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OUTDOOR SCREENS

Airflow Research and Development Study of One (1) Enclosure (with 1000mm x 1120mm opening)



Report No. 30U-22-00670-TRP-38294-0

Vipac Engineers & Scientists Ltd



Melbourne, Australia

14 July 2022



DOCUMENT CONTROL FORM

Airflow Research and Development Study of One (1) Enclosure (with 1000mm x 1120mm opening)		
DOCUMENT NO:	REPORT CODE:	
30U-22-0067-TRP-38294-0	TRP	
PREPARED FOR:	PREPARED BY:	
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REVISION HISTORY:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Issue No.</th> <th style="width: 30%;">Date Issued</th> <th style="width: 50%;">Reason/Comments</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0</td> <td style="text-align: center;">14th July 2022</td> <td>Original Data</td> </tr> </tbody> </table>	Issue No.	Date Issued	Reason/Comments	0	14 th July 2022	Original Data			
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KEY WORDS:	Air Flow Rate, Pressure									

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1.0 INTRODUCTION

This report presents the results of airflow tests carried out on one (1) Enclosure (with 1000mm x 1120mm opening), supplied by “OUTDOOR SCREENS”, as described below.

2.0 TEST SPECIMEN

The unit under test is detailed in Table 1 below.

Table 1: Unit Under Test

#	Product Name	Face Dimensions (mm)
1	Enclosure (Aluminium Air Conditioner Screen)	1020mm x 1120mm

Photograph of the Test Unit is shown in Figure 1 below.



Figure 1: Enclosure

3.0 TEST CONDITIONS AND APPLICABLE STANDARDS

3.1 TEST CONDITIONS

The unit under test was supplied with ambient temperature air at the following conditions:

Room Air Temperature	20 °C	± 3 °C
Barometric Pressure	101 kPa	± 2 kPa
Relative Humidity	50 %	± 10 %

3.2 APPLICABLE STANDARDS

The unit was tested at a range of flow conditions, as shown on the Test Certificate.

The test set up was in general accordance with AS 4740 Standard (Appendix D). Measurements were taken in general accordance with the following standard:

AIRFLOW & STATIC PRESSURE DROP

AS 4740 (Appendix D): Natural ventilators – Classification and performance

4.0 TEST SET UP AND SPECIFICATION

The unit under test was set up as shown in Figures 2 and 3. The enclosure has two (2) openings. One (wall) opening has been connected to VIPAC’s test rig, while the other (floor) opening has been fully sealed / blocked (with a piece of timber), as shown In Figure 3.

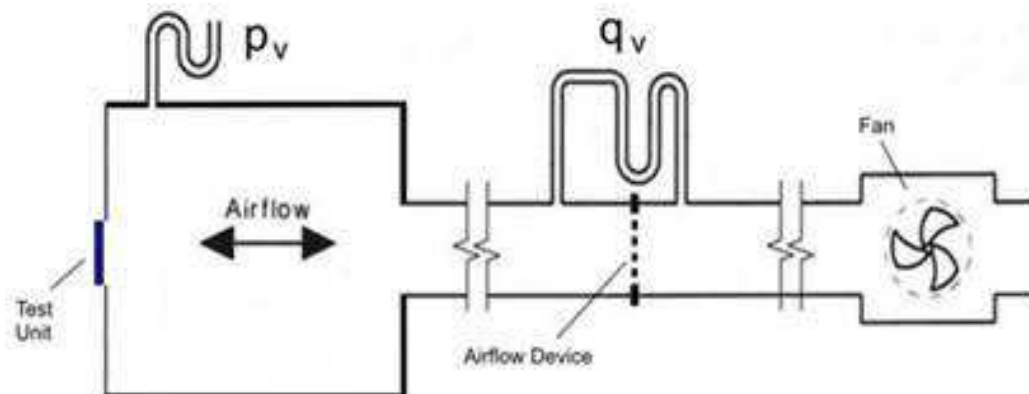


Figure 2: Test Set-up (Enclosure)



Figure 2: Enclosure openings

5.0 INSTRUMENTATION

INSTRUMENT	MAKE & MODEL	CALIBRATION		SERIAL NO. (Bar Code)
		BY	DATE	
Manometer	TSI (DP-CALC)	GTS	May 2022	000010147
Airflow Instrument	Wilson's Flow Grid	Vipac	May 2021	000033546
Airflow Anemometer	TA465-P	Ecotech	October 2021	000033892

6.0 ORDERS OF ACCURACY

Pressure Drop: $\pm 5\%$ or 1 Pa whichever is greater

Airflow: $\pm 5\%$ or 10 L/s whichever is greater

7.0 RESULTS

The results obtained are shown in the attached Test Certificate.

Report Prepared by:
VIPAC ENGINEERS AND SCIENTISTS LTD.

TEST CERTIFICATE No.1 (J/N: 30U-22-0067)

AIRFLOW PERFORMANCE TESTS

SUPPLIED BY:	OUTDOOR SCREENS
TESTED BY:	VIPAC ENGINEERS & SCIENTISTS LTD
TEST DATE:	July 2022
CLIENT:	OUTDOOR SCREENS
UNIT:	One (1) Enclosure
FACE SIZE:	1000mm x 1120 mm

Air Flow Rate (L/s)	Static Pressure (Pa)
631	2
1061	6
1641	15
2256	28
2796	44
3382	65
3836	84
4161	100

