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

Client: *Ventüer Limited*

Date of test: 28-May-24
Test rooms: Reverberation Chambers A and C

Description and identification of the test specimen and test arrangement:

Sample brand name: *ALV-150* by Ventüer Limited
Sample Description: 150 mm single bank acoustic louvre with 50 mm openings
Dimensions: 1720 mm(H) x 1085 mm(W) x 150 mm (D)
Perimeter sealant: Closed cell foam tape to flange side only

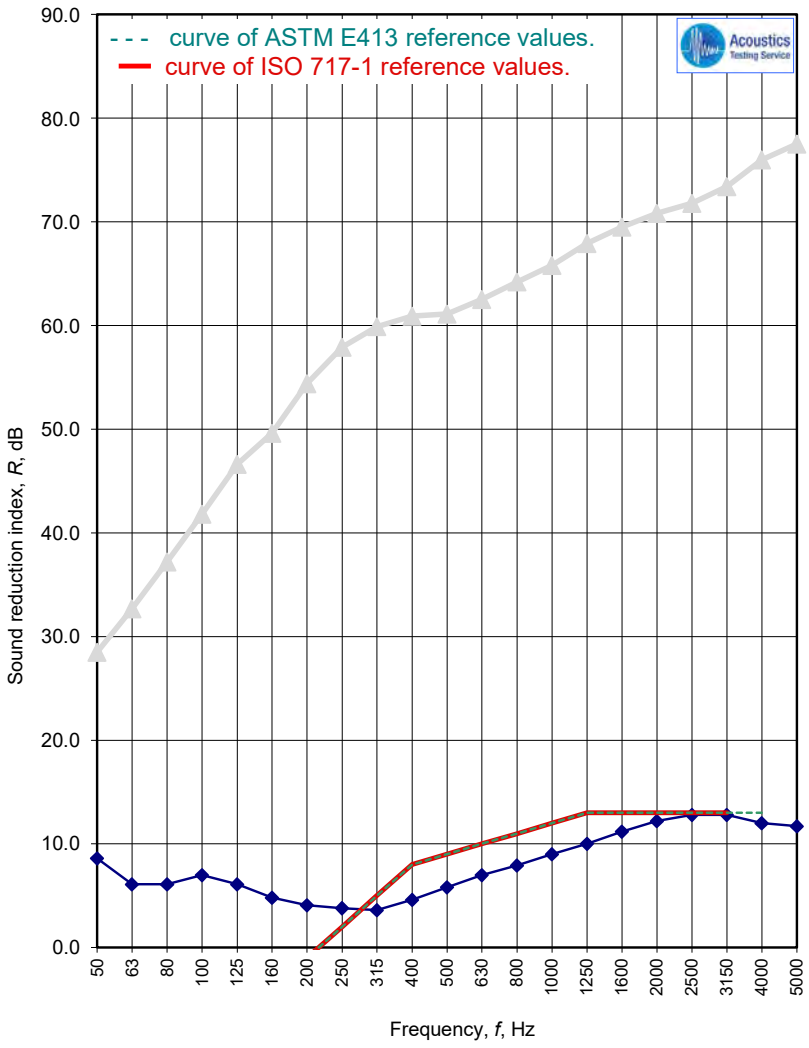
See full test report for louvre details.

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:T2407-1 TL, Source Chamber, Receiving Chamber, Bgr:T2407-1 Bgr, Receiving Chamber. RT:T2407-1 RT

Area *S* of test specimen:	1.87 m^2
Air temp in the test rooms:	17.1 °C
Air humidity in test rooms:	71 %
Source room volume:	208 m^3
Receiving room volume:	203 m^3

Frequency *f* Hz	*R* One-third octave dB
50	8.6
63	6.1
80	6.1
100	**7.0**
125	**6.1**
160	**4.8**
200	**4.1**
250	**3.8**
315	**3.6**
400	**4.6**
500	**5.8**
630	**7.0**
800	**7.9**
1000	**9.0**
1250	**10.0**
1600	**11.2**
2000	**12.2**
2500	**12.8**
3150	**12.8**
4000	**12.0**
5000	11.7

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



Rating according to ISO 717-1

$R_w (C;C_{tr})$ = 9 (0 ; -1) dB

$C_{50\text{-}3150}$ = 0 dB $C_{50\text{-}5000}$ = 1 dB $C_{100\text{-}5000}$ = 1 dB
$C_{tr,50\text{-}3150}$ = -1 dB $C_{tr,50\text{-}5000}$ = -1 dB $C_{tr,100\text{-}5000}$ = -1 dB

Rating according to ASTM E413 -87

Sound Transmission Class = 9 dB

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

No. of test report: **T2407-1**
Name of test institute: University of Auckland Acoustics Testing Service.
Date: 14 June 2024
Signature:

Acoustics Testing Service

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: 28-May-24

Airborne sound insulation of a wall system Client: *Ventüer Limited*

Wall System:

Source room: **Linings:** 1 layer of *13 mm GIB Braceline/Noiseline* screw fixed through 1 layer of *10 mm GIB Braceline/Noiseline* screw fixed to studs
Framing: Double timber frame comprising 70 mm x 45 mm timber studs set at 600 mm centres fixed to 70 mm x 45 mm timber perimeter plates (source side) and 140 mm x 45 mm timber perimeter plates (receiving side)
Insulation: 2 layers of 90 mm Pink Batts R 2.2 fibreglass insulation

