SONIC SERIES ACOUSTIC LOUVRE SL4-60

The Science of Silence

PRODUCT OVERVIEW

The Sonic Series acoustic louvre SL4-60 is a 600mm deep acoustic louvre designed to provide controlled airborne sound reduction while maintaining airflow performance. Specify where acoustic attenuation is the primary design constraint and system depth allows for a deeper louvre configuration.

Developed to balance acoustic, aerodynamic and weather performance requirements, the SL4-60 provides the highest airborne sound reduction of any one-and-a-half stage configuration within the Sonic Series. At Rw 33, it exceeds the acoustic rating of chevron blade configurations while maintaining Class 1 airflow performance and 35% free open area.

The product balances three competing requirements:

- Acoustic attenuation
- Aerodynamic efficiency
- Weather protection

KEY FEATURES

- 600mm deep acoustic louvre
- Rw 33 (C −1, Ctr −4) assessed to AS 1191-2002, rated to AS/NZS ISO 717.1
- Class 1 airflow performance to AS 4740
- Class C rain resistance to AS 4740
- Suitable where acoustic attenuation is prioritised and system depth permits a deeper louvre configuration

APPLICATIONS

- Mechanical plant screens
- Generator and compressor enclosures
- HVAC intake and exhaust openings
- Industrial buildings
- Infrastructure facilities
- Commercial plant rooms

TECHNICAL SPECIFICATIONS

System type	Acoustic louvre – one-and-a-half stage configuration
Model	SL4-60
Construction	**Nominal depth:** 600mm | **Frame:** Steel | **Blades:** Steel (front) / perforated steel (rear) | **Infill:** Mineral wool
Acoustic performance	Rw 33 (C −1, Ctr −4) assessed to AS 1191-2002, rated to AS/NZS ISO 717.1
Airflow classification	Class 1 to AS 4740
Free Open Area (FOA)	35%
Coefficient of discharge (Cd)	0.83
Effective aerodynamic area (EFA)	0.29
Rain resistance	Class C to AS 4740 | **Average Effectiveness:** 0.946

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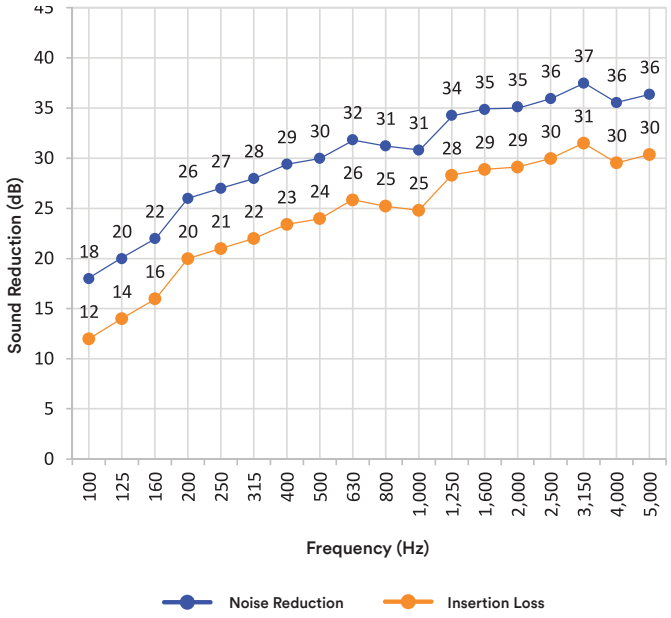
AIRBORNE SOUND REDUCTION

The SL4-60 acoustic louvre provides controlled airborne sound reduction while maintaining airflow performance. Acoustic performance has been assessed and rated in accordance with AS/NZS ISO 717.1.

HIGHLIGHTS

- Weighted Sound Reduction Index Rw 33 (C −1, Ctr −4)
- Insertion loss 27 dB (C −1, Ctr −4)
- Octave band performance data

SL4-60 ACOUSTIC LOUVRE SOUND REDUCTION



RESULTS FOR SONIC SERIES ACOUSTIC LOUVRE SL4-60

Frequency (Hz) - 1/3 Octave	Noise Reduction	
	1/3 Octave	1/1 Octave
100	18	20
125	20	
160	22	
200	26	27
250	27	
315	28	
400	29	30
500	30	
630	32	
800	31	32
1000	31	
1250	34	
1600	35	35
2000	35	
2500	36	
3150	37	36
4000	36	
5000	36	

Full performance data available on request

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AIRFLOW PERFORMANCE

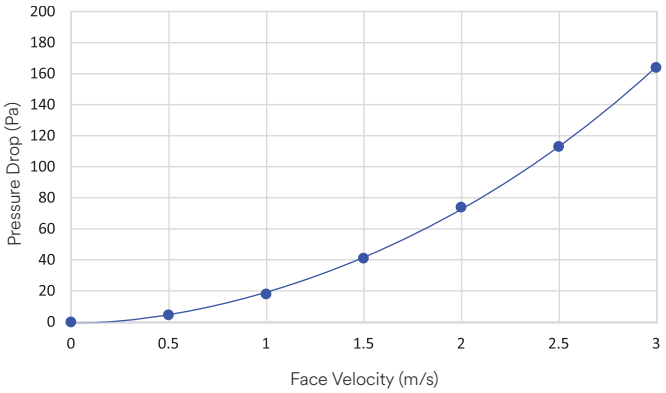
The SL4-60 acoustic louvre airflow performance has been assessed in accordance with AS 4740 to determine pressure drop and aerodynamic performance characteristics across a range of operating velocities.

