

**Airborne sound reduction indices according to ISO 10140-2
Laboratory measurements of airborne sound insulation of building elements**

Client: *Ventüer Limited*

Date of test: 27-May-19

Test rooms: Reverberation Chambers A and C

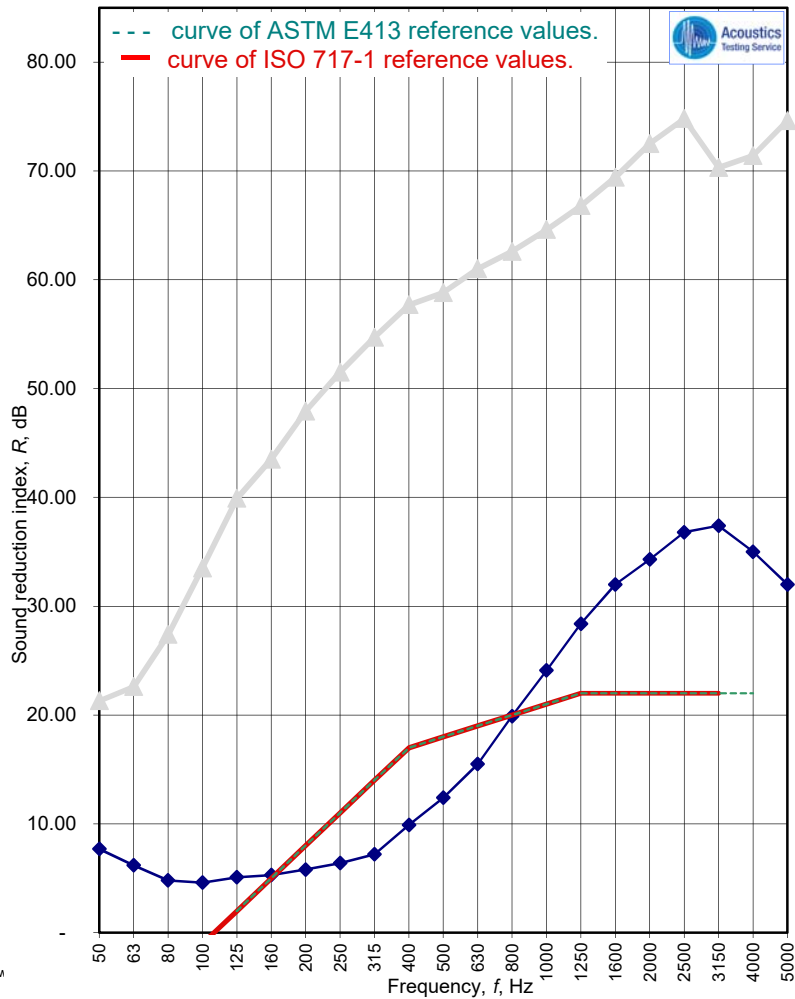
Description and identification of the test specimen and test arrangement:

Sample brand name: *AL-450W* by Ventüer Limited
Sample Description: 450mm double bank acoustic louvre
Dimensions: 1800mm high x 1200mm wide
Perimeter sealant: Closed cell expanding foam

Source chamber was Chamber C and receiving chamber was Chamber A . Test specimen was installed by client. Curing time was: N/A
 Comp Files: TL:T1922-3 TL, Source Chamber, Receiving Chamber, Bgr:T1922-3 Bgr, Receiving Chamber. RT:T1922-3 RT

Area S of test specimen: 2.16 m²
 Air temp in the test rooms: 18 °C
 Air humidity in test rooms: 69 %
 Source room volume: 208 m³
 Receiving room volume: 202 m³

Frequency <i>f</i> Hz	<i>R</i> One-third octave dB
50	7.7
63	6.2
80	4.8
100	4.6
125	5.1
160	5.3
200	5.8
250	6.4
315	7.2
400	9.9
500	12.4
630	15.5
800	19.9
1000	24.1
1250	28.4
1600	32.0
2000	34.3
2500	36.8
3150	37.4
4000	35.0
5000	32.0



Notes: #N/A = Value not available. **Bold** values are used to calculate STC and *R_w*

Rating according to ISO 717-1

$R_w (C; C_{tr}) = 18 (-1 ; -5) \text{ dB}$

$C_{50-3150} = -1 \text{ dB}$

$C_{50-5000} = 0 \text{ dB}$

$C_{100-5000} = 0 \text{ dB}$

$C_{tr,50-3150} = -5 \text{ dB}$

$C_{tr,50-5000} = -5 \text{ dB}$

$C_{tr,100-5000} = -5 \text{ dB}$

Rating according to ASTM E413 -87

Sound Transmission Class = 18 dB

Evaluation based on laboratory measurement results obtained by an engineering method.

No. of test report: **T1922-3**

Name of test institute: University of Auckland Acoustics Testing Service.

