



ISO 9001:2015 Certified Company



Sound Attenuators

KAD-SA

Sound Attenuators with AMCA Seal

KAD AIR CONDITIONING

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Sound Attenuators

KAD-SA

KAD Airconditioning is pioneer in manufacturing Sound Attenuator.

Rectangular and Circular Sound Attenuator and designed to reduce the Noise in commercial, industrial and residential buildings.

Features:

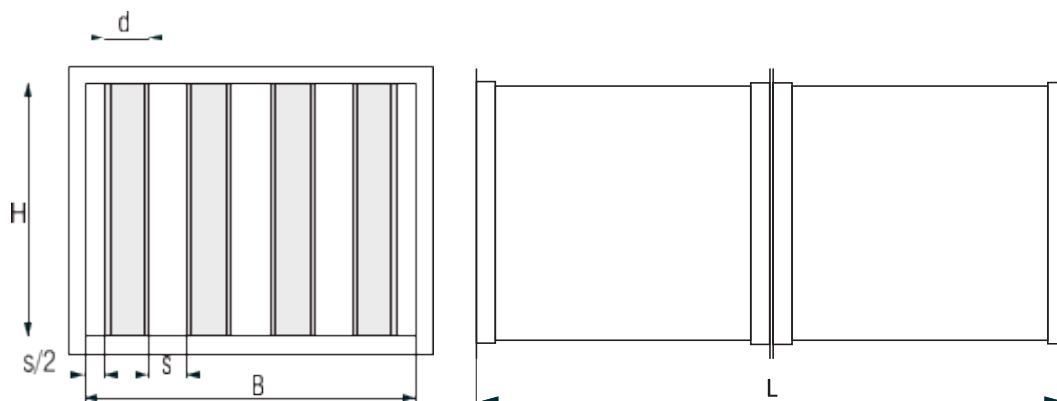
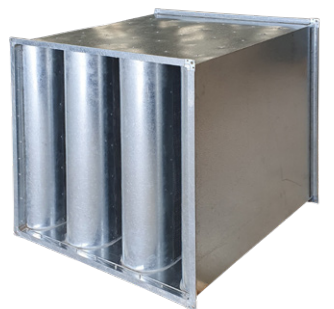
- Highly effective at low, medium and high frequency.
- KAD Sound Attenuator are Test and Certified as per ASTM E-477 for prefabricated Sound Attenuator and will bear the AMCA seal.
- KAD Sound Attenuator are tested and certified as per EN 13631:2012 , for fire rating of 2 Hrs @ 400 C.

Frame: Frame is manufactured from High quality galvanized steel as per ASTM A 653, Lock forming quality, Z-275 GSM with thickness ranging from 0.90 mm to 1.60 mm as per project and customer requirement. Frame is joined with Flanges either by Spot weld, Rivet or Fully welded construction. Flange thickness and size will vary as per the size of Attenuator following DW144 and SMACNA standard.


Splitter: Splitter is manufactured from 0.90 MM galvanized steel sheet as per ASTM A 653, Lock Forming quality, Z-275 GSM. Splitter contain the high quality, incombustible acoustic insulation having flame spread index less than 25 and Smoke spread index less than 50. Insulation is covered with black glass tissue to prevent particle migration. Both size of splitter is protected with 0.70 mm perforated galvanized steel sheet to prevent the damage to insulation and to ensure the long life of attenuator.

RECTANGULAR ATTENUATOR - KAD-SA (KSA-200/100)

- For sound attenuation in ventilation ducts and ventilated areas
- Aerodynamically shaped sound attenuation splitter reduces drag by 30% (energy savings)
- Sound attenuation splitters are made of flame retardant material, absorption material
- Splitters are constructed in three standard thicknesses: $d = 100$ mm, $d = 200$ mm and $d = 300$ mm
- Rectangular sound attenuators are available in five standard cross-section dimensions: $d/s = 100/50$; $100/100$; $200/100$; $200/200$ and $300/100$
- Attenuator casing is made of galvanized steel, fitted with flanges.




