

Sound reduction index in accordance with PN - EN ISO 10140-2:2021-10E

Laboratory measurements of airborne sound insulation of building elements

Client: **NorDan AS**

Measurement date: **28.08.2024**

Address: **Stasjonsveien 46, N-4460 Moi, Norway**

Test specimen: **ND NTech Villa double balcony door – wooden door, 2l system
Inward-opening**

One active and one passive leaf, door leaf with movable post.

The same glazing in both door leaves. Glazing:

8,76 Phon / 20 Ar / 8,76 (GLASSOLUTIONS)

Size of door: **1588 x 2088 x 80 mm** (width x height x door leaf frame thickness)

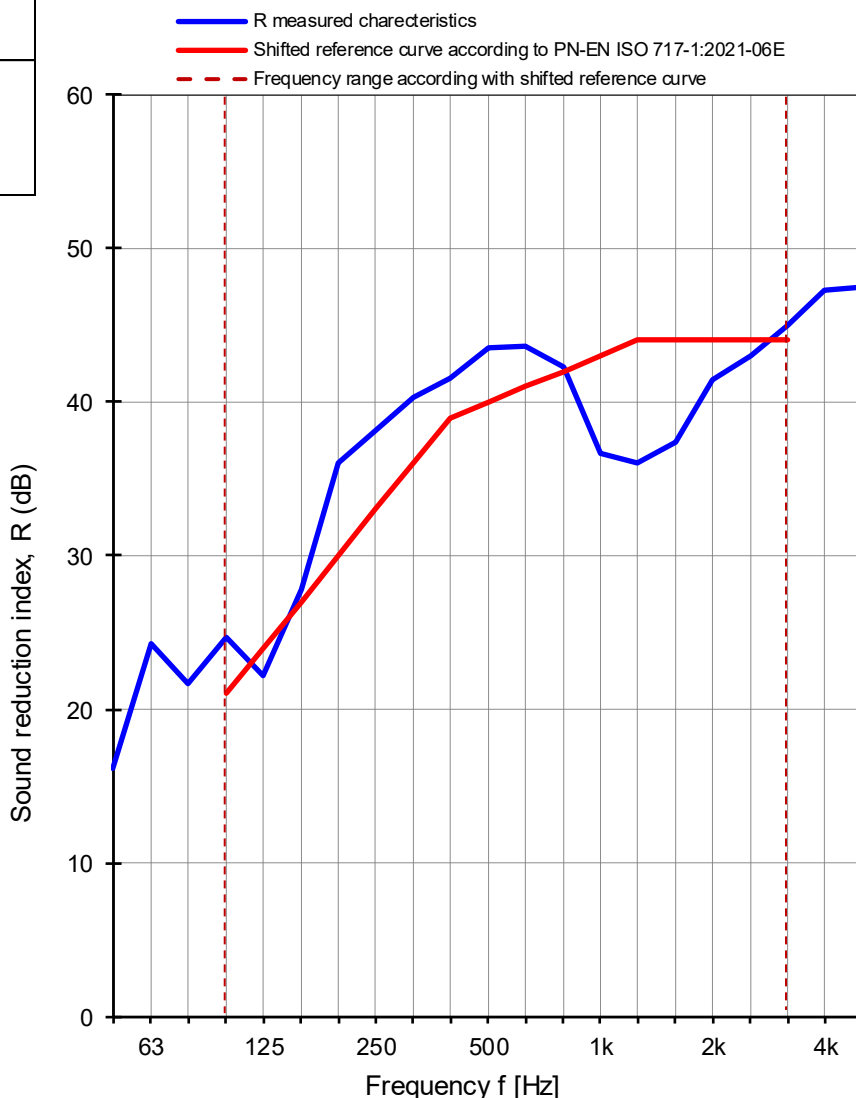
Test specimen mounted by: **Gryfitlab Sp. z o.o.**

Mass per unit area: **kg/m²**

The surface area of test specimen: **3,43 m²**

Parameter	Receiving room	Source room
Air temp. [°C]	22,9	22,8
Humidity [%]	54	53
Pressure [hPa]	1020	1020
Volume [m ³]	324	372

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U _{CR} [dB]
50	16,2	3,3
63	24,3	3,2
80	21,7	3,6
100	24,7	2,2
125	22,2	2,0
160	27,8	1,5
200	36,0	1,9
250	38,1	1,4
315	40,3	1,3
400	41,5	1,3
500	43,5	1,1
630	43,6	1,1
800	42,3	1,1
1000	36,7	1,0
1250	36,0	1,1
1600	37,4	1,0
2000	41,5	1,0
2500	43,0	1,0
3150	45,0	0,9
4000	47,3	0,9
5000	47,5	1,0



Measurement uncertainty of sound reduction U_{CR}

Confidence level 95% at coverage factor, k=2

Weighted sound reduction index in accordance with PN-EN ISO 717-1:2021-06E

R_w (C; C_{tr}) = 40 (-1; -4) dB

C₅₀₋₃₁₅₀ = -2 dB

C₅₀₋₅₀₀₀ = -1 dB

C₁₀₀₋₅₀₀₀ = -1 dB

C_{tr, 50-3150} = -6 dB

C_{tr, 50-5000} = -6 dB

C_{tr, 100-5000} = -4 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: **GLA-1676.13 / 24**

Date of analysis: 28.08.2024

Signature: Robert Dybicz