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: **18.06.2019**

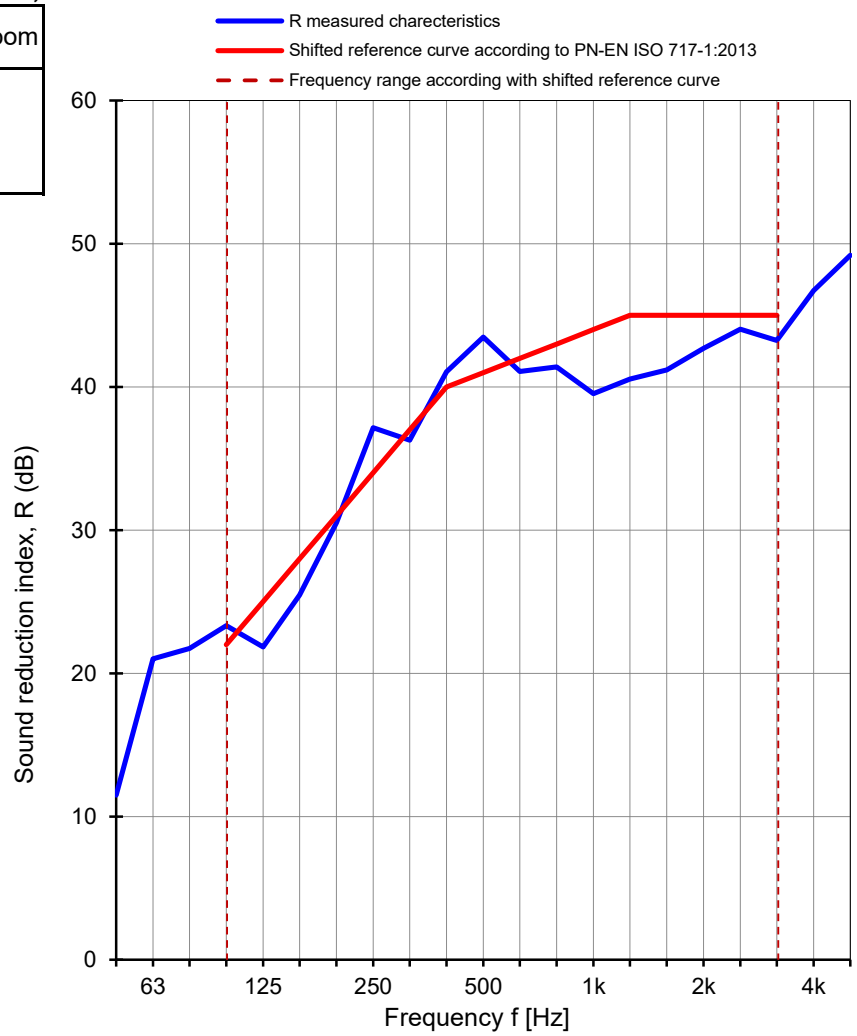
Address: **Powodowo 54, 64-200 Wolsztyn, Poland**

Test specimen: **NorDan inward opening wooden window.**
Frame thickness: 105 mm.
Glazing: 6 / 12G / 4 / 18G / 44.2sc (48,76 mm)
FL 6 / 12CH.ULT7035 / FL 4 / 18CH.ULT7035 / 44.2 Silence kl.P2A Ar 48,8

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 per unit area: **kg/m^2**
The surface area of test specimen: **1,88 m^2**

Parameter	Receiving room	Source room
Air temp. [^{o}C]	25,3	24,9
Humidity [%]	60	59
Pressure [hPa]	1016	1016
Volume [m^3]	324	372

Frequency [Hz]	Test results with uncertainty R [dB]	U_{CR} [dB]
50	* 11,5	4,2
63	21,0	3,1
80	21,7	3,9
100	23,3	2,3
125	21,8	2,7
160	25,5	2,9
200	30,5	2,2
250	37,1	2,2
315	36,3	2,1
400	41,1	2,1
500	43,5	2,0
630	41,1	2,0
800	41,4	2,1
1000	39,5	1,9
1250	40,5	1,9
1600	41,2	1,9
2000	42,7	1,9
2500	44,0	2,0
3150	43,2	2,0
4000	46,7	2,0
5000	49,2	2,1



Measurement uncertainty of sound reduction U_{CR}
Confidence level 95% at coverage factor, k=2
$Lp-Lp_{backgroung}$<6dB

Weighted sound reduction index in accordance with PN-EN ISO 717-1:2013

R_w (C; C_{tr})= 41 (-2; -5) dB

$C_{50-3150}$= **-2** dB $C_{50-5000}$= **-1** dB $C_{100-5000}$= **-1** dB
$C_{tr,\ 50-3150}$= **-9** dB $C_{tr,\ 50-5000}$= **-9** dB $C_{tr,\ 100-5000}$= **-5** dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics
No. of test specimen: GLA-1450.9 / 19
Date: 18.06.2019 Signature: Robert Dybicz