



Louvreclad's Hudson Series<sup>®</sup> 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
- Range from 100mm, 200mm, 300mm, 400mm and 600mm

#### Attention to Detail:

- Tested to Australian Standards AS1191-2002
- 22% free open area
- 180mm Blade Pitch
- R<sub>w</sub> rating of 12



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



Rain Defence:Standard: Class CAerodynamics:Standard: Class 3Note:Full CFD report available on request.

## Hudson Series®

DESIGN

DAY



## ACOUSTIC LOUVRE INSERTION LOSS TEST CERTIFICATE

Insertion Loss			
Frequency - Hz	1/3 Octave	1/1 Octave	Noise Reduction
100	3	4	9
125	5		11
160	4		10
200	5	5	11
250	5		11
315	6		12
400	6	8	12
500	8		14
630	9		15
800	11	12	17
1000	12		18
1250	14		20
1600	15	16	21
2000	16		22
2500	17		23
3150	16	15	22
4000	15		21
5000	14		20

#### Test Specimen:

#### Hudson 100 Series Acoustic Louvre

Australian Standards: Measured according to AS 1191-2002

# ACOUSTI

**Test 4203D** 

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





### **PERFORMANCE DATA - STANDARD LOUVRE**

Louvreclad Hudson Series<sup>®</sup>100 is a 100mm deep with 180mm pitch and 22% 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 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<sup>®</sup> 100 Louvre's average rain penetration effectiveness at core velocities from 0 to 3.5m/s was 95% effective achieving a Class C 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<sup>®</sup> 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.



#### **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® 100mm with an Rw rating of 12, 22% 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).

#### 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 & Finishes 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
- stainless steel
- perforated metal

#### **Insect Mesh**

Select from the following:

- aluminium
- fibreglass
- stainless steel

### 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: **louvreclad.com**