



## Hudson Series® 100 Acoustic Louvre



Louvreclad's Hudson Series® acoustic louvre is the ideal solution when aesthetics is as important as noise reduction, ventilation, and weather protection.

### Distinctive Features:

- Enclosures for air-conditioning intakes and generators, pump rooms, and complete stand-alone plant rooms.
- Insulated with glass wool to reduce noise transmission.
- Multiple options available for selection to counteract specific acoustic frequency bandwidths.
- Hudson Series options include 100mm, 200mm, 300mm, 400mm and 600mm.

### Attention to Detail:

- Tested to Australian Standards AS1191-2002
- 17% free open area
- 180mm Blade Pitch
- Rw rating of 12



### ACOUSTIC SOUND CONTROL

### Performance tested to AS/NZS 4740:2000



Rain Defence: Standard: Class C



Aerodynamics: Standard: Class 3

*Note: Full CFD report available on request*

**DAY  
DESIGN**

## ACOUSTIC LOUVRE INSERTION LOSS TEST CERTIFICATE



**Client:**  
**Lowline Pty Ltd**

**Test Specimen:**  
**Hudson 100 Series Acoustic Louvre**

Frequency - Hz	Insertion Loss - dB	
	1/3 Octave	1/1 Octave
100	3	4
125	5	
160	4	
200	5	5
250	5	
315	6	
400	6	8
500	8	
630	9	
800	11	12
1000	12	
1250	14	
1600	15	16
2000	16	
2500	17	
3150	16	15
4000	15	
5000	14	

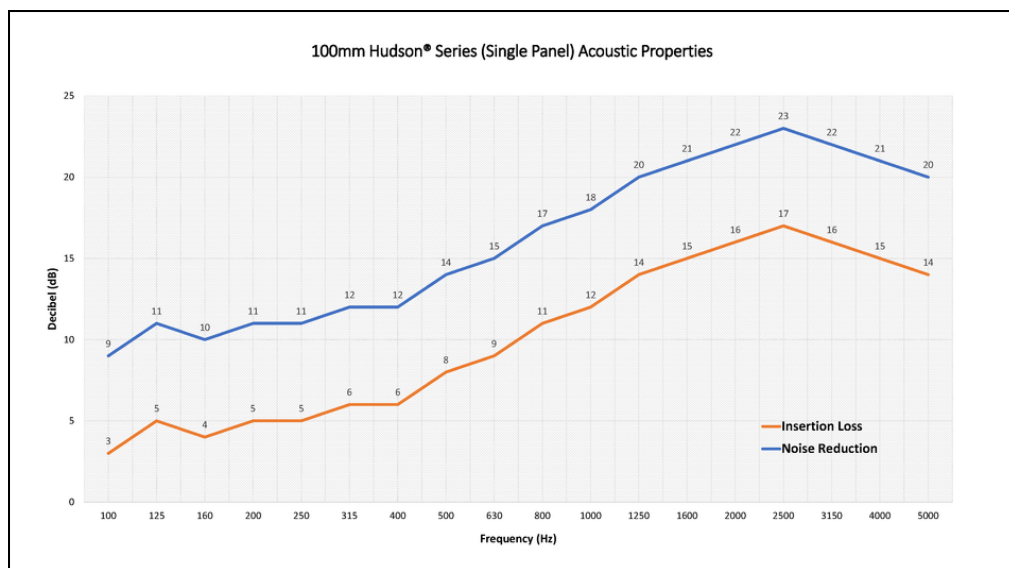
**Australian Standards:**  
Measured according to AS 1191-2002

**Test Specimen Dimensions:**  
1800 mm (H) x 1200 mm (W) x 100 mm (D)

**Test Location:**  
Twin Reverberation Rooms  
National Acoustic Laboratories  
126 Greville Street, Chatswood NSW

**Instrumentation:**

- Brüel and Kjær Two Channel Pulse Analyser (assembly 2825, 7521, 2 x 3015)
- Brüel and Kjær Cathode Follower type 2639
- Brüel and Kjær Cathode Follower type 2669
- Brüel and Kjær Microphone type 4144
- Brüel and Kjær Microphone type 4179
- Brüel and Kjær Sound Level Calibrator type 4231
- Yamaha Professional Sound Sources type S50



**Date of Test:** Thursday, 20 August 2009  
**Project Number:** 4203D

**Test Engineer:** Alex Li, BE(Mech) Hons  
For and on behalf of Day Design Pty Ltd

## GENERAL NOTES

NR (Noise Reduction): A value that represents the difference in sound pressure level between any two points along the path of sound propagation. The unit of measurement is decibels [dB]

Transmission Loss (TL): A reduction of sound levels as a result of passage through an obstruction such as a wall, partition, or ductwork. These values are expressed with a unit of decibels [dB].

Insertion Loss (IL): The reduction of noise level at a given location due to placement of a noise control device in the sound path between the sound source and that location. Usually rated in octave bands or 1/3-octave bands

Far Field: [1] Part of the sound field where the sound wave is spreading spherically. [2] Sound decays at 6 dB for a doubling of the distance from the sound source.

