



**EL** *External Louvre Grille*





## Introduction

External Louvre Grille mainly used in exterior installations for air discharge or intake, as well as providing protection against water ingress.

With effective free area of approximately 60%, the External Louvre Grille provides a combination of both water ingress protection as well as ventilation system at efficient levels. Vanes are also equipped with drip sill for diverting water away.

## CONSTRUCTIONS & MATERIALS

- 45° deflection configuration
- Vanes pitch of 40mm (Customizable)
- Grille sizing:
  - i) Minimum size: 100mm x 100mm
  - ii) Maximum size: 2400mm x 1200mm

### Frames



Extruded Aluminium



Galvanized Steel (L < 1200 mm)



Galvanized Steel (L > 1200 mm)

### Vanes



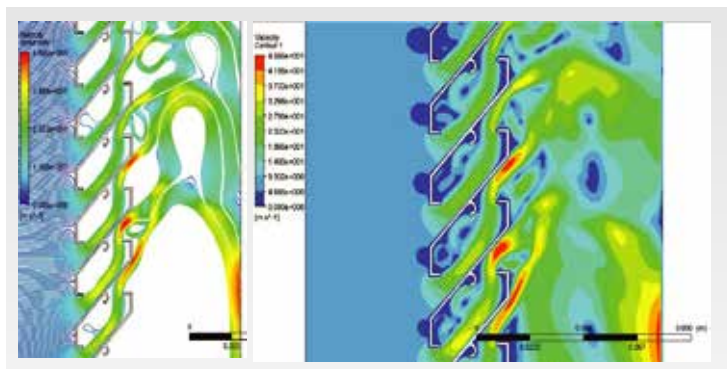
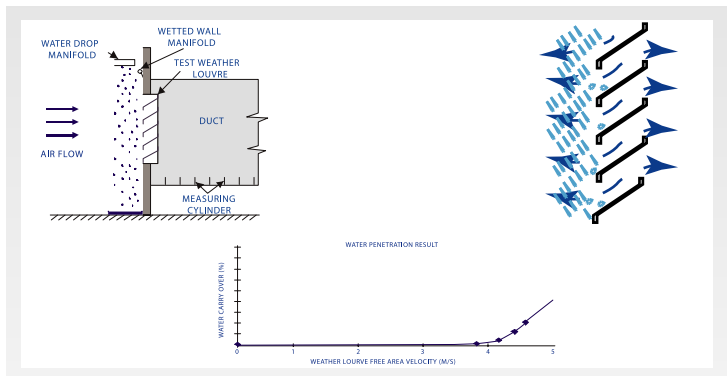
Extruded Aluminium



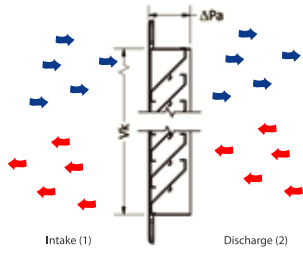
Galvanized Steel (L < 1200 mm)



Galvanized Steel (L > 1200 mm)



Intake / Discharge



\* For round grille, select according to similar grille neck area.

\* For pressure loss for intake and discharge flow, refer to Pa(1) and Pa(2) respectively.

\* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.

