

INTRODUCTION

Type **WSD150 (150mm Deep)** Acoustic Louvre System has been developed to provide acoustic properties to penetrations through the fabric of a building and combines a visually pleasing aesthetic appearance, with an excellent level of weathering performance.

The **WSD150** Acoustic Louvre is typically used for projects that require a moderate level of attenuation of Building Services noise, whilst allowing forced or natural ventilation through a terminal device.

The **WSD150** can be supplied to suit particular applications, with different finishes and options as required.

All louvres are designed to suit your individual project, and our Team of Sales Engineers can assist with the design of the louvre package for the optimum product selection.



DESIGN AND MANUFACTURE

The **WSD150** Acoustic Louvre System can be used for Air Inlet and Outlets to Air Conditioning Plant, such as Chillers or Condensing Units, as well as screening walls for cooling towers and process plant amongst others.

The Louvres are manufactured to exacting standards, and are fabricated in modules using side fixed mechanical fixings to give a robust and stable structure.

The modules can be fixed together to form larger screening areas to suit airflow and screening requirements and pressure loss requirements.



PERFORMANCE DATA

Type **WSD150** Acoustic Louvre has the following Acoustic Performance

Sound Reduction Index (dB) at Octave Band Centre Frequencies (Hz)

Type	63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz
WSD150	3	3	5	8	13	15	15	13
WSD150V	5	6	8	14	20	25	23	20

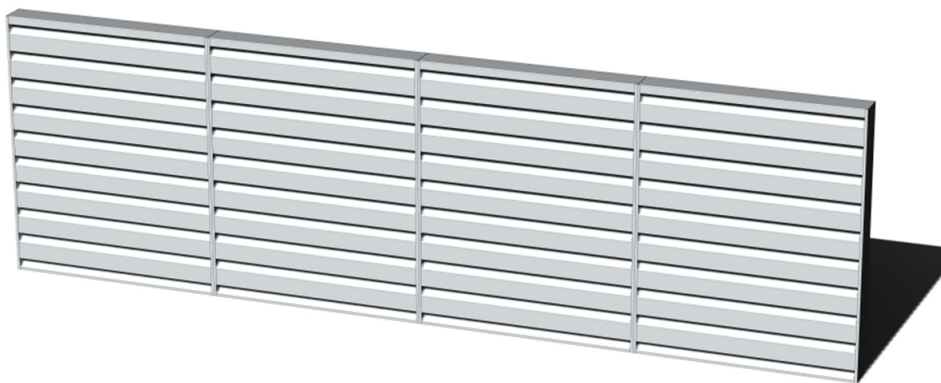


Figure 1 - Acoustic Louvre Modules

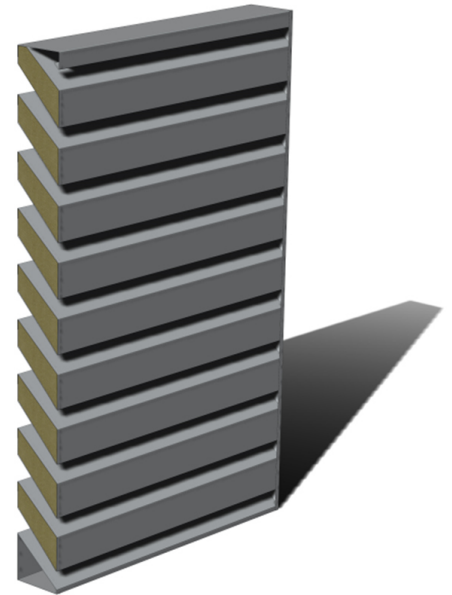


Figure 2 - Acoustic Louvre Module

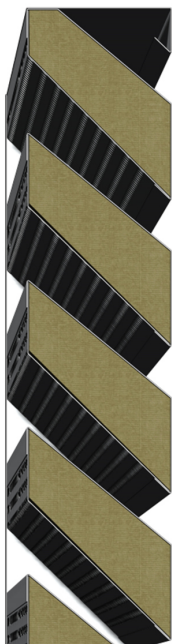


Figure 3 - Single Bank Acoustic Louvre Module.

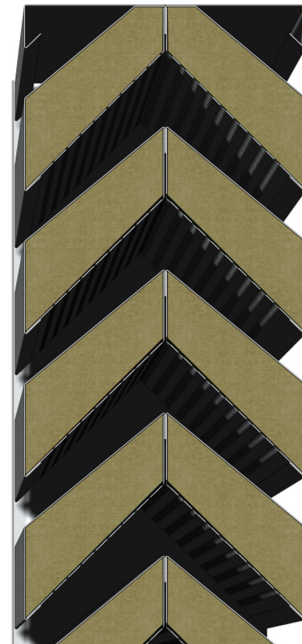


Figure 4 - Type **WSD150V** Double Bank Acoustic Louvre Module.



TYPICAL SPECIFICATION

WSD150 Modular Louvres.

Manufacturer:	Conabeare Acoustics Limited - 0118 930 3650
Louvre Type:	WSD150 (150mm Deep) Acoustic Louvre.
Materials:	Pre-galvanised steel sheet.
Frame:	Pressed pre-galvanised steel frame.
Acoustic Infill:	45kg/m ³ density mineral wool retained behind a glass fibre tissue facing and expanded or perforated metal skin having minimum 30% free area.
Pitch:	150mm pitch with 150mm deep blade.
Finish:	Mill Finish as Standard.
Description:	Fabricated Steel Acoustic Louvre System comprising pre-galvanised steel components throughout. Blades to be fitted using mechanical fixings. Louvre system to be factory assembled components and supplied in sections for incorporation into the works.