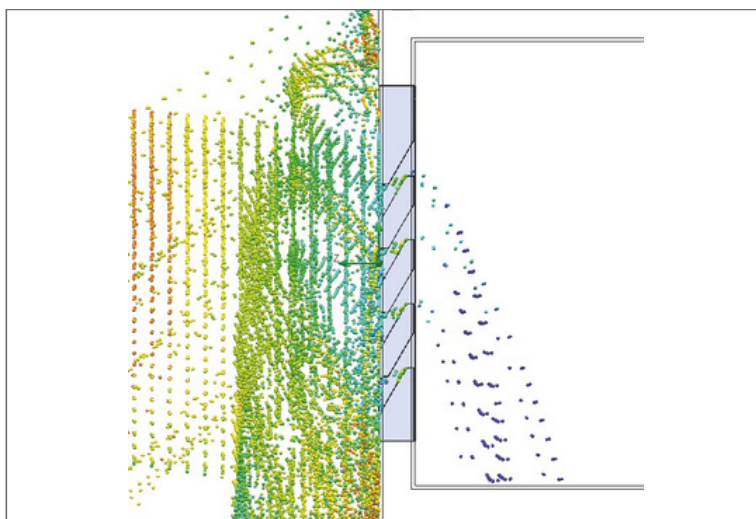
## PERFORMANCE DATA - STANDARD LOUVRE

Louvreclad Hudson Series® 100 is a 100mm deep with 180mm pitch and 17% Free Open area industry standard acoustic louvre. Tested to AS1191-2002 and AS 4740:2000 the Hudson Series 100 achieves Class 3 for aerodynamics and Class C 95% effective rain defence rating.

### Rain defence tested to AS/NZS 4740:2000

Rain penetration analysis is tested to AS/NZS 4740:2000 and was conducted at a constant rain flow rate with ventilation rates ranging from 0.5m<sup>3</sup>/s to 3.5 m<sup>3</sup>/s.

The results concluded that the Hudson Series® 100 louvre's average rain penetration effectiveness at core velocities from 0 to 3.5m/s was 95% effective achieving a Class C rating.

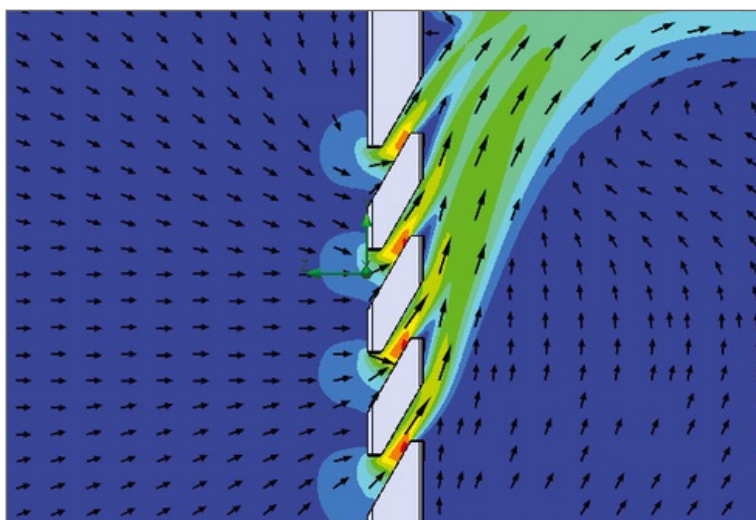


Rain penetration

### Aerodynamics tested to AS/NZS 4740:2000

The aerodynamics and discharge coefficient analysis was conducted to AS/NZS 4740:2000 with the ventilation rate ranging from 0.4m/s to 3.4m/s.

The Hudson Series® 100 louvre performance resulted in an average discharge coefficient of the ventilator was 0.441 and the effective aerodynamic area was 0.16m<sup>2</sup> with Class 3 performance rating.



Velocity vectors



## DRAFT SPECIFICATION

Acoustic Louvres will be Louvreclad Hudson Series® 100mm with an Rw rating of 12, 17% free open area (F.O.A). Tested to Australian Standard AS1191-2002 and AS 4740:2000 the Hudson Series 100 achieves Class 3 for aerodynamics and Class C 95% effective rain defence rating.

### Base Material & Finish

Louvres will be manufactured in [select base material] finish in [select colour].

### Accessories

Louvres will be fitted with [nominate options/accessories from the selection].

The sound insulation material will be Acoustigard 32.

### Installation and Mounting

Installation and mounting details will be designed in accordance with proprietary systems and recommendations as designed and manufactured by Louvreclad Pty. Ltd. Phone: 1300 165 678 Email: sales@louvreclad.com

### Base Material & Finish Options

- ZINCALUME® steel
- COLORBOND® steel
- GALVABOND® steel
- Mill finish aluminium
- Powder coated aluminium
- Anodised aluminium

Specialised coatings are also available on request.

