



ACOUSTIC G-SERIES GAL.0300 - DATA SHEET

PRODUCT OVERVIEW:

The Airocle G Series is a range of high-performance acoustic louvres engineered to reduce noise transmission while maintaining efficient airflow. Designed for industrial, commercial and mechanical ventilation applications, the G Series combines aerodynamic blade geometry with acoustically absorptive media to achieve an optimal balance between ventilation performance and acoustic attenuation.

Available in depths from 100 mm to 600 mm, the G Series provides solutions for a wide range of project-specific acoustic requirements while delivering low pressure loss, durable construction and reliable long-term performance.

PERFORMANCE SUMMARY:

Performance Parameter	Value
Free Open Area (FOA)	34.5 %
Industrial Nominal FOA	61.5 %
Coefficient of Discharge (Cd)	0.44
Effective Aerodynamic Area (EAA)	0.1518
Aerodynamic Performance	Class 3
Pressure Drop	<30 Pa @ 3 m/s throat velocity

TECHNICAL SPECIFICATIONS:

Parameter	Value
Blade Depth	300 mm
Blade Pitch	130 mm
Approximate Weight	C/B – 28 Kg /m ²
Standard Construction	Panels
Available Finishes	CB / ZA/ Powdercoat
Maximum Panel Span – Region A & B	1600 mm
Maximum Panel Span – Region C	1500 mm

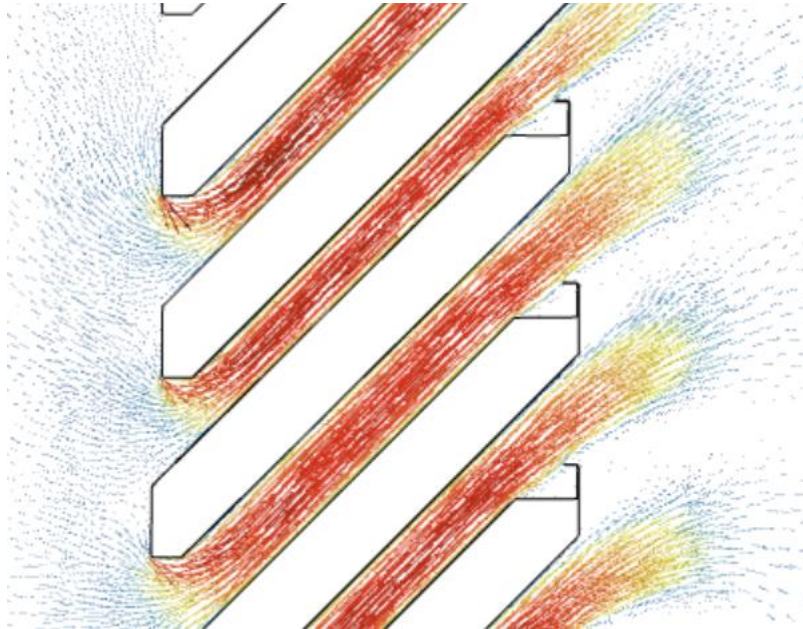
ACOUSTIC SPECIFICATIONS:

Parameter	Value
Acoustic Rating	Rw 17 dB
Test Standard	ISO 10140-2
Rating Standard	ISO 717-1
Acoustic Media	50 mm sound absorbing infill
Blade Configuration	Single-stage acoustic blade



CFD VALIDATED AERODYNAMIC PERFORMANCE:

Computational Fluid Dynamics (CFD) analysis was conducted to evaluate airflow characteristics, pressure drop behavior, and blade aerodynamic performance across the G Series – GAL.0300 geometry.