Grille Neck Size, mm	Neck Area (Eff. Area) m <sup>2</sup>	Unit Volume Flowrate, m <sup>3</sup> /hr Unit Volume Flowrate, l/s	250 70	400 112	600 168	800 224	1000 280	2000 560	2500 700	3000 840	4000 1120
200 x 300	0.06 (0.03)	Face Velocity, m/s	2.3	3.7	5.6	7.4	9.3	-	-	-	-
		Total Pressure Loss, Pa (1)	<10	27	60	>100	>100	-	-	-	-
		Total Pressure Loss, Pa (2)	<10	20	45	80	>100	-	-	-	-
200 x 400	0.08 (0.04)	Face Velocity, m/s	1.7	2.8	4.2	5.6	6.9	13.9	-	-	-
		Total Pressure Loss, Pa (1)	<10	16	35	60	95	>100	-	-	-
		Total Pressure Loss, Pa (2)	<10	11	25	45	70	>100	-	-	-
200 x 500	0.1 (0.06)	Face Velocity, m/s	1.2	1.9	2.8	3.7	4.6	9.3	-	-	-
		Total Pressure Loss, Pa (1)	<10	<10	16	27	45	>100	-	-	-
		Total Pressure Loss, Pa (2)	<10	<10	11	20	32	>100	-	-	-
200 x 600	0.12 (0.07)	Face Velocity, m/s	1.0	1.6	2.4	3.2	4.0	7.9	-	-	-
		Total Pressure Loss, Pa (1)	<10	<10	<10	22	30	>100	-	-	-
		Total Pressure Loss, Pa (2)	<10	<10	<10	17	22	90	-	-	-
200 x 800	0.16 (0.09)	Face Velocity, m/s	-	1.2	1.9	2.5	3.1	6.2	-	-	-
		Total Pressure Loss, Pa (1)	-	<10	<10	12	17	75	-	-	-
		Total Pressure Loss, Pa (2)	-	<10	<10	<10	15	58	-	-	-

300 x 300	0.09 (0.05)	Face Velocity, m/s	1.4	2.2	3.3	4.4	5.6	11.1	-	-	-
		Total Pressure Loss, Pa (1)	<10	<10	25	38	60	>100	-	-	-
		Total Pressure Loss, Pa (2)	<10	<10	19	27	45	>100	-	-	-
300 x 400	0.12 (0.07)	Face Velocity, m/s	1.0	1.6	2.4	3.2	4.0	7.9	-	-	-
		Total Pressure Loss, Pa (1)	<10	<10	<10	22	30	>100	-	-	-
		Total Pressure Loss, Pa (2)	<10	<10	<10	17	22	90	-	-	-
300 x 500	0.15 (0.09)	Face Velocity, m/s	-	1.2	1.9	2.5	3.1	6.2	-	-	-
		Total Pressure Loss, Pa (1)	-	<10	<10	12	17	75	-	-	-
		Total Pressure Loss, Pa (2)	-	<10	<10	<10	15	58	-	-	-
300 x 600	0.18 (0.10)	Face Velocity, m/s	-	1.1	1.7	2.2	2.8	5.6	6.9	8.3	-
		Total Pressure Loss, Pa (1)	-	<10	<10	<10	16	60	95	>100	-
		Total Pressure Loss, Pa (2)	-	<10	<10	<10	11	45	70	>100	-

