

ideal  
louvres

## 50mm Pitch Weather Louvre

EWB50 Series

### Product Overview

idealair EWB50 external weather louvres are ideal for intake or exhaust applications. Blades are mounted at 45 degrees in a perimeter frame and overlap to ensure good protection against water ingress. Bird screen is fitted to all louvres as standard.

### Construction

Frames and blades are manufactured from 6063 T6 extruded aluminium. On sizes of up to 1 square metre frame mitres are mechanically jointed and tig welded on the rear and neck for added strength and rigidity preventing any distortion of the hairline mitres, on sizes larger than 1 square metre frames are fully welded. Standard bird screen is 19swg galvanised wire with cell sizes of 12.5 x 12.5mm.

### Size Range

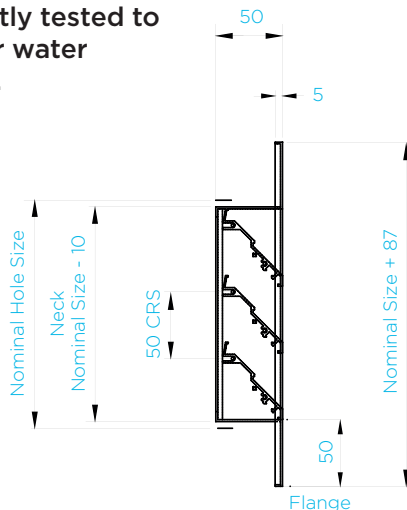
100 x 100mm to 2000 x 2000mm nominal size in 50mm increments. Special sizes and multiple units are available on a made to order basis. Please enquire for details.

### Finish

**MF** - Mill Finish (Standard)

**PPC RAL** - Stock RAL colours available to order

**Independently tested to EN13030 for water penetration.**



### Fixing

Louvre is supplied with no fixing as standard and applied by others. Alternative fixing methods are available on request.

**N** - No fixing provided (Fixing by others)

**S** - Countersunk flange holes

**C** - Neck fixing (Fixing by others)

**R** - Rear fixing lugs

### Special Requirements

The standard flange is on the EWB50 range of louvres is 50mm but any size of flange is available as an option, fully customisable to suit project specific requirements, offering various styles of perimeter frame such as recessed, reversed or channel frames for glazing applications.

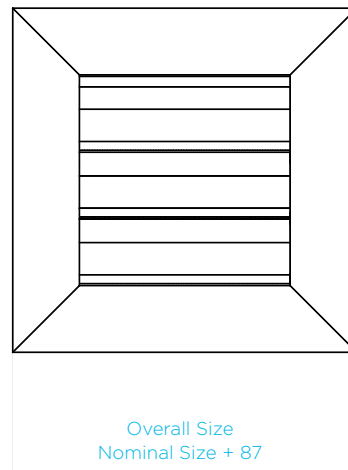
Louvres can be manufactured in a variety of different shapes, such as circular or triangular and multiple panel configuration are available with mullion or continuous appearance to suit your requirements. Single and double doors are also available, please contact us with your requirements.

### Accessories

Please specify the accessories on your order.

**IS** - Insect Screen

**VG** - Vermin Guard



All measurements in millimetres (mm)

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## Performance Data

### Pressure & Velocity

Pressure loss occurs when a louvre is placed into an opening, and air is drawn through it, and may be calculated from the following formulae:

$$Pa = \left( \frac{\sqrt{1/2P \times V^2}}{Ce} \right)^2$$

$$V = \sqrt{\frac{Pa \times Ce^2}{1/2P}}$$

<b>A</b>	Area m <sup>2</sup>	<b>Pa</b>	Pressure Pascals
<b>Q</b>	Volume m <sup>3</sup> /s	<b>Ce</b>	Louvre Coefficient
<b>V</b>	Velocity m/s	<b>P</b>	Air Density (1.2kg/m <sup>3</sup> )

### Selection Procedure 1

- Determine the pressure drop (Pa), across an 1100mm (W) x 915mm (H) EWB50 series louvre with bird guard suitable of handling 2 m<sup>3</sup>/s.
- Determine the air velocity passing through the louvre (m<sup>3</sup>/s).