Dynamic Insertion Loss Rating – Forward Flow (+) / Reverse Flow (-):

| Model Dimensions (W x H x L) | Face Velocity | | Static Pressure | | Octave Band Center Frequency (Hz) | | | | | | | |
|---|---------------|-------|-----------------|------|-----------------------------------|-----|-----|-----|------|------|------|------|
| | (fpm) | (m/s) | (in. wg) | (Pa) | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| (W24in. x H24in. x L36in.) (W600mm x H600mm x L900mm)  * Kad Air Conditioning (AMCA Certified) | -1500 | -7.62 | 0.59 | 147 | 3 | 9 | 16 | 19 | 19 | 19 | 16 | 13 |
| | -1000 | -5.08 | 0.26 | 65 | 3 | 9 | 15 | 19 | 19 | 19 | 16 | 13 |
| | -500 | -2.54 | 0.07 | 17 | 2 | 9 | 15 | 18 | 19 | 18 | 16 | 14 |
| | 0 | 0 | - | - | 3 | 8 | 14 | 18 | 19 | 19 | 16 | 14 |
| | 500 | 2.54 | 0.07 | 17 | 2 | 8 | 14 | 17 | 18 | 18 | 16 | 14 |
| | 1000 | 5.08 | 0.26 | 65 | 1 | 7 | 14 | 17 | 18 | 18 | 16 | 14 |
| | 1500 | 7.62 | 0.59 | 147 | 1 | 6 | 13 | 16 | 18 | 18 | 16 | 14 |
| | 2500 | 12.7 | 1.04 | 259 | 0 | 5 | 12 | 15 | 16 | 17 | 16 | 14 |
| KSA200/100 (W24in. x H24in. x L48in.) (W600mm x H600mm x L1200mm) | -1500 | -7.62 | 0.61 | 152 | 4 | 13 | 22 | 34 | 36 | 27 | 20 | 14 |
| | -1000 | -5.08 | 0.285 | 71 | 3 | 12 | 22 | 35 | 39 | 31 | 20 | 13 |
| | -500 | -2.54 | 0.076 | 19 | 3 | 12 | 21 | 35 | 41 | 31 | 20 | 13 |
| | 0 | 0 | - | - | 2 | 10 | 19 | 34 | 40 | 31 | 21 | 15 |
| | 500 | 2.54 | 0.076 | 19 | 1 | 10 | 19 | 32 | 40 | 31 | 22 | 16 |
| | 1000 | 5.08 | 0.285 | 71 | 1 | 9 | 18 | 31 | 39 | 31 | 22 | 17 |
| | 1500 | 7.62 | 0.61 | 152 | 0 | 8 | 17 | 30 | 36 | 31 | 22 | 17 |
| | 2000 | 10.16 | 1.06 | 263 | 1 | 8 | 17 | 27 | 32 | 28 | 22 | 18 |
| KSA200/100 (W24in. x H24in. x L60in.) (W600mm x H600mm x L1500mm) | -1500 | -7.62 | 0.622 | 155 | 8 | 18 | 28 | 36 | 37 | 30 | 24 | 16 |
| | -1000 | -5.08 | 0.3 | 76 | 7 | 17 | 27 | 40 | 41 | 36 | 24 | 16 |
| | -500 | -2.54 | 0.084 | 21 | 7 | 15 | 26 | 41 | 47 | 37 | 24 | 16 |
| | 0 | 0 | - | - | 4 | 13 | 25 | 39 | 47 | 38 | 25 | 18 |
| | 500 | 2.54 | 0.084 | 21 | 3 | 12 | 24 | 38 | 46 | 38 | 25 | 19 |