Date: 24 June 2019

Signature: *[Handwritten Signature]*

**Sound reduction index, R, in accordance with ISO 10140-2
Laboratory measurements of airborne sound insulation of building elements**

Description and identification of the test specimen and test arrangement:

Date of test: 14-May-19

Airborne sound insulation of a Double leaf Double frame wall

Client: Ventüer Limited

Double timber frame wall comprising:

Lining source side: 2 layers of 10 mm Gib Aqualine plasterboard
 Framing source side: 90 mm x 45 mm timber studs set at 600mm centres
 Frame spacing: 25 mm
 Framing receiving side: 90 mm x 45 mm timber studs set at 600mm centres
 Lining receiving side: 2 layers of 10 mm Gib Aqualine plasterboard
 Batts in receiving side wall frame: Pink Batts R2.2 glass fibre insulation
 Perimeter sealant: Gib Soundseal

Source chamber: Chamber C, Receiving chamber: Chamber A . Test specimen installed by client. Curing time: 14hrs

Emitted noise: Header Size:: Pulse Version:.42 Received noise: Header Size:: Pulse

Computer files: Version:: Reverberation time: Header Size:: Pulse Version:.Pulse Version:

Area S of test specimen: 11.95 m²

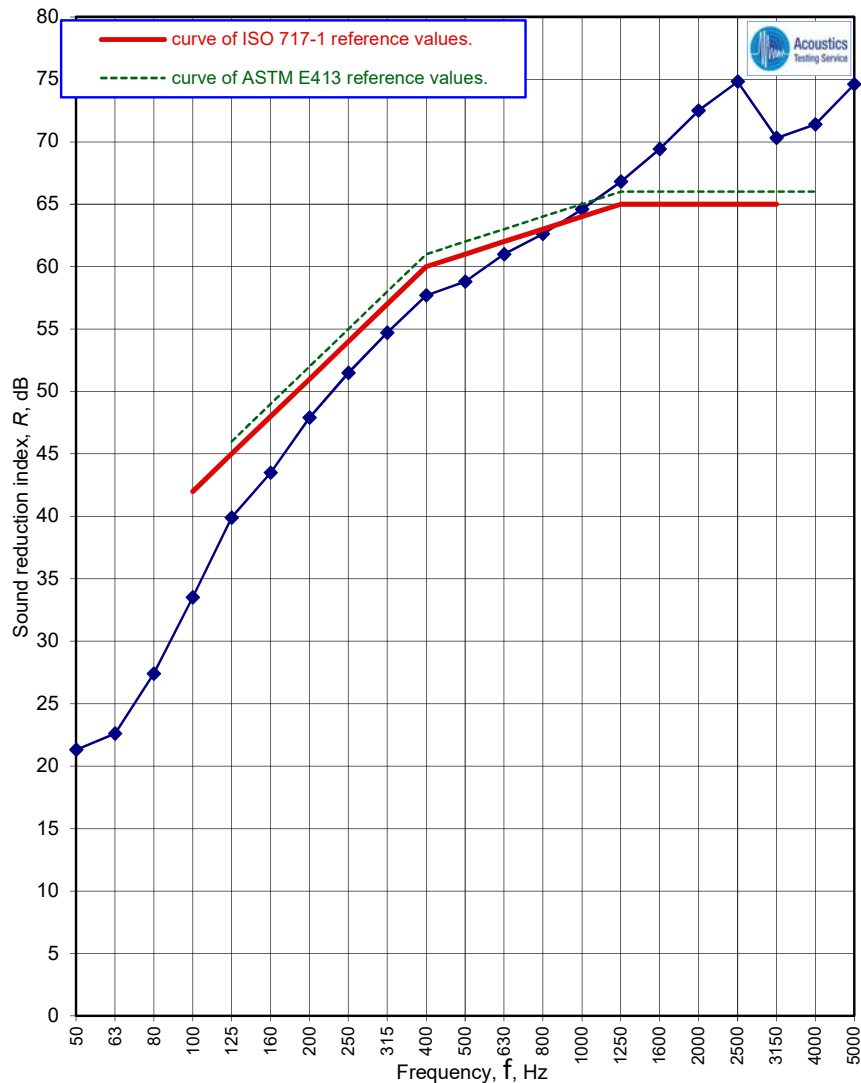
Air temp in the test rooms: 20 °C

Air humidity in test rooms: 61 %

Source room volume: 209 m³

Receiving room volume: 202 m³

Frequency <i>f</i> Hz	R One-third octave dB
50	21.3
63	22.6
80	27.4
100	33.5
125	39.9
160	43.5
200	47.9
250	51.5
315	54.7
400	57.7
500	58.8
630	61.0
800	62.6
1000	64.6
1250	66.8
1600	69.4
2000	72.5
2500	74.8
3150	70.3
4000	71.4
5000	74.6



- Notes: 1. #N/A = Value not available.
 2. **Bold** values are used to calculate STC and R_w.
 3. Words in *Blue Italic* in the description are manufacturers brand names.

Rating according to ISO 717-R_w (C;C_{tr}) = 61 (-3; -10) dB

Rating according to ASTM E413 -87

C₅₀₋₃₁₅₀ = -8 dB ; C_{tr, 50-3150} = -20 dB

Sound Transmission Class = 62 dB

C₅₀₋₅₀₀₀ = -7 dB ; C_{tr, 50-5000} = -20 dB

C₁₀₀₋₅₀₀₀ = -2 dB ; C_{tr, 100-5000} = -10 dB

No. of test report: **T1922-filler**

Name of test institute: University of Auckland Acoustics Testing Service.

Signature: *[Handwritten Signature]*

Date: 5 June 2019