

Sound reduction index in accordance with PN - EN ISO 10140-2 (2011)

Laboratory measurements of airborne sound insulation of building elements

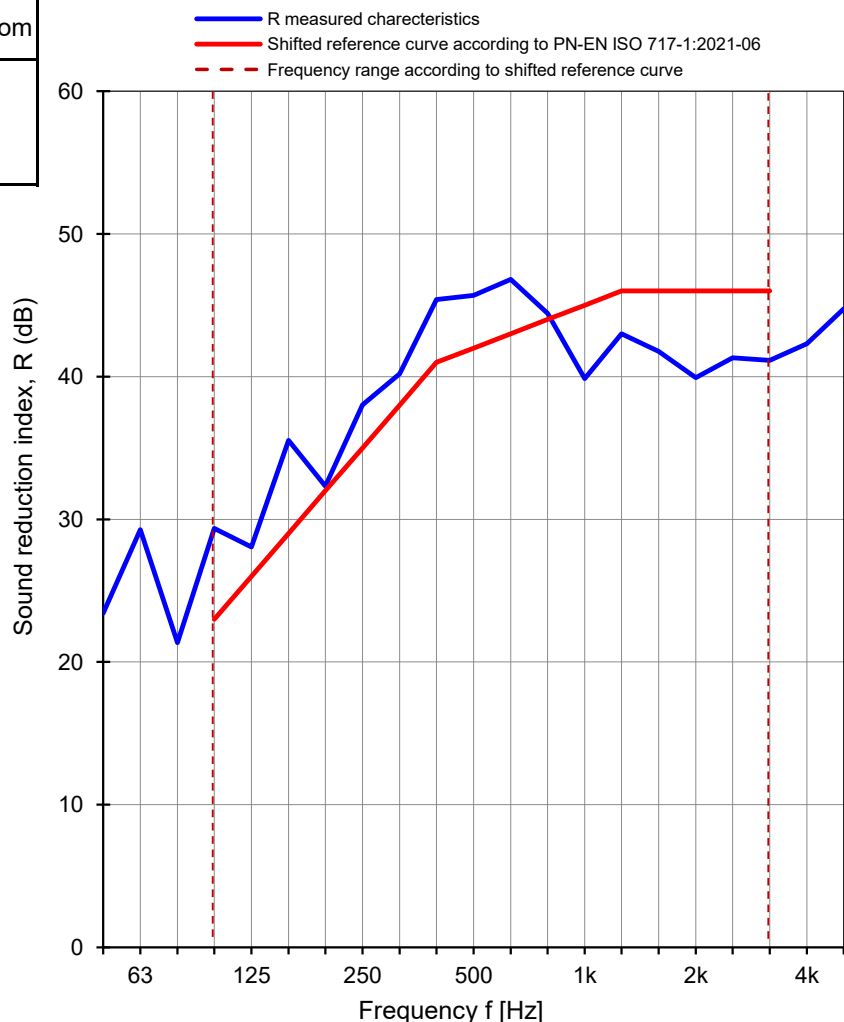
Client: **NorDan Sp. z o.o.**Measurement date: **03.11.2021**Address: **Powodowo 54, 64-200 Wolsztyn**Test specimen: **Wooden window****Pi LNR: 50****Construction: TG, ND NTech Villa Topswing reversible****Frame thickness: 105 mm****Glazed by: 66.2 SR Foil / 24 Ar / 8**

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 m²**

Parameter	Receiving room	Source room
Air temp. [°C]	21,4	21,6
Humidity [%]	59	58
Pressure [hPa]	1003	1003
Volume [m ³]	372	324

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U _{CR} [dB]
50	23,4	3,5
63	29,3	2,0
80	21,3	1,8
100	29,4	2,8
125	28,1	1,5
160	35,5	1,5
200	32,3	1,3
250	38,0	1,4
315	40,2	1,0
400	45,4	0,9
500	45,7	0,9
630	46,8	1,0
800	44,4	0,9
1000	39,9	1,0
1250	43,0	0,9
1600	41,8	0,8
2000	39,9	0,7
2500	41,3	0,9
3150	41,1	1,2
4000	42,3	1,2
5000	44,8	1,1

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

R_w (C; C_{tr}) = 42 (-1; -2) dBC₅₀₋₃₁₅₀ = -1 dBC₅₀₋₅₀₀₀ = -1 dBC₁₀₀₋₅₀₀₀ = -1 dBC_{tr, 50-3150} = -5 dBC_{tr, 50-5000} = -5 dBC_{tr, 100-5000} = -2 dB**R_w = 42,5 dB**

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.32 / 21

Date: 03.11.2021

Signature: Robert Dybicz