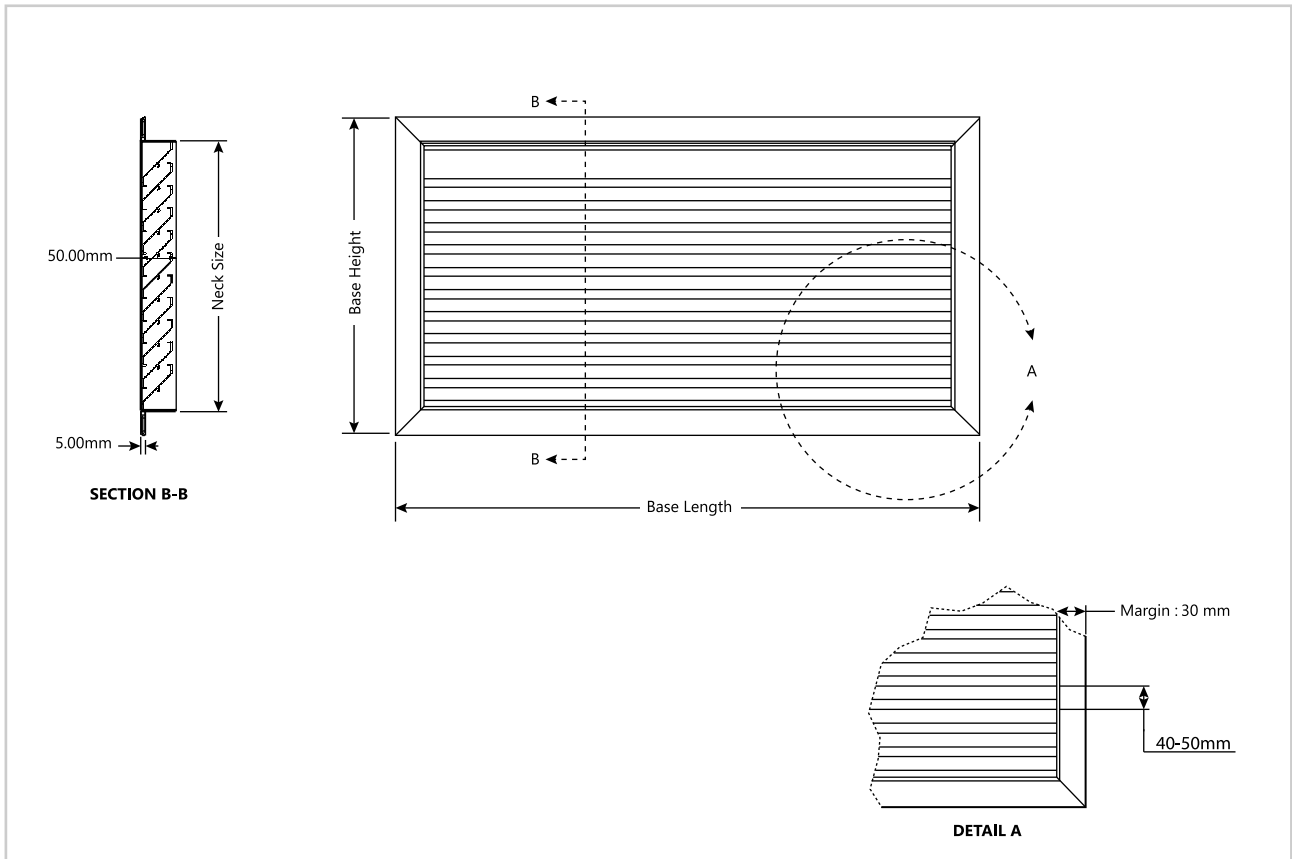
Extract

300 x 800	0.24 (0.14)	Face Velocity, m/s	-	-	1.2	1.6	2.0	4.0	5.0	6.0	7.9
		Total Pressure Loss, Pa (1)	-	-	<10	<10	<10	30	50	70	>100
		Total Pressure Loss, Pa (2)	-	-	<10	<10	<10	22	35	55	90
300 x 1000	0.3 (0.18)	Face Velocity, m/s	-	-	-	1.2	1.5	3.0	3.9	4.6	6.2
		Total Pressure Loss, Pa (1)	-	-	-	<10	<10	15	27	45	75
		Total Pressure Loss, Pa (2)	-	-	-	<10	<10	14	20	35	58

