

ADA- Acoustic Louvre System

AIRFLOW TEST

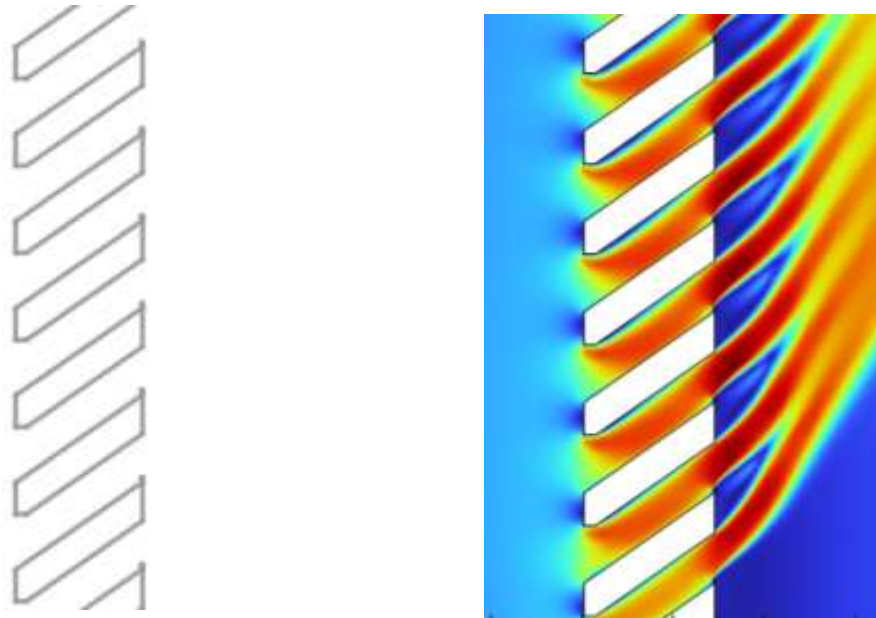


Figure 1: ADA- Acoustic Louvre System CFD Testing

The ADA- Acoustic Louvre System (Blade Pitch 200mm) was tested using CFD (Computational Fluid Dynamics) software to evaluate its aerodynamic performance. All testing was conducted in accordance with AS4740: 2025, “Natural Ventilators, Classification and Performance”, Appendix D. A steady-state analysis was performed with CFD simulation to gather accurate data on the louvre with face dimensions of 2,326 mm (L) x 2,307 mm (H) x 295 mm (W), which included the mullion and flashing.

Six test velocities were applied to determine the pressure drops at each instance (Table 1). These pressure drops were then used to calculate the C_i value for each instance, which were averaged to determine the C_D value for the product based on throat area.

Table 1. ADA- Acoustic Louvre System Performance Classifications (AS/NZS 4740:2025, Appendix D)

FOA ¹	C_d ²	EFA ³	Performance Level ⁴
45%	0.71	0.32	Class 1

¹Free Open Area (Between blade minimum area/ Blade Pitch)

²Coefficient of Discharge

³Effective Aerodynamic Area

⁴According to AS 4740: 2025 (Natural Ventilators— Classification and Performance)

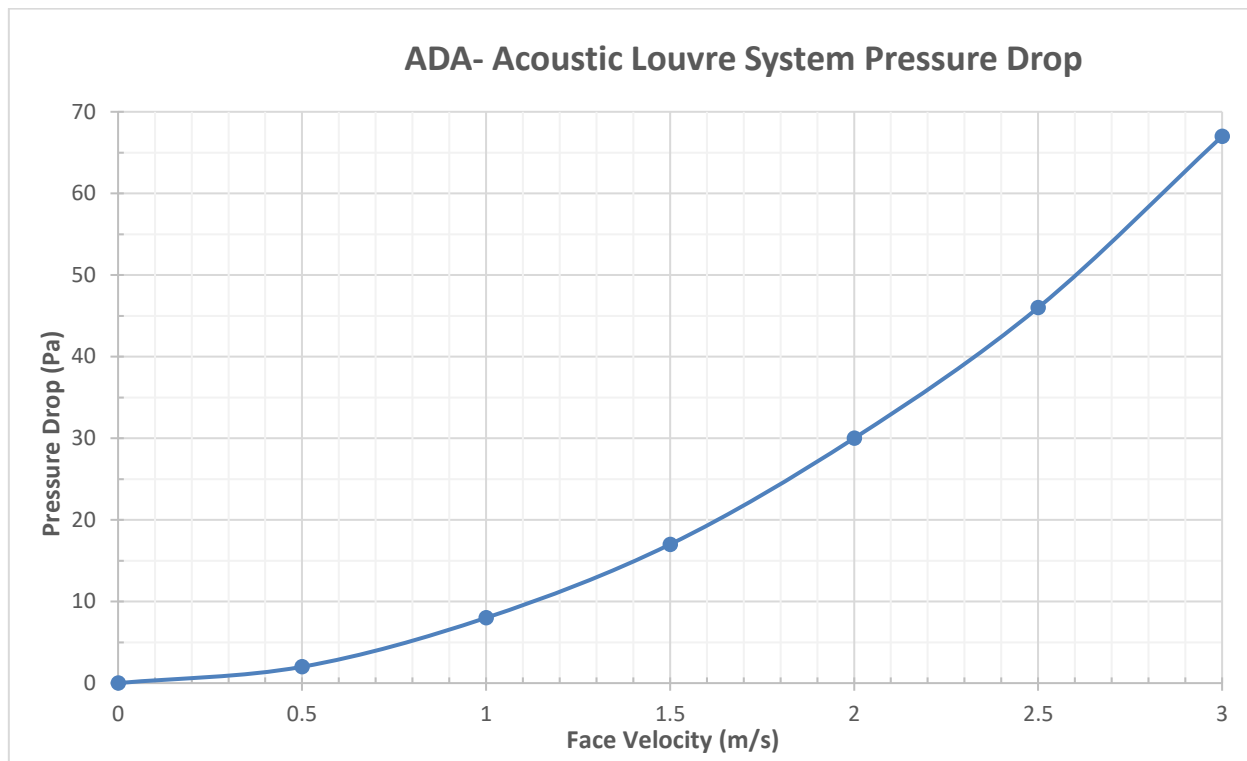


Figure 2: ADA- Acoustic Louvre System Pressure Drop vs Face Velocity.

Table 2. ADA- Acoustic Louvre System Airflow Test Data

Face Velocity (m/s)	Pressure Drop (Pa)	Ci (-)
0.5	2	0.69
1.0	8	0.69
1.5	17	0.71
2.0	30	0.71
2.5	46	0.72
3.0	67	0.72

Disclaimers:

- This report must be reviewed alongside the ADA- Acoustic Louvre System specifications provided. Any alterations to the design or components may invalidate the results and require re-assessment.
- The environmental conditions applied in this analysis are based on assumptions outlined in the supporting documentation and do not represent the final project-specific design parameters.
- This document remains the intellectual property of Deratec and is provided solely for the intended project and client. Reproduction, distribution, or unauthorised use in any form is strictly prohibited.
- The analysis is based on simplified models and industry-recognised simulation tools. While reasonable care has been taken, the results are indicative only and subject to limitations. Deratec accepts no liability for deviations in real-world performance or outcomes based on reliance on this report.