

DWX SERIES

ACOUSTIC BARRIERS FOR DUCTWORK

A SOFT FLEXIBLE QUILT WITH AN OUTER HEAVY POLYMERIC ACOUSTIC MEMBRANE, OFFERING EXCELLENT DURABILITY AND SOUND INSULATION QUALITIES, THAT CAN BE USED IN A VARIETY OF APPLICATIONS.

- Class '0' fire rated
- High acoustic performance
- Good dampening characteristics
- Choice of rear spacing layers
- Flexible and easy to install
- Tested performance

THE **SIDERISE® 'DWX' SERIES** ACOUSTIC BARRIER FOR DUCTWORK RANGE IS FREE OF LEAD, UNREFINED AROMATIC OILS AND BITUMEN.

The product is primarily intended to improve the sound transmission loss of lightweight thin sheet structures

SIDERISE® 'DWX' Series acoustic barrier for ductwork is a range of soft flexible mass barrier quilts with two choices of spacing layer and two weights of the mass membrane (DW5P, DW10P, DW5P/NPF and DW10P/NPF).

The standard (Std) and original DW5P and DW10P comprises a flexible resin-bonded glass fibre quilt contained within an anti-dusting fleece and diamond stitched, with an outer heavy polymeric acoustic membrane with a surface weight of either 5kg/m² or 10kg/m². The exposed surface of the product is finished with a Class 'O' reinforced H & V aluminium foil.

The DW5P/NPF and DW10P/NPF comprises polyester / PP ultrafine fibre spacing layer with the same outer heavy polymeric acoustic membrane options as the Std grade either 5kg/m² or 10kg/m². The exposed surface of the product is finished with a Class 'O' reinforced H & V aluminium foil.

It is particularly suited for use as an external cladding to sheet metal ducts. The insulation layer is an efficient thermal insulation material and the outer foil faced barrier forms an effective vapour barrier.

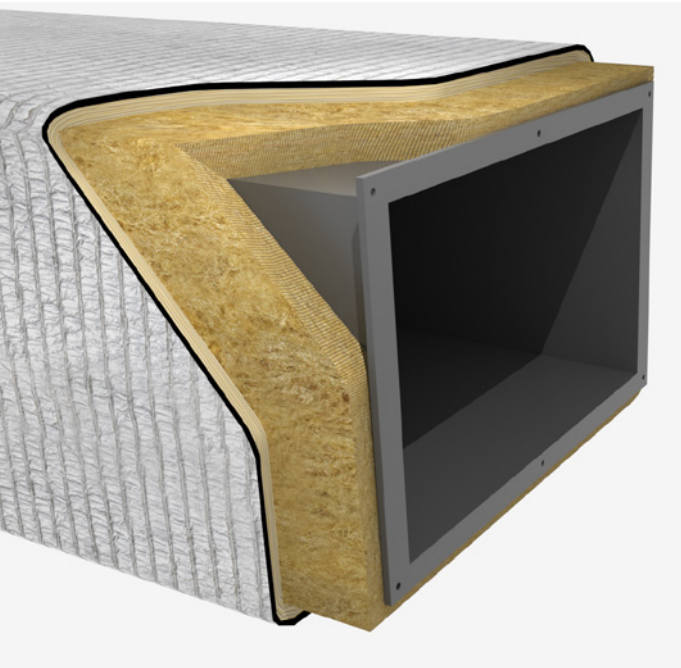
The product is used in many varied applications and industries including construction, marine, automotive, HVAC and OEM.

Common applications include: external lining of ductwork and ventilation equipment, concrete columns, generators, compressors, process plant and electrical equipment.



Technical specification

Form supplied (mm)	Standard sheet size: 2000mm x 1200mm
Standard thickness (mm)	Insulation layer 25mm nominal
Surface weight (25mm Insulation layer)	DW5P or DW5P/NPF – 6 Kg/m ² nominal overall DW10P or DW10P/NPF – 11 Kg/m ² nominal overall
Insulation layer type	Std - Resin bonded glass fibre quilt NPF – Polyester / PP ultrafine fibre
Insulation layer density	Std – 16 kg/m ³ nominal NPF – 12 kg/m ³ nominal
Acoustic membrane type	Flexible EPR and Thermoplastic Polymeric Barrier
Acoustic membrane characteristics	Limp Heavy Membrane
Acoustic membrane	DW5P or DW5P/NPF – 5 Kg/m ² nominal (2.5mm) DW10P or DW10P/NPF – 10Kg/m ² nominal (5.0mm)
Reaction to Fire (finished product)	Class 0 to UK Building Regulations: BS 476, Part 7: Class 1 BS 476, Part 6: I<12, I(1)<6

