

**Typical uses include:**

- Fresh air intakes for ventilation systems
- Mechanical equipment screens and penthouses
- Noise barriers
- Process air intakes
- Cooling tower inlet silencers and screens

**Special Features:**

- Suitable for use behind architectural louvres (allow 100mm air space)
- Bold, curved, blade appearance
- A highly economical louvre system - up to 30% lower in price than equivalent linear blade designs

**NOISHIELD® LOUVRES**

IAC Bulletin NL-DS/1.00

**Model R and LP Single and Double Banked Acoustic Louvres**

- Control noise
- Permit airflow
- Suitable for any application, in any size

The IAC Noishield® louvre is a multi-purpose louvre which permits the flow of air while shielding the environment from noise. Noishield® louvres are available in two models (R and LP) and a complete range of standard modular sizes. This means they can satisfy a wide range of performance requirements, especially where space is limited and architectural standards of appearance must be met. Where access is required, Noishield® louvres can be supplied as doorsets, for inclusion in louvre screens or as stand-alone units. For higher acoustic performance, the louvres can be installed back-to-back (models 2R and 2LP).

**Certified Performance Data**

**TABLE I - AERODYNAMIC PERFORMANCE**

Noishield Louvre Model	Static Pressure Drop, Pascals (N/m <sup>2</sup> )											
	10	20	30	40	50	60	70	80	90	100	150	200
Face Velocity, metres per second												
Model R	0.98	1.39	1.71	1.95	2.18	2.39	2.60	2.75	2.93	3.10	3.78	4.36
Model 2R	0.70	1.07	1.21	1.39	1.55	1.68	1.79	1.89	2.01	2.13	2.59	3.01
Model LP	1.23	1.73	2.11	2.46	2.74	3.00	3.24	3.46	3.65	3.86	4.70	5.46
Model 2LP	1.07	1.41	1.73	1.98	2.21	2.46	2.62	2.77	2.99	3.12	3.86	4.48

**TABLE II - TRANSMISSION LOSS (T.L.)**

Defined as the ratio, in decibels, of acoustic energy transmitted through the louvre to that incident upon it.

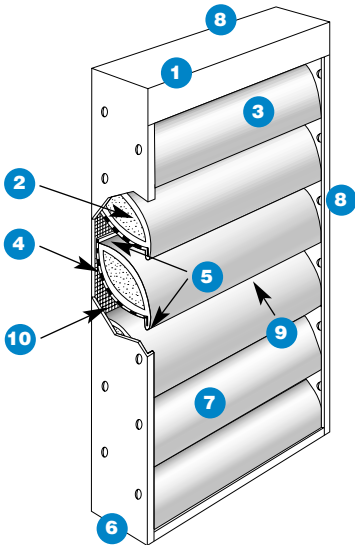
Octave Band Centre Frequency, Hz	Louvre Depth (mm)	1	2	3	4	5	6	7	8
		63	125	250	500	1K	2K	4K	8K
Model R	305	5	7	11	12	13	14	12	9
Model 2R	610	6	12	15	21	24	27	25	20
Model LP	305	4	5	8	9	12	9	7	6
Model 2LP	610	5	8	12	16	22	18	15	14

**TABLE III - NOISE REDUCTION (N.R.)**

The free-field noise reduction of a louvre is the difference, in decibels, between the sound pressure level on the noise source side of the louvre and that measured outdoors on the side of the louvre away from the noise source.

Octave Band Centre Frequency, Hz	Louvre Depth (mm)	1	2	3	4	5	6	7	8
		63	125	250	500	1K	2K	4K	8K
Model R	305	11	13	17	18	19	20	18	15
Model 2R	610	12	18	21	27	30	33	31	26
Model LP	305	10	11	14	15	18	15	13	12
Model 2LP	610	11	14	18	22	28	24	21	20

## Features & Benefits of IAC Noishield® Louvres



- 1 Rugged all-steel galvanised construction. Stainless steel, aluminium and other materials also available.
- 2 Inert, vermin-proof, weather-rated non combustible acoustic fill.
- 3 Aerofoil shaped splitter blade for maximum noise reduction with minimum pressure drop.
- 4 Perforated splitter underside for maximum sound absorption.
- 5 Weather stop inhibits rain/snow entry.
- 6 Only 305mm deep for the single banked system or 610mm deep for the double banked system.
- 7 Available in a variety of durable, attractive finishes, e.g. vinyl coated steel, polyester powder paint, mill finish aluminium, Syntha Pulvin, galvanised and stainless steel.
- 8 Modular sizes enable assembly of rectilinear louvre "walls" of almost any size.
- 9 Louvre blade orientation blocks horizontal line of site, enhancing both aesthetics and acoustic performance.
- 10 Galvanised bird screen fitted as standard on rear of louvre. Insect screens also available.

