

### 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: 39**

**Construction: TE, ND Ntech Villa Balcony door**

**Glazed by:**

**66.4 SR Foil / 24 Ar / 66.2 SR Foil**

**Door frame thickness: 105 mm**

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

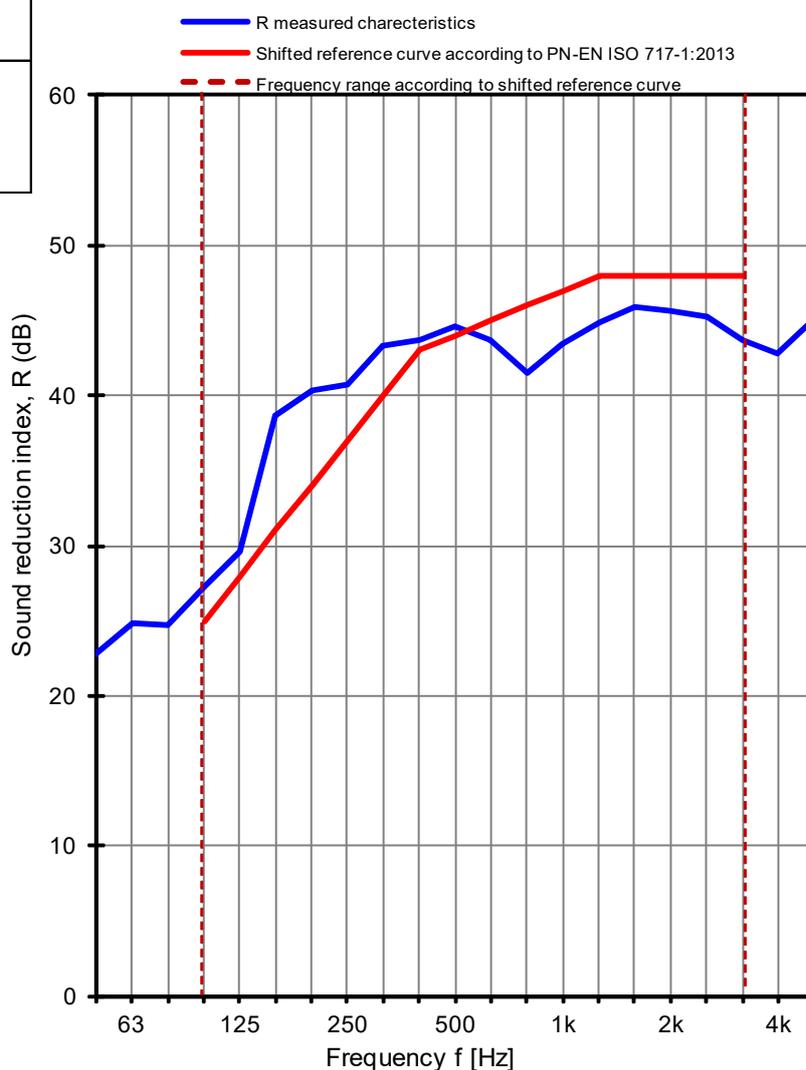
Size of test specimen: **988 x 2088 mm**

Test specimen mounted by: **NorDan Sp. z o.o.**

The surface area of test specimen: **2,15 m<sup>2</sup>**

Parameter	Receiving room	Source room
Air temp. [°C]	20,1	19,9
Humidity [%]	55	57
Pressure [hPa]	1025	1025
Volume [m <sup>3</sup> ]	324	372

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U <sub>CR</sub> [dB]
50	22,8	3,3
63	24,9	2,8
80	24,7	2,4
100	27,3	2,7
125	29,6	2,3
160	38,7	1,4
200	40,3	1,4
250	40,7	1,3
315	43,3	0,8
400	43,7	1,0
500	44,6	0,9
630	43,7	0,7
800	41,5	1,0
1000	43,5	0,9
1250	44,9	0,7
1600	45,9	0,7
2000	45,7	0,7
2500	45,3	0,8
3150	43,8	0,9
4000	42,9	0,9
5000	45,1	1,2



Measurement uncertainty of sound reduction U<sub>CR</sub>  
Confidence level 95% at coverage factor, k=2

Weighted sound reduction index in accordance with PN-EN ISO 717-1:2021-06E

**R<sub>w</sub> (C; C<sub>tr</sub>) = 44 (0; -3) dB**

C<sub>50-3150</sub> = -1 dB

C<sub>50-5000</sub> = -1 dB

C<sub>100-5000</sub> = 0 dB

C<sub>tr, 50-3150</sub> = -5 dB

C<sub>tr, 50-5000</sub> = -5 dB

C<sub>tr, 100-5000</sub> = -3 dB

**R<sub>w</sub> = 44,9 dB**

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.9 / 21

Date: 21.09.2021

Signature: Robert Dybicz

Figure 16. Characteristics of airborne sound insulation of test specimen No. GLA-1559.9 / 21