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: **04.11.2021**

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

Test specimen: **Wooden window** **Pi LNR: 70**

Construction: TY, ND NTech Villa Topswing reversible Opus

Frame thickness: 105 mm

Glazed by: 8 / 20Ar / 44.1 SR foil

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.

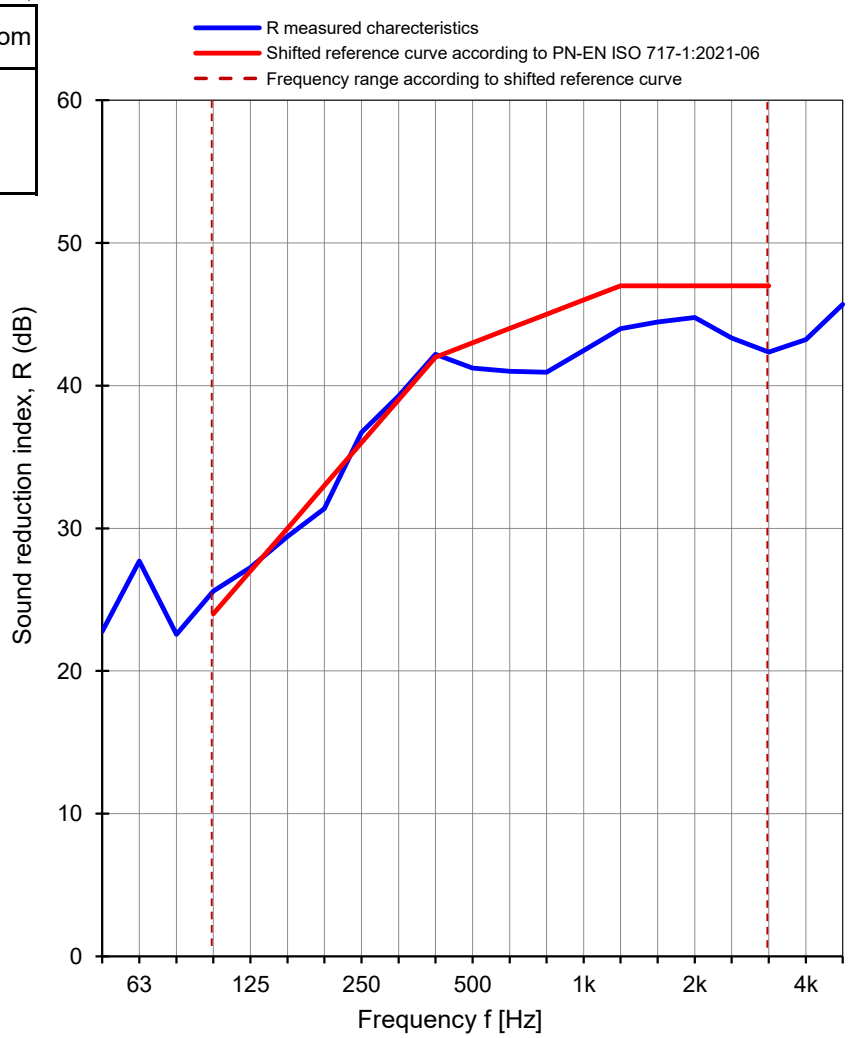
The surface area of test specimen: **1,87 m^2**

Parameter	Receiving room	Source room
Air temp. [°C]	21,0	21,2
Humidity [%]	57	58
Pressure [hPa]	998	998
Volume [m^3]	372	324

Frequency [Hz]	Test results with uncertainty R [dB]	U_{CR} [dB]
50	22,8	2,7
63	27,7	2,4
80	22,6	2,4
100	25,6	2,4
125	27,3	1,4
160	29,4	1,6
200	31,4	1,3
250	36,7	1,3
315	39,3	1,0
400	42,2	0,8
500	41,2	0,8
630	41,0	0,9
800	40,9	1,0
1000	42,5	0,9
1250	44,0	0,7
1600	44,4	0,8
2000	44,8	0,8
2500	43,3	0,7
3150	42,4	0,9
4000	43,2	1,0
5000	45,7	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 717-1:2021-06

Rw (C; Ctr)= 43 (-2; -5) dB

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

$C_{tr,\ 50\text{-}3150}$= **-6** dB $C_{tr,\ 50\text{-}5000}$= **-6** dB $C_{tr,\ 100\text{-}5000}$= **-5** dB

Rw = 43,1 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.38 / 21

Date: 04.11.2021 Signature: Robert Dybicz