

# Acoustic Louvres

Product and Technical Data



**WAKEFIELDACOUSTICS**  
NOISE CONTROL TECHNOLOGY

## **INDUSTRIAL & ENVIRONMENTAL NOISE CONTROL SOLUTIONS WORLDWIDE**

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Wakefield Acoustics specialises in the design and fabrication of a wide range of noise control technologies. Since our formation in 1980, the company has developed a range of solutions for both industrial and commercial applications.

Acoustic louvres are commonly used as air intake paths for air intake and exhausts to plant rooms, and as environmental screens or barriers. Whilst providing noise reduction, acoustic louvres also provide a visual barrier for equipment located at the rear.

Products are fabricated in our modern 40,000 sq. ft. facility in West Yorkshire, and we are accredited to ISO 9001:2015, ISO 14001:2015 and OHSAS 18001:2007, hence ensuring our products are fabricated to the highest levels of quality, with health and safety and environmental compliance being at the heart of our operations.

Wakefield Acoustics has the capability to undertake projects of all sizes from single louvre modules, to full turnkey packages involving large complex louvre banks or screens complete with associated support structures.

## **PRODUCT DESCRIPTION**

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Standard single bank acoustic louvres are available in depths of 150mm and 300mm, with high-performance chevron style louvres also available at an overall thickness of 300mm and 600mm. Non-standard louvre depths can also be accommodated to suit specific applications.

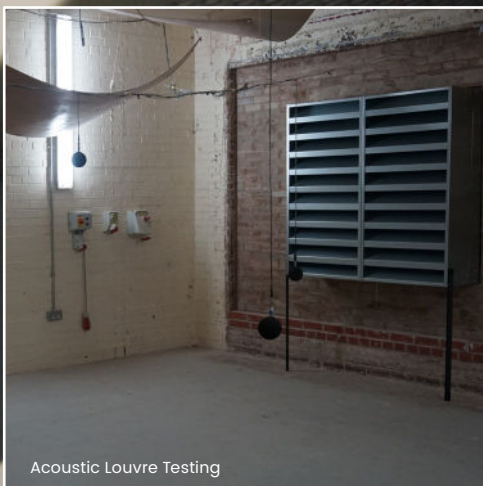
Louvres can be manufactured from a variety of materials including pre-galvanised sheet steel, pre-coated / coloured steel, stainless steel or aluminium. The robust outer casing is formed with fixing holes to allow connection to the builderswork or steelwork opening.

Contained within the casing are a series of horizontally mounted blades set at a standard pitch of 150mm, filled with a dense mineral fibre acoustic insulation. Blades are formed with an integral rain lip to improve weather protection. The acoustic insulation material is odourless, rot proof, non-hygroscopic, does not sustain vermin and will not encourage the growth of fungi, mould or bacteria. Where products are installed in an external application, or subject to high levels of moisture, the acoustic media can be further wrapped in an acoustically transparent polyester film. For mechanical protection, the media is faced with a layer of perforated steel.

## **ACOUSTIC PERFORMANCE**

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To ensure a quality installation, and to guarantee a noise reduction solution, our range of acoustic louvres has been independently tested at Salford University to BS EN ISO 10140-2:2010



## OPTIONS

Louvres can be supplied with a variety of manufacture options to suit specific requirements:

- + **Birdguard** – formed from welded mesh fitted to the rear of the louvre module. As a standard, the guard would be securely mounted to the louvre cassette, though can be removable where required
- + **External flashing** (normally supplied loose) – folded sheet metal facing ‘flange’ / flashing to provide masking of an aperture around the perimeter of the louvre. Flashing finished to suit main louvre
- + **Mounting frames / secondary support steelwork** – a variety of support frames are available where building facades are unable to support the imposed weight of an acoustic louvre
- + **Finish** – Self finish, Powder coat, pre-coated steel options available
- + **Doors** – Louvred doorsets are manufactured with louvre cartridges mounted into a steel hollow section framework for stability and integrity. Standard doorsets are supplied with a peripheral frame for fitting into a builderswork opening, complete with butt hinges, a D-handle and deadlock with internal thumbturn
- + **Industrial/Heavy Duty** – to suit demanding industrial applications louvre modules can be fabricated as full welded units for increased durability
- + **Penthouse** – Penthouse louvres supplied with integral support steel framework, corner flashings and pitched roof. Depending upon size penthouse arrangements can be supplied in a single factory assembled section for ease of installation