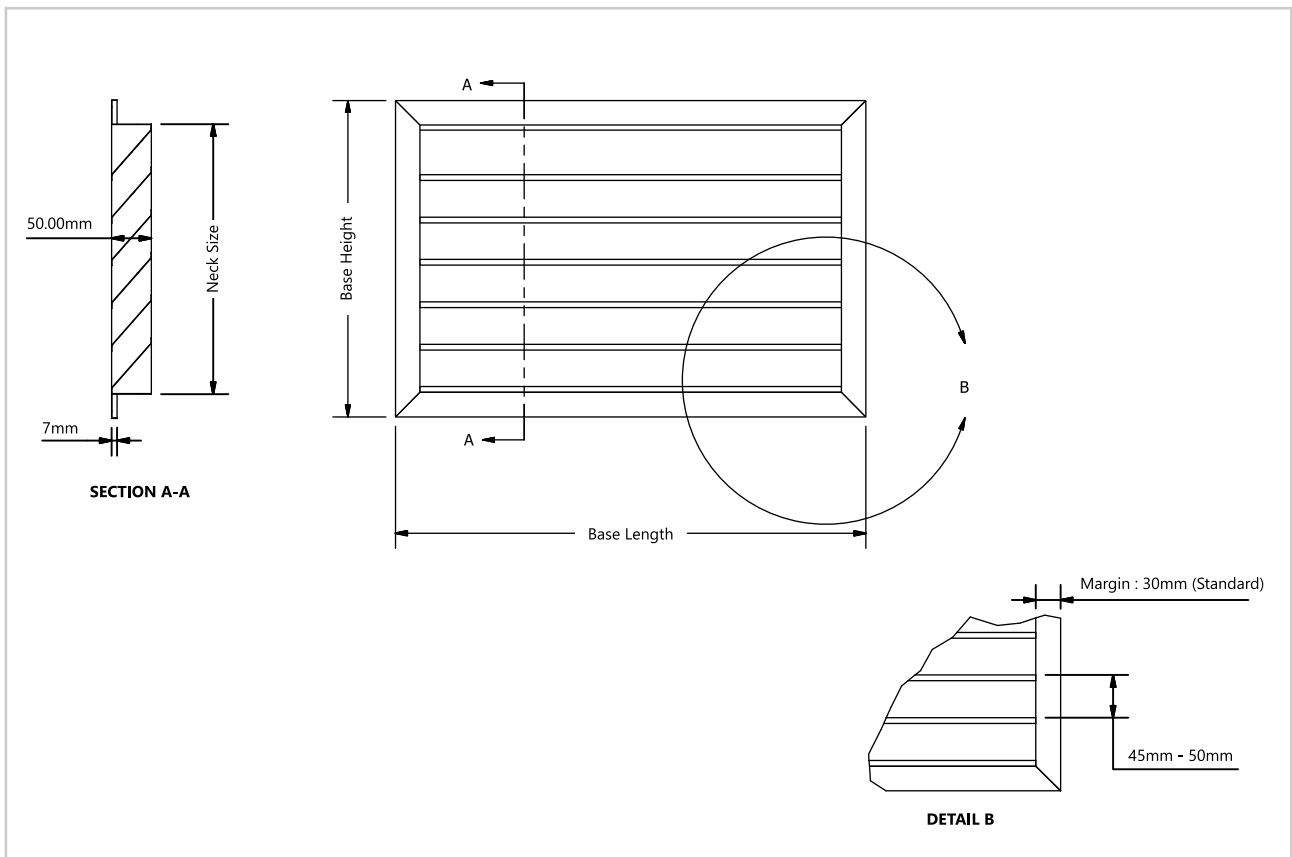
400 x 400	0.16 (0.09)	Face Velocity, m/s	-	1.2	1.9	2.5	3.1	6.2	-	-	-
		Total Pressure Loss, Pa (1)	-	<10	<10	12	17	75	-	-	-
		Total Pressure Loss, Pa (2)	-	<10	<10	<10	15	58	-	-	-
400 x 500	0.2 (0.12)	Face Velocity, m/s	-	-	1.4	1.9	2.3	4.6	5.8	6.9	9.3
		Total Pressure Loss, Pa (1)	-	-	<10	<10	<10	45	65	95	>100
		Total Pressure Loss, Pa (2)	-	-	<10	<10	<10	35	50	70	>100
400 x 600	0.24 (0.14)	Face Velocity, m/s	-	-	1.2	1.6	2.0	4.0	5.0	6.0	7.9
		Total Pressure Loss, Pa (1)	-	-	<10	<10	<10	30	50	70	>100
		Total Pressure Loss, Pa (2)	-	-	<10	<10	<10	22	35	55	90
400 x 800	0.32 (0.19)	Face Velocity, m/s	-	-	-	1.2	1.5	2.9	3.7	4.4	5.8
		Total Pressure Loss, Pa (1)	-	-	-	<10	<10	13	27	35	65
		Total Pressure Loss, Pa (2)	-	-	-	<10	<10	12	20	27	50
400 x 1000	0.4 (0.24)	Face Velocity, m/s	-	-	-	-	1.2	2.3	2.9	3.5	4.6
		Total Pressure Loss, Pa (1)	-	-	-	-	<10	<10	13	22	45
		Total Pressure Loss, Pa (2)	-	-	-	-	<10	<10	12	17	35