| | 1000 | 5.08 | 0.56 | 76 | 3 | 12 | 23 | 36 | 43 | 37 | 25 | 20 |
| | 1500 | 7.62 | 0.623 | 155 | 2 | 11 | 22 | 33 | 38 | 35 | 25 | 20 |
| | 2000 | 10.16 | 1.105 | 275 | 1 | 11 | 20 | 28 | 34 | 30 | 25 | 20 |
| KSA200/100 (W24in. x H24in. x L72in.) (W600mm x H600mm x L1800mm) | -1500 | -7.62 | 0.67 | 166 | 6 | 19 | 31 | 34 | 36 | 30 | 26 | 17 |
| | -1000 | -5.08 | 0.31 | 83 | 5 | 18 | 34 | 38 | 40 | 38 | 27 | 17 |
| | -500 | -2.54 | 0.0924 | 23 | 5 | 17 | 34 | 42 | 51 | 44 | 26 | 17 |
| | 0 | 0 | - | - | 3 | 15 | 33 | 42 | 51 | 44 | 28 | 20 |
| | 500 | 2.54 | 0.149 | 23 | 4 | 14 | 32 | 41 | 51 | 44 | 29 | 21 |
| | 1000 | 5.08 | 0.596 | 78 | 3 | 13 | 30 | 39 | 45 | 43 | 29 | 22 |
| | 1500 | 7.62 | 1.341 | 166 | 2 | 13 | 27 | 34 | 39 | 37 | 29 | 22 |
| | 2000 | 10.16 | 1.19 | 296 | 1 | 12 | 22 | 29 | 34 | 31 | 29 | 23 |
| KSA200/100 (W24in. x H24in. x L84in.) (W600mm x H600mm x L2100mm) | -1500 | -7.62 | 0.69 | 172 | 8 | 24 | 33 | 37 | 37 | 31 | 28 | 19 |
| | -1000 | -5.08 | 0.34 | 85 | 8 | 22 | 35 | 41 | 42 | 40 | 30 | 19 |
| | -500 | -2.54 | 0.1 | 25 | 7 | 21 | 34 | 50 | 52 | 48 | 30 | 19 |
| | 0 | 0 | - | - | 5 | 18 | 33 | 52 | 51 | 47 | 31 | 22 |
| | 500 | 2.54 | 0.156 | 25 | 3 | 17 | 32 | 50 | 51 | 47 | 32 | 23 |
| | 1000 | 5.08 | 0.625 | 85 | 3 | 14 | 31 | 42 | 45 | 45 | 32 | 24 |
| | 1500 | 7.62 | 1.406 | 172 | 2 | 15 | 27 | 35 | 39 | 37 | 32 | 25 |
| | 2000 | 10.16 | 1.21 | 301 | 2 | 14 | 21 | 28 | 34 | 31 | 31 | 25 |
| KSA200/100 (W24in. x H24in. x L96in.) (W600mm x H600mm x L2400mm) | -1500 | -7.62 | 0.735 | 183 | 9 | 24 | 32 | 36 | 37 | 30 | 30 | 21 |
| | -1000 | -5.08 | 0.506 | 126 | 8 | 23 | 36 | 40 | 41 | 38 | 34 | 21 |
| | -500 | -2.54 | 0.108 | 27 | 8 | 22 | 37 | 51 | 53 | 52 | 34 | 21 |
| | 0 | 0 | - | - | 5 | 20 | 37 | 53 | 52 | 51 | 35 | 25 |
| | 500 | 2.54 | 0.163 | 27 | 4 | 19 | 35 | 52 | 52 | 51 | 35 | 25 |
| | 1000 | 5.08 | 0.654 | 126 | 4 | 18 | 34 | 42 | 46 | 47 | 36 | 27 |
| | 1500 | 7.62 | 1.471 | 183 | 3 | 17 | 27 | 34 | 39 | 37 | 35 | 28 |
| | 2000 | 10.16 | 1.31 | 325 | 2 | 15 | 21 | 28 | 34 | 30 | 32 | 28 |

