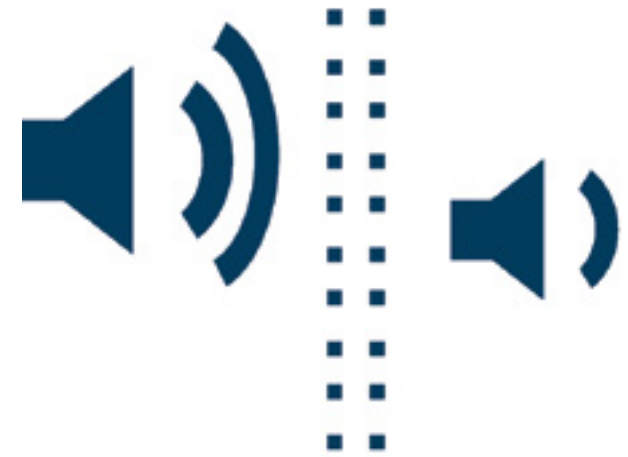




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**Noise attenuation**



**EXCLUSIVE EXHAUSTS, EXPERTLY ENGINEERED**



**Robert Bontenbal**

Contact your noise attenuation expert at +31(0)78 681 09 75 or rb@marquip.nl



# NOISE ATTENUATION

*In general, all yachts have set maximum noise levels inside spaces and on decks. As it can be difficult to establish maximum noise levels for equipment based on these restrictions, few yards will actually demand these noise levels. Instead, they rely on MarQuip's experience and advice on the best possible exhaust system.*

Our exhaust silencers reduce the exhaust noise over the complete bandwidth from low to middle and high frequencies of 25 to 35 dB (A). Additional attenuation of up to 20 dB (A) can be achieved simply by leading the exhaust gas out underwater. An underwater outlet on a main engine exhaust system allows for substantial noise attenuation.

More is expected of generator exhaust systems as they do not utilise an underwater exhaust. These systems are equipped with an additional water lift separator to allow even more sound attenuation, up to 45 dB (A).

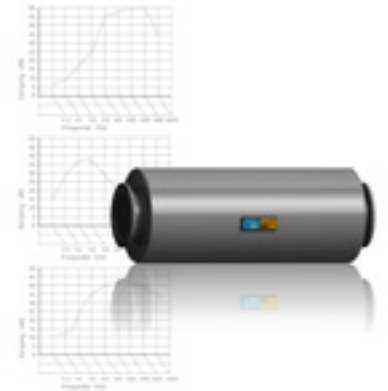
## DRY EXHAUST GAS SILENCER

Dry exhaust gas silencers are used in both dry and combined dry/wet exhaust systems. The silencer can be of a reactive, absorptive or a combined type. This allows for noise attenuation for a specifically chosen frequency range or over a wide frequency range.

In addition to several standard ranges, we also design and deliver fully customised silencers. Depending on customer preference, silencers can be equipped with single, double or quadruple inlets, radial in and outlet positions, mounting supports, condensation drains, spark arrestors and/or integrated catalytic converters.

The illustration shows a standard silencer and attenuation specifications for three of the most frequently used silencers. Passive and active filters can be integrated inside silencers, and exhaust systems can be optimised by the integration of a filter system. This makes it unnecessary to choose between noise or emission reduction.

Here are two examples of custom designed dry exhaust gas silencers. The silencers are made of either mild steel, Corten steel or stainless steel, and are welded according to quality standard NEN 25817 Class C or Class B.



*Generator silencer with integrated catalytic converter, with the maintenance catch on the side of the silencer.*

*Oval-shaped main engine silencer, used in engine rooms where height is an issue.*

