

### 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: **30.08.2017**

Test specimen: **Wooden window**  
**ND N Tech Villa Fixed frame**  
**Glazed IGU: 15,52- 16Ar-16,76**

Designation: VSG (FL8/1,52SC/FL6)1B1 / 16 CH.ULT7035 / VSG (TH1,0 8/0,76SC/FL8)kl. 1B1 Ar 48,3

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

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

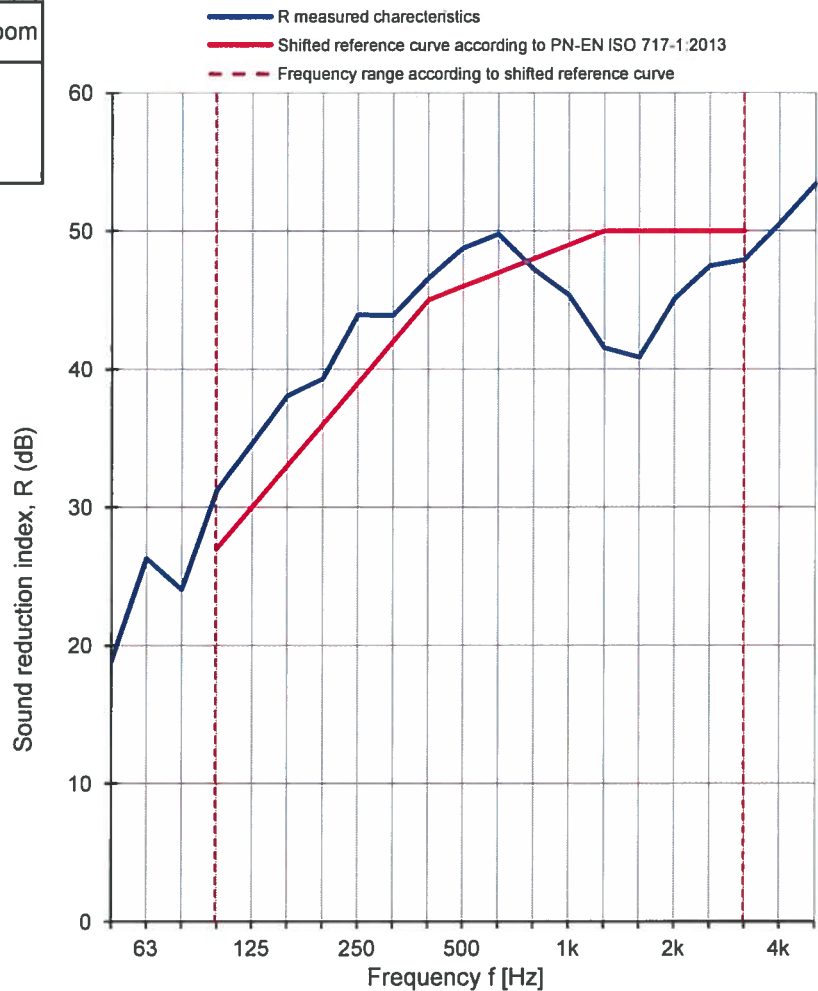
Test specimen mounted by: **Gryfitlab Sp. z o.o.**

Mass: --- kg

The surface area of test specimen: **1,90 m<sup>2</sup>**

Parameter	Receiving room	Source room
Air temp. [°C]	20,9	20,7
Humidity [%]	66	67
Pressure [hPa]	1011	1011
Volume [m <sup>3</sup> ]	324	372

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U <sub>CR</sub> [dB]
50	18,8	4,5
63	26,3	3,1
80	24,0	3,5
100	31,2	3,2
125	34,6	2,2
160	38,0	2,5
200	39,3	2,1
250	43,9	2,3
315	43,9	2,1
400	46,6	2,1
500	48,8	2,2
630	49,8	1,9
800	47,2	1,9
1000	45,4	1,9
1250	41,5	1,9
1600	40,8	1,9
2000	45,1	1,9
2500	47,5	1,9
3150	47,9	1,9
4000	50,5	1,9
5000	53,4	2,0



Measurement uncertainty of sound reduction U<sub>CR</sub>  
 Confidence level 95% at coverage factor, k=2

<b>Weighted sound reduction index in accordance with PN-EN ISO 717-1:2013</b>			
<b>R<sub>w</sub> (C; C<sub>tr</sub>) = 46 (-2; -3) dB</b>	C <sub>50-3150</sub> = -2 dB	C <sub>50-5000</sub> = -1 dB	C <sub>100-5000</sub> = -1 dB
	C <sub>tr, 50-3150</sub> = -7 dB	C <sub>tr, 50-5000</sub> = -7 dB	C <sub>tr, 100-5000</sub> = -3 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1343.2/17

Date: 30.08.2017

Signature: Krzysztof Mech