Note: The Insertion (IL) is in dB

* KAD AIRCONDITIONING certifies that the silencer shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 1011 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to dynamic insertion loss, airflow generated noise, and pressure drop.

Generated Sound Power Level - Forward Flow (+) / Reverse Flow (-)

| Model Dimensions (W x H x L) | Face Velocity | | Static Pressure | | Octave Band Center Frequency (Hz) | | | | | | | |
|--|---------------|-------|-----------------|------|-----------------------------------|-----|-----|-----|------|------|------|------|
| | (fpm) | (m/s) | (in. wg) | (Pa) | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| KSA200/100 (W24in. x H24in. x L36in.) (W600mm x H600mm x L900mm)  * Kad Air Conditioning (AMCA Certified) | -2000 | -12.7 | 1.04 | 259 | 72 | 63 | 59 | 59 | 59 | 66 | 64 | 53 |
| | -1500 | -7.62 | 0.59 | 147 | 68 | 60 | 55 | 55 | 57 | 62 | 58 | 47 |
| | -1000 | -5.08 | 0.16 | 40 | 61 | 52 | 48 | 50 | 53 | 52 | 44 | 33 |
| | -500 | -2.54 | 0.07 | 17 | 56 | 46 | 38 | 32 | 28 | 21 | 26 | 23 |
| | 500 | 2.54 | 0.07 | 17 | 58 | 48 | 41 | 37 | 32 | 27 | 26 | 23 |
| | 1000 | 5.08 | 0.016 | 40 | 59 | 53 | 51 | 51 | 51 | 48 | 42 | 31 |
| | 1500 | 7.62 | 0.41 | 102 | 64 | 60 | 57 | 58 | 58 | 57 | 54 | 46 |
| | 2500 | 12.7 | 1.04 | 259 | 79 | 74 | 67 | 69 | 68 | 68 | 68 | 63 |
| KSA200/100 (W24in. x H24in. x L48in.) (W600mm x H600mm x L1200mm) | -1500 | -7.62 | 1.04 | 259 | 65 | 57 | 55 | 59 | 65 | 69 | 64 | 52 |
| | -1000 | -5.08 | 0.538 | 134 | 59 | 50 | 49 | 54 | 57 | 55 | 45 | 35 |
| | -500 | -2.54 | 0.132 | 33 | 55 | 44 | 37 | 40 | 36 | 24 | 22 | 22 |
| | 500 | 2.54 | 132 | 33 | 55 | 43 | 38 | 39 | 35 | 24 | 20 | 22 |
| | 1000 | 5.08 | 0.538 | 134 | 59 | 52 | 49 | 52 | 54 | 50 | 43 | 31 |
| | 1500 | 7.62 | 0.61 | 152 | 67 | 63 | 58 | 59 | 61 | 60 | 56 | 48 |
| | 2000 | 10.16 | 1.01 | 259 | 78 | 70 | 66 | 65 | 66 | 67 | 65 | 58 |
| KSA200/100 (W24in. x H24in. x L60in.) (W600mm x H600mm x L1500mm) | -1500 | -7.62 | 0.622 | 155 | 65 | 55 | 55 | 59 | 64 | 67 | 67 | 54 |
| | -1000 | -5.08 | 0.305 | 76 | 59 | 48 | 49 | 53 | 57 | 56 | 47 | 36 |
| | -500 | -2.54 | 0.084 | 21 | 56 | 43 | 37 | 41 | 39 | 28 | 21 | 22 |
| | 500 | 2.54 | 0.084 | 21 | 60 | 47 | 39 | 39 | 35 | 25 | 20 | 22 |
| | 1000 | 5.08 | 0.0305 | 76 | 62 | 52 | 49 | 51 | 52 | 48 | 42 | 30 |
| | 1500 | 7.62 | 0.622 | 155 | 67 | 62 | 58 | 58 | 60 | 60 | 56 | 48 |
| | 2000 | 10.16 | 1.1 | 275 | 72 | 69 | 65 | 64 | 65 | 66 | 64 | 58 |
| KSA200/100 (W24in. x H24in. x L72in.) (W600mm x H600mm x L1800mm) | -1500 | -7.62 | 0.667 | 166 | 66 | 57 | 57 | 60 | 65 | 67 | 65 | 53 |
| | -1000 | -5.08 | 0.31 | 78 | 61 | 49 | 51 | 55 | 58 | 57 | 47 | 37 |
| | -500 | -2.54 | 0.092 | 23 | 62 | 45 | 36 | 40 | 35 | 24 | 21 | 22 |
| | 500 | 2.54 | 0.092 | 23 | 61 | 47 | 37 | 39 | 35 | 25 | 20 | 22 |
| | 1000 | 5.08 | 0.031 | 78 | 58 | 52 | 48 | 51 | 52 | 48 | 42 | 29 |
| | 1500 | 7.62 | 0.31 | 166 | 66 | 63 | 58 | 58 | 60 | 60 | 56 | 48 |
| | 2000 | 10.16 | 1.189 | 296 | 73 | 71 | 66 | 64 | 65 | 66 | 64 | 58 |
| KSA200/100 (W24in. x H24in. x L84in.) (W600mm x H600mm x L2100mm) | -1500 | -7.62 | 0.69 | 172 | 64 | 54 | 54 | 58 | 64 | 67 | 67 | 63 |
| | -1000 | -5.08 | 0.34 | 85 | 61 | 49 | 50 | 54 | 58 | 57 | 47 | 37 |
| | -500 | -2.54 | 0.1 | 25 | 56 | 44 | 37 | 42 | 39 | 28 | 21 | 22 |
| | 500 | 2.54 | 0.1 | 25 | 57 | 45 | 38 | 38 | 34 | 24 | 21 | 22 |
| | 1000 | 5.08 | 0.14 | 35 | 60 | 54 | 50 | 51 | 52 | 48 | 42 | 30 |
| | 1500 | 7.62 | 0.69 | 172 | 66 | 64 | 60 | 59 | 60 | 60 | 56 | 48 |
| | 2000 | 10.16 | 1.209 | 301 | 73 | 71 | 67 | 65 | 65 | 66 | 64 | 59 |
| KSA200/100 (W24in. x H24in. x L96in.) (W600mm x H600mm x L2400mm) | -1500 | -7.62 | 0.735 | 183 | 65 | 55 | 56 | 60 | 64 | 68 | 67 | 55 |
| | -1000 | -5.08 | 0.35 | 88 | 59 | 50 | 51 | 54 | 58 | 59 | 49 | 40 |
| | -500 | -2.54 | 0.108 | 27 | 56 | 44 | 37 | 41 | 37 | 26 | 20 | 22 |
| | 500 | 2.54 | 0.108 | 27 | 60 | 47 | 38 | 38 | 34 | 24 | 20 | 22 |
| | 1000 | 5.08 | 0.35 | 88 | 62 | 55 | 50 | 52 | 53 | 50 | 44 | 32 |
| | 1500 | 7.62 | 0.735 | 183 | 67 | 64 | 59 | 59 | 60 | 60 | 56 | 49 |
| | 2000 | 10.16 | 1.31 | 325 | 73 | 72 | 67 | 66 | 65 | 67 | 65 | 59 |

