

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

Laboratory measurements of airborne sound insulation of building elements

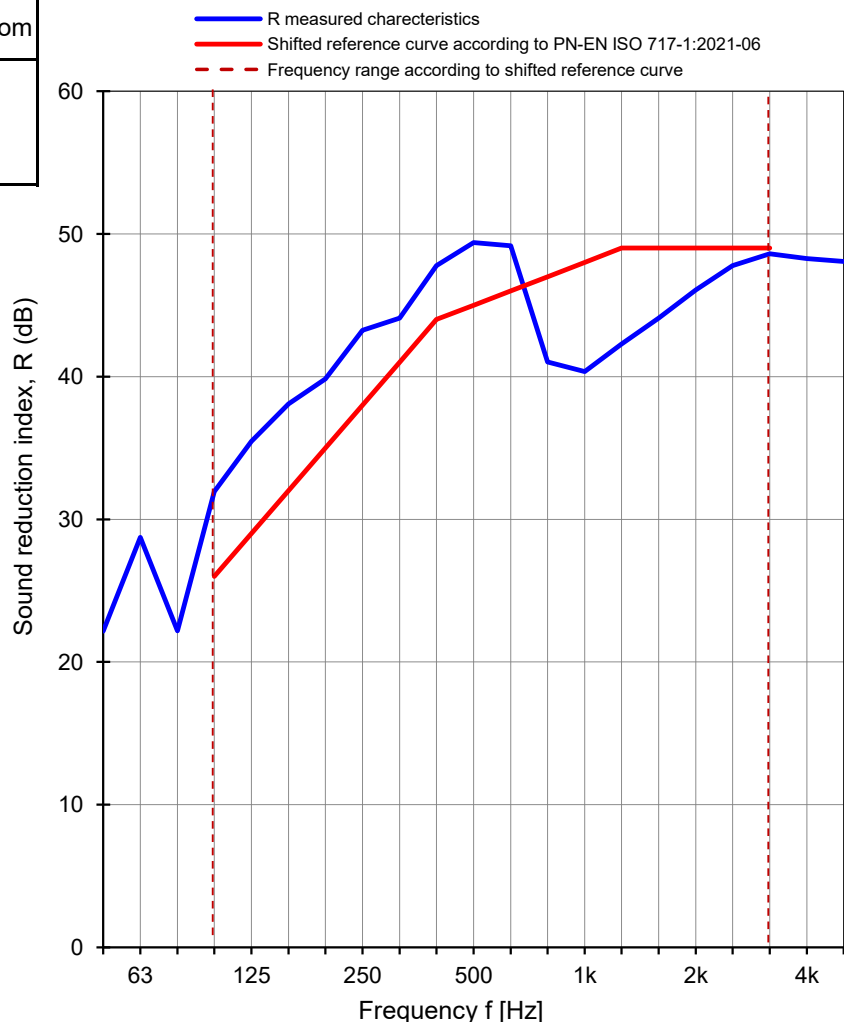
Client: **NorDan Sp. z o.o.**Measurement date: **05.11.2021**Address: **Powodowo 54, 64-200 Wolsztyn**Test specimen: **Wooden window****Pi LNR: 130****Construction: OD, ND NTech One Tilt and Turn****Frame thickness: 105 mm****Glazed by: 64.2 SR Foil / 24 Ar / 68.2 SR Foil**

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]	21,4	21,3
Humidity [%]	64	63
Pressure [hPa]	1010	1010
Volume [m ³]	372	324

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U _{CR} [dB]
50	22,2	4,0
63	28,7	2,2
80	22,2	1,8
100	31,9	2,7
125	35,5	1,7
160	38,1	1,4
200	39,8	1,2
250	43,3	1,0
315	44,1	0,9
400	47,8	0,9
500	49,4	1,2
630	49,2	0,9
800	41,0	0,9
1000	40,4	0,8
1250	42,3	0,9
1600	44,1	0,7
2000	46,1	0,8
2500	47,8	0,7
3150	48,6	1,0
4000	48,3	1,0
5000	48,1	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}) = 45 (-1; -3) dBC₅₀₋₃₁₅₀ = -2 dBC₅₀₋₅₀₀₀ = -1 dBC₁₀₀₋₅₀₀₀ = -1 dBC_{tr, 50-3150} = -6 dBC_{tr, 50-5000} = -6 dBC_{tr, 100-5000} = -3 dB**R_w = 45,3 dB**

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.41 / 21

Date: 05.11.2021

Signature: Robert Dybicz