

Sound reduction index in accordance with PN - EN ISO 10140-2 (2011)

Laboratory measurements of airborne sound insulation of building elements

Client: **NorDan Sp. z o.o.**

Measurement date: **23.09.2021**

Address: **Powodowo 54, 64-200 Wolsztyn**

Test specimen: **Wooden fixed frame**

Pi LNR: **5**

Construction: **TL, ND Ntech Villa Fixed frame 105mm**

Glazed by:

66.2 SR Foil / 10 Ar / 4 / 14 Ar / 44.2 SR Foil

Frame thickness: **105 mm**

Description of the test facility, test specimen and test arrangement:

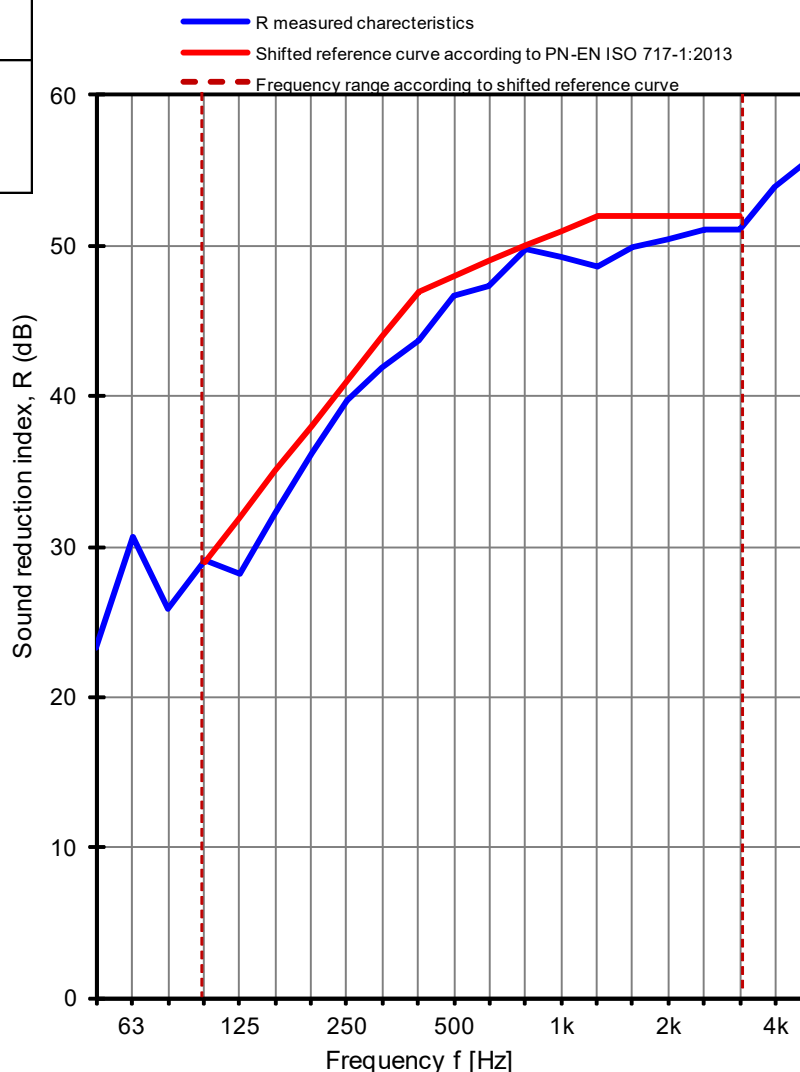
Size of test specimen: **1230 x 1480 mm**

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

The surface area of test specimen: **1,90 m²**

Parameter	Receiving room	Source room
Air temp. [°C]	21,1	20,8
Humidity [%]	58	59
Pressure [hPa]	1009	1009
Volume [m ³]	372	324

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U _{CR} [dB]
50	23,3	3,1
63	30,7	2,4
80	25,9	2,6
100	29,1	2,6
125	28,1	1,4
160	32,2	1,5
200	36,2	1,0
250	39,7	2,0
315	41,9	1,2
400	43,7	1,3
500	46,7	0,9
630	47,3	1,0
800	49,8	1,0
1000	49,2	0,7
1250	48,6	0,7
1600	50,0	0,8
2000	50,4	0,8
2500	51,1	0,8
3150	51,1	0,9
4000	53,9	1,0
5000	55,8	1,1



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}) = 48 (-2; -6) dB

C₅₀₋₃₁₅₀ = -2 dB

C₅₀₋₅₀₀₀ = -1 dB

C₁₀₀₋₅₀₀₀ = -1 dB

C_{tr, 50-3150} = -8 dB

C_{tr, 50-5000} = -8 dB

C_{tr, 100-5000} = -6 dB

R_w = 48,2 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.17 / 21

Date: 23.09.2021

Signature: Robert Dybicz

Figure 7. Characteristics of airborne sound insulation of test specimen No. GLA-1544.17 / 21