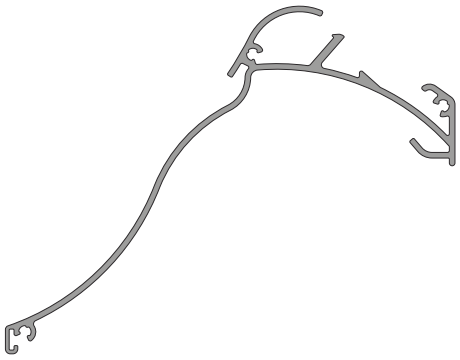
LWH-120-60-DE

Weather Louvre System
Technical Datasheet



SYSTEM ATTRIBUTES

A Max. Rainwater Rejection Class	50 % Nominal Free Area	120 Louvre Blade Depth (mm)
2 Aerodynamic Performance Class	25 kg Typical Mass per Unit Area (kg/m²)	60 Louvre Blade Pitch (mm)

SUMMARY OF FEATURES

- Formerly known as WLAC 120-60
- Blade geometry developed with use of computational fluid dynamics to optimise airflow characteristics
- Water traps reduce the ingress of rain water to a minimum
- Tested at BSRIA to BS EN 13030:2001
- Tested to the CWCT standard for systemised building envelopes
- Certified for safety up to 3.6 kPa wind load
- Certified for safety up to 500J soft-body impact
- Certified for fatigue up to 6400 cyclic load tests
- Extruded from grade 6063-T6 aluminium
- Suitable for an architectural PPC or anodised finish
- All aluminium construction means all components are 100% recyclable
- No polyamide (Nylon) combustible components
- Horizontal blade alignment
- Modular option with aluminium frame
- Continuous line option with hair line joints

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AERODYNAMIC PERFORMANCE

To establish the core area of louvre knowing that a certain pressure loss is required for a given volume of air, the following formula may be used:

$$A = \frac{Q}{v}$$

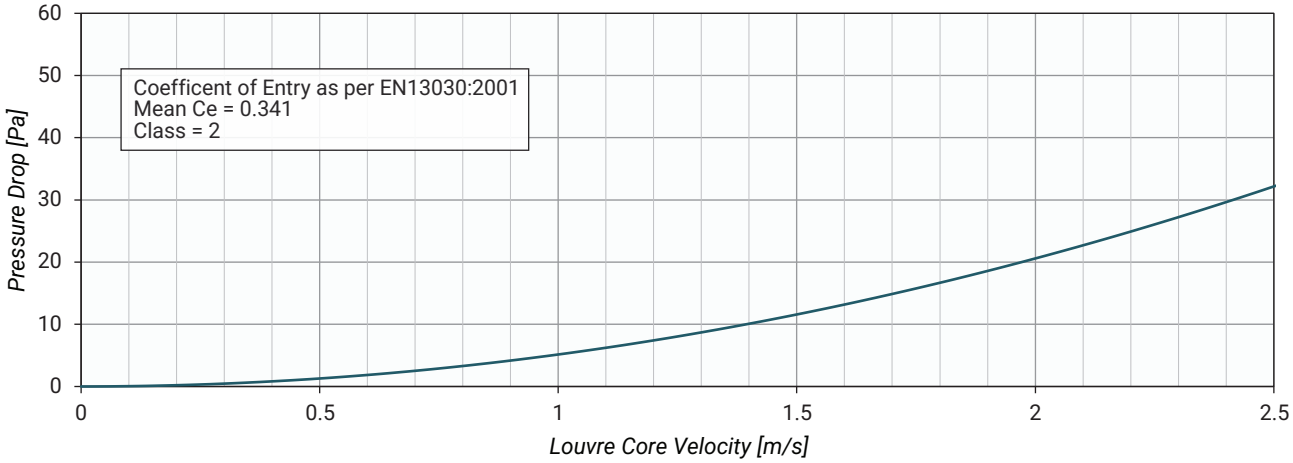
Where: A is the louvre core area [m²] Q is volume flow rate [m³/s]
v is the louvre core velocity - read off the chart below [m/s]

To establish the pressure drop knowing that a certain louvre size is available for a given volumn of air, the following formula may be used:

$$P_D = \left(\frac{7 \times Q}{9 \times A \times C_e}\right)^2$$

Where: P_D is the pressure drop [Pa] A is the louvre core area [m²]
Q is the volume flow rate [m³/s] C_e is the loss coefficient

