



**AL** *Acoustic Louvre Grille*



## Introduction

Inclining at 45°, each horizontal blade is reversed bent at the rear tip, Prudent Aire's Acoustic Louvre is designed to provide both acoustic attenuation as well as weather resistant applications. Available in standard 150/300mm louvre depth (highly customizable to customer's requirement), it is used primarily in areas where weather and noise protection with minimal pressure loss. For areas without depth concerns, double louvres (back-to-back) configuration is available for the best sound absorption and weather resistance performance; incorporating sight proof function as well.

In efforts of addressing the possible health issues, acoustic infill used in Prudent Aire's acoustic attenuators are bacteria, fungi growth and corrosion/erosion resistant (With standing maximum air velocity up to 30.5 m/s) with toughskin facing in prevention of possible contamination of fiberglass strands.

## CONSTRUCTIONS & MATERIALS

- 45° inclining horizontal blade
- Vertical pitch 150 mm
- Fibreglass infill
- Grille sizing :
  - i) Minimum size : 300 x 450 mm
  - ii) Maximum size : 1800 x 2400 mm
  - ii) Standard depth or 150 mm & 300 mm
- Acoustic Infill :
  - i) Standard Faced Fibreglass (32 kg/m<sup>3</sup> toughskin faced)
  - ii) Faced rockwool (upon request)
  - iii) Perforated sheetmetal protection

### Construction



Stainless Steel

### Frame



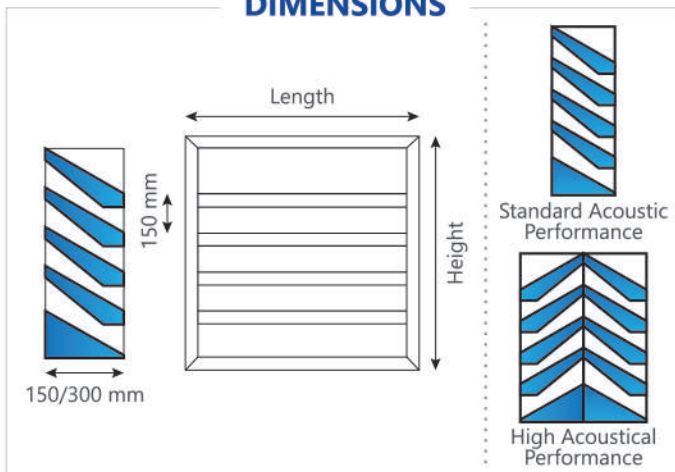
Galvanised Steel

### Blade



Galvanised Steel

## DIMENSIONS



## TECHNICAL PERFORMANCE

Free field noise reduction, dB

Depth (mm)	Octave Band Numbers							
	1	2	3	4	5	6	7	8
150	12	13	11	14	20	21	22	23
300	11	11	13	17	21	24	19	19
Grille Size (HxD) mm	Face Velocity, m/s		0.5	1.0	2.0	3.0	4.0	5.0
	200 x 300	Free Velocity, m/s	2.3	3.7	5.6	7.4	2.3	-
	Total Pressure Loss, Pa (1)	<10	27	60	>100	>100	-	-
	Total Pressure Loss, Pa (2)	<10	20	45	80	>100	-	-
200 x 400	Free 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	Free 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	Free 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	Free 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	Free 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	Free 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	Free 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	Free Velocity, m/s	-	1.1	1.7	2.2	2.8	5.6	
	Total Pressure Loss, Pa (1)	-	<10	<10	<10	16	60	
	Total Pressure Loss, Pa (2)	-	<10	<10	<10	11	45	

\* Total Pressure Loss, Pa (1) - 300 mm Depth \* Total Pressure Loss, Pa (2) - 150 mm Depth