## 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: **22.09.2021**

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

Test specimen: **Wooden door** **Pi LNR: 100**

**Construction: M1 (Standard), ND External door Horizon M008**

**Glazed by:**

**33.1 PVB / 14 Ar / 4 / 12 Ar / 4**

**Door frame thickness: 105 mm**

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

Size of test specimen: **988 x 2088 mm**

Test specimen mounted by: NorDan Sp. z o.o.

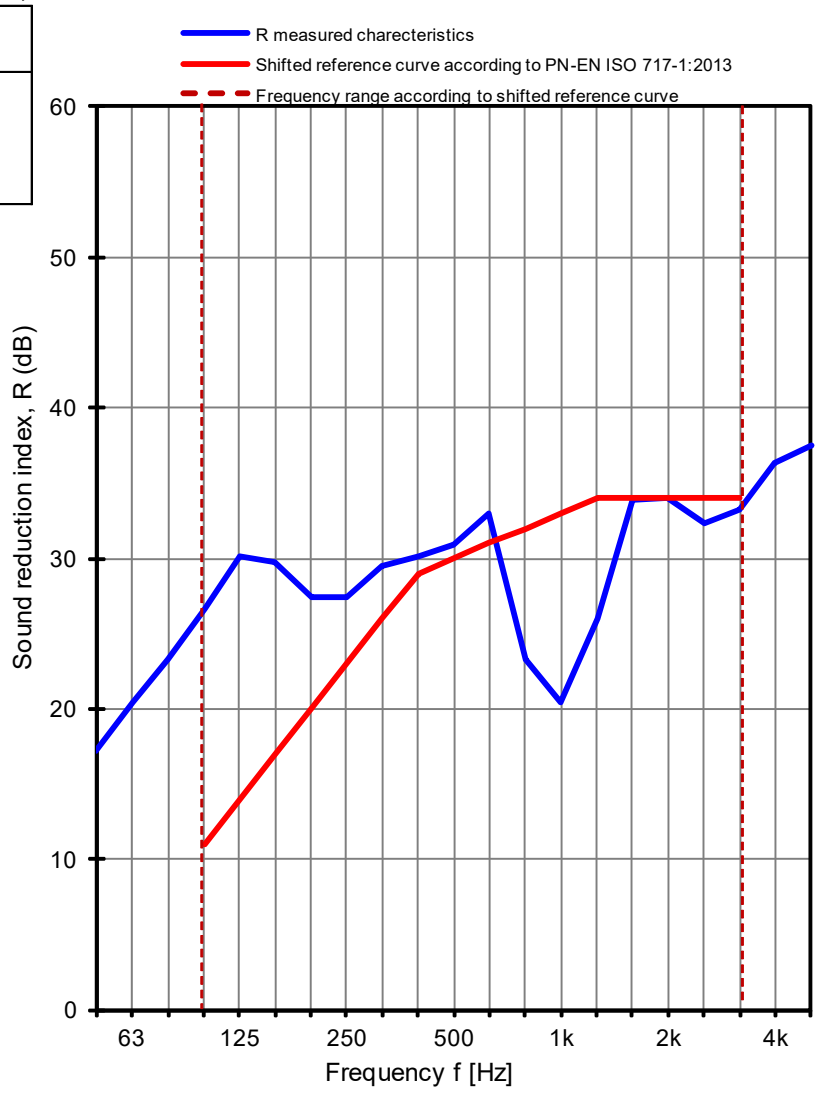
The surface area of test specimen: **2,15 m²**

| Parameter | Receiving room | Source room |
|---|---|---|
| Air temp. [°C] | 19,1 | 19,0 |
| Humidity [%] | 56 | 55 |
| Pressure [hPa] | 1024 | 1024 |
| Volume [m³] | 324 | 372 |

| Frequency [Hz] | Test results with uncertainty R [dB] | $U_{CR}$ [dB] |
|---|---|---|
| 50 | 17,2 | 3,3 |
| 63 | 20,4 | 3,9 |
| 80 | 23,3 | 2,7 |
| 100 | 26,6 | 2,1 |
| 125 | 30,1 | 1,4 |
| 160 | 29,7 | 1,1 |
| 200 | 27,4 | 1,5 |
| 250 | 27,5 | 1,1 |
| 315 | 29,5 | 1,1 |
| 400 | 30,2 | 0,8 |
| 500 | 30,9 | 1,0 |
| 630 | 33,0 | 0,8 |
| 800 | 23,3 | 0,8 |
| 1000 | 20,4 | 0,7 |
| 1250 | 26,0 | 0,8 |
| 1600 | 33,8 | 0,8 |
| 2000 | 34,0 | 0,8 |
| 2500 | 32,3 | 0,9 |
| 3150 | 33,2 | 0,9 |
| 4000 | 36,4 | 0,9 |
| 5000 | 37,5 | 1,3 |

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 717-1:2021-06E

**Rw (C; Ctr)= 30 (-3; -4) dB**

$C_{50\text{-}3150}$= **-3** dB $C_{50\text{-}5000}$= **-2** dB $C_{100\text{-}5000}$= **-2** dB

$C_{tr,\ 50\text{-}3150}$= **-5** dB $C_{tr,\ 50\text{-}5000}$= **-5** dB $C_{tr,\ 100\text{-}5000}$= **-4** dB

**Rw = 30,0 dB**

**GRYFITLAB Sp. z o.o. Laboratory of Acoustics**

No. of test specimen: GLA-1559.15 / 21

Date: 22.09.2021 Signature: Robert Dybicz

Figure 8. Characteristics of airborne sound insulation of test specimen No. GLA-1559.15 / 21