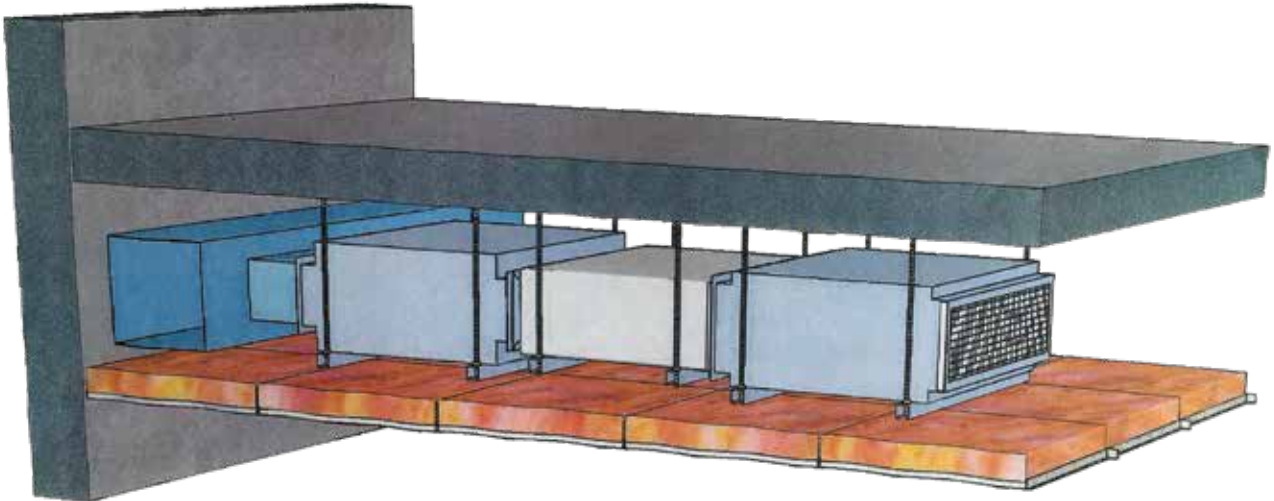




## FCU Attenuators

### Attenuation for Fan Coil Units



Attenuators are designed to absorb sound energy as air passes through their length, resulting in reduced sound levels at exit.

FCU Attenuators provide optimised acoustic performance for reducing inlet/outlet sound levels from ceiling mounted FCU units where high levels of noise reduction are required and space constraints govern, such as residential and hotel HVAC applications.

- Guaranteed to comply with specified performance.
- Client specified spigot sizes for easy connection to FCU unit and ducting.
- Standard sizes 600mm & 900mm long and custom widths manufactured to individual requirements.
- Galvanized steel.
- Filter track can be fitted if required.



## ACOUSTIC PERFORMANCE

Rectangular splitter type attenuators consist of a duct casing housing parallel splitters with airways in between. Air passes through the airways and sound energy is absorbed by the absorptive material contained within the splitters.

FCU Attenuators have a wide shallow design for in ceiling applications.

Regenerated noise is generally not a issue when using FCU attenuators.

## CONSTRUCTION

**Unit width and spigot height is client specified to match clients FCU and inlet or discharge spigot sizes.**

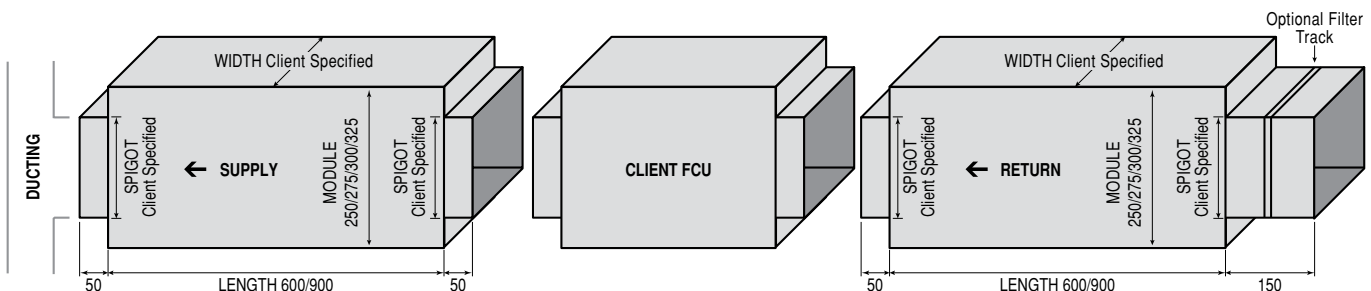
Casings are manufactured from pre-galvanised sheet steel. End flanges when supplied are typically proprietary systems although other flange systems are available on request.

The splitter modules are constructed from pre-galvanised sheet steel frames. The inlet/discharge has an aerodynamically shaped folded nose. The high density glass wool infill material is protected behind a layer of fibreglass facing.

Acoustic infill within splitters carry a Group Number of 1-s which complies with New Zealand Building Code clause C3.4(a). Tests were carried out in accordance with NZBC Verification Method C/VM2 Appendix A : Establishing group numbers for lining materials.

Filter track slot can be provided if required.

For environmental or architectural requirements, powder coating or paint finishes such as epoxy are available in a range of colours.



