Hudson Series® 400 Chevron Louvre

LOUVRES

Louvreclad's Hudson Series® is an acoustic louvre. It 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
- Range from 100mm, 200mm, 300mm, 400mm and 600mm

Attention to Detail:

- Tested to Australian Standards AS1191-2002
- 33% free open area
- 200mm Blade Pitch
- R_w rating of 21

ACOUSTIC LOUVRE

Performance tested to AS/NZS 4740:2000

Rain Defence: Standard: Class B

Aerodynamics: Standard: Class 1

Note: *Full CFD report available on request.*

DAY DESIGN	ACOUSTIC LOUVRE INSERTION LOSS TEST CERTIFICATE	Test 4203C

Insertion Loss			
Frequency - Hz	1/3 Octave	1/1 Octave	Noise Reduction
100	4	4	10
125	5		11
160	5		11
200	9	11	15
250	10		16
315	14		20
400	16	18	22
500	19		25
630	22		28
800	23	23	29
1000	23		29
1250	24		30
1600	26	27	32
2000	27		33
2500	27		33
3150	25	25	31
4000	24		30
5000	25		31

Test Specimen:

Hudson 400 Chevron Series Acoustic Louvre

(2 x Hudson 200 Series Louvres back-to-back)

Australian Standards:

Measured according to AS 1191-2002

Test Specimen Dimensions:

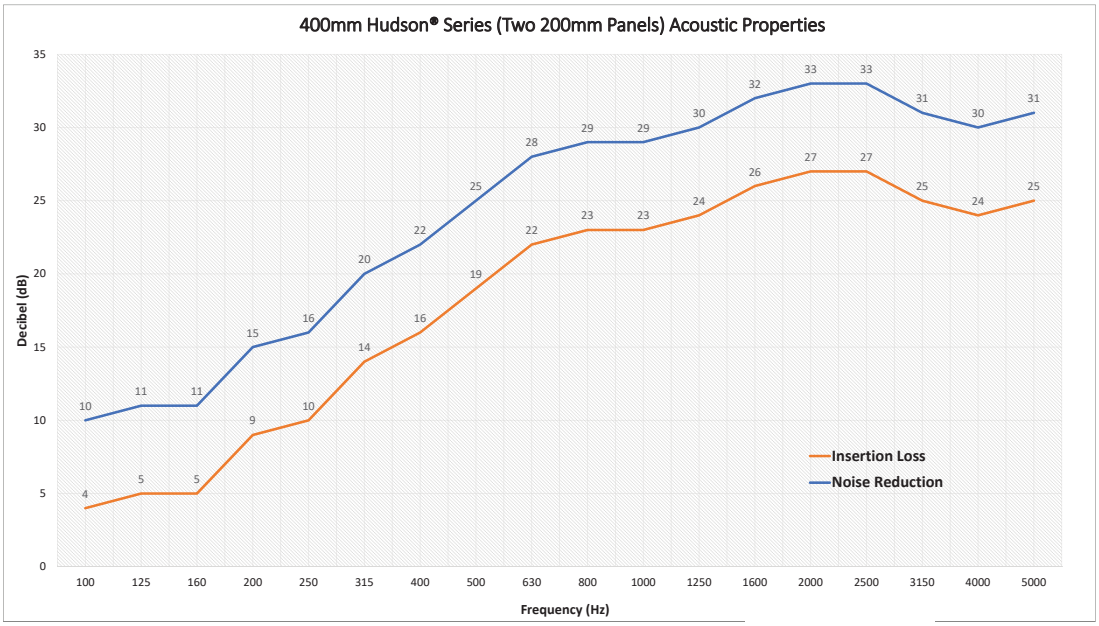
1800 mm (H) x 1200 mm (W) x 400 mm (D)

