



Hudson Series® 200 Chevron Louvre



Louvreclad's Hudson Series® acoustic louvre is the ideal solution when aesthetics are 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
- 22% free open area
- 180mm Blade Pitch
- Rw rating of 18



ACOUSTIC SOUND CONTROL

Performance tested to AS/NZS 4740:2000



Rain Defence: Standard: Class C



Aerodynamics: Standard: Class 2

Note: Full CFD report available on request

**DAY
DESIGN**

ACOUSTIC LOUVRE INSERTION LOSS TEST CERTIFICATE



Client:
Lowline Pty Ltd

Test Specimen:
**Hudson 200 Chevron Series
Acoustic Louvre**
(2 x Hudson 100 Series Louvres back-to-back)

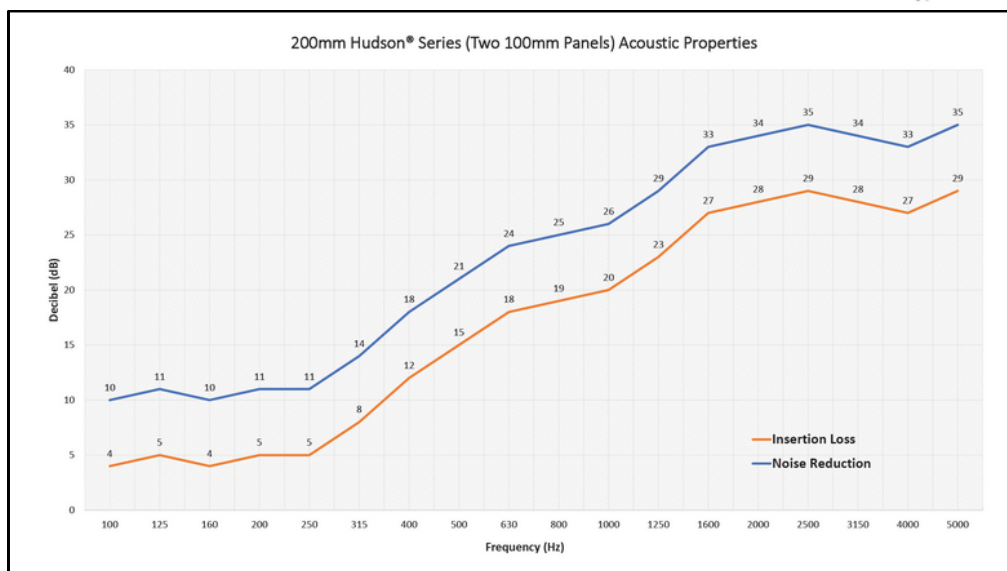
Frequency - Hz	Insertion Loss - dB	
	1/3 Octave	1/1 Octave
100	4	5
125	5	
160	4	
200	5	6
250	5	
315	8	
400	12	15
500	15	
630	18	
800	19	20
1000	20	
1250	23	
1600	27	28
2000	28	
2500	29	
3150	28	28
4000	27	
5000	29	

Australian Standards:
Measured according to AS 1191-2002

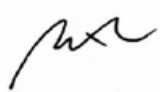
Test Specimen Dimensions:
1800 mm (H) x 1200 mm (W) x 200 mm (D)

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: Friday, 21 August 2009
Project Number: 4203E

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.