Pressure Loss Graph for 1m High Emtec Type LWH-120-60-DE

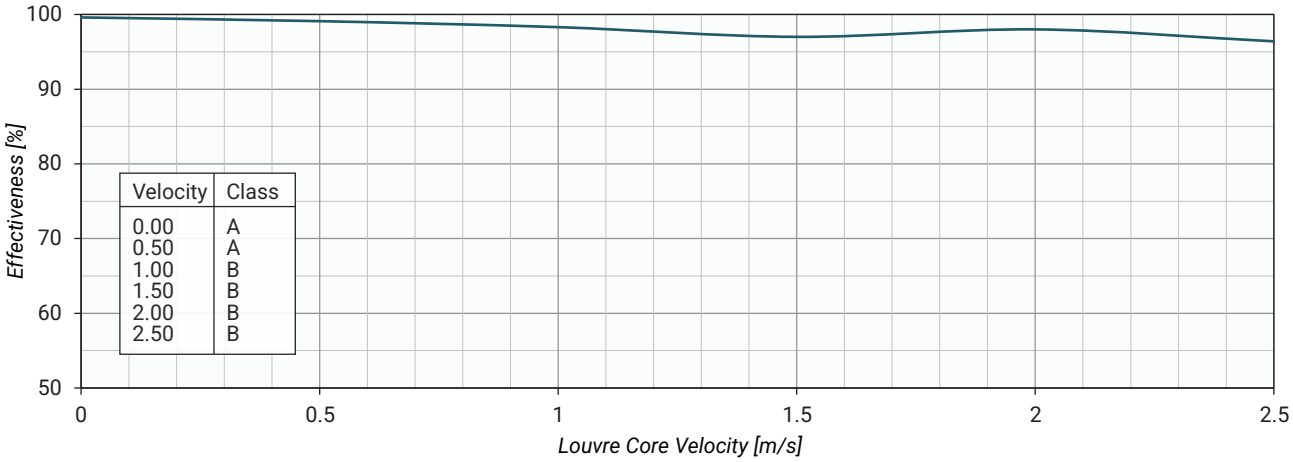


RAINWATER PENETRATION

Emtec's type LWH-120-60-DE louvre system has been tested at BSRIA in accordance with EN13030:2001.

The louvre is subjected to fan driven wind speed of 13 m/s and water sprayed at 75 l/h. In addition to simulated wind and rain, air is drawn through the louvre at various face velocities. Effectiveness is measured as a percentage of the water rejected by the louvre.

Effectiveness of Louvre with Simulated Wind and Rain for Emtec Type LWH-120-60-DE



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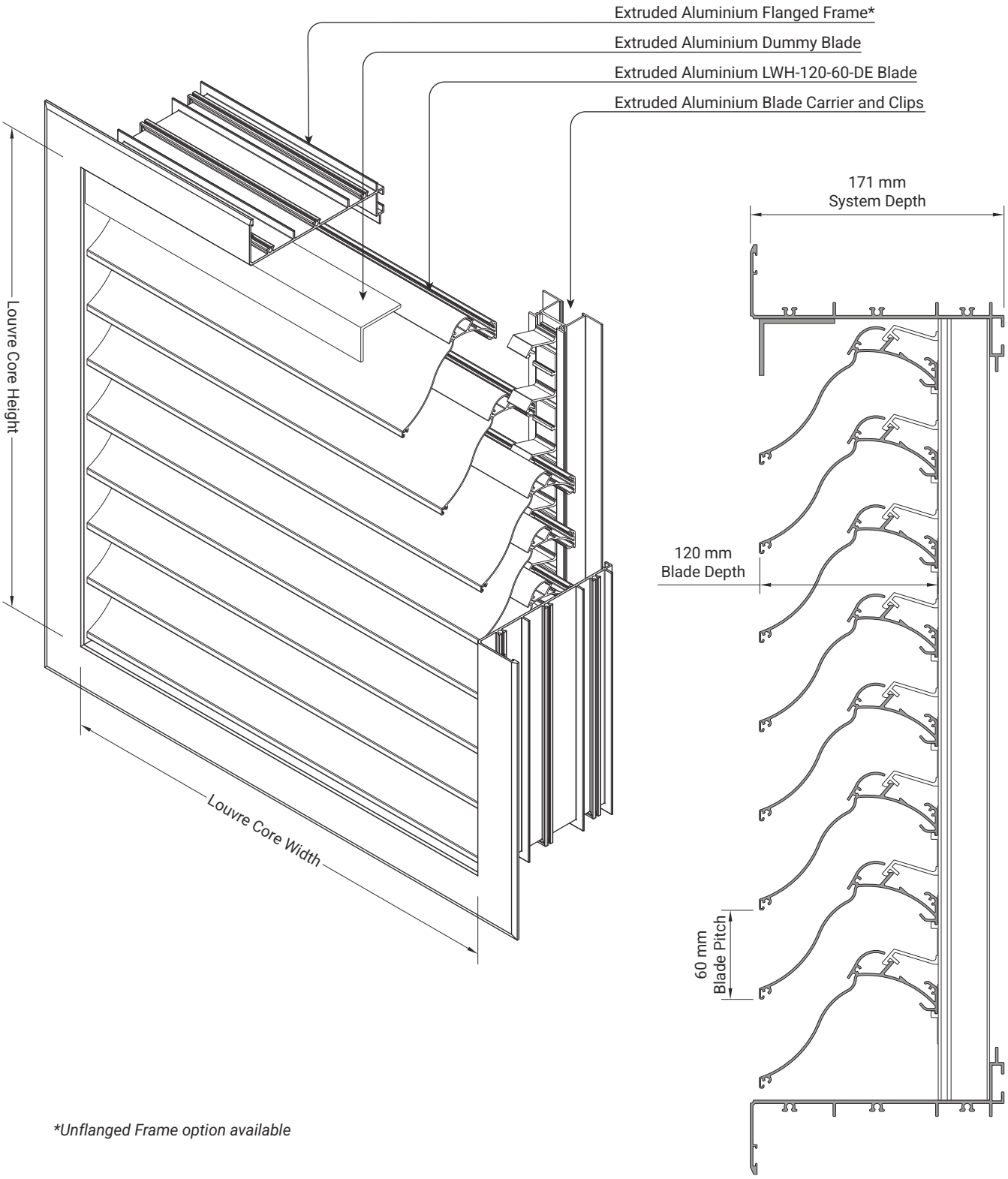
ARRANGEMENT DRAWINGS

