

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: 90

Construction: 1I, ND Ntech Villa Balcony door

Glazed by:

33.1 + 16G + 6

Door frame thickness: 105 mm

After mounting new seal

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

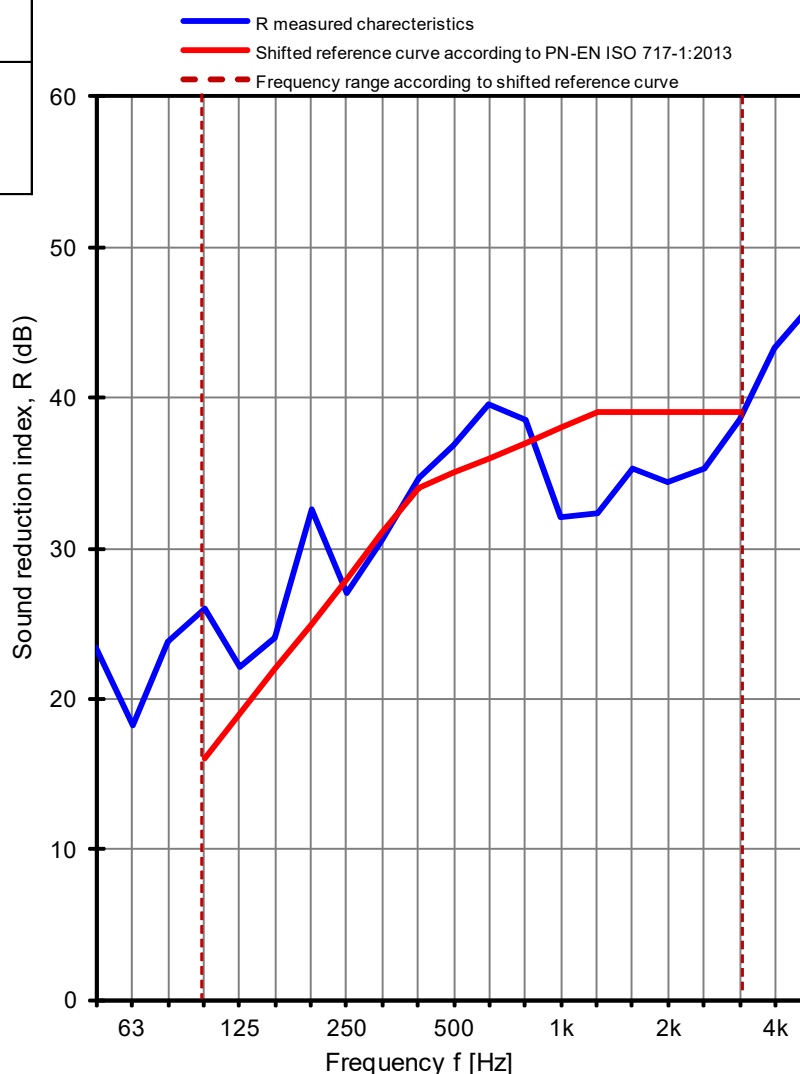
Size of test specimen: **988 x 2088 mm**

Test specimen mounted by: Gryfitlab 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	23,5	3,4
63	18,2	4,4
80	23,9	2,9
100	26,1	1,9
125	22,1	2,0
160	24,1	1,1
200	32,6	1,4
250	27,1	1,3
315	30,5	1,1
400	34,6	1,1
500	36,8	1,1
630	39,6	1,0
800	38,5	1,0
1000	32,1	1,1
1250	32,3	0,8
1600	35,3	0,8
2000	34,4	0,8
2500	35,3	0,9
3150	38,5	0,8
4000	43,4	0,9
5000	46,2	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}) = 35 (-1; -3) dB

C₅₀₋₃₁₅₀ = -1 dB

C₅₀₋₅₀₀₀ = 0 dB

C₁₀₀₋₅₀₀₀ = 0 dB

C_{tr, 50-3150} = -3 dB

C_{tr, 50-5000} = -3 dB

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

R_w = 35,6 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.7 / 21

Date: 20.09.2021

Signature: Robert Dybicz

Figure 14. Characteristics of airborne sound insulation of test specimen No. GLA-1559.7 / 21