Client:	Octacell Oy Miikka Merinen +358 40 530 9592 miikka.merinen@octa.fi

Document created by:	Olli Santala | D.Sc. (Tech.), FISE PV acoustics +358 20 7118 697 | olli.santala@sitowise.com Erno Huttunen | M.Sc. (Eng), FISE PV acoustics +358 20 7118 694 | erno.huttunen@sitowise.com

Measurement report, airborne sound insulation

Octacell 4x4

FINAS
Finnish Accreditation Service
T260 (EN ISO/IEC 17025)

Document created	24.11.2025

List of changes

Revision	Date	Changes
-	-	-

This document may only be presented or published in its entirety with the appendix.

1 Introduction

Octacell Oy has ordered measurements of airborne sound insulation of product Octacell 4x4 (version with door R_w 37 dB). The measurements were performed on 14th of November 2025 at Octacell office building (Huopalahdentie 24, 00350 Helsinki, Finland).

The tested product is a modular workspace that was installed in a corner of a larger office space.

2 Testing equipment

The equipment used in the testing is listed in table 1 below. The sound level meter was calibrated before and after the measurements. The calibration of the equipment has been verified in an accredited calibration laboratory.

Table 1. Testing equipment.

Equipment	Model	Serial number
Sound level meter	Norsonic 140	1407409
Preamplifier	Norsonic 1209	22186
Microphone	Norsonic 1225	384503
Calibrator	Norsonic 1255	125525202
Loudspeaker	Norsonic 276	2766252
Power amplifier	Norsonic 282	28256045

3 Airborne sound insulation

3.1 Method

An omnidirectional loudspeaker and a power amplifier generating pink noise were used as the sound source. The sound pressure level differences were measured in the source and receiving room according to standard ISO 16283-1. Apparent sound reduction index was obtained from the measurement results according to standard ISO 717-1. As a deviation from the standard, the low-frequency method was not applied in rooms under 25 m^3. The source and receiving room, separating structure, and sound insulation values measured in frequency bands are presented in appendix 1.

3.2 Results

Results for apparent sound reduction index are listed in table 2 below.

Table 2. Measurement results of apparent sound reduction index.

No.	Horizontal / Vertical	Source room	Receiving room	R'_w [dB]
1	H	Office space	Octacell 4x4 with door R_w 37 dB	41

The results are only valid for the tested specimen configuration. Changes in size, geometry, or materials may lead to significant changes in measured results.

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4 Figure of the tested product

Figure 1 shows the tested product in the test environment.

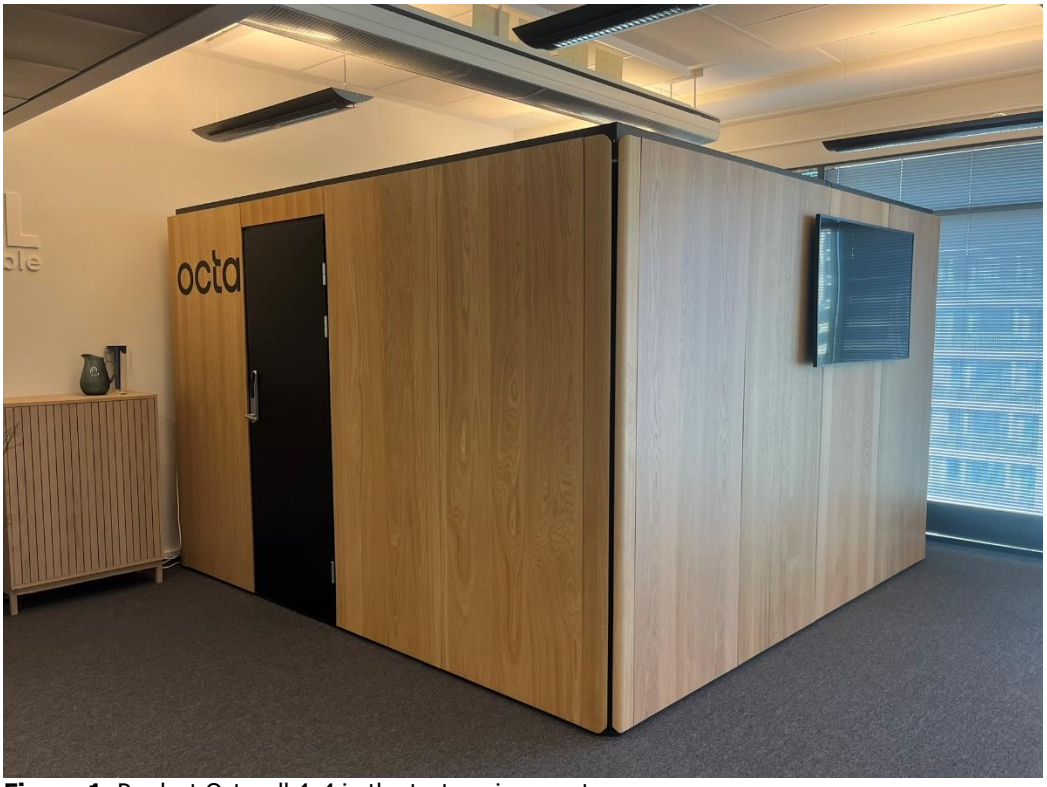

Figure 1. Product Octacell 4x4 in the test environment.

