

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

Laboratory measurements of airborne sound insulation of building elements

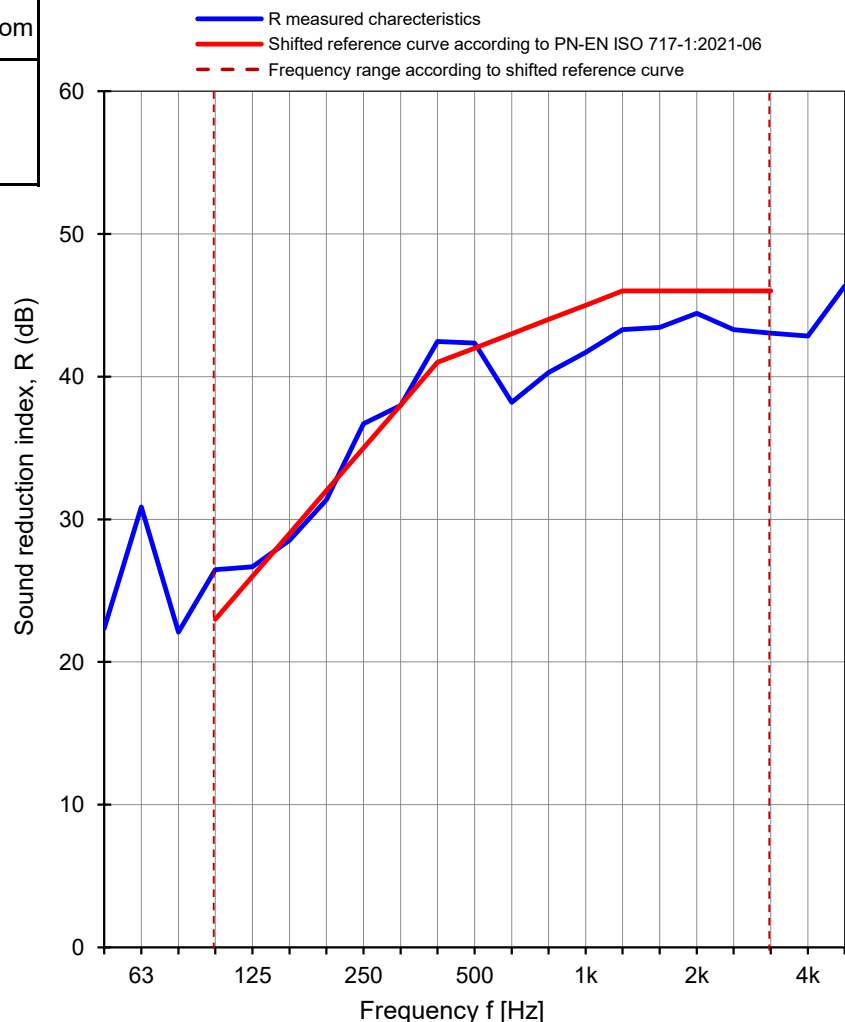
Client: **NorDan Sp. z o.o.**
Address: **Powodowo 54, 64-200 Wolsztyn**Measurement date: **08.11.2021**Test specimen: **Wooden window**
Construction: TQ ND NTech Villa Topguided
Frame thickness: 105 mm
Glazed by: 8 / 20 Ar / 44.1 SR foil**Pi LNR: 80**

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	21,1
Humidity [%]	56	57
Pressure [hPa]	1016	1016
Volume [m ³]	372	324

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U _{CR} [dB]
50	22,3	3,3
63	30,9	2,1
80	22,1	1,7
100	26,5	2,5
125	26,7	1,5
160	28,5	1,2
200	31,4	1,0
250	36,7	1,1
315	38,0	0,7
400	42,5	1,0
500	42,4	1,0
630	38,2	1,2
800	40,3	0,9
1000	41,7	0,8
1250	43,3	0,6
1600	43,5	0,7
2000	44,4	0,7
2500	43,3	0,7
3150	43,0	1,0
4000	42,8	1,1
5000	46,3	1,2

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; -4) dBC₅₀₋₃₁₅₀ = -1 dBC₅₀₋₅₀₀₀ = -1 dBC₁₀₀₋₅₀₀₀ = -1 dBC_{tr, 50-3150} = -6 dBC_{tr, 50-5000} = -6 dBC_{tr, 100-5000} = -4 dB**R_w = 42,5 dB**

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1559.53 / 21

Date: 08.11.2021

Signature: Robert Dybicz