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: 55**

Construction: TE, ND Ntech Villa Balcony door

Glazed by:

64.2 SR Foil / 24 Ar / 68.2 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.

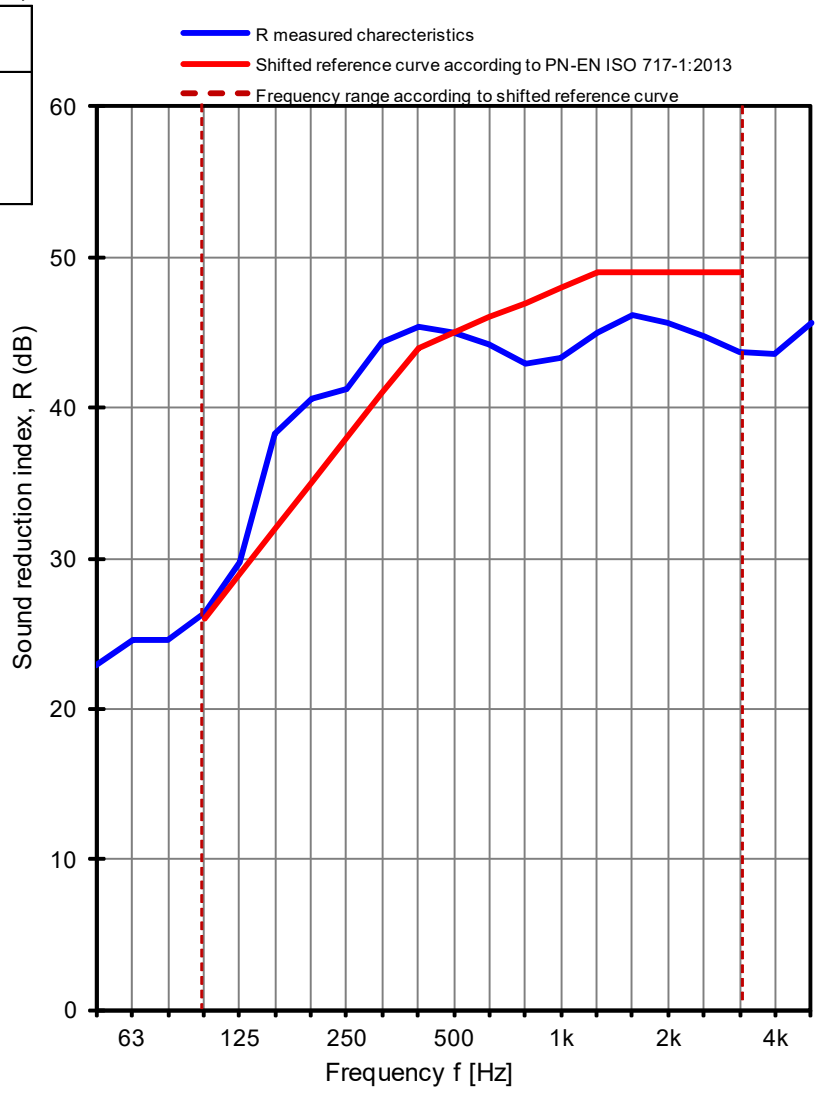
The surface area of test specimen: **2,15 m²**

Parameter	Receiving room	Source room
Air temp. [°C]	20,2	20,1
Humidity [%]	54	56
Pressure [hPa]	1025	1025
Volume [m³]	324	372

Frequency [Hz]	Test results with uncertainty R [dB]	U_{CR} [dB]
50	22,9	2,7
63	24,6	3,2
80	24,6	2,7
100	26,4	2,2
125	29,7	1,7
160	38,3	1,1
200	40,6	1,3
250	41,3	1,4
315	44,4	0,9
400	45,4	0,8
500	45,0	0,9
630	44,2	0,8
800	42,9	0,9
1000	43,3	0,7
1250	45,0	0,8
1600	46,1	0,9
2000	45,7	0,7
2500	44,7	0,7
3150	43,7	0,9
4000	43,6	0,9
5000	45,6	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

Rw (C; Ctr)= 45 (-1; -4) dB

$C_{50\text{-}3150}$= **-2** dB $C_{50\text{-}5000}$= **-1** dB $C_{100\text{-}5000}$= **-1** dB

$C_{tr,\ 50\text{-}3150}$= **-6** dB $C_{tr,\ 50\text{-}5000}$= **-6** dB $C_{tr,\ 100\text{-}5000}$= **-4** dB

Rw = 45,1 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.11 / 21

Date: 21.09.2021 Signature: Robert Dybicz

Figure 18. Characteristics of airborne sound insulation of test specimen No. GLA-1559.11 / 21