Appendix

1. Results of apparent sound reduction index (1 p.)

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Apparent sound reduction index R'_w

FINAS Finnish Accreditation Service T260 (EN ISO/IEC 17025)

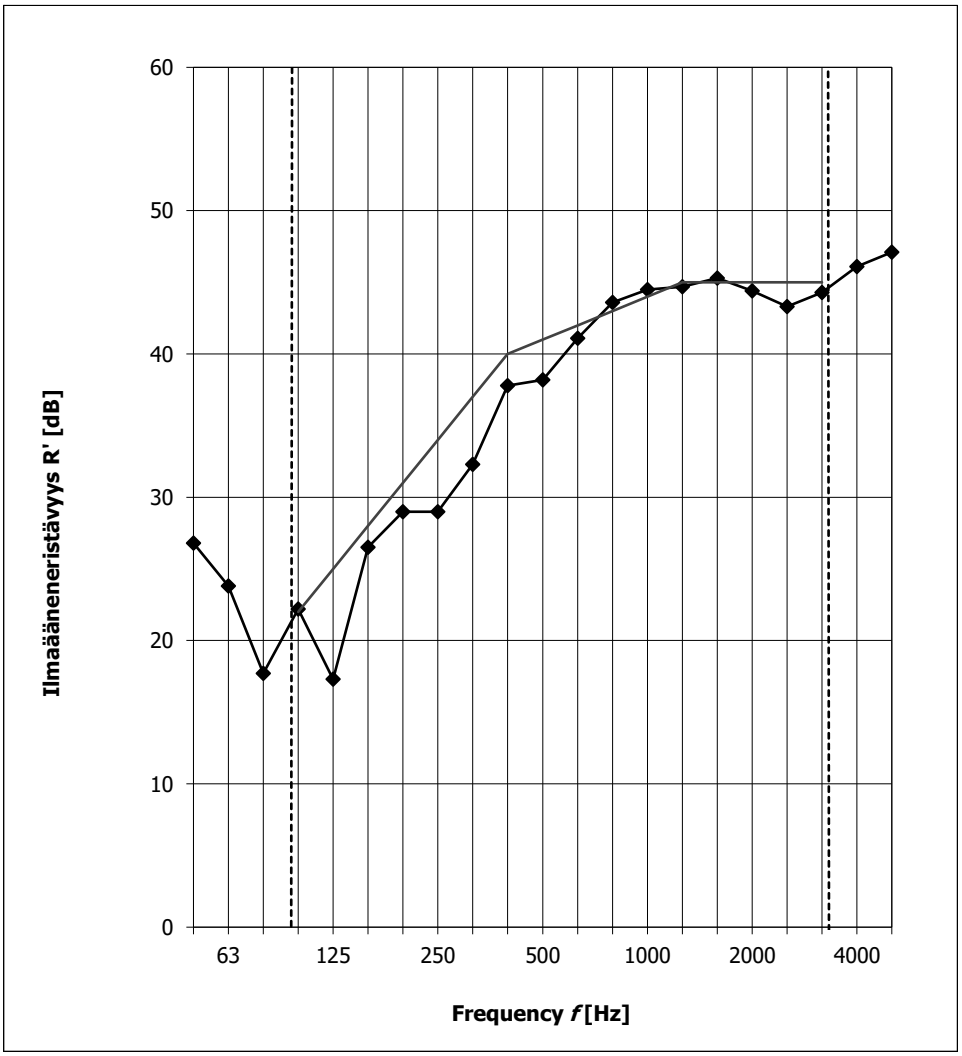
Client:	Octacell
Source room:	Octa 4x4
Receiving room:	Office space
Separating structure:	Modular element walls, door Rw 37 dB

Date:	14th of November, 2025
Operator:	Olli Santala D.Sc. (Tech)
Standard:	ISO 16283-1

Area of separating structure: S = 26,2 m²
Volume of source room: V_S = 20 m³
Volume of receiving room: V_R = 150 m³

f [Hz]	*R´* [dB]
50	26,8
63	23,8
80	17,7
100	22,2
125	17,3
160	26,5
200	29,0
250	29,0
315	32,3
400	37,8
500	38,2
630	41,1
800	43,6
1000	44,5
1250	44,7
1600	45,3
2000	44,4
2500	43,3
3150	44,3
4000	46,1
5000	47,1

Measurement
Curve of ref. values



Rating in accordance with ISO 717-1

$R'_w (C; C_{tr})$: 41 (-3 ; -7) dB

Evaluation based on field measurement using results obtained by an engineering method