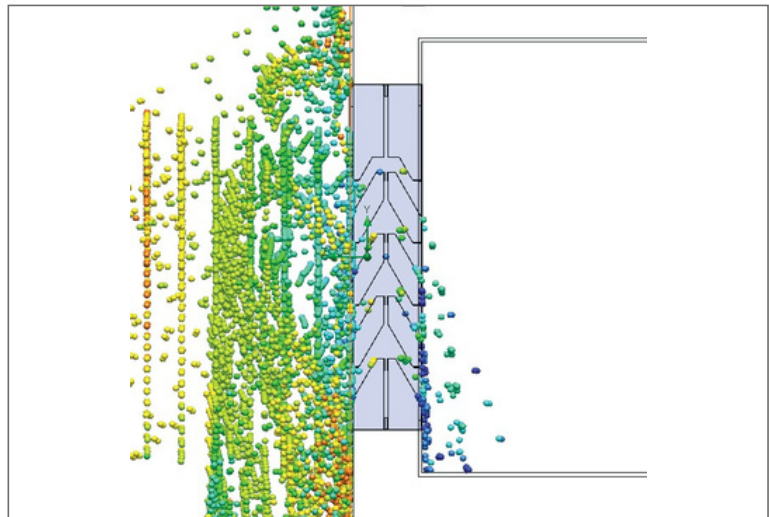
PERFORMANCE DATA - STANDARD LOUVRE

Louvreclad Hudson Series® 200 Chevron is a 200mm deep with 180mm pitch acoustic louvre. It provides excellent noise reduction, good air flow and strong rain defence. Tested to AS1191-2002 and AS 4740:2000, while it only provides 17% Free Open Area, this chevron profile achieves Class 2 for aerodynamics and 95% effective Class C 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 0.5m³/s to 3.5 m³/s.

The results concluded that the Hudson Series® 200 Chevron Louvre's average rain penetration effectiveness at core velocities from 0 to 3.5m/s was 95% effective achieving a Class C rating.

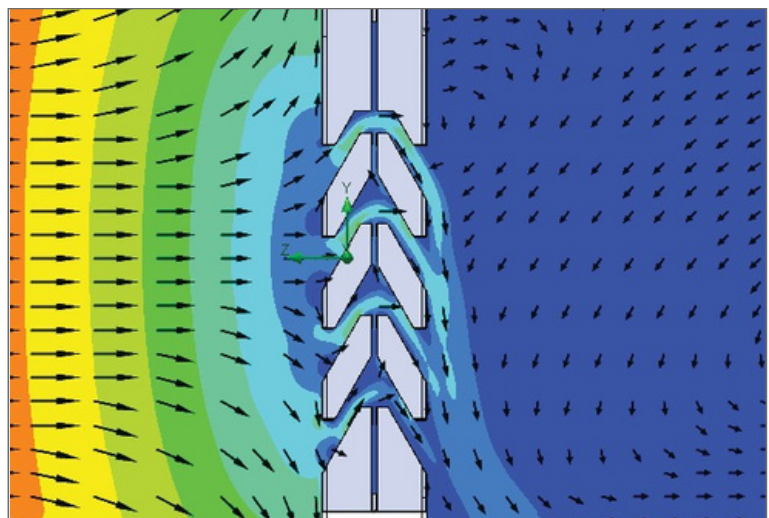


Rain penetration

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® 200 Chevron louvre performance resulted in an average discharge coefficient of the ventilator was 0.510 and the effective aerodynamic area was 0.16m² with Class 2 performance rating.



Velocity vectors

DRAFT SPECIFICATION

Acoustic Louvres will be Louvreclad Hudson Series® 200mm Chevron with an Rw rating of 18, 22% free open area [F.O.A]. Tested to Australian Standard AS1191- 2002 and AS4740:2000, this chevron profile achieves Class 2 for aerodynamics and 95% effective Class C 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

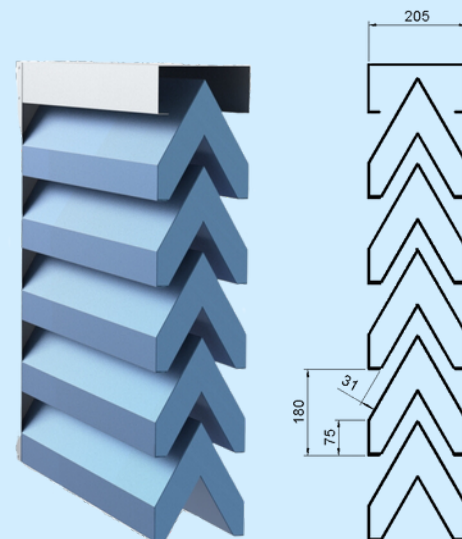
Select from the following:

- aluminium
- fibreglass
- stainless steel

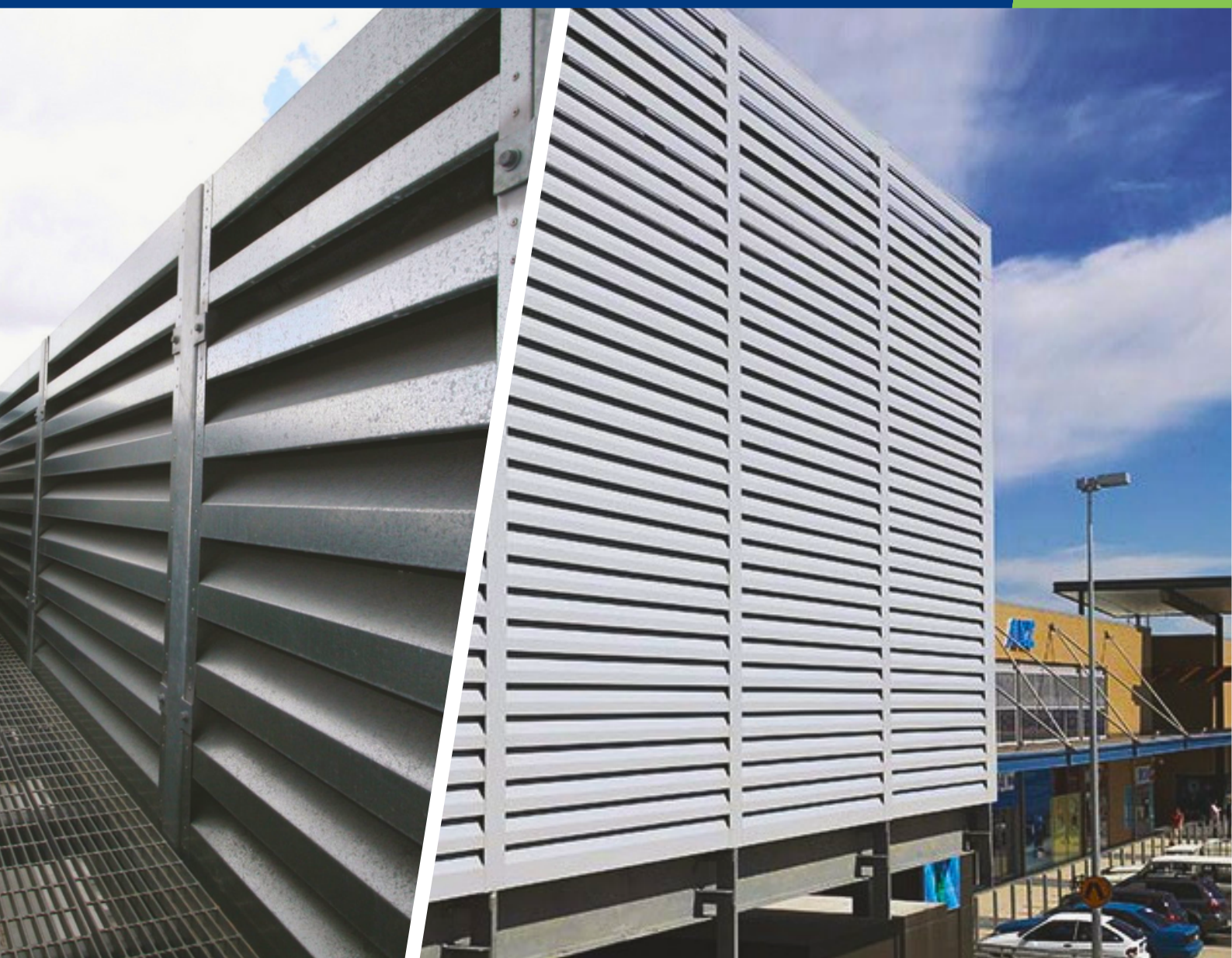
Sound Insulation

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

PROFILES



Hudson Series® 200 Chevron 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