### Accessories Options

#### Bird/Vermin Mesh

Select from the following:

- aluminium
- stainless steel
- perforated metal

#### Insect Mesh

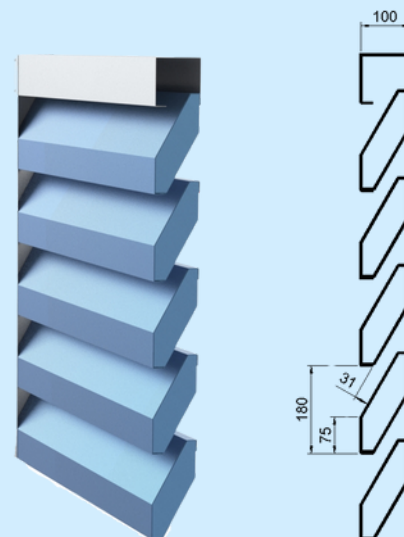
Select from the following:

- aluminium
- fibreglass
- stainless steel

### Sound Insulation

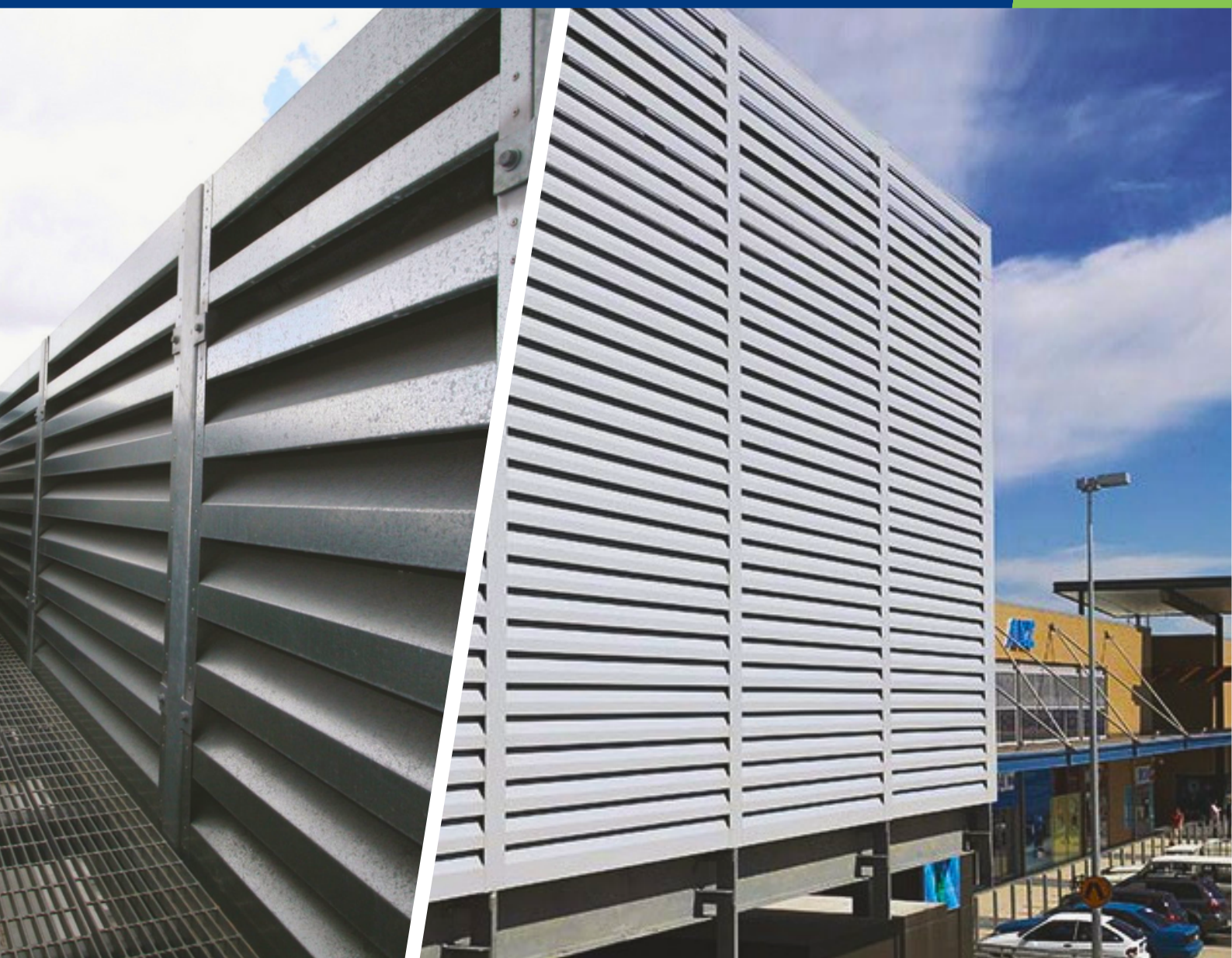
- Bradford™ Acoustigard® 32 [tested to non-combustible standards]

## PROFILES





# Hudson Series® 100 Acoustic Louvre



## **WOULD YOU LIKE TO KNOW MORE?**

If you have any questions about this product, or if you would like to speak to a member of our expert team about how we can tailor a solution for you, call: 1300 165 678 or visit: [louvreciad.com](http://louvreciad.com)