

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: **22.09.2021**

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

Test specimen: **Wooden door**

Pi LNR: 60

Construction: TE, ND Ntech Villa Balcony door

Glazed by:

33.1 PVB / 16 Ar / 6

Door frame thickness: 92 mm

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

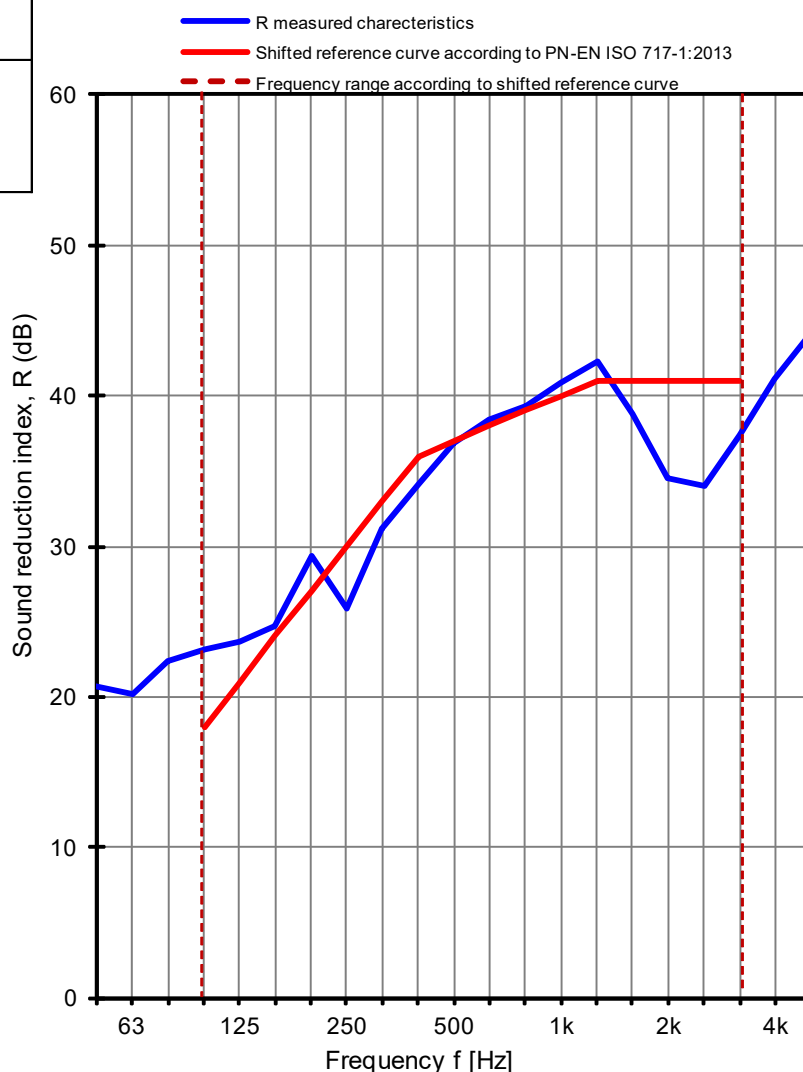
Size of test specimen: **988 x 2088 mm**

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]	19,2	19,0
Humidity [%]	58	56
Pressure [hPa]	1024	1024
Volume [m ³]	324	372

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U _{CR} [dB]
50	20,8	3,4
63	20,2	4,1
80	22,4	2,8
100	23,2	1,8
125	23,7	1,4
160	24,7	1,3
200	29,4	1,4
250	25,8	1,1
315	31,1	1,2
400	34,1	1,1
500	36,8	1,0
630	38,3	0,7
800	39,3	1,0
1000	40,8	0,8
1250	42,3	0,8
1600	38,8	0,8
2000	34,6	0,8
2500	34,0	0,8
3150	37,4	0,9
4000	41,2	0,9
5000	44,2	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}) = 37 (-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 = 37,5 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.14 / 21

Date: 22.09.2021

Signature: Robert Dybicz

Figure 21. Characteristics of airborne sound insulation of test specimen No. GLA-1559.14 / 21