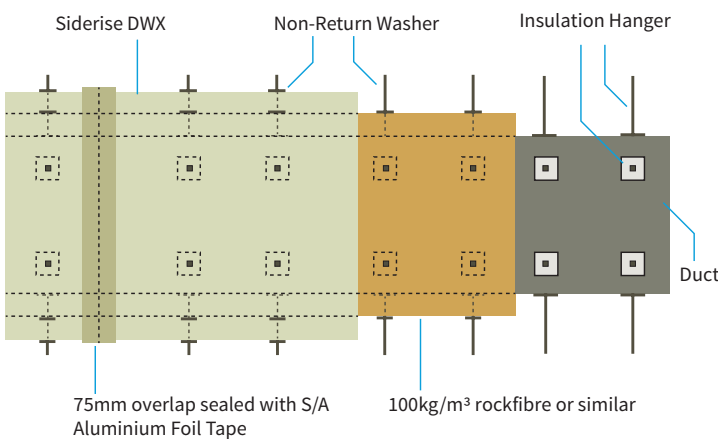


Product installation

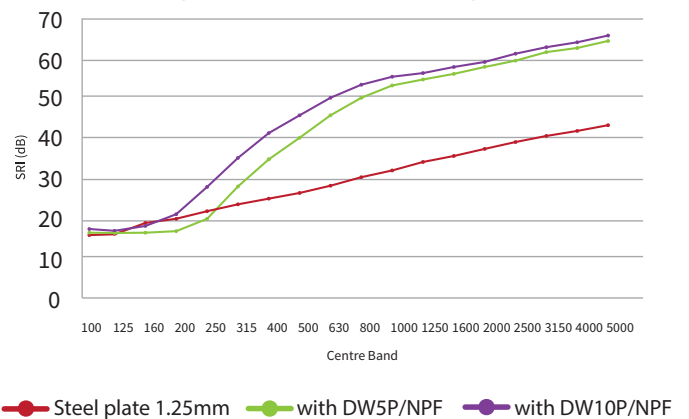
SIDERISE® 'DWX' acoustic barrier is normally fixed by the use of through mechanical fixings such as insulation support pins with non-return washers. The frequency of use is influenced by the orientation of the barrier (e.g. vertical or underside of horizontal) and the presence of any secondary cladding providing additional restraint.

As a general guide fixings should be provided at 300mm centres. Suitable insulation support pins include: spotwelded; separate adhesive and self-adhesive. In the case of the latter, it is essential to secure the self-adhesive base to the background by additional mechanical fixing e.g. blind riveting, self-tapping screws, etc.

To maximise acoustic performance, it is important to maintain continuity of the sound barrier membrane. For this reason, the product should preferably be overlapped by a minimum of 75mm at all joints. Ideally the overlaps should coincide with a grid line of the chosen mechanical fixings. The overlap joint thus formed should be sealed by the application of a self-adhesive aluminium foil tape (min. 75mm).



SOUND REDUCTION INDEX
Improvement to 1.25mm steel plate



Acoustic performance

The improvement in sound transmission loss for the application of DWX to a light-weight structure is dependent on a number of factors.

These include:

- Selected membrane weight
- Selected Insulation layer
- Surface weight of the original background sheet
- Presence of a primary insulation layer

In addition, it is common to apply the barrier on to a mineral fibre insulation layer. This material acts as a resilient spacing layer (positions the barrier away from the original background whilst limiting mechanical coupling).

The type and thickness of this material will also change the increase in sound transmission loss. Frequently this layer additionally acts as the thermal insulation treatment.

Our technical department would be pleased to provide indicative performance values against provision of details for a specific condition.

Typical level of improvement in sound reduction performance for the application of a single layer of DWX to a 0.8mm steel duct is:

18dB (mean value for frequency range 100 – 3150 Hz)

Additional options

The following options are available:

- Use of weather proofing wrap for external application.
- Can be supplied with alternative thickness insulation layer for specialist application.

Additional information

The following information is available upon request or via download from our website:

- 1/3rd octave data for the acoustic membrane available on request
- Safety Data Sheet

Environmental

SIDERISE® 'DWX' series acoustic barrier is environmentally friendly.

- It contains no Volatile Organic Compounds (VOCs) and no very Volatile Organic Compounds (vVOCs)
- Zero Ozone Depleting Potential
- Global Warming Potential of less than 5
- Recyclable

Technical support

For further information please contact our technical team at the address on the following page.

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FURTHER INFORMATION

Available CPDs

Contact SIDERISE® for further information on our CPDs:

- Internal Treatment of HVAC elements - Absorption
- External Treatment of HVAC elements
 - Sound break out
- Sound Energy / Acoustic Principles

Sales and technical support

Contact our team for sales and technical support

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