

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**

Additional test

Test specimen: **Wooden door**

Pi LNR: 75

Construction: 1I, ND Ntech Villa Balcony door

Glazed by:

44.2 PVB+16Ar+6

Door frame thickness: 105 mm

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

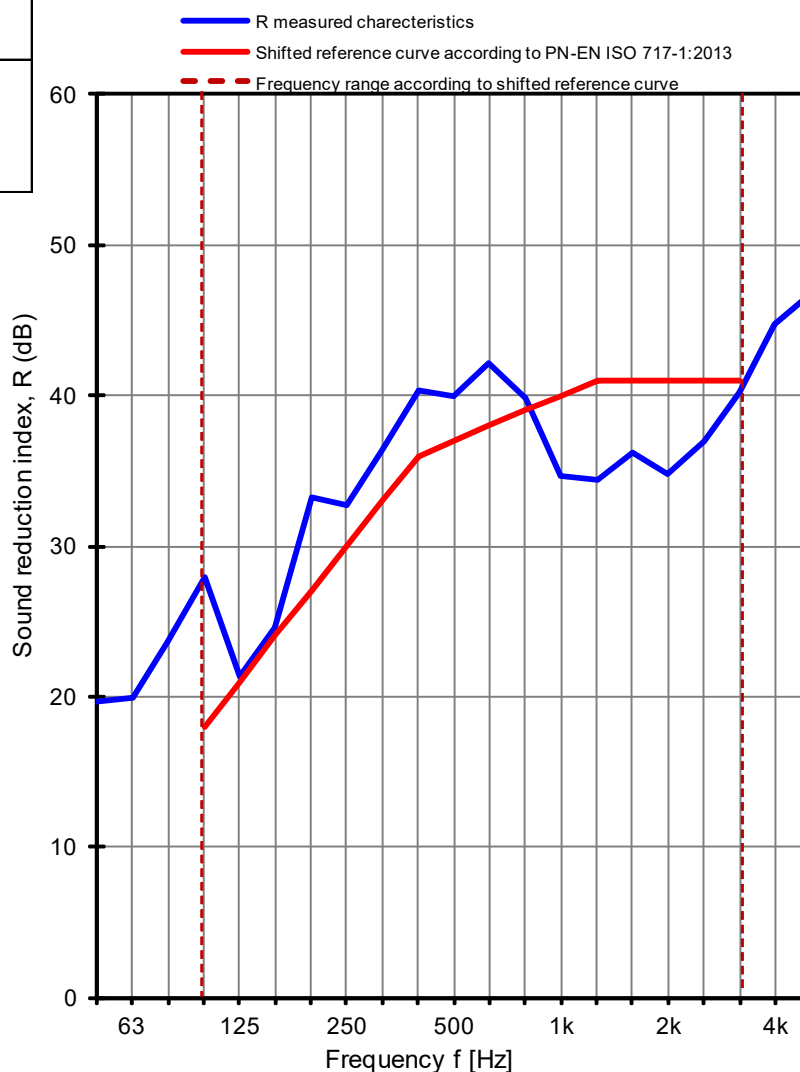
Size of test specimen: **988 x 2088 mm**

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]	21	21,0
Humidity [%]	56	55
Pressure [hPa]	1020	1020
Volume [m ³]	324	372

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U _{CR} [dB]
50	19,7	4,2
63	19,9	4,0
80	23,7	3,1
100	27,9	1,8
125	21,3	1,9
160	24,5	1,4
200	33,2	1,4
250	32,7	1,0
315	36,3	0,8
400	40,4	1,0
500	39,9	1,3
630	42,2	0,9
800	39,9	1,1
1000	34,6	0,9
1250	34,3	0,9
1600	36,2	0,9
2000	34,8	0,9
2500	37,0	0,8
3150	40,2	0,9
4000	44,8	0,9
5000	46,8	1,3



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 (-1; -3) dB

C₅₀₋₃₁₅₀ = -1 dB

C₅₀₋₅₀₀₀ = 0 dB

C₁₀₀₋₅₀₀₀ = 0 dB

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

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

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

R_w = 37,6 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.8 / 21

Date: 20.09.2021

Signature: Robert Dybicz

Figure 15. Characteristics of airborne sound insulation of test specimen No. GLA-1559.8 / 21