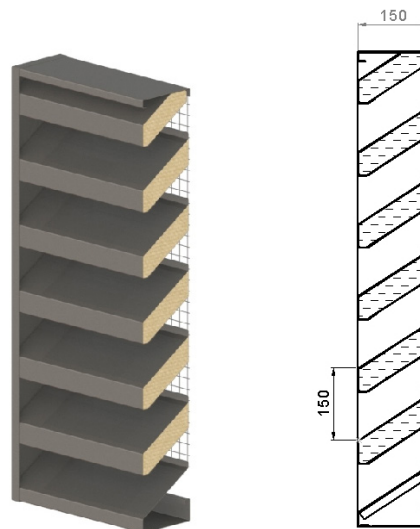


## Louvre Type WA-ACL-150SB

### 150mm deep single bank louvre

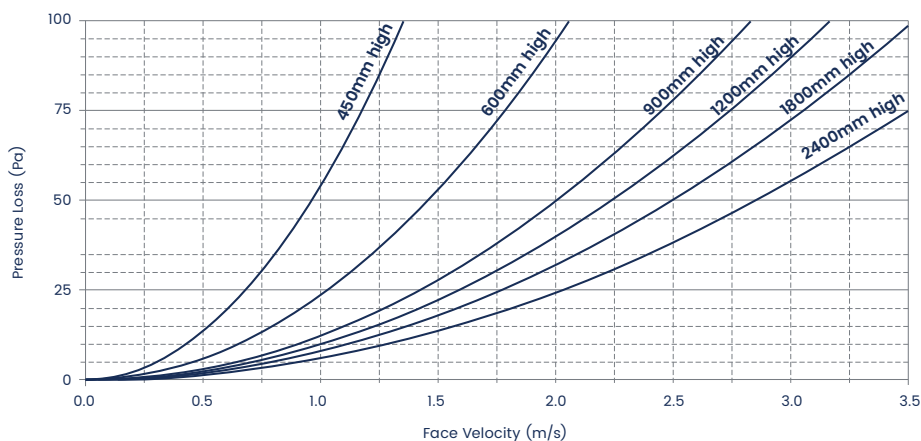
**Specification:** Single bank acoustic louvre 150mm deep, manufactured with horizontally mounted blades on a 150mm pitch, housed in an outer casing.

Louvre supplied with birdguard and polyester powder paint finish to a standard RAL / BS colour



Louvre			Sound Reduction (dB) at Octave Band Centre Frequency (Hz)							
Depth	Style	Product Code	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
150mm	Single Bank	WA-ACL-150SB	4	4	6	8	10	11	11	10

### Pressure Loss Details



Pressure loss correction factors based upon installation conditions are given below:

Fresh air intake, ducted to rear	+0%
Exhaust air to atmosphere, ducted to rear	+10%
Non-ducted	+50%

Weight	Height	Free Area
56kg/m2 Approx	450	33%
	600	38%
	900	42%
	1200	44%
	1500	46%
	1800	46%
	2100	46%
	2400	47%

Options Available
+ Birdguard (BG)
+ Powder Coat finish (PC)
+ Pre-coated steel (CS)
+ Externally Flanged (F)
+ Support Frame (SF)

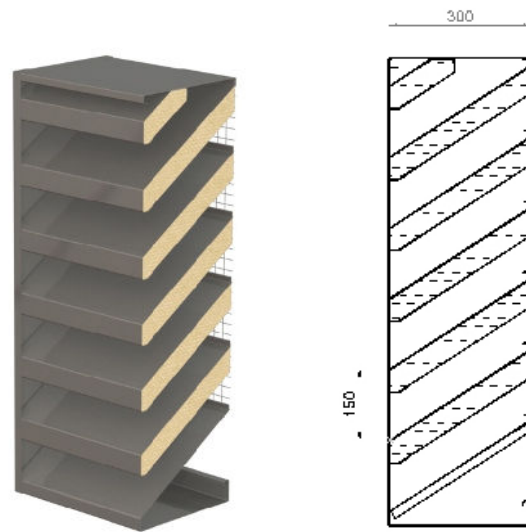
**Coding Example:** WA-ACL-150-SB/BG/PC/F