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Face Area Adjustment Factors:

For given face areas, add or subtract the relevant values from all Octave band frequencies to adjust airflow generated sound power levels.

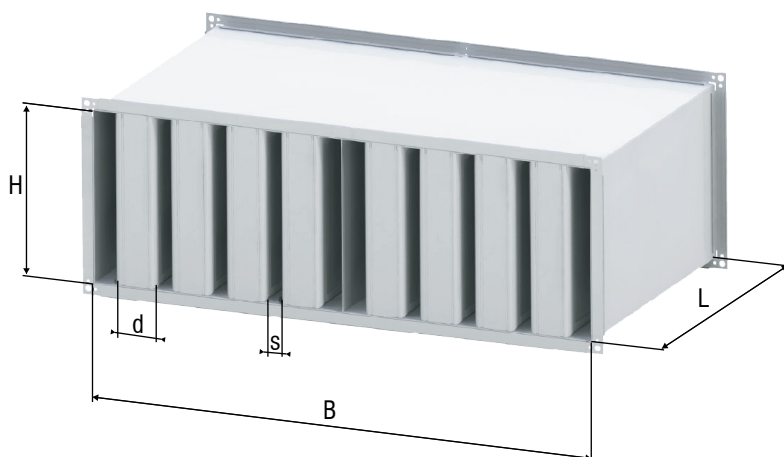
| Face Area (sq. ft.) | 0.5 | 1 | 2 | 4 | 8 | 16 | 32 | 64 | 128 | 256 |
|------------------------|-----|----|----|---|---|----|----|----|-----|-----|
| Adjustment Factor (dB) | -9 | -6 | -3 | 0 | 3 | 6 | 9 | 12 | 15 | 18 |

