Acoustic Louvres - WSD300

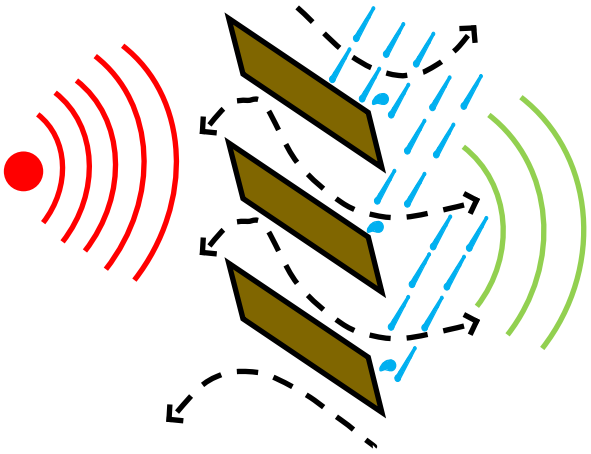
INTRODUCTION

Type **WSD300 (300mm 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 **WSD300** Acoustic Louvre is typically used for projects that require a good level of attenuation of Building Services noise, whilst allowing forced or natural ventilation through a terminal device.

The **WSD300** 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 **WSD300** 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 pressure loss requirements.

CONABEARE ACOUSTICS

TYPICAL DETAILS

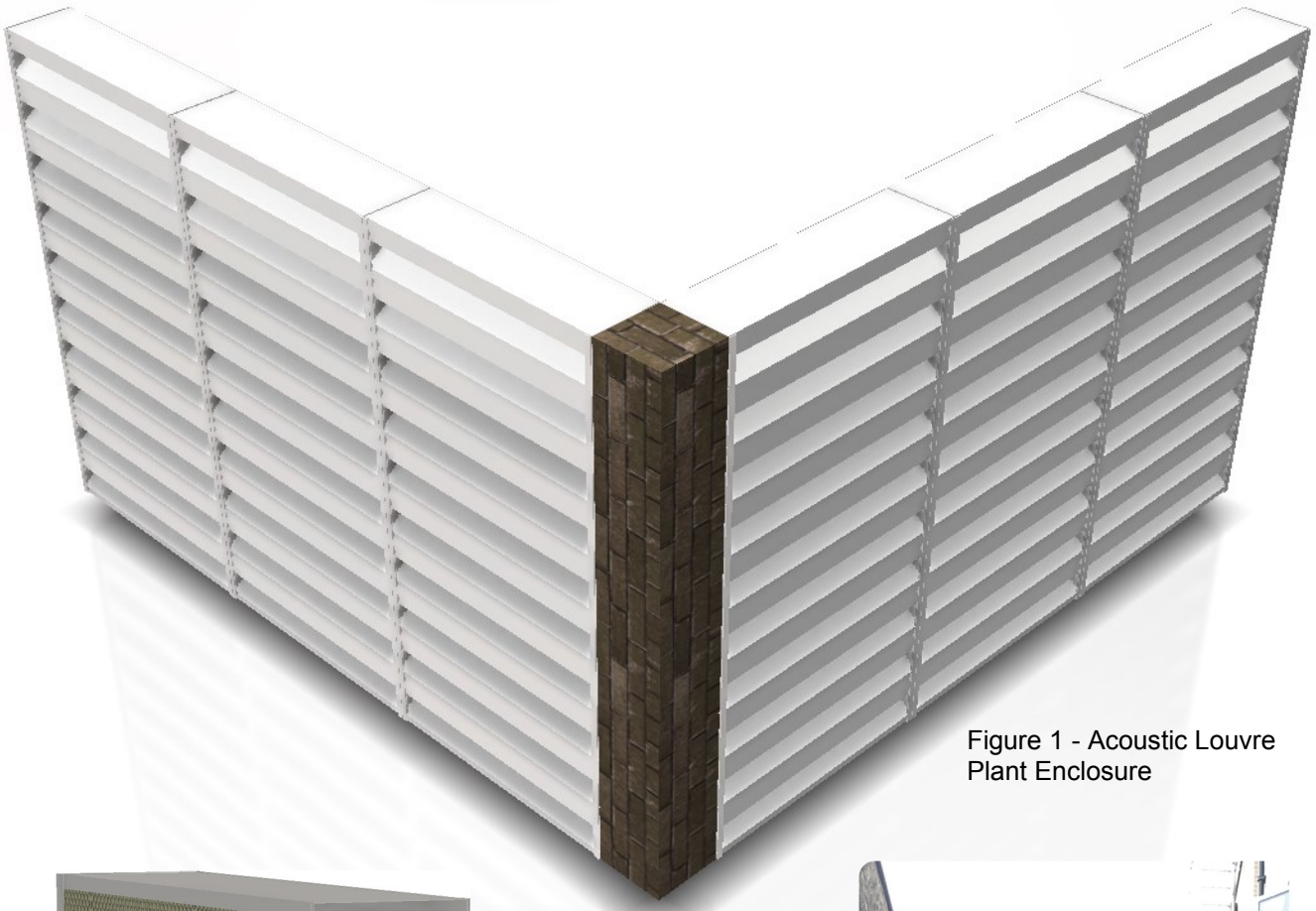


Figure 1 - Acoustic Louvre Plant Enclosure

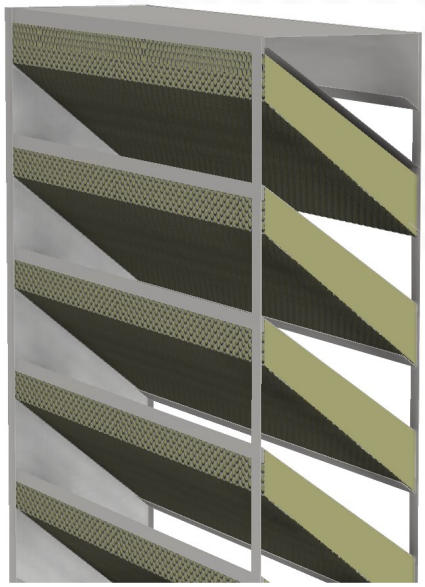
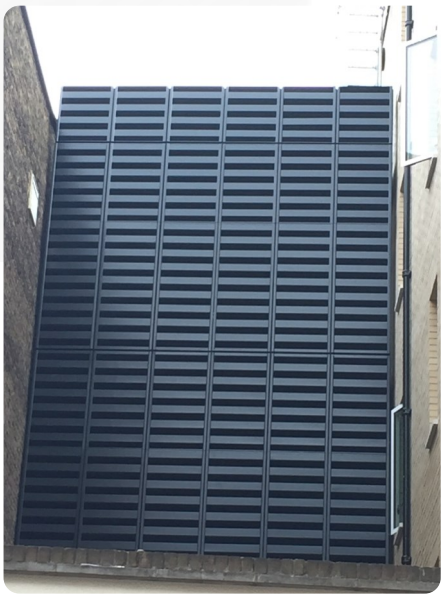


Figure 2 - Single Bank Acoustic Louvre



Acoustic Louvre Wall

PERFORMANCE DATA

Type **WSD300** Acoustic Louvre has the following Acoustic Performance

Insertion Loss (dB) at Octave Band Centre Frequencies (Hz)

WSD300	63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz
	5	5	7	12	16	19	15	15

TYPICAL SPECIFICATION

WSD300 Modular Louvres.

Manufacturer:	Conabeare Acoustics Limited - 0118 930 3650
Louvre Type:	**WSD300** (300mm 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:	250mm pitch with 300mm 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 to be incorporated 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
- Colour Coated - Pre-finished steel fabrication
- Stainless Steel Fabrication