## Louvre Type WA-ACL-300SB

### 300mm deep single bank louvre

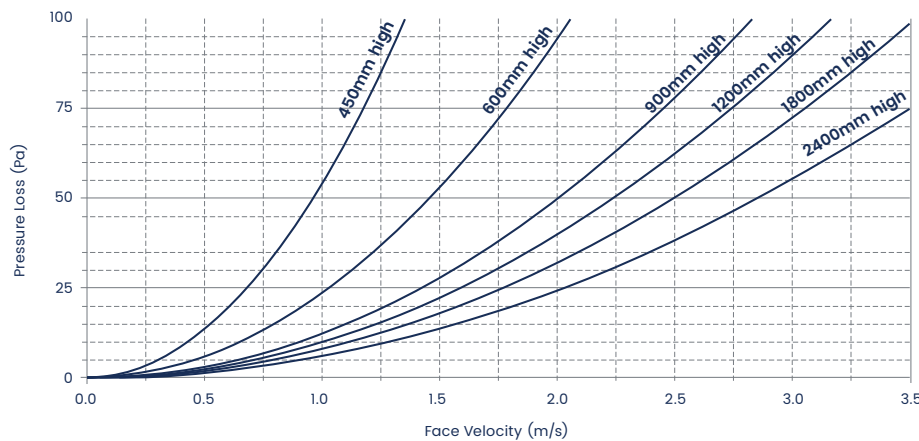
**Specification:** Single bank acoustic louvre 300mm deep, manufactured with horizontally mounted blades on a 150mm pitch, housed in an outer casing.

Louvre supplied with birdguard and polyester powder paint finish to a standard RAL / BS colour



Louvre			Sound Reduction (dB) at Octave Band Centre Frequency (Hz)							
Depth	Style	Product Code	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
300mm	Single Bank	WA-ACL-300SB	6	6	9	13	20	20	16	15

### Pressure Loss Details



Pressure loss correction factors based upon installation conditions are given below:

Fresh air intake, ducted to rear	+0%
Exhaust air to atmosphere, ducted to rear	+10%
Non-ducted	+50%

Weight	Height	Free Area
56kg/m2 Approx	450	33%
	600	38%
	900	42%
	1200	44%
	1500	46%
	1800	46%
	2100	46%
	2400	47%

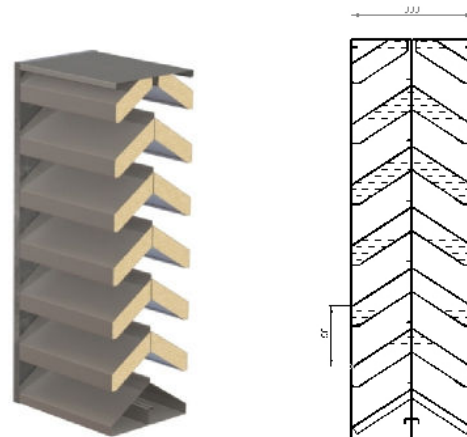
Options Available
+ Birdguard (BG)
+ Powder Coat finish (PC)
+ Pre-coated steel (CS)
+ Externally Flanged (F)
+ Support Frame (SF)

## Louvre Type WA-ACL-300DB

### 300mm deep chevron style louvre

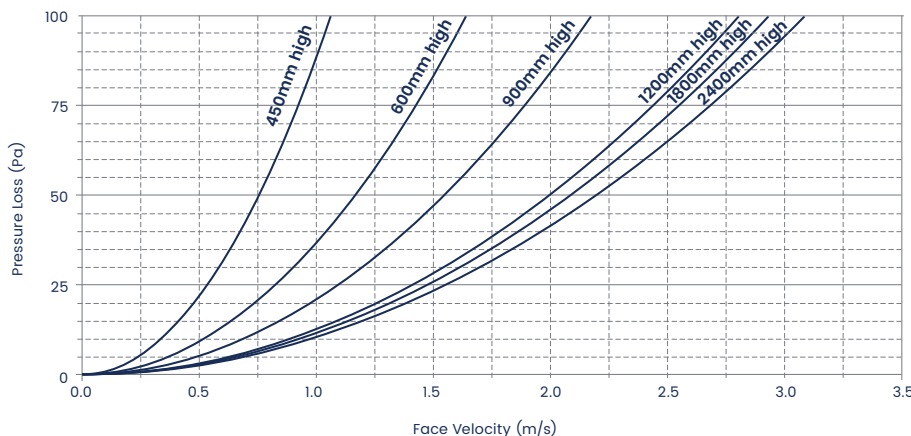
**Specification:** Double bank acoustic louvre formed from 2 x 150 louvre modules fitted back-to-back. Louvre manufactured with horizontally mounted blades on a 150mm pitch, housed in an outer casing.

