

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

Laboratory measurements of airborne sound insulation of building elements

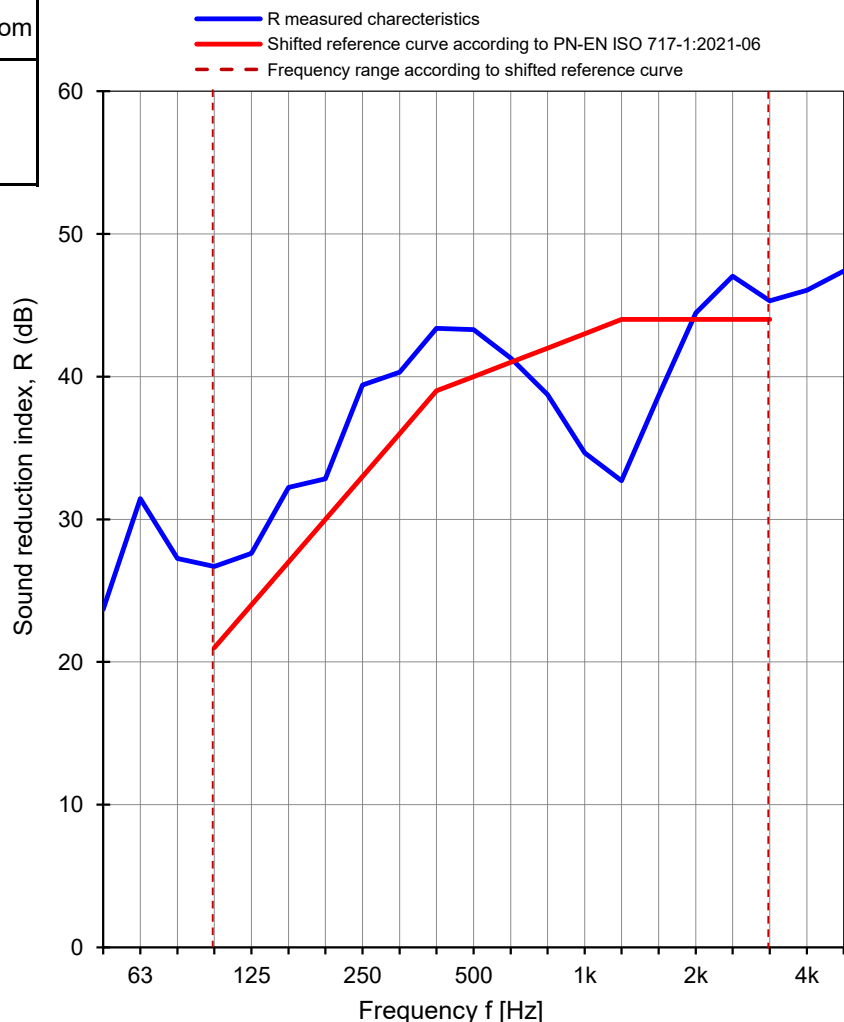
Client: **NorDan Sp. z o.o.**Measurement date: **10.11.2021**Address: **Powodowo 54, 64-200 Wolsztyn**Test specimen: **Wooden window****Pi LNR: 140****Construction: ND EI30, ND NTech Tilt and Turn 3 handle****Frame thickness: 105 mm****Glazed by: 44.2 SR Foil / 16 Ar / 16 EI30**

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]	21,0	20,8
Humidity [%]	50	49
Pressure [hPa]	1025	1025
Volume [m ³]	372	324

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U _{CR} [dB]
50	23,7	2,7
63	31,4	1,9
80	27,3	2,0
100	26,7	2,6
125	27,6	1,7
160	32,2	1,7
200	32,8	1,2
250	39,4	1,0
315	40,3	1,1
400	43,4	0,8
500	43,3	0,9
630	41,3	0,9
800	38,7	0,8
1000	34,7	0,7
1250	32,7	0,7
1600	38,7	0,7
2000	44,5	0,7
2500	47,0	0,9
3150	45,3	1,0
4000	46,0	1,0
5000	47,4	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}) = 40 (-2; -4) dBC₅₀₋₃₁₅₀ = -2 dBC₅₀₋₅₀₀₀ = -1 dBC₁₀₀₋₅₀₀₀ = -1 dBC_{tr, 50-3150} = -4 dBC_{tr, 50-5000} = -4 dBC_{tr, 100-5000} = -4 dB**R_w = 40,7 dB**

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.59 / 21

Date: 10.11.2021

Signature: Robert Dybicz