

Aldes solutions answering noise issues



Nowadays, all key actors of a construction project take care about comfort, indoor air quality and safety. The well-being of occupants inside any building remains essential. As a consequence, the choice of ventilation, fire protection, but also air distribution solutions should be done in a careful manner.

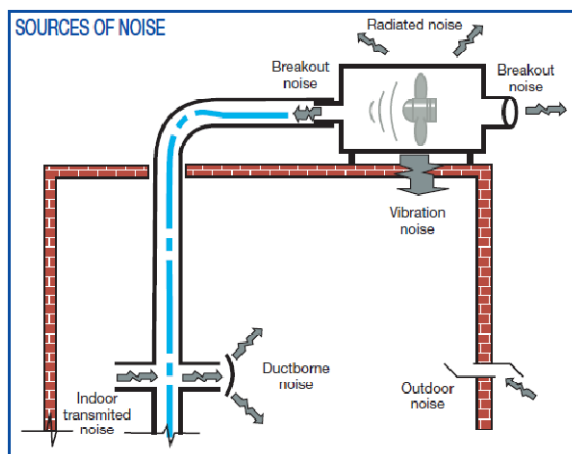
→ Noise as a major issue

Noise control involves examining the noise sources (fan noise, duct noise, diffuser noise and outdoor noise), the sound transmission path, and the receivers.

For most HVAC systems, the sound sources are associated with the building mechanical and electrical equipment. They can definitely generate noise (such as electric motor fans, diffusers, dampers).

Efforts to control noise and vibration in a wide range of mechanisms and devices inevitably require the use of passive acoustical materials. To achieve the greatest performances requires a correct understanding of the sound attenuators' application, as well as a right selection and installation.

Cf. Aldes ME Flash 30: How to select sound attenuators?



→ Rectangular sound attenuators

Rectangular sound attenuators are used to reduce fan / AHU noises propagated through air duct, for both air supply and exhaust. They are highly efficient at medium and high frequencies and can be used in any kind of application such as villas, commercial/residential buildings, substations.

Aldes Middle East has the **expertise** to manufacture rectangular sound attenuators with various duct connections, based on clients' **requirements**. Our sound attenuators and sound baffles are heavy duty type, with galvanized mild steel construction for air conditioning and industrial applications.

Very often, rectangular sound attenuators are **non-standard products**. As a flexible manufacturer, Aldes Middle East is definitely able to produce **big sizes** for specific requests, such as for instance **1800 x 3060 x 4000 mm**.



We had a requirement of approx. 16 nos. of sound attenuators with max. sizes of 900L x 4050W x 4050H for this project. The big challenge in the supply of these sound attenuators was to find a reliable supplier which could manage to manufacture as per these non-standard dimensions, in sections or in whole, without compromising on the quality of the silencers.

Aldes Middle East provided us with the right solution. They designed and provided sound attenuators in multi-sections for final assembly on-site.

When manufacturing sound attenuators in multi-sections, the most important criteria are to ensure the alignment of the sections, and at the same time maintain the performance levels of the attenuators. The same was done with great accuracy by Aldes ME which demonstrates their expertise and skills in this field.

Ziad N. Nazair, PM- Dubai Air conditioning Co.

*** Bend sound attenuators**



Bend type sound attenuators (belonging to the rectangular sound attenuators family) are typically used for limited space areas, in order to reduce fan noise and to eventually meet the NC* levels. These attenuators can be designed for vertical or horizontal installations, to suit the ductwork layout.

* Noise Criteria

Advantages of rectangular/bend types sound attenuators

- **Efficient at medium and high frequencies**
- **Easy installation**

→ Circular sound attenuators

Well known for its ability to produce non-standard sound attenuators, Aldes Middle East is also able to manufacture **circular** sound attenuators. These products aim to attenuate the fan / AHU noises propagated through circular air ducts, for both air supply and air exhaust, in order to meet required noise levels (such as NC or NR levels).

Once again, Aldes Middle East shows its **flexibility** by being capable to produce big sizes of circular sound attenuators, such as: **1700 length x 1700 outer diameter x 1500 inner diameter (mm)**.



Circular sound attenuators can either be **passive** or **active**. In case of active sound attenuators, an electronics sensor is fixed on the outer casing that generates sound waves intended to cancel some of the noise generated by the fans in an HVAC system.

Advantages of circular type sound attenuators

- **Low pressure loss**
- **Easy installation**

+ for active ones

- **Efficient at low frequencies**
- **Integrated: self test**

→ Cross talk sound attenuators

Cross talk sound attenuators are most of the time used in office buildings. It helps to reduce the transfer of noise in adjacent rooms/zones, when they are served by branches of common duct.



Advantages of cross talk types sound attenuators

- **Reduce noise transfer in adjacent room**
- **Easy installation**

Aldes Middle East has always focused to bring a **high level of expertise** in air distribution, fire protection and ventilation systems, to support its clients and to act as a **reliable supplier fully committed to deliver quality and efficient solutions** from sound attenuators, fire dampers, fans, VCDs... to grilles and diffusers.



Consequently, Aldes ME will continue to provide the best support and solutions to the GCC market **to enhance the noise comfort** in any projects.

Some prestigious references in the GCC region for sound attenuators:

- *Sheikh Villa, Dubai (UAE)*
- *Dubai Festival City (UAE)*
- *Fujairah power plant (UAE)*
- *Al Ain airport extension (UAE)*
- *Business park & hotel facilities (Qatar)*
- *Ain Aoudha Palace (Morocco)*
- *City Center (Bahrain)*
- *Palm Garden @ Sohar (Oman)*

For more information on Aldes Middle East sound attenuators, please visit our website:
www.aldes.ae

Or ask for our General Catalogue 2011.