

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: **20.09.2021**

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

Test specimen: **Wooden door**

Pi LNR: 85

Construction: 1I, ND Ntech Villa Balcony door

Glazed by:

44.2 SR Foil / 20 Ar / 44.2 SR Foil

Door frame thickness: 105 mm

After regulation of gasket

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

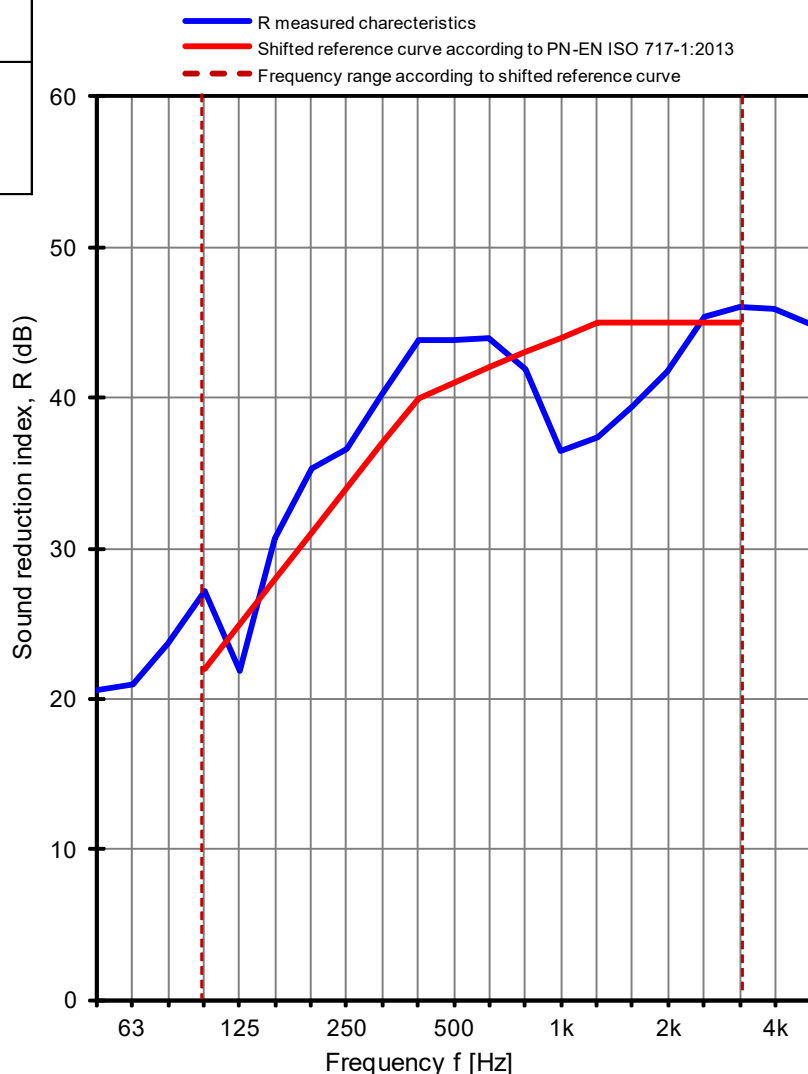
Size of test specimen: **988 x 2088 mm**

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

The surface area of test specimen: **2,15 m²**

Parameter	Receiving room	Source room
Air temp. [°C]	21	21,0
Humidity [%]	53	51
Pressure [hPa]	1020	1020
Volume [m ³]	324	372

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U _{CR} [dB]
50	20,5	3,7
63	20,9	3,8
80	23,7	3,0
100	27,2	1,8
125	21,9	2,1
160	30,7	1,4
200	35,2	1,5
250	36,6	0,9
315	40,3	1,0
400	43,8	0,9
500	43,8	1,0
630	43,9	0,9
800	41,8	0,9
1000	36,4	1,1
1250	37,4	0,7
1600	39,4	0,7
2000	41,8	0,6
2500	45,4	0,7
3150	46,1	0,8
4000	45,9	0,8
5000	44,9	1,2



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}) = 41 (-2; -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

R_w = 41,5 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.5 / 21

Date: 20.09.2021

Signature: Robert Dybicz

Figure 12 Characteristics of airborne sound insulation of test specimen No. GLA-1544.5 / 21