

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: **31.08.2017**

Test specimen: **Wooden window**
ND N Tech Villa Topswing reversible
Glazed IGU: 14,76 - 24Ar - 10,76

Designation: **VSG (FL8/0,76SC/FL6)1B1 / 24 CH.ULT7035**
/ VSG (TH1,0 6/0,76SC/FL4)kl. 1B1 Ar 49,6

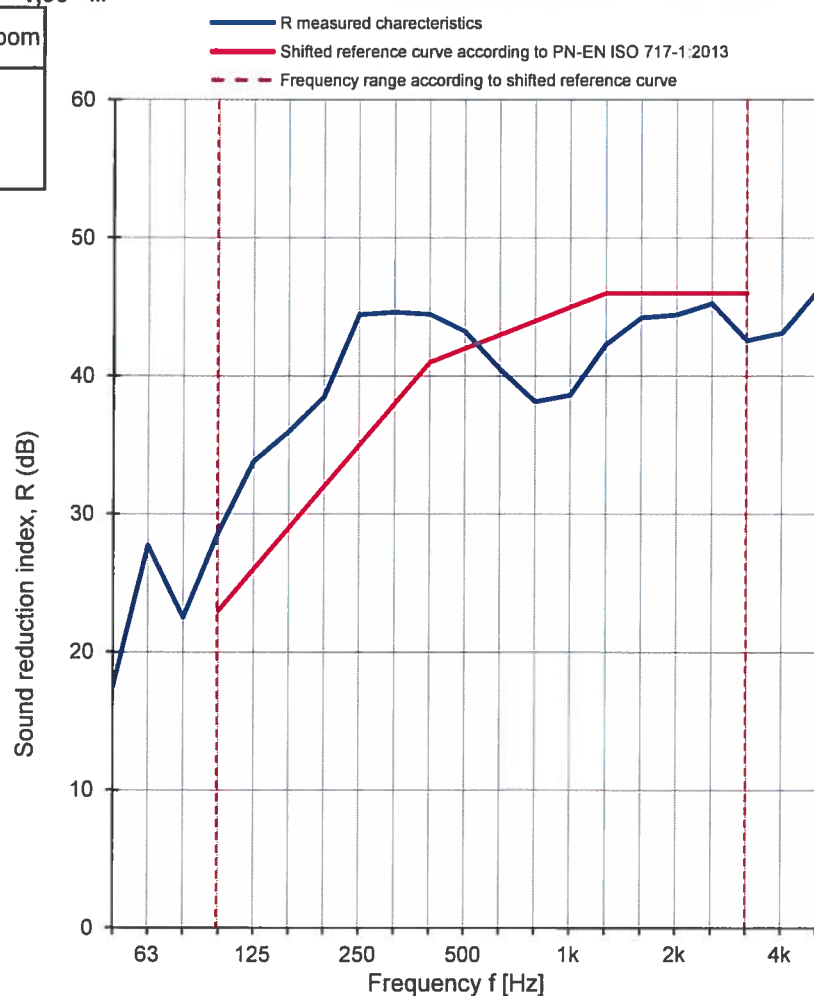
Aluminium cladding pad on external side of frame
of window and sash was disassembled.

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

Size of test specimen: **1230 x 1480 mm**Test specimen mounted by: **Gryfitlab Sp. z o.o.**Weight: **108 kg**The surface area of test specimen: **1,90 m²**

Parameter	Receiving room	Source room
Air temp. [°C]	21,7	21,8
Humidity [%]	70	70
Pressure [hPa]	1008	1008
Volume [m ³]	372	324

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U _{CR} [dB]
50	17,5	3,9
63	27,7	2,8
80	22,5	3,0
100	28,7	2,3
125	33,8	2,3
160	36,0	2,4
200	38,5	2,2
250	44,4	2,2
315	44,6	2,0
400	44,5	2,0
500	43,2	2,1
630	40,5	2,0
800	38,1	1,9
1000	38,6	1,9
1250	42,3	1,9
1600	44,2	1,9
2000	44,4	1,9
2500	45,2	1,9
3150	42,6	1,9
4000	43,1	1,9
5000	46,1	1,9

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 717-1:2013

R_w (C; C_{tr}) = 42 (0; -2) dBC₅₀₋₃₁₅₀ = -1 dBC₅₀₋₅₀₀₀ = 0 dBC₁₀₀₋₅₀₀₀ = 0 dBC_{tr, 50-3150} = -5 dBC_{tr, 50-5000} = -5 dBC_{tr, 100-5000} = -2 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1344.4.1/17

Date: 31.08.2017

Signature: Krzysztof Mech