

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: **105**

Construction: **M1 (Vision), ND External door Horizon M016**

Glazed by:

33.1 PVB / 16 Ar / 4 / 16 Ar / 4

Door frame thickness: **105 mm**

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

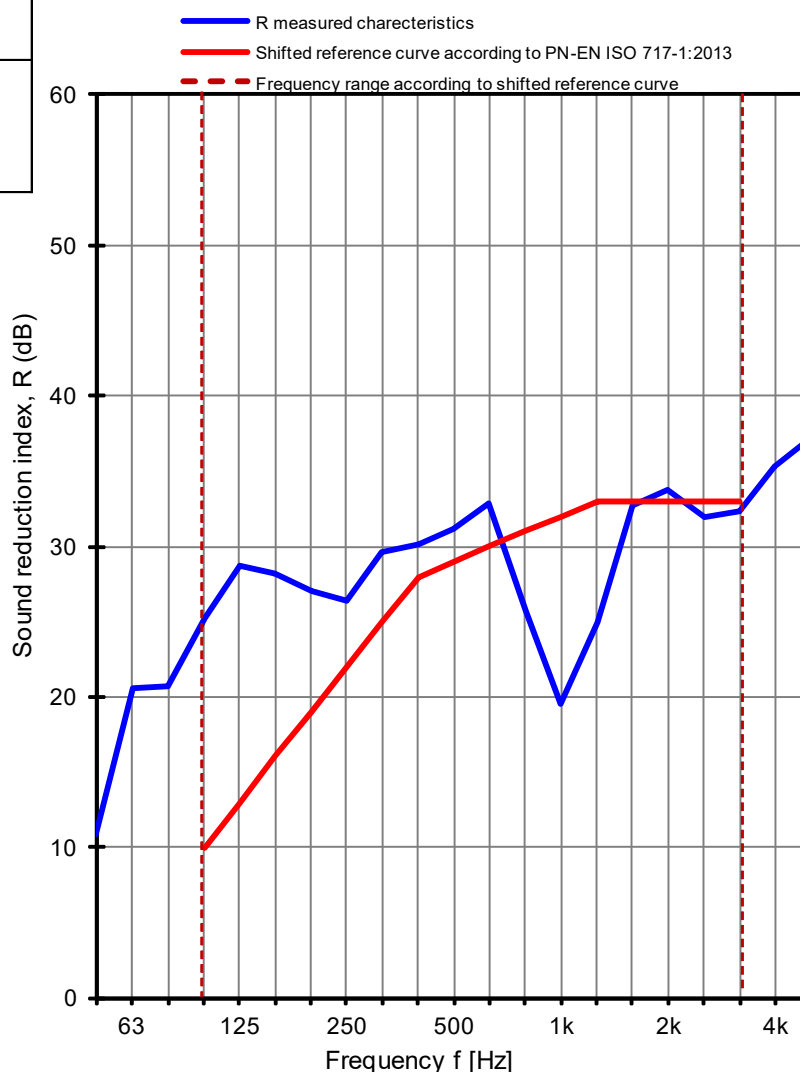
Size of test specimen: **988 x 2088 mm**

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]	19,2	19,1
Humidity [%]	54	55
Pressure [hPa]	1024	1024
Volume [m ³]	324	372

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U _{CR} [dB]
50	10,8	4,1
63	20,6	2,6
80	20,7	2,7
100	25,2	1,8
125	28,8	1,4
160	28,2	1,4
200	27,0	1,2
250	26,4	1,2
315	29,6	1,0
400	30,2	0,8
500	31,1	1,0
630	32,9	0,8
800	25,7	1,0
1000	19,5	0,8
1250	24,9	0,7
1600	32,7	0,7
2000	33,7	0,7
2500	31,9	0,8
3150	32,3	0,9
4000	35,3	0,9
5000	37,3	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}) = 29 (-2; -4) dB

C₅₀₋₃₁₅₀ = -2 dB

C₅₀₋₅₀₀₀ = -2 dB

C₁₀₀₋₅₀₀₀ = -2 dB

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

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

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

R_w = 29,6 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.16 / 21

Date: 22.09.2021

Signature: Robert Dybicz

Figure 9. Characteristics of airborne sound insulation of test specimen No. GLA-1559.16 / 21