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: **09.11.2021**

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

Test specimen: **Wooden window** **Pi LNR: 155**

Construction: TL EI60, ND NTech Villa Fixed frame

Frame thickness: 105 mm

Glazed by: 44.2 SR Foil / 10 Ar / 4 / 10 Ar / 25 EI60

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

Size of test specimen: **1230 x 1480 mm**

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

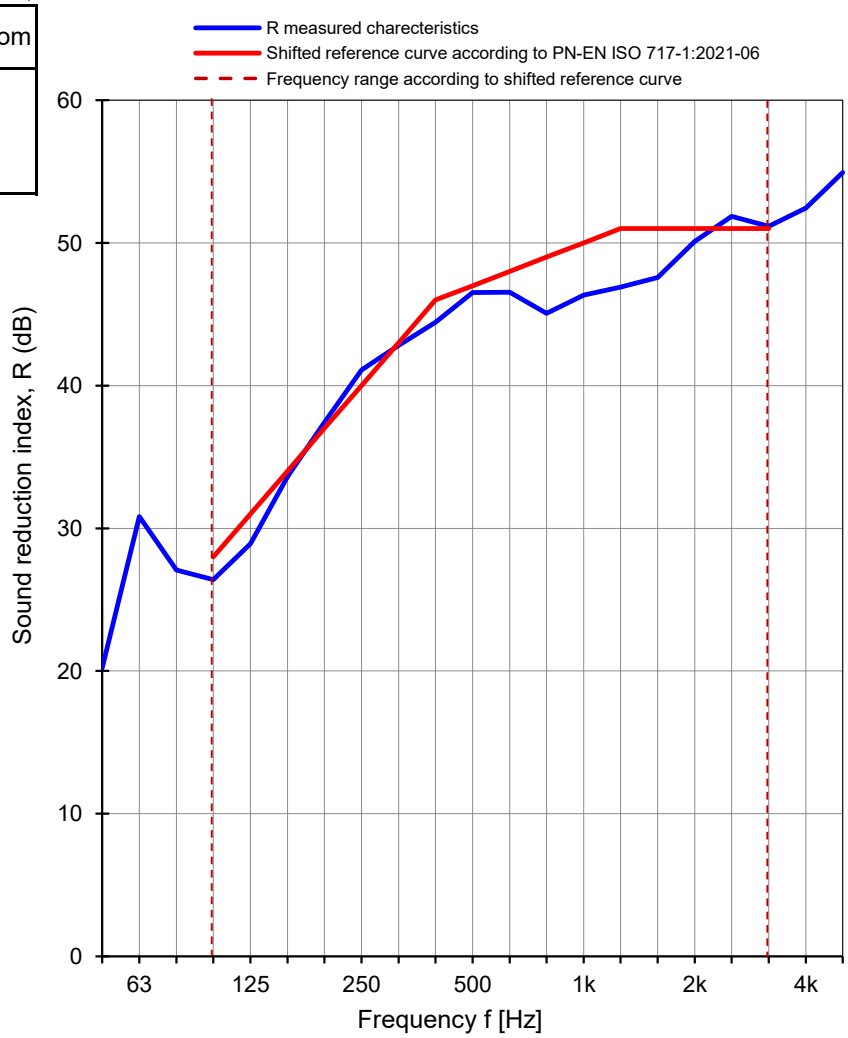
The surface area of test specimen: **1,87 m^2**

Parameter	Receiving room	Source room
Air temp. [°C]	21,3	21,1
Humidity [%]	50	51
Pressure [hPa]	1027	1027
Volume [m^3]	372	324

Frequency [Hz]	Test results with uncertainty R [dB]	U_{CR} [dB]
50	20,2	2,8
63	30,8	1,4
80	27,1	2,2
100	26,4	2,2
125	28,9	1,7
160	33,6	1,5
200	37,4	1,0
250	41,1	1,3
315	42,8	0,8
400	44,4	1,1
500	46,5	1,0
630	46,5	0,8
800	45,1	0,8
1000	46,3	0,6
1250	46,9	0,8
1600	47,6	0,7
2000	50,1	0,8
2500	51,9	0,9
3150	51,2	1,1
4000	52,4	1,0
5000	54,9	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 717-1:2021-06

Rw (C; Ctr)= 47 (-1; -5) dB

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

$C_{tr,\ 50\text{-}3150}$= **-8** dB $C_{tr,\ 50\text{-}5000}$= **-8** dB $C_{tr,\ 100\text{-}5000}$= **-5** dB

Rw = 47,6 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.58 / 21

Date: 09.11.2021 Signature: Robert Dybicz