

**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: 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**

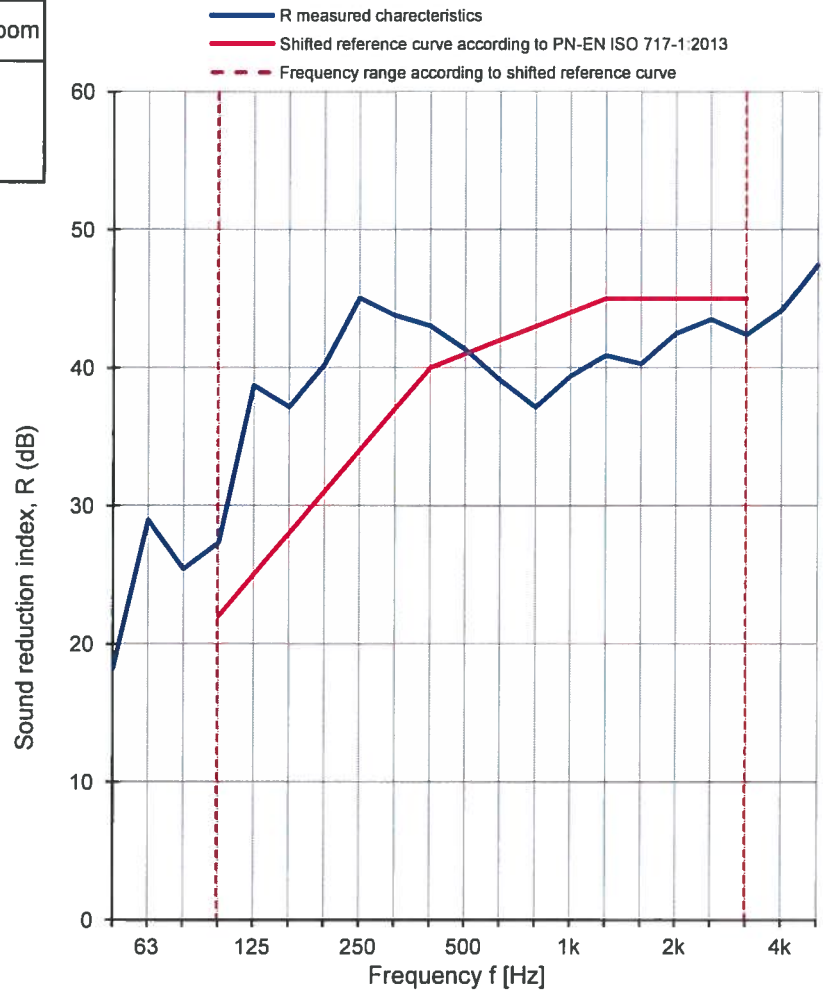
Description of the test facility, test specimen and test arrangement:

Size of test specimen: **1230 x 1480 mm**  
 Test specimen mounted by: **Gryfitlab Sp. z o.o.**  
 Weight: **129,6 kg**

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

Parameter	Receiving room	Source room
Air temp. [°C]	21,5	21,7
Humidity [%]	69	68
Pressure [hPa]	1007	1007
Volume [m <sup>3</sup> ]	372	324

Frequency [Hz]	Test results with uncertainty	
	R [dB]	U <sub>CR</sub> [dB]
50	18,2	3,8
63	28,9	2,9
80	25,4	3,2
100	27,3	2,6
125	38,7	2,1
160	37,1	2,7
200	40,2	2,1
250	45,0	2,0
315	43,8	2,2
400	43,0	2,1
500	41,3	2,0
630	39,1	1,9
800	37,1	1,9
1000	39,4	1,9
1250	40,9	1,9
1600	40,3	1,9
2000	42,4	1,9
2500	43,5	1,9
3150	42,4	1,9
4000	44,1	1,9
5000	47,4	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>) = 41 (0; -2) dB</b>	C <sub>50-3150</sub> = -1 dB	C <sub>50-5000</sub> = 0 dB	C <sub>100-5000</sub> = 0 dB
	C <sub>tr, 50-3150</sub> = -4 dB	C <sub>tr, 50-5000</sub> = -4 dB	C <sub>tr, 100-5000</sub> = -2 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics  
 No. of test specimen: GLA-1344.2/17  
 Date: 31.08.2017

Signature: Krzysztof Mech