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

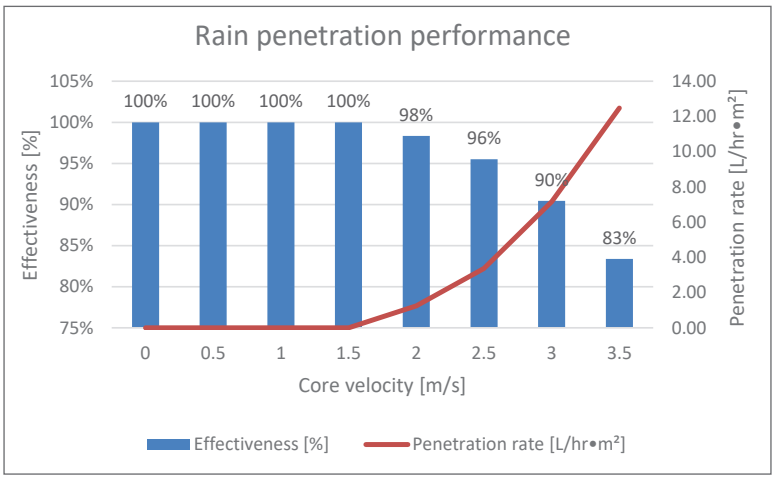


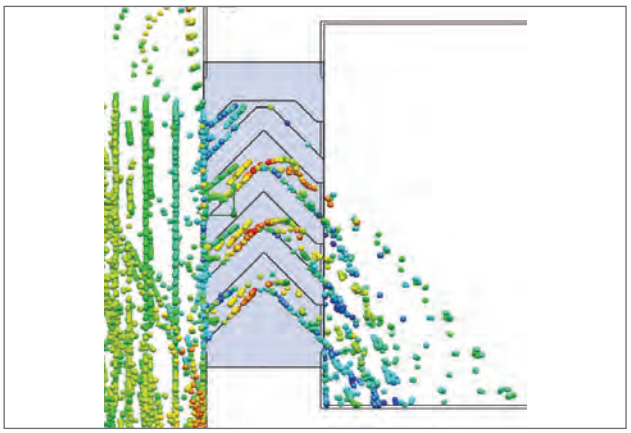
Date of Test: Thursday, 20 August 2009
Project Number: 4203C

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

PERFORMANCE DATA - STANDARD LOUVRE

Louvreclad Hudson Series®400 Chevron is a 400mm deep with 200mm pitch acoustic louvre that provides superb noise reduction and first-rate rain defence and air flow. Tested to AS1191-2002 and AS 4740:2000 the Hudson Series 400 achieves Class 1 for aerodynamics and 96% effective Class B rain defence rating.

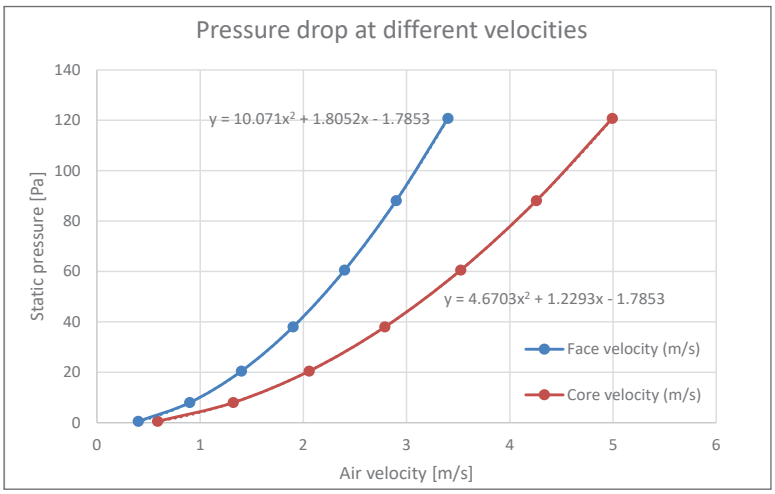


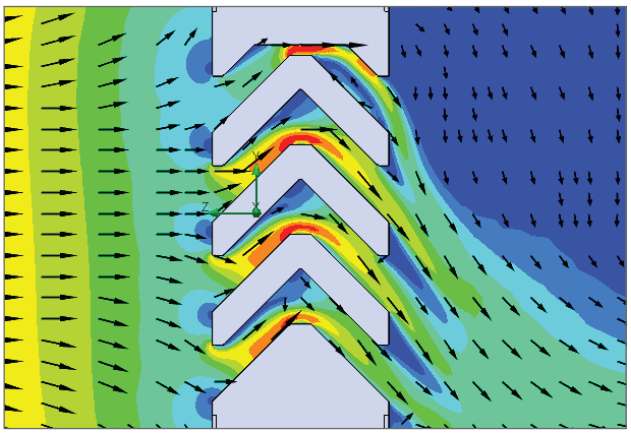


Rain penetration

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® 400 Louvre's average rain penetration effectiveness at core velocities from 0 to 3.5m/s was 96% effective achieving a Class B rating





Velocity vectors

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. Table 2 summarizes the ventilator's aerodynamic performance at different face velocities. The Hudson Series® 400 louvre performance resulted in an average discharge coefficient of the ventilator was 0.845 and the effective aerodynamic area was 0.24m² with Class 1 performance rating.

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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) is 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.

DRAFT SPECIFICATION

Acoustic Louvres will be Louvreclad Hudson Series® 400mm with an Rw rating of 21, 33% free open area (F.O.A) Tested to Australian Standard AS1191-2002 and AS4740:2000, Hudson Series 400 achieves Class 1 for aerodynamics and 96% effective Class B 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).

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 Options

Zincalume® | Colorbond® | Galvabond®

Mill finish Aluminium, Powdercoated Aluminium, Anodised Aluminium

Specialised coatings are also available on request.

Accessories

Bird/Vermin Mesh

Select from the following:

- galvanised
- perforated metal
- expanded metal

Insect Mesh

Select from the following:

- aluminium
- fibreglass
- stainless steel
- perforated metal

Other Louvre Accessories

- Security screens and bars
- Volume control dampers
- Fire and smoke dampers
- Dust filters

PROFILES

Hudson Series® 400 Louvre

F.O.A -> Free Open Area

Hudson Series®

LOUVRES

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: **louvreclad.com**