500	1000	2000	4000	8000	'K' (FACE)
KSD4035	375	600	3	5	10	15	19	16	13	12	1.47
	375	900	3	6	13	22	26	21	15	13	1.58
	375	1200	4	8	17	29	33	26	17	14	1.7
	375	1500	5	10	21	36	40	31	20	16	1.81
	375	1800	6	12	25	43	48	36	22	17	1.93
	375	2100	7	14	29	50	55	41	24	18	2.04
	375	2400	8	16	33	55	55	46	27	20	2.16

TYPE	MOD SIZE (mm)	LENGTH (mm)	63	125	250	500	1000	2000	4000	8000	'K' (FACE)
KSD4040	400	600	3	4	8	13	15	12	10	10	1.08
	400	900	3	5	11	18	22	16	11	11	1.17
	400	1200	4	7	15	24	29	20	13	12	1.27
	400	1500	5	9	19	30	36	24	15	13	1.36
	400	1800	6	10	22	35	43	28	17	14	1.45
	400	2100	7	12	26	41	50	32	19	15	1.55
	400	2400	8	14	30	47	55	37	21	17	1.64

TYPE	MOD SIZE (mm)	LENGTH (mm)	63	125	250	500	1000	2000	4000	8000	'K' (FACE)
KSD4045	425	600	3	3	6	11	11	8	7	8	0.78
	425	900	3	4	9	15	17	11	8	9	0.86
	425	1200	4	6	13	19	24	14	9	10	0.94
	425	1500	5	7	16	24	31	18	11	11	1.02
	425	1800	6	9	20	28	38	21	12	12	1.09
	425	2100	7	10	23	32	45	24	13	13	1.17
	425	2400	8	12	27	37	52	28	15	14	1.25

TYPE	MOD SIZE (mm)	LENGTH (mm)	63	125	250	500	1000	2000	4000	8000	'K' (FACE)
KSD4050	450	600	3	2	4	9	7	4	4	6	0.55
	450	900	3	3	7	12	12	6	5	6	0.62
	450	1200	4	4	10	15	18	9	6	7	0.68
	450	1500	5	6	14	18	23	11	8	8	0.75
	450	1800	6	7	17	21	29	14	9	9	0.81
	450	2100	7	8	20	24	34	16	10	10	0.87
	450	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.

Insertion (dB) at Octave Band Centre Frequencies (Hz)

63	125	250	500	1000	2000	4000	8000
x 1.00	x 1.00	x 0.95	x 0.85	x 0.80	x 0.65	x 0.55	x 0.50

AVAILABLE SIZES

The **KSD40** Series can be selected to have a cross sectional size from 250mm wide x 250mm high up to cross sectional sizes of 2000mm x 2000mm in one section. Larger sections are available by fixing two or more modules together.



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 glass fibre tissue and expanded or perforated metal skin having a minimum 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

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) × (Number of Modules = 4) × (Height = 0.9m) → 0.3 × 4 × 0.9 = 1.08

Step 2 – $\left(\frac{\text{Airflow}(m^3/s)}{\text{Step 1}}\right)^2 \rightarrow \left(\frac{4.0m^3/s}{1.08}\right)^2 = 13.71$

Step 3 – (Step 2 × K' Factor) × 0.6 → (13.71 × 5.76) × 0.6 = Pressure Drop of 47Pa

Rectangular Attenuators - KSD40 Series

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