

Silence is Golden



AirLay Attenuators

The patented AirLay range of rectangular attenuators achieves superior duct-borne noise reductions in commercial HVAC applications. Its unique construction and revolutionary polyester acoustic infill provide greater insertion losses across the most critical frequencies when compared to conventional infill materials.

- Up to 8dB noise reduction at low frequencies
- 15% lower pressure drop on average
- Smaller and more economical selections possible



FANTECH
Intelligent Ventilation



Superior Acoustic Performance

Low noise levels have always been a critical factor of building design and increasingly becoming more important due to environmental awareness and the effects of noise on health, safety and comfort.

The AirLay range of rectangular attenuators have been designed to optimise insertion loss performance at hard to attenuate low frequencies, resulting in greater noise control of the environment. Whether its noise control of the HVAC system, controlling transmission of sound to rooms, offices and other structures from high noise areas, AirLay provides maximum privacy where it's needed.

AirLay rectangular attenuators use a polyester infill material that is made from 70% recycled plastic. The unique infill manufacturing process is different to the traditional carding process which aligns insulation fibers. The AirLay process creates a random pattern of fibres, making it much harder for the sound to pass through and therefore enabling better attenuation.



Built for *Application*

The AirLay range of rectangular attenuators is suited to general HVAC applications such as Plant Rooms, Car Park Supply and Return Ducts, Ventilation Shafts and Air Handling Unit ducting where pressures are in the range of -500Pa and +1000Pa.

As HVAC applications can have vast insertion loss and dimensional requirements, AirLay has been designed as a modular system whilst maintaining a low pressure drop and maximising attenuation.

AirLay attenuator cases and splitter frames are made from durable Z275 coated galvanised sheet metal as standard. They also can be requested in different materials such as long lasting stainless steel, or have protective coatings such as Epoxy Paint or Chlorinated Rubber.

AirLay is suitable for temperatures up to 80 °C and for dry applications. For applications where water may be present in the air stream or where insulation must be encapsulated, speak to Fantech about the Q-Seal attenuator range that is well suited for high temperature, smoke spill, grease or moisture laden air.



Engineered to *Reduce* *Attenuator Sizes*

AirLay's unique acoustic infill improves low frequency insertion losses when compared to other conventional materials. The infill includes a hardened outer membrane that helps form a self-supporting splitter wall. These splitter walls are extremely durable and hold their shape without the need for perforated steel facings.

These combined innovations help to reduce pressure drop which can often result in smaller and lighter attenuators able to be selected.



AirLay splitter section



Attenuator Selections Made Easy

As HVAC applications can have vast insertion loss and dimensional requirements, the AirLay range has been designed as a modular system.

Using the Fans by Fantech Selection Program, designers can simply enter their airflow, pressure and insertion loss requirements followed by any dimensional restrictions and the program will automatically provide the best selection of complying attenuators for review.

Rectangular attenuators will typically be produced in a single piece up to a maximum of 2400mm in width, length, or height. They are split into multiple sections when above this size and can be sectioned where applications have limit access.

The AirLay range of rectangular attenuators is available with straight splitters for applications with greater insertion loss requirements, or tapered splitters for applications with low pressure drop requirements.

The screenshot shows the 'Fans by Fantech Product Selection Program' software. The 'Select Silencer' window is active, displaying input fields for Air Flow (5000 L/s), Max. Pressure Drop (60 Pa), Max. Passage Vel. (25 m/s), Diameter/Width (1250 mm), Height (1000 mm), and Max. Length (2400 mm). The 'Mounting Type' section is set to 'Rectangular' with options for 'Straight', 'Tapered', and 'O-Seal'. A table of 17 silencers is shown below, with columns for Product, Type, Size, Length, Vel., Loss, and Price. The selected silencer, NTA22C-127-100, is shown in a detailed view with a 3D model and a drawing. The drawing shows a rectangular silencer with dimensions W, H, and L, and a note: 'If any dimension is greater than 2400mm, silencer will be made in multiple sections'.