HIGHLIGHTS

- Low pressure drop characteristics support applications where airflow performance is a priority
- **Free Open Area (FOA):** 35%
- **Coefficient of Discharge (Cd):** 0.83
- **Effective Aerodynamic Area (EFA):** 0.29
- **Airflow Performance Classification:** Class 1 to AS 4740

PRESSURE DROP DATA

SL4-60 LOUVRE PRESSURE DROP



SL4-60 LOUVRE AIRFLOW PERFORMANCE DATA

Face Velocity (m/s)	Throat Velocity (m/s)	Pressure Drop (Pa)	Ci (-)
0.5	2.3	4.5	0.83
1	4.5	18	0.83
1.5	6.8	41	0.83
2	9.1	74	0.82
2.5	11.4	113	0.83
3	13.6	164	0.83

Full performance data available on request

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WEATHER PERFORMANCE

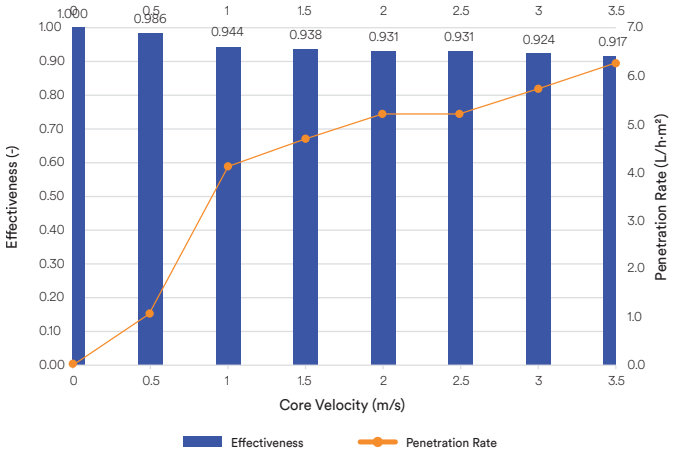
The SL4-60 acoustic louvre has been assessed for rain penetration resistance in accordance with AS 4740 Appendix B. The louvre provides weather protection suitable for general ventilation applications where acoustic performance and airflow are primary design considerations.

HIGHLIGHTS

- **Average Effectiveness:** 0.946
- **Rain Resistance Classification:** Class C

PERFORMANCE DATA

SL4-60 LOUVRE RAIN PENETRATION PERFORMANCE



SL4-60 LOUVRE RAIN RESISTANCE PERFORMANCE DATA

Core Velocity (m/s)	Penetration Rate (L/h.m2)	Effectiveness	Rain Penetration Class
0	0	1.000	A
0.5	1	0.986	B
1	4.2	0.944	C
1.5	4.7	0.938	C
2	5.2	0.931	C
2.5	5.2	0.931	C
3	5.7	0.924	C
3.5	6.3	0.917	C

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COMPLIANCE AND STANDARDS

- Acoustic performance rated in accordance with AS/NZS ISO 717.1
- Airflow performance classification to AS 4740
- Rain resistance classification to AS 4740
- Project-specific acoustic and aerodynamic configurations available
- Performance data derived from standards-based engineering assessment methodologies

ORDERING AND SUPPORT

AcousTech louvres are available in standard module sizes or engineered to project-specific dimensions.

Customisation options include:

- Tailored width and height
- Project-specific colour finishes
- Integration with façade and plant screen systems

To discuss your project requirements, contact AcousTech.

HOW TO SPECIFY – SL4-60

Category	Specification
System	Sonic Series acoustic louvre - SL4-60
Construction	600mm deep steel acoustic louvre with steel front blade, perforated steel rear liner and mineral wool infill
Finish	Galvanised steel or aluminium, powder-coated to nominated colour
Acoustic Performance	Rw 33 (C −1, Ctr −4) assessed to AS 1191-2002, rated to AS/NZS ISO 717.1
Airflow Performance	FOA 35%, Cd 0.83, Class 1 to AS 4740
Rain Resistance	Class C to AS 4740

SYSTEM SELECTION GUIDANCE

The SL4-60 is typically used where:

- The highest level of airborne sound reduction within a one-and-a-half stage louvre configuration is required
- System depth allows for a 600mm louvre
- Airflow requirements are compatible with Class 1 classification and 35% free open area
- Weather protection performance is also a design consideration

For applications where system depth is constrained, shallower configurations within the Sonic Series should be considered.

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QUICK REFERENCE SPECIFICATIONS

Category	Specification
System	Sonic Series acoustic louvre – SL4-60
Configuration	One-and-a-half stage
Nominal Depth	600mm
Frame Construction	Steel
Blade Construction	Steel (front) / perforated steel (rear)
Acoustic Infill	Mineral wool
Weighted Sound Reduction Index	Rw 33 (C −1, Ctr −4) assessed to AS 1191-2002, rated to AS/NZS ISO 717.1
Insertion Loss	27 dB (C −1, Ctr −4)
Acoustic Assessment Standard	AS 1191-2002
Rating Determination	AS/NZS ISO 717.1
Free Open Area (FOA)	35%
Coefficient of Discharge (Cd)	0.83
Effective Aerodynamic Area (EFA)	0.29
Airflow Classification	Class 1 to AS 4740
Average Rain Effectiveness	0.946
Rain Resistance Classification	Class C to AS 4740
Surface Finish	Galvanised steel or aluminium, powder-coated to nominated colour
Standard Sizes	Modular sizing available
Custom Options	Project-specific dimensions and finishes available
Installation	Suitable for mechanical intake and exhaust applications
Compliance	Acoustic, airflow and rain performance determined in accordance with relevant Australian Standards using standards-based engineering assessment methodologies

AcousTech **(ABN 42 631 902 899 ACN 631 902 899)**

Call us on
1300 508 232

Email
enquiry@acoustech.com.au

Visit
www.acoustech.com.au

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