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AFRC Lab Single Value Acoustic Simulation Report

Prepared for **PMAA PTY LTD**

[2/ 22 Eastern Service Road, Stapylton Queensland 4207](#)

System Modelled - **Path XO SD 10.38_10_8.38 Laminate with Megasorber FG50 as per supplied detail**

Prepared by **DM@AFRC Lab Pty Ltd 20/02/2018**

This report has been generated following the Methods and procedures set out in
AS/NZS ISO 717.1:2004 Acoustics - Rating of sound insulation in buildings and of building elements
Airborne sound insulation

This report is only to be read in whole, in conjunction with the above listed drawings.
Only the System nominated in this report have been simulated,
Any changes to the Product schedule will require a new rating to be applied to changed items,
The system modelled is NOT Generic and this report is only valid for the listed Path XO SD
10.38_10_8.38 Laminate as per supplied detail system.

Report Limitations

This Report has been issued to provide information to enable the benchmarking of the performance of the proposed systems against Australian Standards.

The environment conditions that have been used in this analysis are nominated in the supporting documentation, these are not representative of any actual project design conditions, therefore the performance outlined in this report cannot be used directly for detailed design and sizing of building services systems and components.

Limitations

This document is and shall remain the property of **AFRC Lab** The document may only be used for the purposes for which it was commissioned and in accordance with the Terms of Engagement for this commission. Unauthorised use of this document in any form is prohibited.

Modelling Disclaimer

We note the test models constructed are basic in nature to minimise the number of variables which could affect the results and such do not fully reflect any specific real life scenarios. The intent is to use the result to indicate the likely Acoustic performance for the subject system using industry recognised simulation tools.

Due to the various limitations of simulation tools, modelling does not and can not fully represent all of the intricacies of the system or building, its operation, and interaction with its surrounding environment. As a result, the computer model results only represent an interpretation of the potential performance of the subject system. No guarantee of building performance in practice can be based on modelling results alone.

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Introduction.

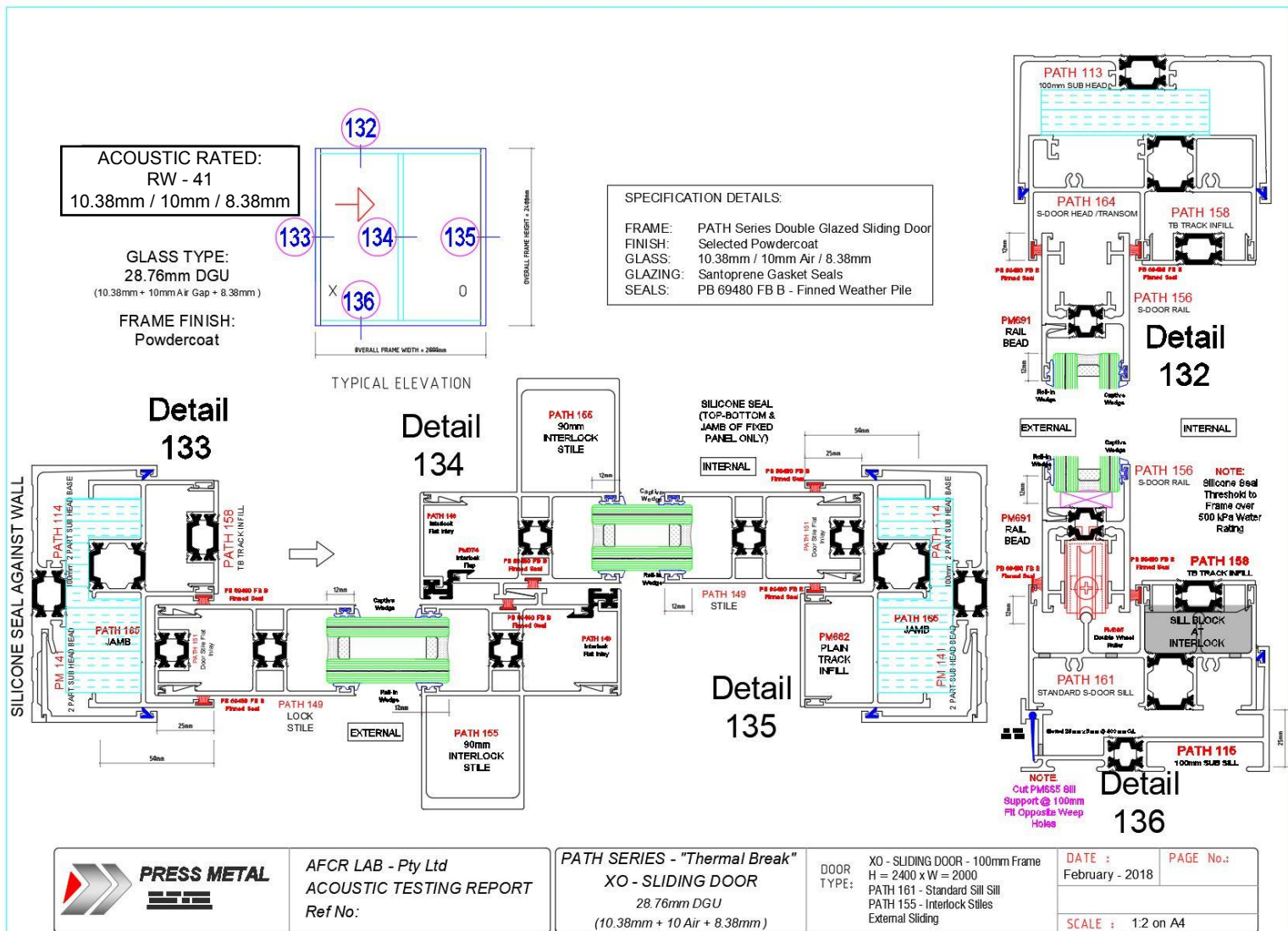
AFRC Lab have been appointed by PMAA to analyse the overall single value Number for sound reduction through the system known as Path XO SD 10.38_10_8.38 Laminate .