500 x 500	0.25 (0.15)	Face Velocity, m/s	-	-	1.1	1.5	1.9	3.8	4.6	5.6	7.4
		Total Pressure Loss, Pa (1)	-	-	<10	<10	<10	30	45	60	>100
		Total Pressure Loss, Pa (2)	-	-	<10	<10	<10	22	35	45	74
500 x 600	0.3 (0.18)	Face Velocity, m/s	-	-	-	1.2	1.5	3.0	3.9	4.6	6.2
		Total Pressure Loss, Pa (1)	-	-	-	<10	<10	15	27	45	75
		Total Pressure Loss, Pa (2)	-	-	-	<10	<10	14	20	35	58
500 x 800	0.4 (0.24)	Face Velocity, m/s	-	-	-	-	1.2	2.3	2.9	3.5	4.6
		Total Pressure Loss, Pa (1)	-	-	-	-	<10	<10	13	22	45
		Total Pressure Loss, Pa (2)	-	-	-	-	<10	<10	12	17	35
500 x 1000	0.5 (0.3)	Face Velocity, m/s	-	-	-	-	-	1.9	2.3	2.8	3.7
		Total Pressure Loss, Pa (1)	-	-	-	-	-	<10	<10	16	27
		Total Pressure Loss, Pa (2)	-	-	-	-	-	<10	<10	11	20
500 x 1200	0.6 (0.36)	Face Velocity, m/s	-	-	-	-	-	1.5	1.9	2.3	3.1
		Total Pressure Loss, Pa (1)	-	-	-	-	-	<10	<10	<10	18
		Total Pressure Loss, Pa (2)	-	-	-	-	-	<10	<10	<10	15

**DIMENSIONS - ALUMINIUM**



**DIMENSIONS - GALVANIZED STEEL**





## ALUMINIUM EXTERNAL LOUVER TECHNICAL SPECIFICATION

### Frame Construction

1. Frame to be in extruded aluminium. Frame thickness should be in minimum 1.2mm thick, unless otherwise stated.
2. The frame to be in 28mm from the neck height to the edge.
3. Frame height to be in 50mm.
4. The corner of the frame should be pressed with a 90° corner piece to ensure the frames are in 90°.
5. Removable core designs are available upon request.

### Vanes Construction

1. Vanes to be in extruded aluminium.
2. Vanes to be in 1.0mm thick. Edge of the vanes should with C hock to minimize water penetrate through the louver.
3. Vanes pitch to be in 40-50mm depends on size.

### Finishing

1. Finishing should be in powder coated RAL 9010 SG white matt, unless otherwise stated.
2. BeckryFluor is PVDF 70% acrylic 30% that meets AAMA 2605 with minimum 2 coats.  
For metallic colors minimum is 3 coats.

### Performance

1. Free area of the grill to be in 60%.
2. Vanes angle should be with 45° to minimize water penetrate through the louver.
3. External louver are designed to be install as wall mounted and the surface are normally outside of the building.

## GALVANIZED STEEL EXTERNAL LOUVER TECHNICAL SPECIFICATION

### Frame Construction

1. Frame to be in galvanized steel. Frame thickness should be in minimum 0.6mm thick, unless otherwise stated.
2. The frame to be in 30mm from the neck height to the edge.
3. Frame height to be in 50mm.
4. Removable core designs are available upon request.

### Vanes Construction

1. Vanes to be in galvanized steel.
2. Vanes to be in 0.6mm thick, unless otherwise stated.
3. Vanes pitch to be in 40-50mm depends on size.

### Finishing

1. Finishing should be in powder coated RAL 9010 SG white matt, unless otherwise stated.
2. BeckryFluor is PVDF 70% acrylic 30% that meets AAMA 2605 with minimum 2 coats.  
For metallic colors minimum is 3 coats.

### Performance

1. Free area of the grille to be in 60%.
2. Vanes angle should be with 45° to minimize water penetrate through the louver.
3. External louvers are designed to be install as wall mounted and the surface are normally outside of the building.

## AVAILABLE TYPES



Fixed - Aluminium



Fixed - Galvanized Steel



Round



# EL | External Louvre Grille

## Products Range

- Grilles 
- Diffusers 
- Dampers 
- Fire & Smoke Protection 
- VAV 
- Others 
- Accessories 



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