From dimension details Area (m<sup>2</sup>) = Nominal sizes minus 10mm.  
(W-10/1000) x (H-10/1000)

$$A = (1100-10/1000) \times (915-10/1000)$$

$$A = 1.09 \times 0.905$$

$$A = 0.986 \text{ m}^2$$

$$\text{Velocity (m/s)} = Q/A$$

$$V = 2 / 0.986$$

$$V = 2.028 \text{ m/s}$$

- From the adjacent chart look up face velocity (m/s), recording the pressure drop (Pa) and Effectiveness (%).  
At 2 m/s Pressure = 32 Pa and Effectiveness = 69%

### Calculation Example (velocity formula)

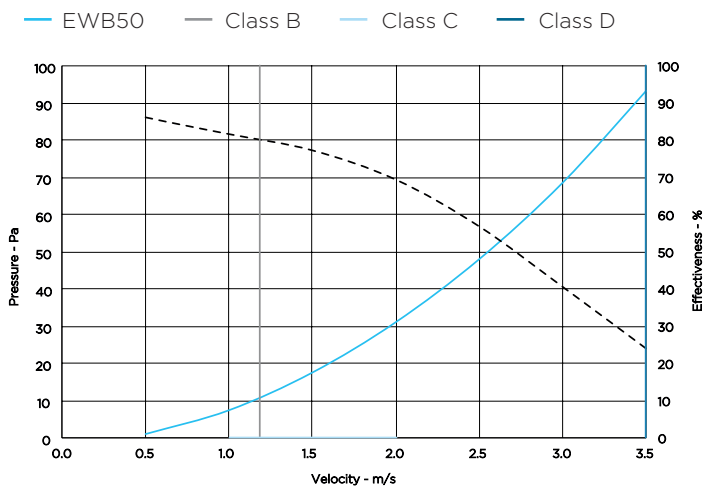
Size a EWB50 series louvre with bird guard suitable of handling 2m<sup>3</sup>/s, in intake mode with a pressure drop of not more than 29Pa.

$$V = \sqrt{\frac{31 \times 0.279^2}{0.6}} \quad V = 2.005 \text{ m/s}$$

$$\text{Louvre area (m}^2\text{)} = \frac{2}{2.005} = 0.997 \text{ m}^2$$

Size Louvre 1100mm (W)  
Accordingly x 906mm (H)

### Performance



Effectiveness	Face Velocity	
<b>Class B</b>	-	-
<b>Class C</b>	0.000 min	1.189 max
<b>Class D</b>	1.190 min	3.5 max

EWB50 Performance Table							
<b>Velocity m/s</b>	0.5	1	1.5	2	2.5	3	3.5
<b>Pressure Pa</b>	1	7	18	31	48	69	93
<b>Effectiveness %</b>	86.0	81.7	77.3	69.4	56.8	40.6	24.0
<b>Mean Ce</b>	0.279						
<b>Class</b>	3						

\*Louvre is fitted with a rear bird / vermin guard screen as standard.

### Placing an order

Example Product Code					
<b>EWB50</b>	<b>0300</b>	<b>0500</b>	<b>NOM</b>	<b>N</b>	<b>MF</b>

Series	Size mm*		Dimensional Selection		Fixing		Finish	
	Width	Height						
<b>EWB50</b>	<b>0100</b>	<b>0100</b>	<b>NOM</b>	Nominal opening size	<b>N</b>	No fixing (standard)	<b>MF</b>	Mill Finished
	<b>2000</b>	<b>2000</b>			<b>S</b>	Countersunk flange holes	<b>RAL</b>	PPC RAL
					<b>C</b>	Neck fixing (fixing by others)		
					<b>R</b>	Rear fixing lugs		

\*Sizes in 50mm increments  
When ordering please state requirement from each column: Series, Size, Dimensional Selection, Fixing & Finish.