Louvre supplied with birdguard and polyester powder paint finish to a standard RAL / BS colour



Louvre			Sound Reduction (dB) at Octave Band Centre Frequency (Hz)							
Depth	Style	Product Code	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
300mm	Chevron Double Bank	WA-ACL-300DB	5	6	8	12	19	19	20	18

### Pressure Loss Details



Pressure loss correction factors based upon installation conditions are given below:

Fresh air intake, ducted to rear	+0%
Exhaust air to atmosphere, ducted to rear	+10%
Non-ducted	+50%

Weight	Height	Free Area
72kg/m <sup>2</sup> Approx	450	33%
	600	38%
	900	42%
	1200	44%
	1500	45%
	1800	46%
	2100	46%

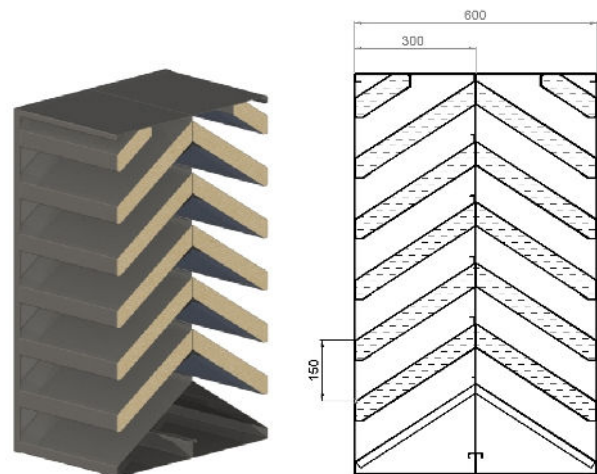
Options Available
+ Birdguard (BG)
+ Powder Coat finish (PC)
+ Pre-coated steel (CS)
+ Externally Flanged (F)
+ Support Frame (SF)

## Louvre Type WA-ACL-600DB

### 600mm deep chevron style louvre

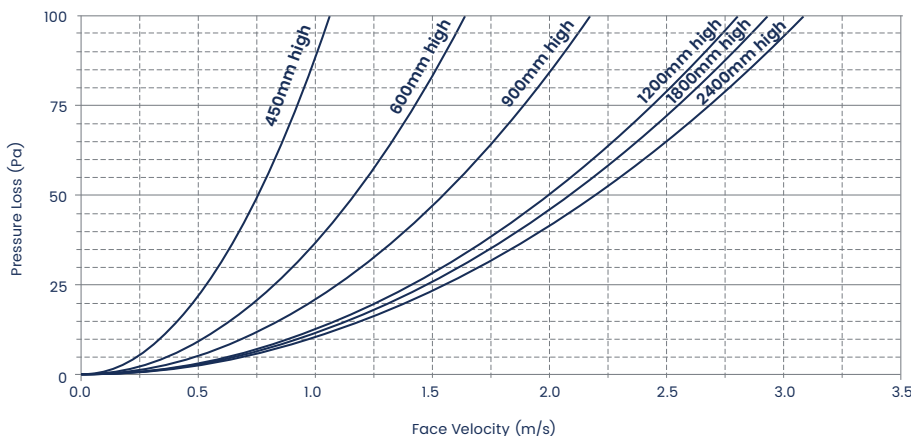
**Specification:** Double bank acoustic louvre formed from 2 x 300 louvre modules fitted back-to-back. Louvre manufactured with horizontally mounted blades on a 150mm pitch, housed in an outer casing.

Louvre supplied with birdguard and polyester powder paint finish to a standard RAL / BS colour



Louvre			Sound Reduction (dB) at Octave Band Centre Frequency (Hz)							
Depth	Style	Product Code	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
600mm	Chevron Double Bank	WA-ACL-600DB	7	8	12	21	28	30	28	27

### Pressure Loss Details



Pressure loss correction factors based upon installation conditions are given below:

Fresh air intake, ducted to rear	+0%
Exhaust air to atmosphere, ducted to rear	+10%
Non-ducted	+50%

Weight	Height	Free Area
112kg/m <sup>2</sup> Approx	450	33%
	600	38%
	900	42%
	1200	44%
	1500	45%
	1800	46%
	2100	46%

Options Available
+ Birdguard (BG)
+ Powder Coat finish (PC)
+ Pre-coated steel (CS)
+ Externally Flanged (F)
+ Support Frame (SF)

**Coding Example:** WA-ASL-600-DB/BG/PC/F



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