

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: **21.09.2021**

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

Test specimen: **Wooden door**

Pi LNR: 45

Construction: TE, ND Ntech Villa Balcony door

Additional

Glazed by:

44.2 PVB / 16 Ar / 6

Door frame thickness: 105 mm

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

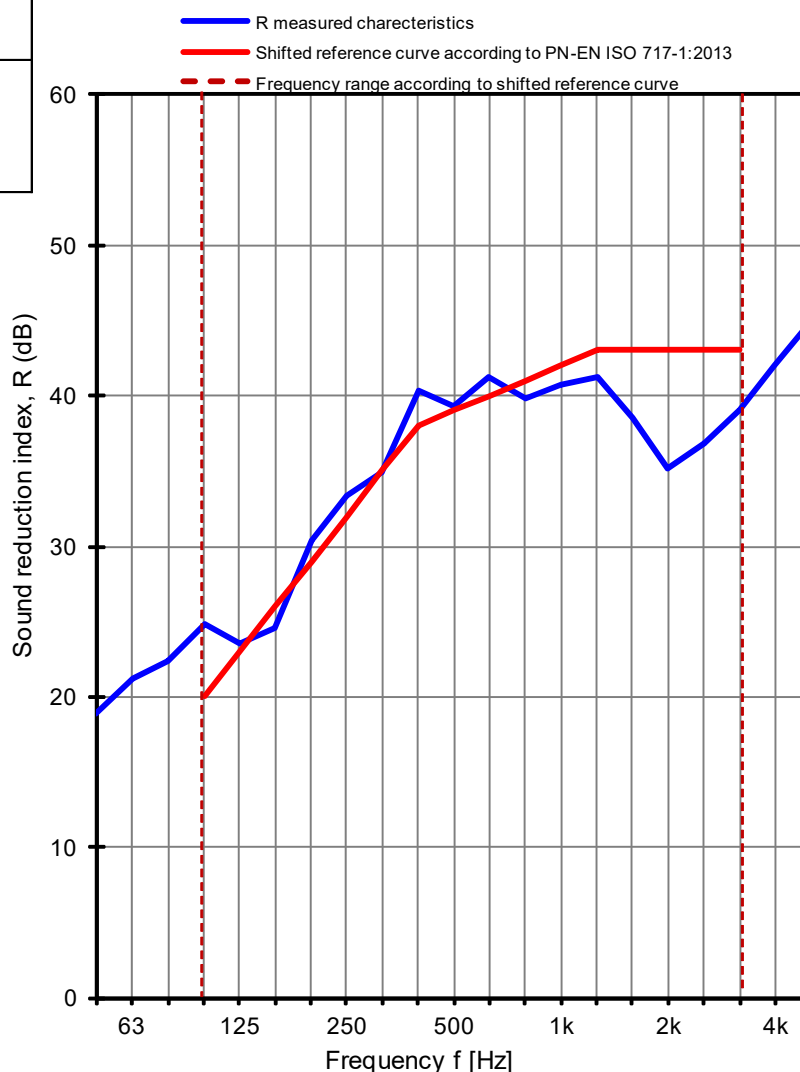
Size of test specimen: **988 x 2088 mm**

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]	20,4	20,2
Humidity [%]	53	54
Pressure [hPa]	1025	1025
Volume [m ³]	324	372

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U _{CR} [dB]
50	18,9	3,3
63	21,3	2,8
80	22,4	2,8
100	24,9	2,2
125	23,5	1,5
160	24,5	1,5
200	30,4	1,2
250	33,4	0,9
315	34,9	1,4
400	40,3	0,8
500	39,3	1,0
630	41,3	0,8
800	39,8	1,1
1000	40,7	0,8
1250	41,2	0,7
1600	38,5	0,7
2000	35,1	0,7
2500	36,9	0,9
3150	39,0	1,0
4000	42,0	0,9
5000	45,0	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}) = 39 (-2; -4) dB

C₅₀₋₃₁₅₀ = -2 dB

C₅₀₋₅₀₀₀ = -1 dB

C₁₀₀₋₅₀₀₀ = -1 dB

C_{tr, 50-3150} = -5 dB

C_{tr, 50-5000} = -5 dB

C_{tr, 100-5000} = -4 dB

R_w = 39,4 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.13 / 21

Date: 21.09.2021

Signature: Robert Dybicz

Figure 20. Characteristics of airborne sound insulation of test specimen No. GLA-1559.13 / 21