## How to Specify Noishield® Acoustic Louvres

Supply and install Noishield® Louvre(s) as manufactured by IAC Limited. Outer casings shall be made from 18 gauge (1.2 mm) galvanised steel. Louvre blades shall be of aerofoil configuration and be made from 22 gauge (0.71 mm) galvanised steel. They shall be packed with inert, vermin and moisture proof mineral fibre and provide the acoustic performance as indicated in Table II.

Louvres shall have ..... finish in ..... colour.

Static pressure drop of the louvres shall not exceed ..... Pascals at a face velocity of ..... metres per second. *(Fill in appropriate values).*

Manufacturer shall submit certified data from one laboratory substantiation of both the specified acoustic and aerodynamic performance.

## Simplified Selection Procedure

Louvres are rated in IAC's aero-acoustic laboratory in accordance with ASTM Standard E90 and other applicable test standards.

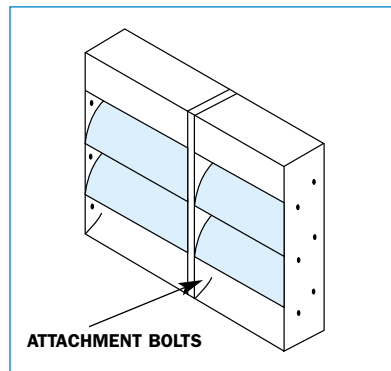
To analyse specific louvre requirements, ask for IAC SNAP II (Bulletin 1.0503). This *Systemic Noise Analysis Procedure* enables you to evaluate the effects of the acoustical environment in which the source is located and to determine the louvre model and size.

## Standard Noishield® Module Sizes

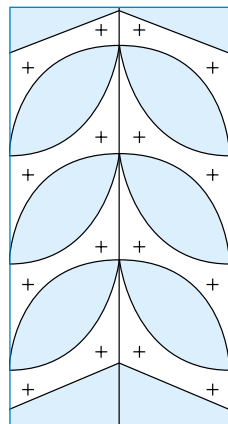
Noishield® Louvre Model	Module Width (mm)	Module Height (mm)
<b>Model R</b> Optimum acoustical performance with normal pressure drop	300 to 1219	305 to 3658 in 305 mm increments
<b>Model LP</b> Normal acoustical performance with minimum pressure drop	300 to 1219	356 to 3556 in 356 mm increments

NOTE: Width and height dimensions are nominal. Final assemblies will be 6 mm less than nominal. Noishield Louvre average weight of face area: Model R and LP - 50 kg/m<sup>2</sup>, Model 2R and 2LP - 100 kg/m<sup>2</sup>

## Module Assembly



Sketch illustrating how individual louvre modules can be easily bolted together to form larger louvre screens.



Section through a Model 2R or 2LP louvre, showing the chevron arrangement of the acoustic blades.

*For application engineering advice, please contact IAC.*



### United Kingdom

IAC House, Moorside Road,  
WINCHESTER,  
Hampshire, SO23 7US  
Tel: +44 (0) 1962 873000  
Fax: +44 (0) 1962 873111  
E-mail: info@iac.co.uk  
Website: www.iac.co.uk

### Germany

Sohlweg 17,  
D-41372 Niederkrüchten  
Tel: (02163) 99910  
Fax: (02163) 999123  
E-mail: iac.gmbh@t-online.de  
Website: www.iac-gmbh.de

### Denmark

HM Akustik A/S,  
Jernholmen 44,  
DK-2650 Hvidovre  
Tel: +45 36 77 88 00  
Fax: +45 36 77 50 88  
E-mail: mail@hm-akustik.dk  
Website: www.hm-akustik.dk

### United States

1160 Commerce Avenue,  
Bronx,  
New York 10462-5599  
Tel: (718) 931 8000  
Fax: (718) 863 1138  
E-mail: info@industrialacoustics.com  
Website: www.industrialacoustics.com