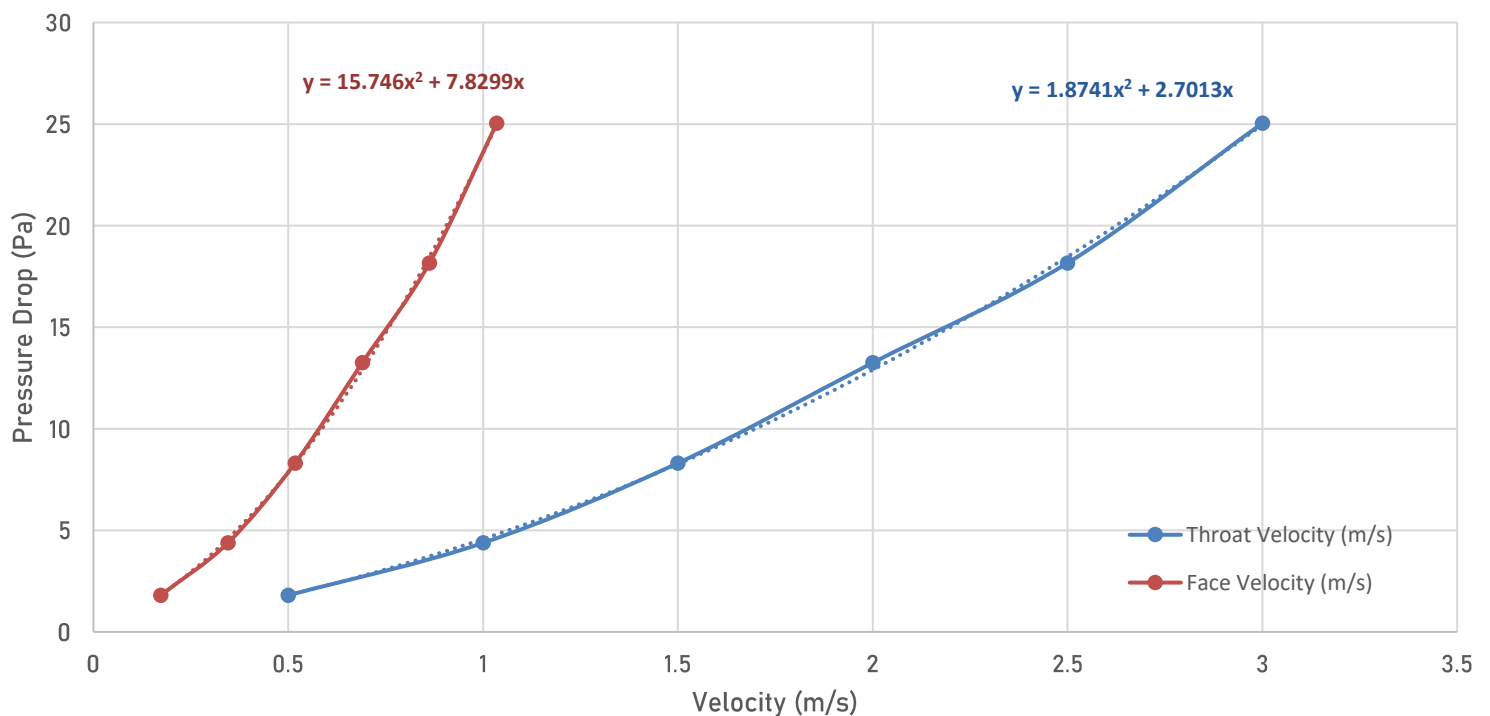
PRESSURE DROP PERFORMANCE:

Pressure drop performance shown for a standard 1 m × 1 m – GAL.0300 louvre panel.

Face Velocity Equation:
 $y = 15.746x^2 + 7.8299x$

Throat Velocity Equation:
 $y = 1.8741x^2 + 2.7013x$

GAL.0300 - Pressure Drop Curve





GAL.0300 – LABORATORY TESTED ACOUSTIC PERFORMANCE:

