

# Sound reduction index in accordance with PN - EN ISO 10140-2:2021-10E

Laboratory measurements of airborne sound insulation of building elements

Client: **NorDan AS**

Measurement date: **29.08.2024**

Address: **Stasjonsveien 46, N-4460 Moi, Norway**

Test specimen: **ND NTech Villa double balcony door – wooden door, 2l system  
Inward-opening**

One active and one passive leaf, door leaf with movable post.

The same glazing in both door leaves. Glazing:

**12,76 Phon / 24 Ar / 8,76 Phon MAT (GLASSOLUTIONS)**

Size of door: **1588 x 2088 x 80 mm** (width x height x door leaf frame thickness)

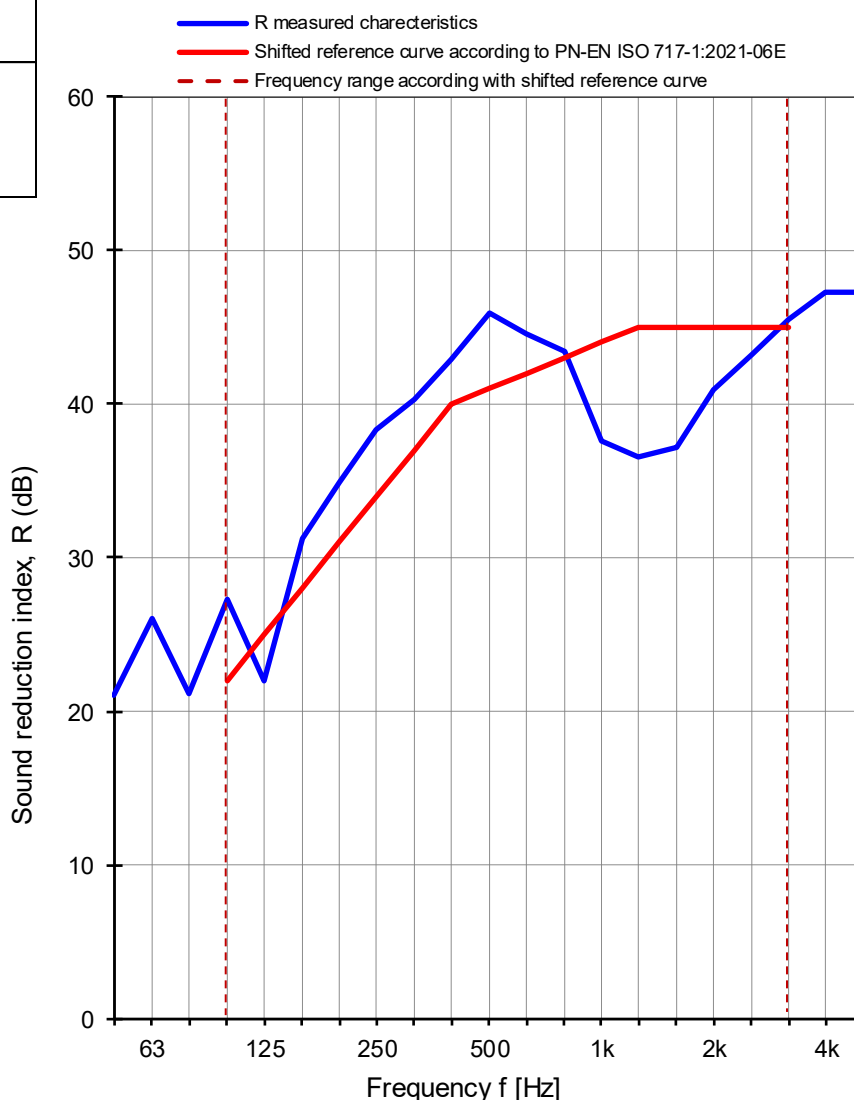
Test specimen mounted by: **Gryfitlab Sp. z o.o.**

Mass per unit area: **kg/m<sup>2</sup>**

The surface area of test specimen: **3,43 m<sup>2</sup>**

| Parameter                | Receiving room | Source room |
|--------------------------|----------------|-------------|
| Air temp. [°C]           | 23,1           | 22,8        |
| Humidity [%]             | 59             | 60          |
| Pressure [hPa]           | 1015           | 1015        |
| Volume [m <sup>3</sup> ] | 324            | 372         |

| Frequency<br>[Hz] | Test results<br>with uncertainty |                      |
|-------------------|----------------------------------|----------------------|
|                   | R [dB]                           | U <sub>CR</sub> [dB] |
| 50                | 21,1                             | 2,8                  |
| 63                | 26,0                             | 3,0                  |
| 80                | 21,2                             | 3,7                  |
| 100               | 27,3                             | 2,0                  |
| 125               | 22,0                             | 1,8                  |
| 160               | 31,3                             | 1,4                  |
| 200               | 34,9                             | 2,3                  |
| 250               | 38,4                             | 1,9                  |
| 315               | 40,3                             | 1,1                  |
| 400               | 42,9                             | 1,4                  |
| 500               | 45,9                             | 1,2                  |
| 630               | 44,6                             | 1,2                  |
| 800               | 43,4                             | 1,1                  |
| 1000              | 37,6                             | 1,2                  |
| 1250              | 36,6                             | 1,0                  |
| 1600              | 37,2                             | 1,1                  |
| 2000              | 40,9                             | 1,0                  |
| 2500              | 43,2                             | 0,9                  |
| 3150              | 45,5                             | 1,0                  |
| 4000              | 47,3                             | 0,9                  |
| 5000              | 47,3                             | 1,2                  |



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

**$R_w(C; C_{tr}) = 41 (-2; -4) \text{ dB}$**

$C_{50-3150} = -2 \text{ dB}$

$C_{50-5000} = -1 \text{ dB}$

$C_{100-5000} = -1 \text{ dB}$

$C_{tr, 50-3150} = -6 \text{ dB}$

$C_{tr, 50-5000} = -6 \text{ dB}$

$C_{tr, 100-5000} = -4 \text{ dB}$

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

No. of test specimen: **GLA-1676.16 / 24**

Date of analysis: 29.08.2024

Signature: Robert Dybicz