The Acoustic performance has been modelled based on the shop drawings provided by PMAA.

AFRC Lab has followed the methods and processes from AS/NZS ISO 717.1:2004 Acoustics - Rating of sound insulation in buildings and of building elements Airborne sound insulation

System Assessed.

The Acoustic assessment only applies to the system nominated as item Path XO SD 10.38_10_8.38 Laminate as per supplied detail. Any other systems are outside of this study and are not included in this report.





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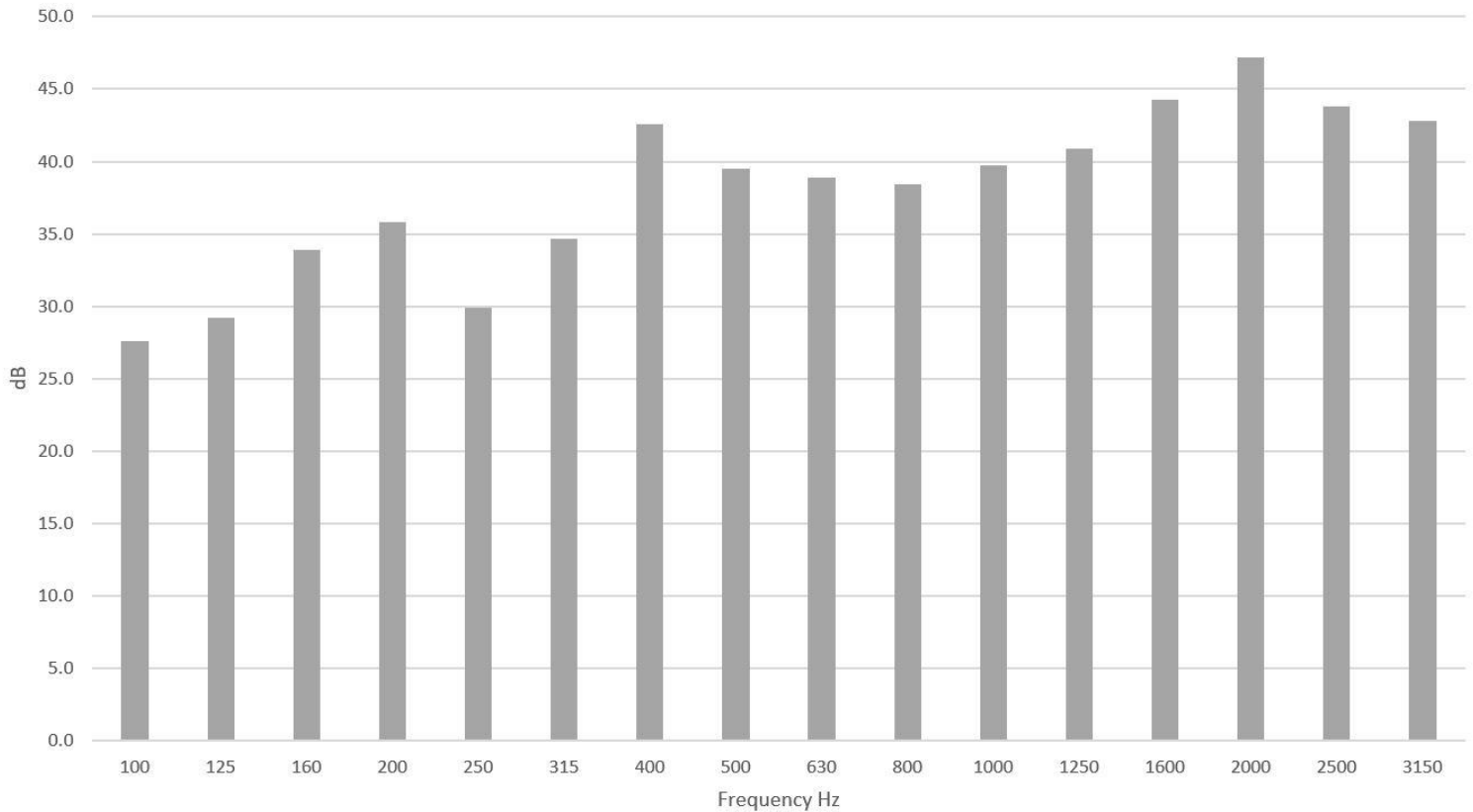
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Conclusion:

The Single Number quantity derived from one-third octave band values is

Rw 41 (C-1, Ctr-3)

Sound Reduction in dB accross 1/3rd Octave Bands
PMAA 8000 Series XO SD with 10.38_10_8.38 and Acoustic Foam



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Transmission Sound reduction values across $\frac{1}{3}$ Octave Band

Table 1 - Sound Reduction across 1/3rd Octave bands	
PMAA 8000 Series XO SD 10.38_10_8.38 and acoustic foam	
Frequency 1/3rd Octave Bands Hz	Sound Reduction dB
100	27.6
125	29.2
160	33.9
200	35.8
250	29.9
315	34.7
400	42.6
500	39.5
630	38.9
800	38.4
1000	39.7
1250	40.9
1600	44.3
2000	47.2
2500	43.8
3150	42.8

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