

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: **24.09.2021**

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

Test specimen: **Wooden fixed frame**

Pi LNR: **30**

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

Glazed by:

44.2 SR Foil / 20 Ar / 44.2 SR Foil

Frame thickness: **105 mm**

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

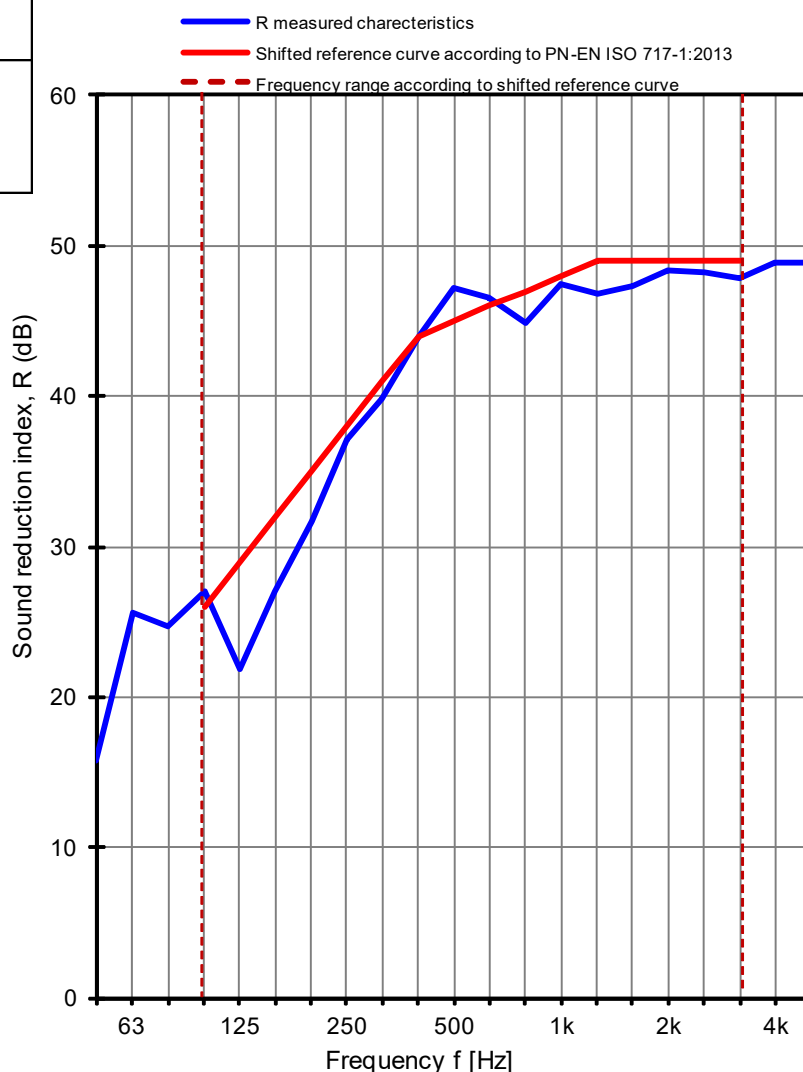
Size of test specimen: **1230 x 1480 mm**

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]	19,5	19,5
Humidity [%]	57	56
Pressure [hPa]	1009	1009
Volume [m ³]	372	324

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U _{CR} [dB]
50	15,7	2,6
63	25,6	2,0
80	24,7	1,9
100	27,0	3,2
125	21,9	1,4
160	27,0	1,3
200	31,7	1,2
250	37,1	1,8
315	39,9	0,9
400	43,9	1,1
500	47,1	0,8
630	46,6	0,8
800	44,8	0,8
1000	47,5	0,8
1250	46,8	0,7
1600	47,4	0,8
2000	48,4	0,7
2500	48,3	1,0
3150	47,8	1,1
4000	48,9	1,0
5000	48,8	0,9



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}) = 45 (-3; -7) dB

C₅₀₋₃₁₅₀ = -3 dB

C₅₀₋₅₀₀₀ = -2 dB

C₁₀₀₋₅₀₀₀ = -2 dB

C_{tr, 50-3150} = -10 dB

C_{tr, 50-5000} = -10 dB

C_{tr, 100-5000} = -7 dB

R_w = 45,4 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.21 / 21

Date: 24.09.2021

Signature: Robert Dybicz

Figure 11. Characteristics of airborne sound insulation of test specimen No. GLA-1544.21 / 21