AVAILABLE OPTIONS

- Birdmesh Guards to the rear face.
- Insect mesh Guards to the rear face.
- Polyester Powder Coat to a Standard RAL Colour.
- Polyester Powder Coat to a RAL Metallic Colour.
- Painted finish to a standard RAL colour.
- Colour Coated - Pre-finished steel fabrication.
- Stainless Steel Fabrication.
- Aluminium Fabrication.
- Single Leaf Door.
- Double Leaf Doors.
- Dampers - Fire/Smoke or Volume Control.
- Steelwork Supports.
- Mitred Corners.
- Bespoke Flashings.
- Flanged or Un-flanged Frames.

AVAILABLE SIZES

Louvres are supplied in Modular Format with individual component sizes of up to 3000mm wide x 3000mm high.

The minimum height for the louvre is 300mm and louvre heights not matching the 150mm module increments are constructed with adjustments made to top or bottom dummy blade sections.

Multi section modules may require centre mullions or transoms to ensure that structural stability is maintained.

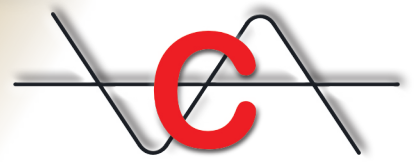
ENVIRONMENTAL CONSIDERATIONS

All items are produced in the UK from UK sourced suppliers and are constructed from recyclable materials throughout.

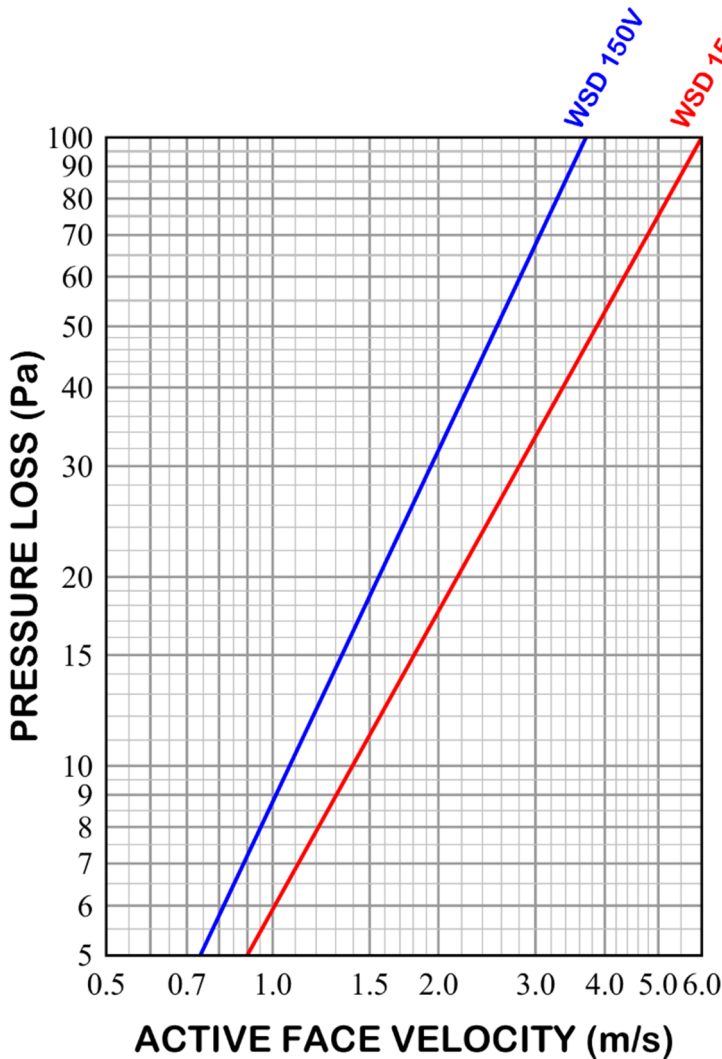
All items are supplied to ensure minimal handling, transportation and waste and as such all raw materials are ordered on a project by project basis to facilitate this.

The louvres are supplied in stackable modules to enable any transportation to be fully utilised.

All packaging is kept to a minimum and mainly consists of recyclable cardboard or bubble wrap.



PRESSURE LOSS



Pressure Loss % Increase		
Installed Situation	WSD150	WSD150V
Plenum To Duct (Supply air from atmosphere)	As Graph	As Graph
Duct to Plenum (Exhaust air to atmosphere)	25%	8%
Plenum to Plenum (Supply air from atmosphere)	50%	30%
Plenum to Plenum (Exhaust air to atmosphere)	66%	40%

$$\text{Active Face Velocity (m/s)} = \frac{\text{Volume Flow Rate (m}^3\text{/s)}}{(\text{Width (m)} \times (\text{Height (m)} - 0.15))}$$

EXAMPLE

WSD150 Exhaust Louvre at 1.6 metres wide x 2.1 metres high with a duty of 6.2m³/s

$$\text{Louvre Active Face Velocity} = \frac{6.2\text{m}^3\text{/s}}{(1.6\text{m} \times (2.1\text{m} - 0.15))} = 1.98\text{m/s}$$

From Graph Horizontal Axis 1.98m/s = 17Pa Pressure Loss

Exhaust Louvre Correction (Duct to Plenum 10%) of 1.1 → 17Pa × 1.1 = 18.71Pa

Louvre Pressure Drop = 19Pa

NOTE: Pressure Loss Figures are shown without Bird/Insect mesh guards or any other optional extra.

Acoustic Louvre - WSD150

11 Chiltern Enterprise Centre, Station Road, Theale, Berkshire. RG7 4AA.

Telephone [0118 930 3650](tel:01189303650)

sales@conabeare.co.uk

Facsimile [0118 930 3912](tel:01189303912)

www.conabeare.co.uk



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