

CUSTOM DESIGN

As no machine or project is the same, we strive to go beyond the air-borne noise reduction of standard sound enclosures and incorporate any specific requirements from our customer. Being weight or size reduction, an ultra-silent enclosure by using the latest technologies or fully non-combustible constructions.

Our engineering does not stop at the enclosure as we know that an inadequate mount selection, rigid connections of appendices and dynamically weak supporting foundations can largely destroy the effect of any enclosure, no matter how good.



In order to meet our structure-borne noise requirements we designed a new base frame concept (1). Through FEA and specific mount selection (both single and double) an optimal result can be achieved.

When required we can use our 3D noise level prediction software (2) to predict air-borne levels and FEA to analyse the generator foundation on stiffness and natural frequencies.

SOUND INSULATION MATERIAL

The enCAPsure is fitted with purposely selected sound absorption materials, offering excellent sound absorption characteristics and increase the overall noise reduction whilst meeting the test criteria of some of the highest fire resistance testing standards including EN 13501-1 B-s1,d0.

Not limited to this selection, other sound insulation materials can be offered ranging from ultra-light to non-combustible, all chosen with acoustics, safety and durability in mind.

UNIQUE CLOSURE SYSTEM

One key feature of the enCAPsure enclosure is the unique patented closure system (3) which ensures tight closure along the perimeter of the panels.

PERFORMANCE

The 22mm standard enCAPsure panels are tested in our in-house test laboratory in order to fine tune the air-borne noise reduction. When these standard panels do not meet the requirements we can design panels with specific acoustic requirements and conduct test procedures at low cost.

| Frequency | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 |
|-----------|------|------|------|------|------|------|------|
| dB | 20.8 | 20.9 | 24.5 | 28.2 | 28.3 | 34.0 | 39.2 |

Our 22mm standard panel tested with 50mm insulation

For extreme demanding projects or rough environment requirements a standard 45mm panel is optional with full metal frames and closing mechanism.

The overall performance of our enclosure depends on a lot of variables such as weight, size, panel types, ventilation, hatches, cable penetrations etc. It is therefore impossible to give an exact air-borne noise reduction value without at least some of the variables known. Indicative values can be given after an initial informative discussion.

ENCAPSURE

Van Cappellen Consultancy gained experience in marine acoustics for over 30 years and now this knowledge is used to design an innovative sound enclosure. A key part in airborne noise reduction of generators or any other noise radiating machinery.



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CONTACT

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