ABOUT REDU-SONE

Redu-Sone B.V. is an acoustic company based in Nijverdal (NL). The mission of Redu-Sone is to reduce noise with the application of acoustics technologies.

Specializations

- Fiber-free silencer technology
- Noise control
- Acoustic simulations
- Acoustic measurements
- Acoustic consultancy

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Redu-Sone
fiber-free noise reduction

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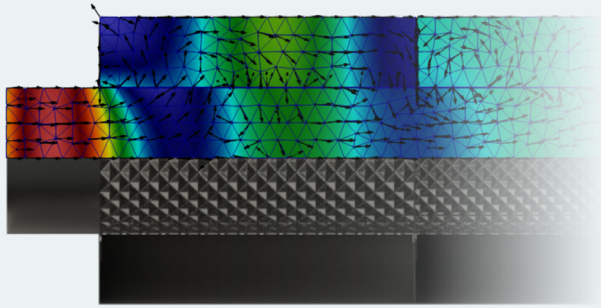
REDU-SONE
I-150

THE **REDU-SONE I-150** IS A REVOLUTIONARY **BROADBAND** PASSIVE FIBER-FREE FLOW DUCT SILENCER. IT PROVIDES AND EFFECTIVE AND **PREDICTABLE** NOISE REDUCTION FOR LOW FREQUENCY (FAN) NOISE IN DUCTS SUCH AS VENTILATION- AND EXHAUST GAS CHANNELS.



SPECIFICATIONS

Total length	1400 mm
Outer diameter	300 mm
Weight	18 kg
Material	Stainless steel SS 316
Flow pressure drop	Same as duct with 150 mm inner diameter
Absolute pressure	Atmospheric pressure only

The sound absorption mechanism inside the Redu-Sone I-150 is based on novel micro-perforated panel (MPP) technology. As such, the silencer is built with stainless steel as the single material. Therefore, the main advantages of this silencer compared to absorber silencers are:

- **Fiber-free**, so no airborne particulate matter
- **Resistant** to hot exhaust gas
- **Antibacterial** and easily cleanable material
- High to very high **noise reduction** values

In addition, the Redu-Sone I-150 has the following beneficial properties:

- Free transit of flow: low head loss
- Sustainable and no performance degradation[1]
- Recycleable

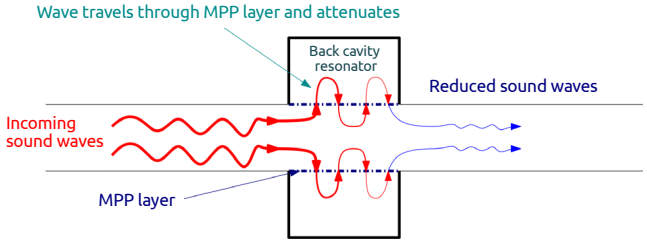
The Redu-Sone I-150 opens the possibility to achieve noise reduction where it was not possible before. Enjoy more silence!

[1] With proper maintenance intervals

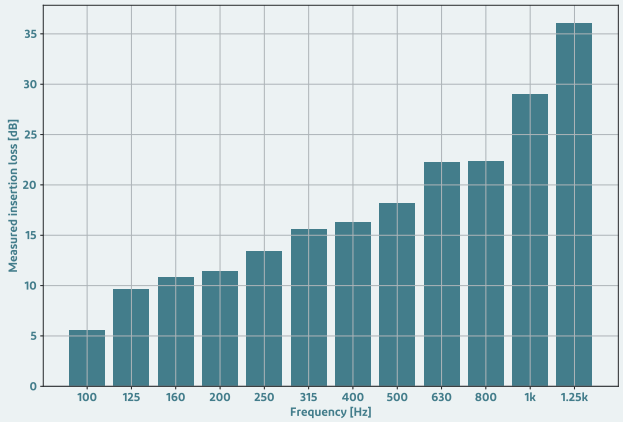
WORKING PRINCIPLE

MPP's are metal panels which are perforated with sub-millimeter sized holes. These small holes generate viscous friction when a sound wave passes through the holes. The viscous friction turns the acoustic energy into heat energy.

Around the MPP layer, there are four back cavities. These cavities work similar to a Helmholtz resonator. The resonance frequencies of the different cavities are tuned to obtain an optimal noise reduction in different frequency bands. This results in a high overall broadband noise reduction.



Noise reduction
The Redu-Sone I-150 is optimally designed for a broadband noise reduction in the low frequency range of 100 Hz to 1 kHz. Typical insertion loss values in one-third octave bands[2]:



[2] Measurement performed using the in-duct two-microphone method. For more information, see www.redusone.com