| Attenuator Length | | Static Pressure Drop | | | | | | | | | | | | | | | |
|-------------------|-------|----------------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| (ft) | (mm) | | | | | | | | | | | | | | | | |
| 1 | 900 | (in.wg) | 0.035 | 0.0525 | 0.07 | 0.1 | 0.161 | 0.213 | 0.26 | 0.341 | 0.424 | 0.508 | 0.59 | 0.703 | 0.844 | 0.924 | 1.04 |
| | | (Pa) | 9 | 13 | 17 | 25 | 40 | 53 | 65 | 85 | 106 | 127 | 147 | 175 | 210 | 230 | 259 |
| 2 | 1200 | (in.wg) | 0.044 | 0.06 | 0.076 | 0.108 | 0.177 | 0.225 | 0.285 | 0.386 | 0.409 | 0.53 | 0.611 | 0.756 | 0.896 | 0.989 | 1.06 |
| | | (Pa) | 11 | 15 | 19 | 27 | 44 | 56 | 71 | 96 | 122 | 132 | 152 | 188 | 223 | 246 | 263 |
| 3 | 1500 | (in.wg) | 0.044 | 0.06 | 0.084 | 0.117 | 0.189 | 0.237 | 0.305 | 0.406 | 0.514 | 0.559 | 0.623 | 0.788 | 0.989 | 1.105 | 1.105 |
| | | (Pa) | 11 | 15 | 21 | 29 | 47 | 59 | 76 | 101 | 128 | 139 | 155 | 196 | 246 | 275 | 275 |
| 4 | 1800 | (in.wg) | 0.06 | 0.064 | 0.092 | 0.129 | 0.205 | 0.249 | 0.313 | 0.446 | 0.542 | 0.577 | 0.667 | 0.824 | 1.04 | 1.15 | 1.19 |
| | | (Pa) | 15 | 16 | 23 | 32 | 51 | 62 | 78 | 111 | 135 | 143 | 166 | 205 | 258 | 286 | 296 |
| 5 | 2100 | (in.wg) | 0.06 | 0.072 | 0.1 | 0.141 | 0.221 | 0.261 | 0.341 | 0.474 | 0.57 | 0.611 | 0.691 | 0.868 | 1.06 | 1.165 | 1.21 |
| | | (Pa) | 15 | 18 | 25 | 35 | 55 | 65 | 85 | 118 | 142 | 152 | 172 | 216 | 264 | 290 | 301 |
| 6 | 2400 | (in.wg) | 0.072 | 0.0763 | 0.108 | 0.149 | 0.245 | 0.285 | 0.354 | 0.506 | 0.622 | 0.647 | 0.735 | 0.9 | 1.16 | 1.25 | 1.31 |
| | | (Pa) | 18 | 19 | 27 | 37 | 61 | 71 | 88 | 126 | 155 | 161 | 183 | 224 | 288 | 311 | 325 |
| Face Velocity | (fpm) | 250 | 375 | 500 | 625 | 750 | 875 | 1000 | 1125 | 1250 | 1375 | 1500 | 1625 | 1750 | 1875 | 2000 | |
| | (m/s) | 1.27 | 1.905 | 2.54 | 3.175 | 3.81 | 4.445 | 5.08 | 5.715 | 6.35 | 6.985 | 7.62 | 8.255 | 8.89 | 9.525 | 10.16 | |

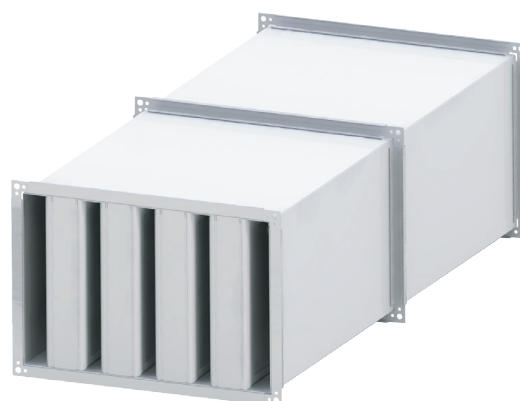
Connecting more attenuators

- Sections of the attenuator are connected with built-in flanges and bolts
- Contact flange surfaces can be additionally fixed by reinforcement holders
- Prior to attenuator delivery, sections of each Attenuator are assembled and disassembled in the factory.

