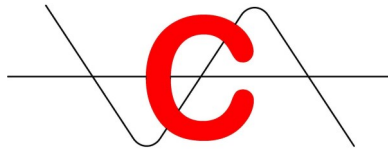


## INTRODUCTION



Type **KSD 60** 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 **KSD 60** 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 300mm thick splitter configuration.

The **KSD 60** Series attenuators are also very efficient at providing Plant Noise Attenuation, as well as being suitable for medium 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 **KSD60** 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.

Rectangular Attenuator - KSD60

# CONABEARE ACOUSTICS

# PERFORMANCE DATA

## Type KSD6010 - 350mm 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	11	14	28	37	48	52	35	20	52.55
900	12	19	32	41	55	55	43	25	56.94
1200	14	24	36	46	55	55	51	30	61.33
1500	16	30	40	51	55	55	55	35	65.72
1800	18	35	44	55	55	55	55	40	70.11
2100	20	40	48	55	55	55	55	45	74.50
2400	22	46	52	55	55	55	55	50	78.89

## Type KSD6015 - 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	10	13	25	34	43	45	31	19	23.25
900	11	17	29	39	52	50	38	23	25.54
1200	13	22	33	44	55	55	46	27	27.83
1500	15	27	37	49	55	55	53	32	30.13
1800	17	31	41	54	55	55	55	36	32.42
2100	19	36	45	55	55	55	55	40	34.71
2400	21	41	49	55	55	55	55	45	37.00

## Type KSD6020 - 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	9	12	22	31	38	38	27	18	12.60
900	10	16	26	36	45	45	34	21	14.10
1200	12	20	30	41	52	52	41	25	15.60
1500	14	24	34	47	55	55	48	29	17.10
1800	16	28	38	52	55	55	55	32	18.60
2100	18	32	42	55	55	55	55	36	20.10
2400	20	36	46	55	55	55	55	40	21.60

## Type KSD6025 - 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	9	12	20	28	34	32	23	17	7.40
900	10	15	23	34	38	36	27	20	8.54
1200	12	18	27	40	43	40	31	23	9.67
1500	14	21	31	46	48	44	35	26	10.81
1800	15	24	35	52	52	48	39	29	11.95
2100	17	27	39	55	55	52	43	32	13.08
2400	19	31	43	55	55	55	48	35	14.22

## Type **KSD6030** - 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	4	6	11	16	21	19	15	14	4.50
900	4	8	15	22	28	24	18	15	5.40
1200	5	10	19	29	35	30	21	16	6.30
1500	6	12	23	35	42	35	24	18	7.20
1800	7	14	27	42	49	41	27	19	8.10
2100	8	16	31	49	55	47	30	20	9.00
2400	9	18	36	55	55	52	33	22	9.90

## Type **KSD6035** - 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	8	11	17	22	27	22	18	15	3.17
900	9	13	20	28	32	27	21	17	3.83
1200	11	15	24	34	38	32	25	19	4.49
1500	12	18	27	40	44	37	28	21	5.16
1800	14	20	31	47	49	42	32	23	5.82
2100	15	22	34	53	55	47	35	25	6.48
2400	17	25	38	55	55	52	39	27	7.15

## Type **KSD6040** - 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	7	10	16	19	24	19	16	14	2.30
900	8	12	19	25	30	24	18	15	2.78
1200	9	14	22	31	36	29	21	17	3.27
1500	11	17	26	37	42	34	24	19	3.75
1800	12	19	29	44	49	39	27	20	4.23
2100	13	21	32	50	55	44	30	22	4.72
2400	15	24	36	55	55	49	33	24	5.20

## **MELINEX**

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

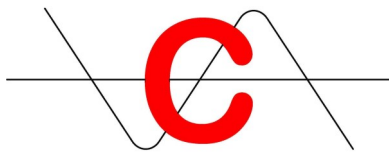
<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>4000</u>	<u>8000</u>
x 1	x 1	x 0.95	x 0.85	x 0.8	x 0.65	x 0.55	x 0.5

## **AVAILABLE SIZES**

Type **KSD60** Series attenuators can be supplied in a multitude of sizes with the width dependant on the module size and height selected to suit pressure drop requirements.

The **KSD60** Series can be selected to have a cross sectional size from 350mm wide x 200mm high up to cross sectional sizes of 4000mm x 4000mm in one section. Larger sections are available by fixing two or more modules together.

The attenuator length increases in 300mm increments from 600mm long to 2400mm long although other sizes are available.



## TYPICAL SPECIFICATION

Type **KSD60** Series Attenuator.

Manufacturer:	Conabeare Acoustics Limited - <a href="tel:01189303650">0118 930 3650</a>
Louvre Type:	<b>KSD60</b> Series Rectangular Attenuator.
Outer Skin:	Pre-Galvanised Steel Sheet Outer Skin throughout.
Splitters:	45kg/m <sup>3</sup> 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.

## 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

KSD6020 Attenuator at 1.2 metres wide x .9 metres high x 1.5 metres long having a duty of 3m<sup>3</sup>/s

Step 1 - Module size = 0.4m x number of modules = 3 (1.2/0.4) x height = .9m which = (0.4 x 3 x .9) = 1.08

Step 2 - (Airflow (m<sup>3</sup>/s) / step 1) squared = (3 m<sup>3</sup>/s / 1.08)<sup>2</sup> = 2.77<sup>2</sup> = 7.56

Step 3 - (step 2 x 'K' Factor) x 0.6 = (7.56 x 15.6) x 0.6 = Pressure drop of 72Pa

# CONABEARE ACOUSTICS LIMITED

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