LWH-120-60-DE



**Unflanged Frame option available*

Louvre Core Area = Louvre Core Width x Louvre Core Height
Louvre Core Velocity = Volume Flow Rate ÷ Louvre Core Area

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Systems

Ss_25_50_45_45 Louvre screen systems

1. Description: [Continuous/ Modular] aluminium weather louvre system [Delete as appropriate]
2. System Reference: LWH-120-60-DE
3. System manufacturer:
   i. Emtec Products Ltd
   ii. Web: www.emtecproducts.co.uk
   iii. Email: sales@emtecproducts.co.uk
4. Louvres
   i. Blades: *Pr_30_59_48_02 Aluminium louvre blades*
   ii. Mullions: *Pr_30_59_48_78 Screening and ventilation louvre support frames*
   iii. Frames: *Pr_30_59_48_03 Aluminium louvre frames*
5. Operation: Fixed
6. System performance: *Ss_25_50_45/205 Compliance with performance requirements; Ss_25_50_45/215 Design of acoustic, screening and ventilation louvre systems; Ss_25_50_45/220 Durability*
7. Installation fasteners: As recommended by the manufacturer.

Products

Pr_30_59_48_02 Aluminium louvre blades

1. Description: Extruded weather louvre blade
2. Product Reference: EMT161
3. Manufacturer:
   i. Emtec Products Ltd
   ii. Web: www.emtecproducts.co.uk
   iii. Email: sales@emtecproducts.co.uk
4. Pitch: 60mm
5. Depth: 120mm
6. Material: 6063-T6 high quality extruded aluminium alloy to BS EN 755-1
7. Finish: Powder Coating to BS EN 12206-1 [Insert Qualicoat Class] - or - Anodising to BS EN 3987 [Insert Qualanod if required]. [Delete as appropriate]
8. Colour: [Insert RAL colour code] - or - [Insert anodised colour] . [Delete as appropriate]
9. Construction: Clip mounting to support frames

Pr_30_59_48_78 Screening and ventilation louvre support frames

1. Description: Extruded louvre support mullion with riveted clips
2. Product Reference: EMT101 & EMT172
3. Manufacturer:
   i. Emtec Products Ltd
   ii. Web: www.emtecproducts.co.uk
   iii. Email: sales@emtecproducts.co.uk
4. Material: 6063-T6 high quality extruded aluminium alloy to BS EN 755-1
5. Finish: Powder Coating to BS EN 12206-1 [Insert Qualicoat Class] - or - Anodising to BS EN 3987 [Insert Qualanod if required]. [Delete as appropriate]
6. Colour: [Insert RAL colour code] - or - [Insert anodised colour] . [Delete as appropriate]
7. Construction: As recommended by the manufacturer.

Pr_30_59_48_03 Aluminium louvre frames

1. Description: Extruded weather louvre flanged - or - unflanged frame. [Delete as appropriate]
2. Product Reference: EMT164 (flanged) - or - EMT165 (unflanged). [Delete as appropriate]
3. Manufacturer:
   i. Emtec Products Ltd
   ii. Web: www.emtecproducts.co.uk
   iii. Email: sales@emtecproducts.co.uk
4. Material: 6063-T6 high quality extruded aluminium alloy to BS EN 755-1
5. Finish: Powder Coating to BS EN 12206-1 [Insert Qualicoat Class] - or - Anodising to BS EN 3987 [Insert Qualanod if required]. [Delete as appropriate]
6. Colour: [Insert RAL colour code] - or - [Insert anodised colour] . [Delete as appropriate]

System performance

Ss_25_50_45/205 Compliance with performance requirements

1. Requirement: Proof of compliance with specified performance.
2. Method
   i. Previous test results: For louvre performance
3. Submittals: Typical plan, elevation and section drawings at suitable scales.

Ss_25_50_45/215 Design of acoustic, screening and ventilation louvre systems

1. Weather performance: Class [Insert performance requirment] @ [Insert maximum core velocity] m/s to BS EN 13030
2. Inlet operation [Refer to the performance characteristics graphs to select values]
   i. Water penetration class (minimum): To BS EN 13030, Class [Insert water penetration Class].
   ii. Entry loss coefficient (minimum): To BS EN 13030, Class 2.
   iii. Core velocity (maximum): Up to [Insert maximum core velocity] m/s.
3. Discharge operation
   i. Discharge loss coefficient (minimum): Class 3.

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