## INSERTION LOSS (dB)

Model	Module (mm)	Length (mm)	Frequency (Hz)							
			63	125	250	500	1k	2k	4k	8k
FCU-250-6	250	600	6	11	22	36	41	43	40	24
FCU-250-9		900	8	15	29	44	46	48	44	28
FCU-275-6	275	600	5	9	18	27	37	32	33	18
FCU-275-9		900	7	12	23	37	43	40	36	22
FCU-300-6	300	600	5	8	14	21	28	25	21	15
FCU-300-9		900	6	10	19	30	38	36	30	19
FCU-325-6	325	600	4	7	14	19	30	26	19	14
FCU-325-9		900	6	9	19	28	37	33	25	17

CUSTOM SIZES AVAILABLE – CONTACT US.

*The static insertion loss performance figures have been measured in accordance with AS1277-1983 Acoustics – Measurement Procedures for Duct Silencers. A testing facility has been purpose built to allow the verification of the acoustic performance of these attenuators.*

## ATTENUATOR MASS (kg)

Length (mm)	Module (mm)	Width (mm)				
		300	600	900	1200	1500
600	250	20	28	37	46	56
	275					
	300					
	325					
900	250	22	37	50	62	76
	275					
	300					
	325					

## PRESSURE LOSS

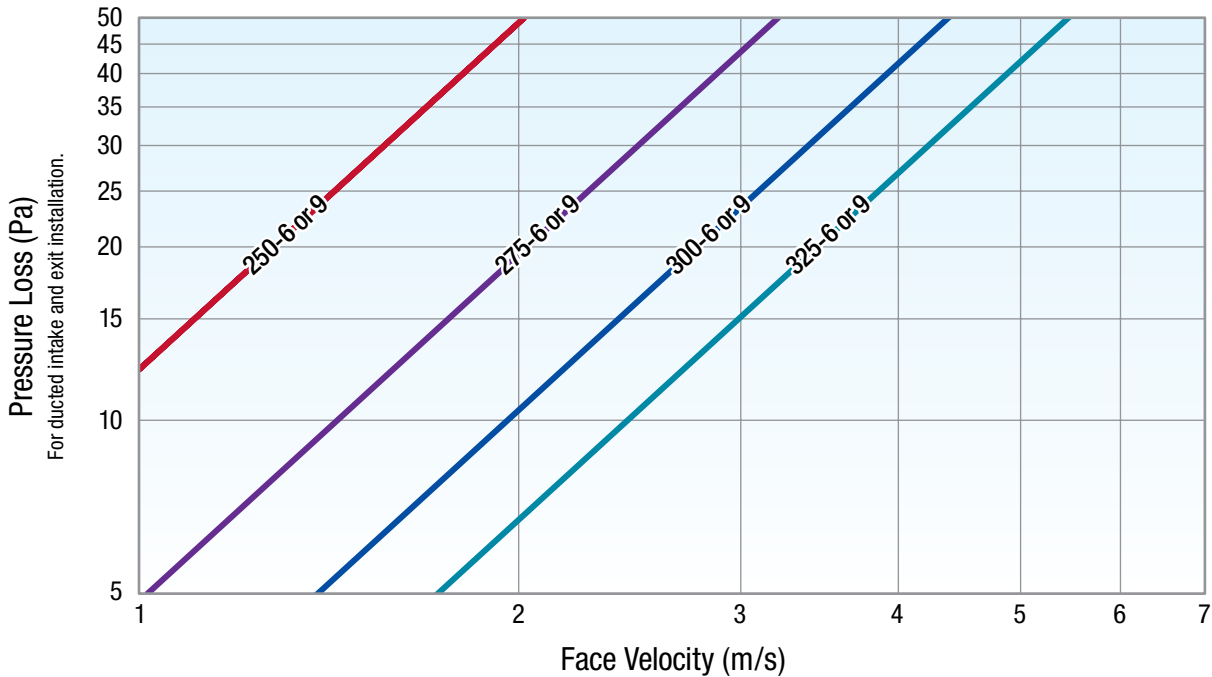
To calculate the pressure loss firstly calculate the face or duct velocity. Locate on the graphs below the attenuator model line and read off the pressure loss. Negligible difference between 600 and 900.

*This pressure loss is for ducted inlet and ducted exit installation. Additional pressure loss will occur if the intake or exit from the attenuator are plenum type conditions. The pressure loss figures are for uniform air flow at the intake of the attenuator. Poor inlet and exit conditions will result in an increase in the pressure loss through the attenuator. Poor conditions include a bend or fan located close the attenuator.*

### Example:

Model	FCU-300-6, 900W x 300H x 600L
Airflow	= 600 l/s
Attenuator area	= 0.9m x 0.3m = 0.27m <sup>2</sup>
Face velocity	= 0.6 m <sup>3</sup> /s ÷ 0.27m <sup>2</sup> = 2.22m/s
Pressure loss	= 12Pa

### FCU ATTENUATORS PRESSURE LOSS



### ADDITIONAL INFORMATION

Visit our website or contact us for information on installation, testing, monitoring, maintenance services and technical guides.

Other models are available, visit our website for the full range. Or contact us to discuss which model is best suited to your requirements. If none of our standard models are suitable, we can design and manufacture a solution for you.



Got a question? Call us to discuss with an experienced engineer:

**+64 9 269 0001**

Or visit our website for more information:

**[www.ncsacoustics.co.nz](http://www.ncsacoustics.co.nz)**

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