

# 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: **25.09.2024**

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

Test specimen: **ND NTech Villa double balcony wooden door – TX/BX system**

**Outward-opening**

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

The same glazing in both door leaf. Glazing:

**6,38 / 16 Ar / 4 / 16 Ar / 6,38 (PRESSGLASS)**

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

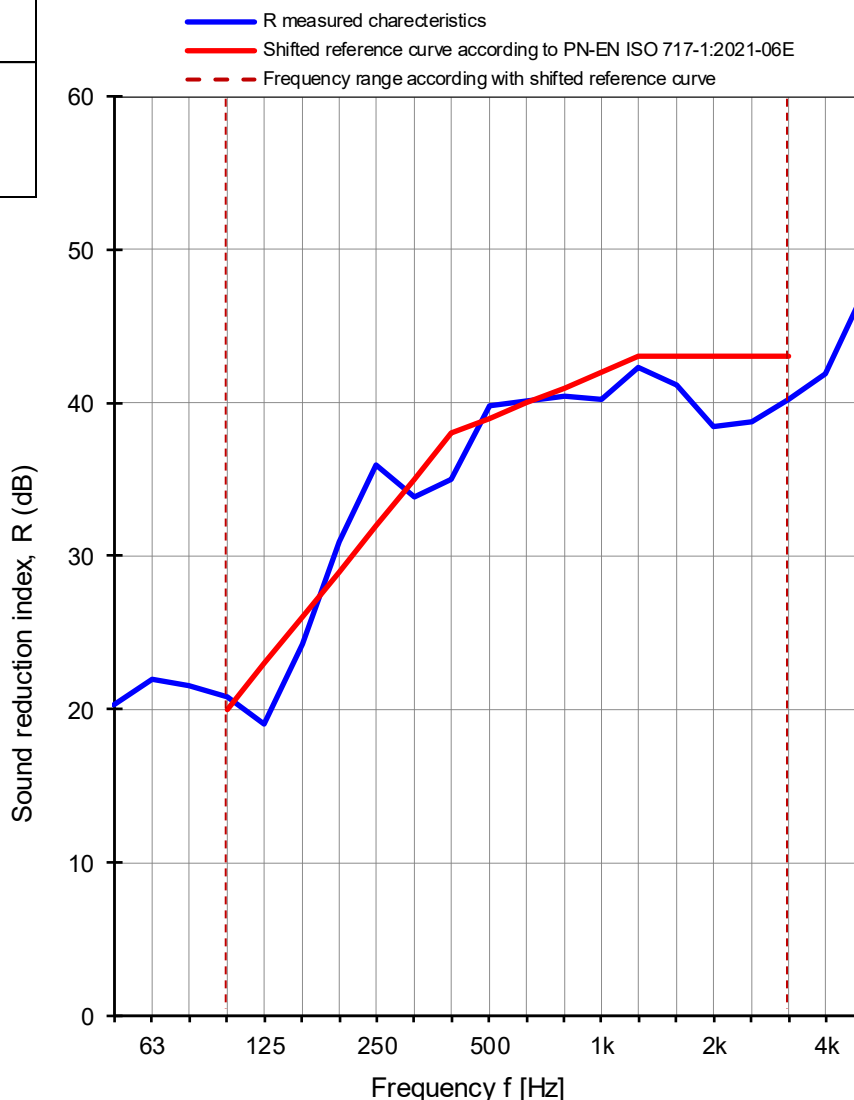
Test specimen mounted by: **Gryfitlab Sp. z o.o.**

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

The surface area of test specimen: **3,42 m<sup>2</sup>**

| Parameter                | Receiving room | Source room |
|--------------------------|----------------|-------------|
| Air temp. [°C]           | 21,1           | 21,0        |
| Humidity [%]             | 59             | 59          |
| Pressure [hPa]           | 1004           | 1004        |
| Volume [m <sup>3</sup> ] | 324            | 372         |

| Frequency<br>[Hz] | Test results<br>with uncertainty |                      |
|-------------------|----------------------------------|----------------------|
|                   | R [dB]                           | U <sub>CR</sub> [dB] |
| 50                | 20,2                             | 2,7                  |
| 63                | 22,0                             | 3,2                  |
| 80                | 21,5                             | 3,9                  |
| 100               | 20,8                             | 2,5                  |
| 125               | 19,1                             | 2,8                  |
| 160               | 24,3                             | 1,9                  |
| 200               | 30,9                             | 1,5                  |
| 250               | 36,0                             | 1,3                  |
| 315               | 33,9                             | 1,3                  |
| 400               | 35,0                             | 1,4                  |
| 500               | 39,8                             | 1,1                  |
| 630               | 40,1                             | 1,0                  |
| 800               | 40,4                             | 1,0                  |
| 1000              | 40,3                             | 1,0                  |
| 1250              | 42,4                             | 1,0                  |
| 1600              | 41,2                             | 1,0                  |
| 2000              | 38,4                             | 1,0                  |
| 2500              | 38,8                             | 1,0                  |
| 3150              | 40,2                             | 1,0                  |
| 4000              | 41,9                             | 1,0                  |
| 5000              | 47,2                             | 1,1                  |



Measurement uncertainty of sound reduction U<sub>CR</sub>

Confidence level 95% at coverage factor, k=2

Weighted sound reduction index in accordance with PN-EN ISO 717-1:2021-06E

**R<sub>w</sub> (C; C<sub>tr</sub>) = 39 (-2; -5) dB**

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> = -6 dB

C<sub>tr, 50-5000</sub> = -6 dB

C<sub>tr, 100-5000</sub> = -5 dB

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

No. of test specimen: **GLA-1676.25 / 24**

Date of analysis: 25.09.2024

Signature: Robert Dybicz