

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: **05.11.2021**Address: **Powodowo 54, 64-200 Wolsztyn**Test specimen: **Wooden window****Pi LNR: 115****Construction: OD, ND NTech One Tilt and Turn****Frame thickness: 105 mm****Glazed by: 44.2 SR Foil / 20 Ar / 44.2 SR Foil**

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

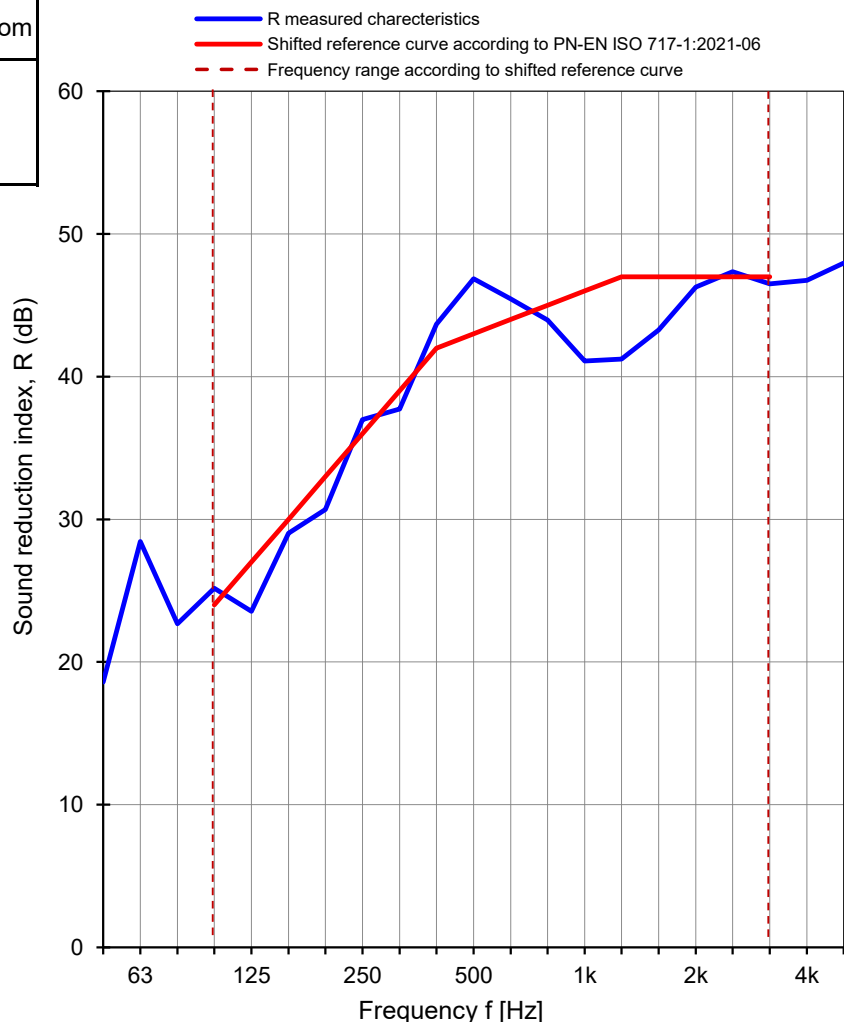
Size of test specimen: **1230 x 1480 mm**

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]	20,4	20,9
Humidity [%]	57	59
Pressure [hPa]	1013	1013
Volume [m ³]	372	324

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U _{CR} [dB]
50	* 18,6	3,2
63	* 28,4	2,9
80	22,7	1,9
100	25,2	2,9
125	23,6	1,7
160	29,0	1,7
200	30,7	1,0
250	37,0	1,2
315	37,7	0,8
400	43,7	0,8
500	46,9	1,0
630	45,4	0,9
800	44,0	0,7
1000	41,1	0,8
1250	41,2	0,7
1600	43,3	0,7
2000	46,3	0,7
2500	47,3	0,9
3150	46,5	1,1
4000	46,8	0,9
5000	48,0	1,0

Measurement uncertainty of sound reduction U_{CR}

Confidence level 95% at coverage factor, k=2

* L_p-L_{pbackground} < 6 dB

Weighted sound reduction index in accordance with PN-EN ISO 717-1:2021-06

R_w (C; C_{tr}) = 43 (-2; -5) dBC₅₀₋₃₁₅₀ = -2 dBC₅₀₋₅₀₀₀ = -1 dBC₁₀₀₋₅₀₀₀ = -1 dBC_{tr, 50-3150} = -7 dBC_{tr, 50-5000} = -7 dBC_{tr, 100-5000} = -5 dB**R_w = 43,6 dB**

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.46 / 21

Date: 05.11.2021

Signature: Robert Dybicz