

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: 20

Construction: TL, ND Ntech Villa Fixed frame 105mm

Glazed by:

10 / 20 Ar / 6

Frame thickness: 105 mm

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

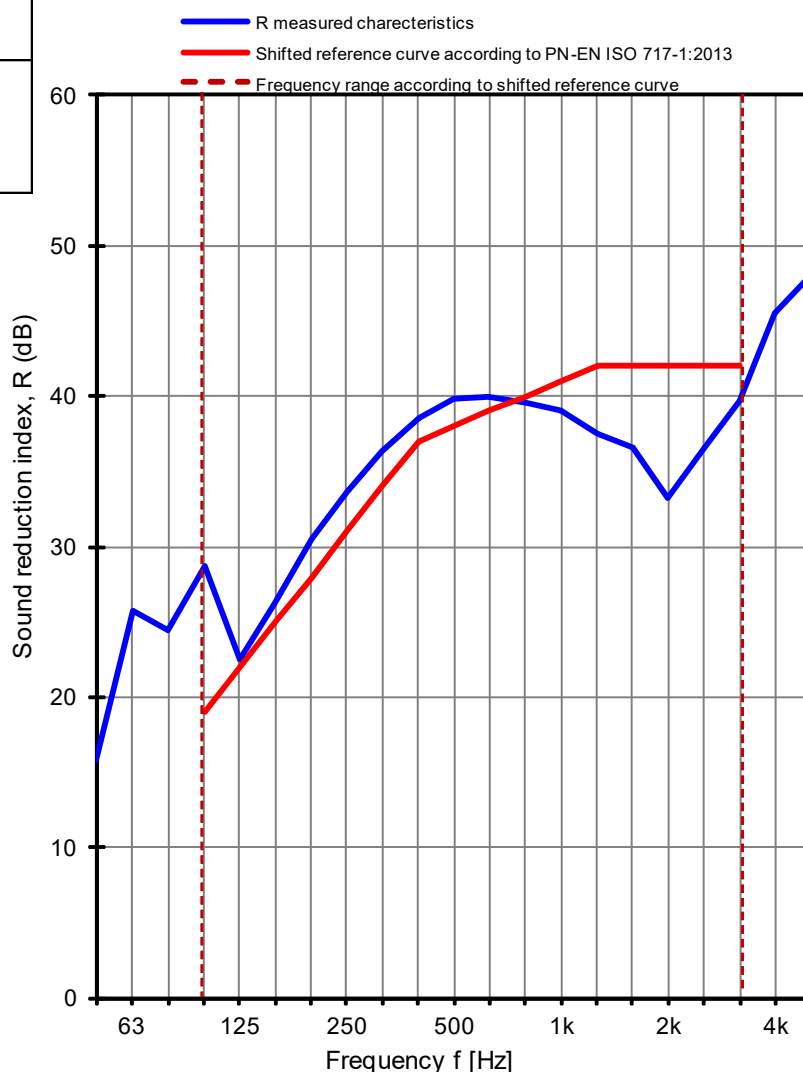
Size of test specimen: **1230 x 1480 mm**

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]	19,6	19,5
Humidity [%]	56	56
Pressure [hPa]	1009	1009
Volume [m ³]	372	324

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U _{CR} [dB]
50	15,8	2,7
63	25,8	2,0
80	24,4	2,0
100	28,8	2,6
125	22,5	1,3
160	26,3	1,2
200	30,5	1,7
250	33,6	1,4
315	36,4	0,9
400	38,5	1,0
500	39,9	1,0
630	40,0	0,8
800	39,5	0,8
1000	39,1	0,7
1250	37,5	0,7
1600	36,6	0,7
2000	33,2	0,8
2500	36,6	1,0
3150	39,7	1,0
4000	45,5	0,9
5000	48,2	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}) = 38 (-2; -3) dB

C₅₀₋₃₁₅₀ = -2 dB

C₅₀₋₅₀₀₀ = -1 dB

C₁₀₀₋₅₀₀₀ = -1 dB

C_{tr, 50-3150} = -4 dB

C_{tr, 50-5000} = -4 dB

C_{tr, 100-5000} = -3 dB

R_w = 38,4 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.22 / 21

Date: 24.09.2021

Signature: Robert Dybicz

Figure 12 Characteristics of airborne sound insulation of test specimen No. GLA-1544.22 / 21