Connection Along Width



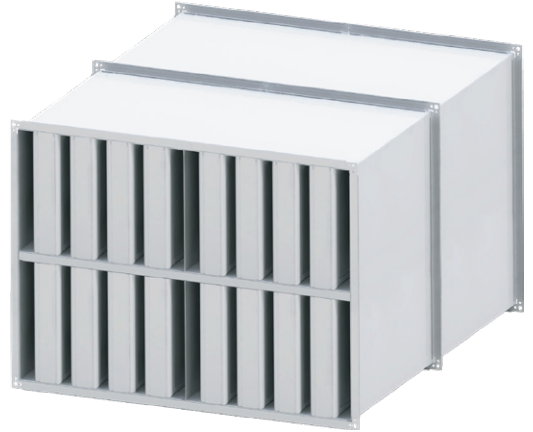
Connection Along Length



Connection Along Height

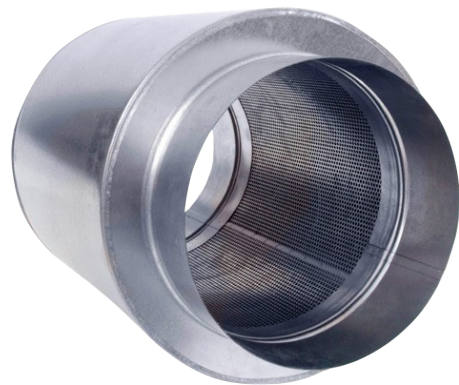
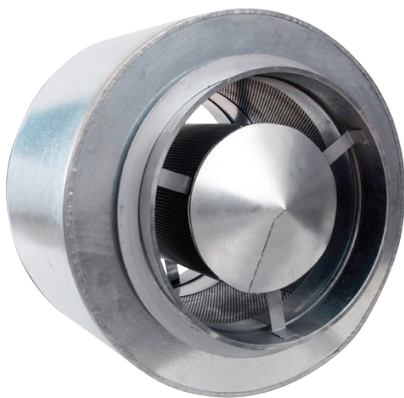


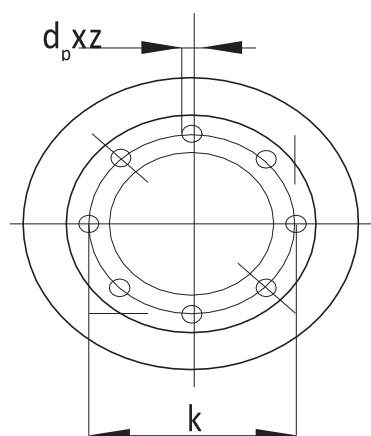
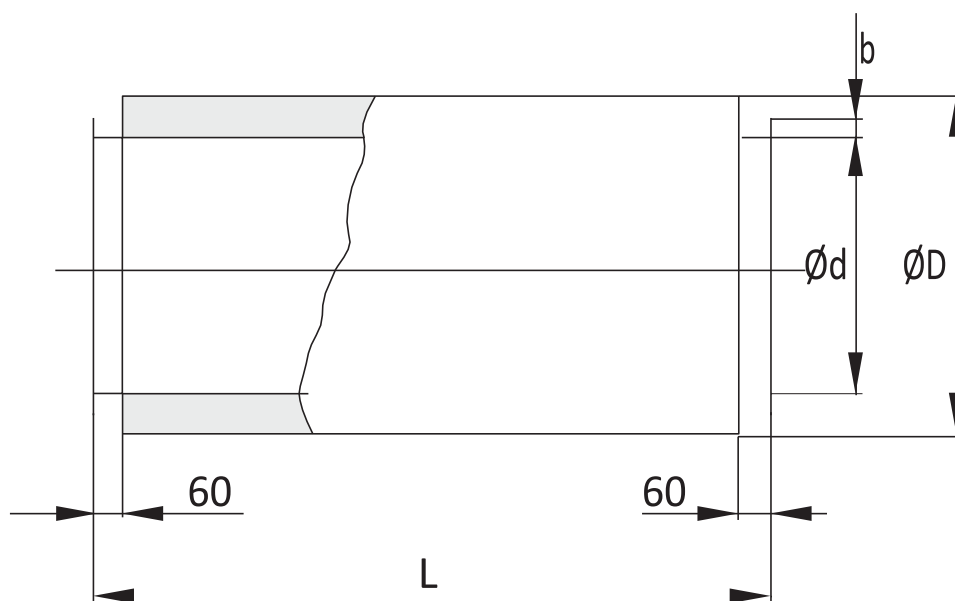
Four and Eight Sectional Attenuator



ROUND SOUND ATTENUATORS (KAD-SA-C)

KAD Round Sound Attenuator (KAD-SA-C) is mainly used to reduce FCU and AHU noise to obtain the required noise Level. Round Sound Attenuator offers many advance features including as standard, Aerodynamic pod, side liners, Flanges and protective acoustic infill with galvanized perforated sheet metal.





| Dimensions of interspace sound attenuator | | | |
|---|------------------------|----------------------|----------------------|
| Standard size $\varnothing d$ [mm] | $\varnothing d-2$ [mm] | $\varnothing D$ [mm] | Lengths L [mm] |
| 100 | 98 | 200 | L=500, 1000, 1500 |
| 125 | 123 | 225 | |
| 160 | 158 | 260 | |
| 200 | 198 | 300 | |
| 250 | 248 | 350 | |
| 300 | 298 | 400 | |
| 315 | 313 | 415 | |

CONTACT US



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