Product	Type	Size	Length	Vel.	Loss	Price
RT07A-137-100	Rectangular A...	1375 x 1000	600	13.33	40.0	100
RT10A-120-100	Rectangular A...	1200 x 1000	600	12.50	31.0	83
RT12A-130-100	Rectangular A...	1300 x 1000	600	9.99	14.0	83
RT15A-140-100	Rectangular A...	1400 x 1000	600	8.33	9.0	83
RT17A-112-100	Rectangular A...	1125 x 1000	600	9.52	11.0	66
RT20A-120-100	Rectangular A...	1200 x 1000	600	8.33	7.0	66
RT22A-127-100	Rectangular A...	1275 x 1000	600	7.40	5.0	66
RT25A-135-100	Rectangular A...	1350 x 1000	600	6.66	4.0	67
NTA05C-150-1...	Rectangular A...	1500 x 1000	1200	16.66	60.0	141
NTA07C-137-1...	Rectangular A...	1375 x 1000	1200	13.33	34.0	120
NTA10C-120-1...	Rectangular A...	1200 x 1000	1200	12.50	27.0	101
NTA12C-130-1...	Rectangular A...	1300 x 1000	1200	10.00	16.0	101
NTA15C-140-1...	Rectangular A...	1400 x 1000	1200	8.33	10.0	101
NTA17C-112-1...	Rectangular A...	1125 x 1000	1200	9.52	12.0	82
NTA20C-120-1...	Rectangular A...	1200 x 1000	1200	8.33	9.0	82
NTA22C-127-1...	Rectangular A...	1275 x 1000	1200	7.40	7.0	82
NTA25C-135-1...	Rectangular A...	1350 x 1000	1200	6.66	5.0	82

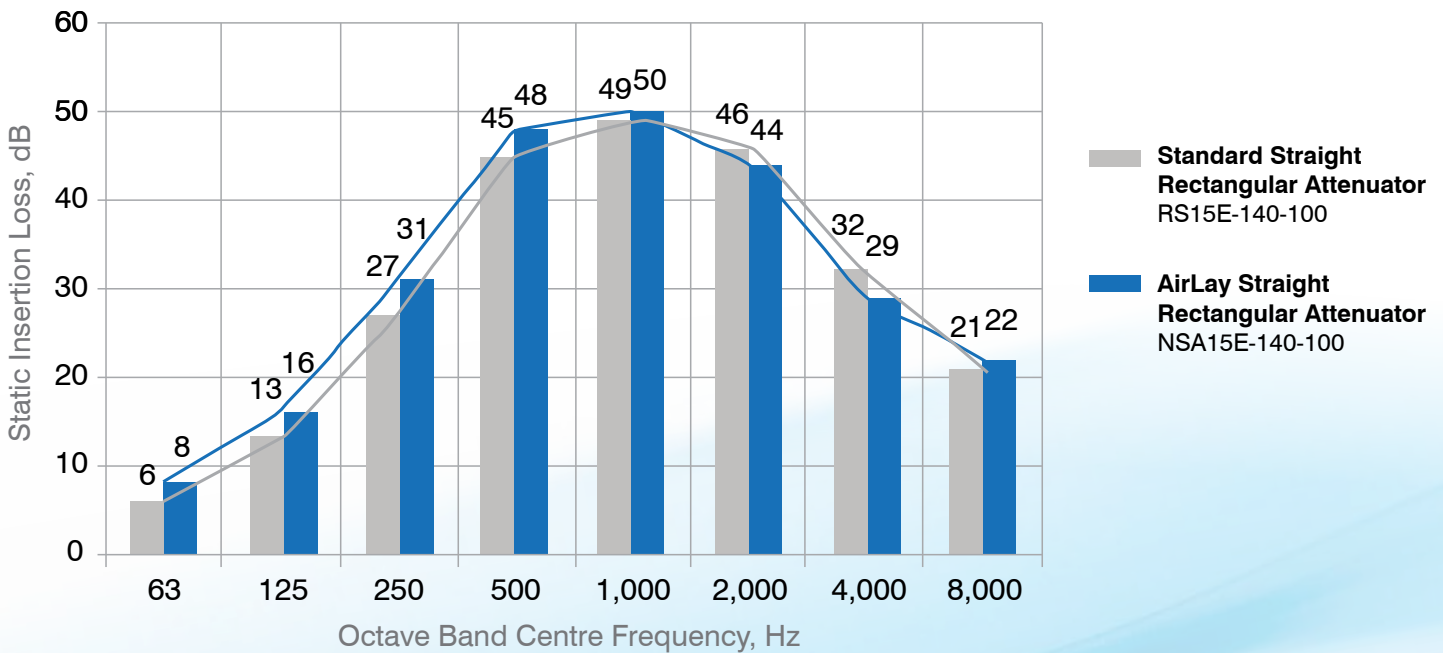


Performance and Testing

The AirLay range of rectangular attenuators has been tested to BS4718:1971 Methods of Test for Silencers for Air Distribution Systems. For the complete range of data refer to the Fans by Fantech Selection Program or contact your local Fantech office.

The following insertion loss graph is a like for like comparison between a Fantech AirLay attenuator and standard rectangular attenuator. The AirLay attenuator in this example provides an additional 2dB to 4dB of insertion loss at the critical 63Hz to 250Hz low frequencies. As well as a massive 46% reduction in pressure loss at 5,000L/s air flow for this selection.

Superior performance at these frequencies combined with reductions in pressure loss often result in smaller, lighter and more economical selections in comparison to attenuators with traditional infills.



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