Receiving room: **Linings:**1 layer of *13 mm GIB Braceline/Noiseline* screw fixed through 1 layer of *10 mm GIB Braceline/Noiseline* screw fixed to studs

Perimeter Sealant: *GIB® Fire Soundseal™*

Total wall thickness: 226 mm

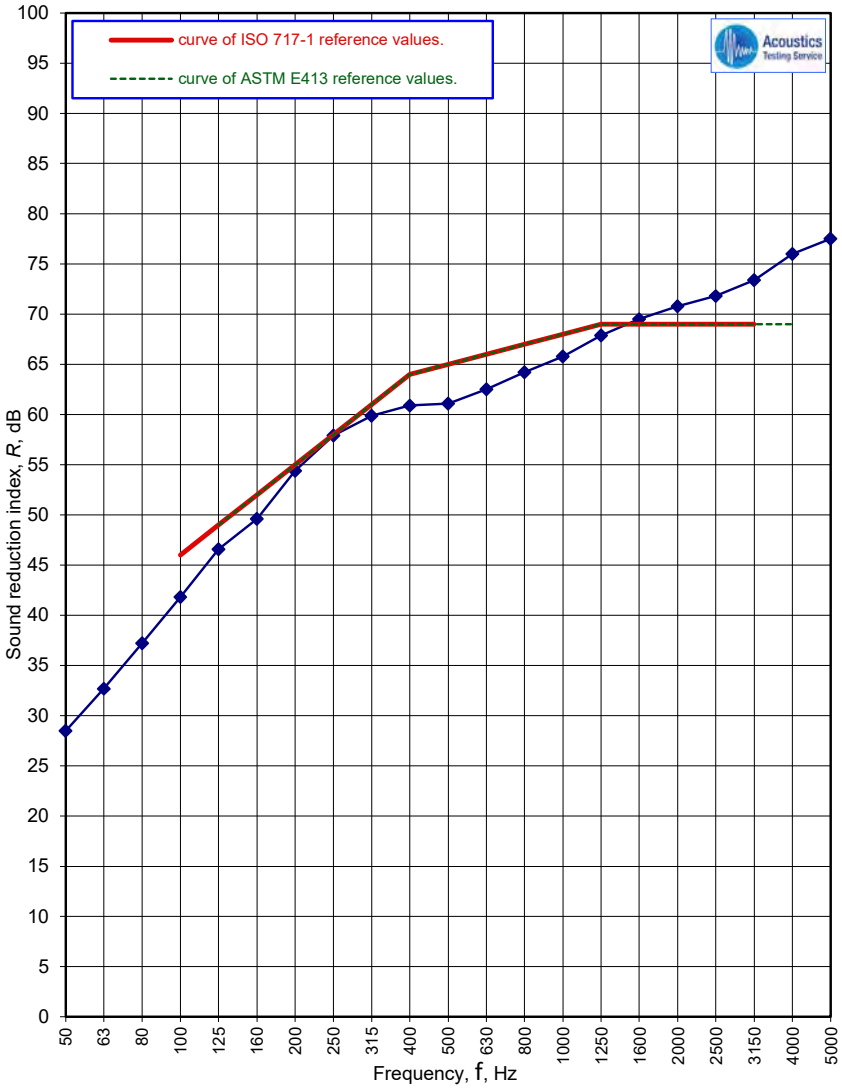
Source chamber: Chamber A, Receiving chamber: Chamber B . Test specimen installed by client.

Computer files: T2407_TL.pls Emmited noise: T2407_TL.pls: Source Received noise: T2407_TL.pls: Receiving Reverberation time: T2407-Filler_RT.pls

Area *S* of test specimen: 11.95 m^2
Air temp in the test rooms: 16.5 °C
Air humidity in test rooms: 71 %
Source room volume: 208 m^3
Receiving room volume: 203 m^3

Frequency *f* Hz	*R* One-third octave dB
50	28.5
63	32.7
80	37.2
100	**41.8**
125	**46.6**
160	**49.6**
200	**54.4**
250	**57.9**
315	**59.9**
400	**60.9**
500	**61.1**
630	**62.5**
800	**64.2**
1000	**65.8**
1250	**67.9**
1600	**69.5**
2000	**70.8**
2500	**71.8**
3150	**73.4**
4000	**76.0**
5000	77.5

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 717-1 R_w $(C;C_{tr})$ = 65 (-2 ; -7) dB

$C_{50\text{-}3150}$ = -4 dB $C_{tr,\ 50\text{-}3150}$ = -15 dB
$C_{50\text{-}5000}$ = -3 dB $C_{tr,\ 50\text{-}5000}$ = -15 dB
$C_{100\text{-}5000}$ = -1 dB $C_{tr,100\text{-}5000}$ = -7 dB

Rating according to ASTM E413 -87
Sound Transmission Class = 65 dB

No. of test report: **T2407-Filler** Name of test institute: University of Auckland Acoustics Testing Service.
Signature: Date: 14/06/2024

Acoustics Testing Service