

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

Laboratory measurements of airborne sound insulation of building elements

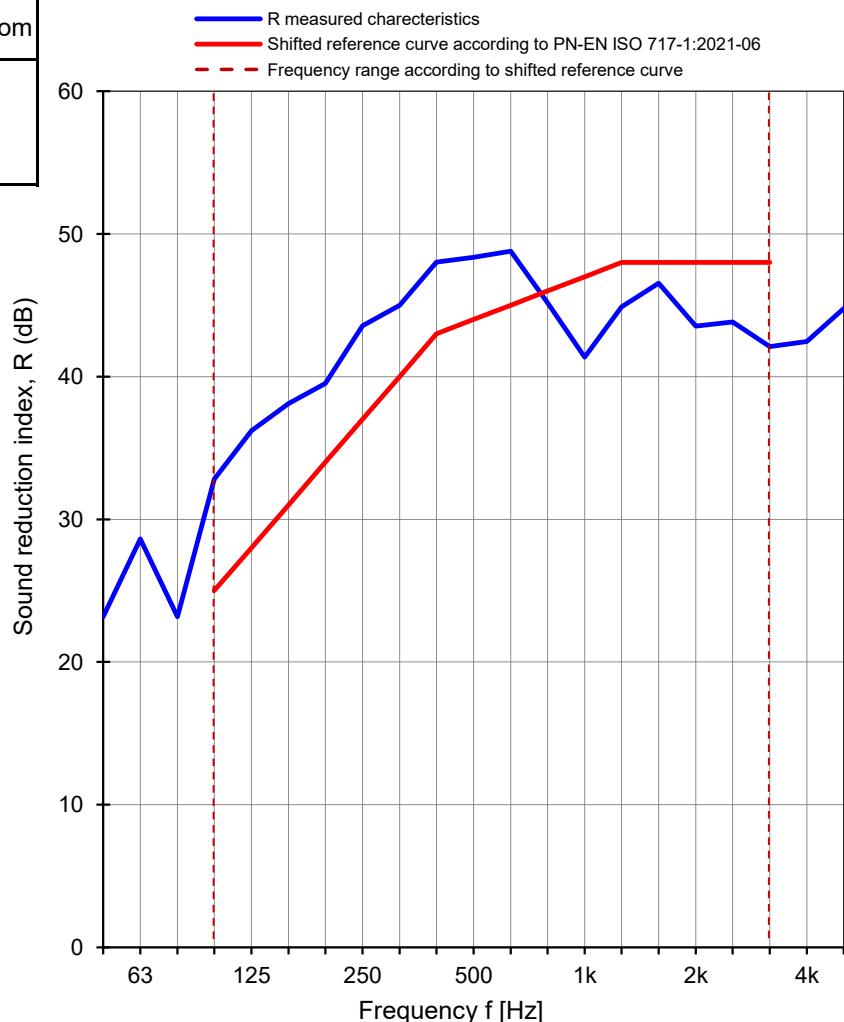
Client: **NorDan Sp. z o.o.**Measurement date: **03.11.2021**Address: **Powodowo 54, 64-200 Wolsztyn**Test specimen: **Wooden window****Pi LNR: 60****Construction: TG, ND NTech Villa Topswing reversible****Frame thickness: 105 mm****Glazed by: 66.4 SR Foil / 24 Ar / 66.2 SR Foil**

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 m²**

Parameter	Receiving room	Source room
Air temp. [°C]	21,2	21,3
Humidity [%]	58	58
Pressure [hPa]	1003	1003
Volume [m ³]	372	324

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U _{CR} [dB]
50	23,2	3,2
63	28,6	2,1
80	23,2	1,8
100	32,8	2,6
125	36,2	1,5
160	38,1	1,3
200	39,5	1,0
250	43,6	1,4
315	45,0	1,0
400	48,0	0,9
500	48,4	0,9
630	48,8	1,0
800	45,2	1,0
1000	41,4	0,7
1250	44,9	0,8
1600	46,5	0,7
2000	43,5	0,8
2500	43,8	0,9
3150	42,1	1,0
4000	42,5	1,2
5000	44,8	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

R_w (C; C_{tr}) = 44 (0; -1) dBC₅₀₋₃₁₅₀ = 0 dBC₅₀₋₅₀₀₀ = 0 dBC₁₀₀₋₅₀₀₀ = 0 dBC_{tr, 50-3150} = -4 dBC_{tr, 50-5000} = -4 dBC_{tr, 100-5000} = -1 dB**R_w = 44,9 dB**

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.33 / 21

Date: 03.11.2021

Signature: Robert Dybicz