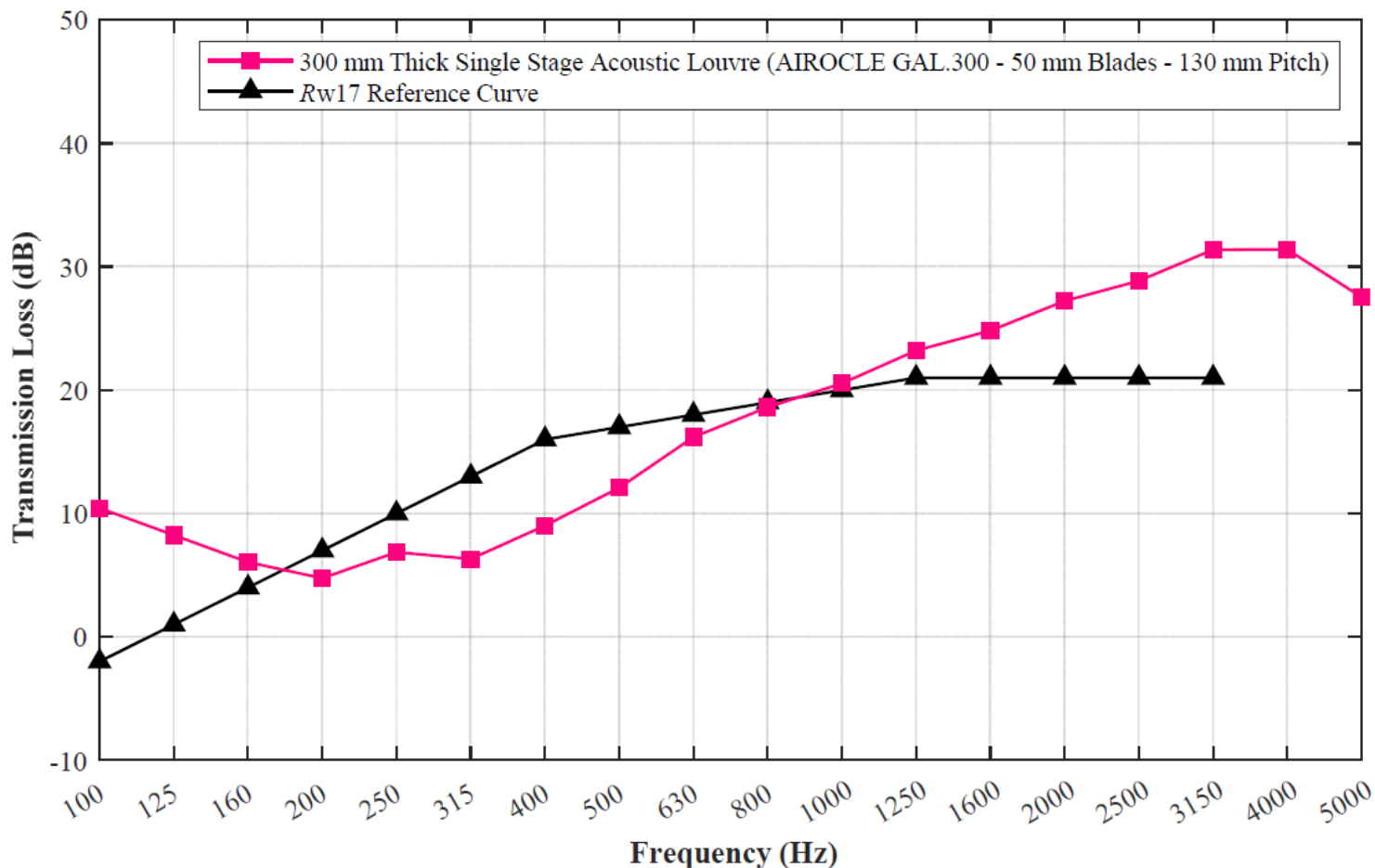
The acoustic performance of the GAL.0300 has been independently tested in accordance with ISO 10140-2 and rated in accordance with ISO 717-1. The results below summarize the measured airborne sound transmission loss.

GAL.0300 - Laboratory Measured Sound Transmission Loss			
1/3 Octave Centre Frequency Band (Hz)	Apparent Transmission Loss of Filler Wall, RF (dB)	Sound Transmission Loss of Test Sample, R (dB)	Reference Curve (Rw 17) (dB)
50	–	11.8	–
63	–	7.1	–
80	–	7.2	–
100	42.8	10.4	-2
125	41.2	8.2	1
160	41.0	6.1	4
200	41.6	4.8	7
250	47.2	6.9	10
315	49.2	6.3	13
400	52.9	9.0	16
500	55.6	12.1	17
630	58.0	16.2	18
800	60.5	18.6	19
1000	62.7	20.5	20
1250	64.6	23.2	21
1600	63.7	24.8	21
2000	56.0	27.2	21
2500	57.6	28.9	21
3150	62.7	31.4	21
4000	64.6	31.4	–
5000	67.9	27.5	–

G Series - GAL.0300 – Laboratory Measured Sound Transmission Loss values across 1/3 Octave Band



GAL.0300 – LABORATORY TESTED ACOUSTIC PERFORMANCE:



G Series – GAL.0300 – Laboratory Measured Sound transmission loss of the test sample



Material & Finish Options:

- Aluminium
- Stainless Steel
- Galvanised Steel
- Colorbond® Steel
- Colorbond® Ultra
- Powdercoat Finish
- Anodised Finish

Other Options:

- Mitred corners
- Guards: Bird mesh optional, Insect screen available (Fixed or Removable), Security Screens, SL81, etc.
- Special shapes, Circular, triangular etc. upon request
- Acoustic blanking available
- Continuous panel mullion systems available for large assemblies

Typical Applications:

- Industrial Ventilation
- Commercial Buildings
- Mechanical Intake Systems
- Architectural Façades
- Weather-Protected Air Intake
- Exhaust Systems

IMPORTANT NOTES

It is important that the wind velocity through the free open area (FOA) of a louvre is identified. This will then determine the pressure drop of the louvre and will govern the degree of possible water penetration due to rain. No external louvre can carry a guarantee that water penetration will be prevented in all weather conditions involving wind and/or rain. When there is no control over the wind velocity passing through the louvre, the louvres' performance in relation to water penetration cannot be guaranteed. Airocle can assist in selecting a louvre with the right performance class, and understanding the circumstances around the louvre to minimize water ingress. Contact Airocle if you require assistance in choosing the most suitable louvre for your needs.