- Aluminium Fabrication
- Single Leaf Door
- Double Leaf Doors
- Dampers - Fire/Smoke or Volume Control
- Security Bars
- 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 2400mm wide x 2400mm high.

The minimum height for the louvre is 550mm and louvre heights not matching the 250mm 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.

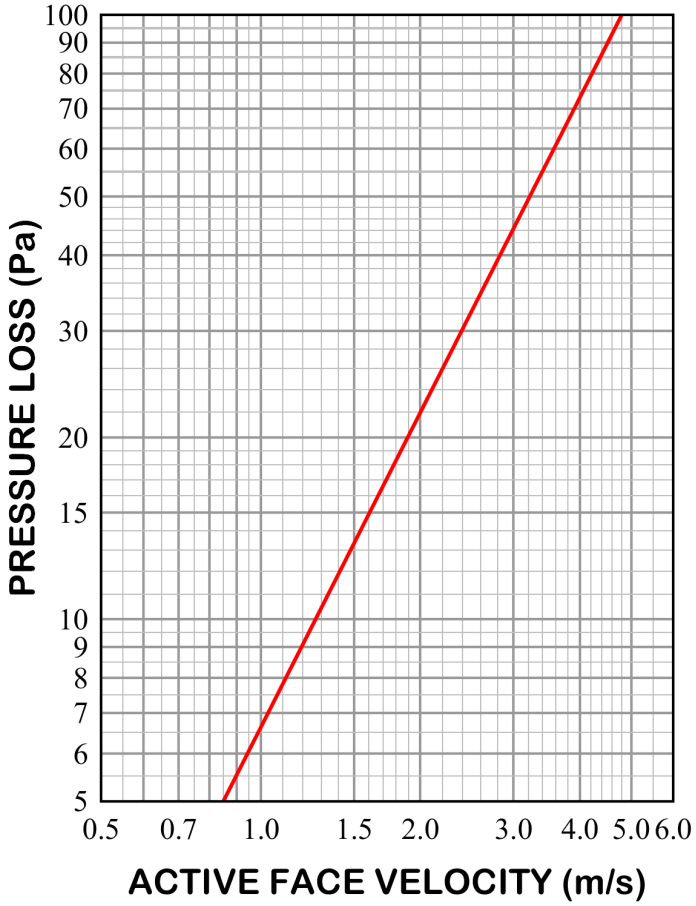
All items are supplied to ensure minimal handling, transportation and waste and as such all raw materials are ordered on a project by project basis to facilitate this.

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

$$\text{Active Face Velocity (m/s)} = \frac{\text{Volume Flow Rate } (m^3/s)}{(\text{Width (m)} \times (\text{Height (m)} - 0.3))}$$



Pressure Loss % Increase Installed Situation	
Plenum to Duct (Supply air from atmosphere)	As Graph
Duct to Plenum (Exhaust air to atmosphere)	10%
Plenum to Plenum (Supply air from atmosphere)	50%
Plenum to Plenum (Exhaust air to atmosphere)	66%

Example

WSD300 Ducted exhaust Louvre at 3.2 metres wide x 1.8 metres high with a duty of 6.2m^3/s

Therefore Louvre Active Face Velocity = 6.2/(3.2 x (1.8-0.3)) = 1.29 m/s

From Graph Horizontal Axis 1.29 m/s = 10 Pa Pressure Loss

Exhaust Louvre Correction of 1.1

Therefore 10 Pa x 1.1 = 11 Pa

Louvre Pressure Drop therefore equates to 11 Pa

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

Acoustic Louvres - WSD300

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