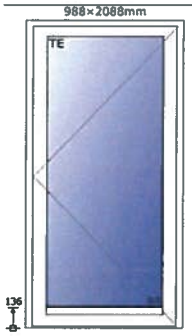
Sound reduction index in accordance with PN - EN ISO 10140-2 (2011)

Laboratory measurements of airborne sound insulation of building elements

Client: **NorDan AS** Measurement date: **01.03.2017**

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

Test specimen: **Wooden Balcony Door TE NTech Villa (security) 105/80mm**
Glazed: LowE (LE) w/Lam WES/Ar 4E+16G+6,38
(Test 3.1)

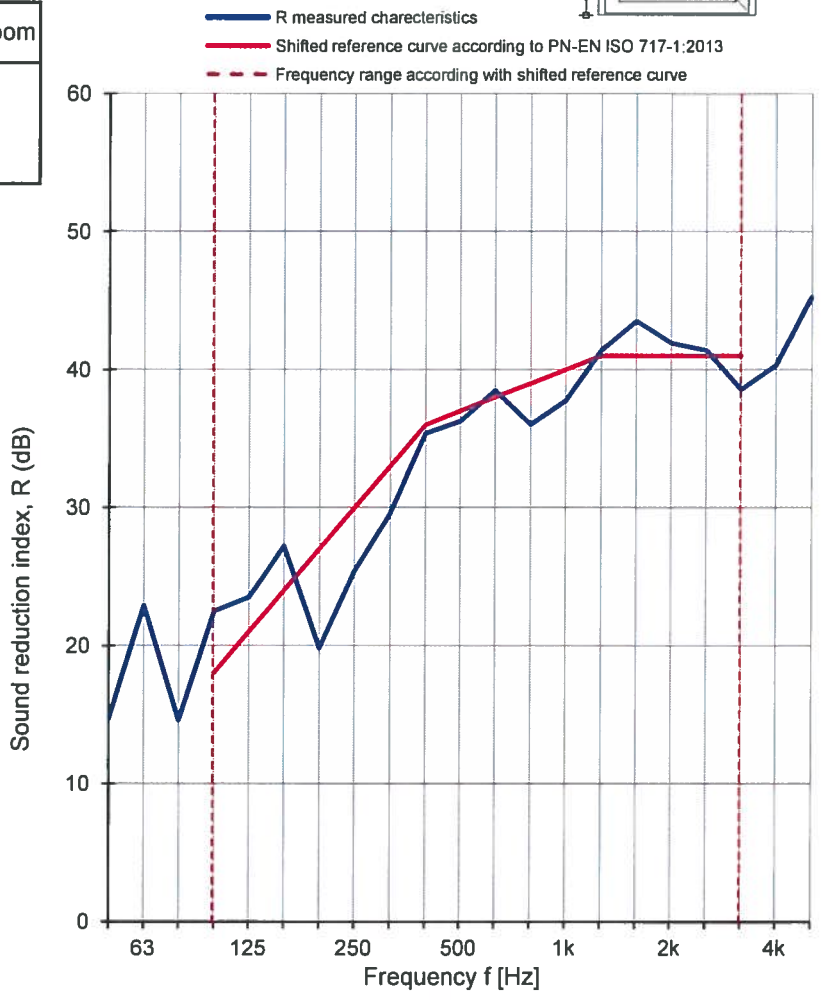


Description of the test facility, test specimen and test arrangement:
Size of test specimen: **988 x 2088 mm**
Test specimen mounted by: **Gryfitlab Sp. z o.o.**
Mass per unit area: **kg/m²**
The surface area of test specimen: **2,16 m²**

Parameter	Receiving room	Source room
Air temp. [°C]	19,3	19,7
Humidity [%]	64	65
Pressure [hPa]	990	990
Volume [m³]	372	324

Frequency [Hz]	Test results with uncertainty R [dB]	U_{CR} [dB]
50	14,7	6,0
63	22,9	3,5
80	14,6	3,2
100	22,5	2,9
125	23,5	2,4
160	27,2	2,5
200	19,8	2,6
250	25,4	2,4
315	29,6	2,1
400	35,4	1,9
500	36,3	1,9
630	38,5	1,9
800	36,0	2,1
1000	37,7	2,0
1250	41,4	1,9
1600	43,5	2,0
2000	41,9	2,0
2500	41,4	1,9
3150	38,5	1,9
4000	40,3	1,9
5000	45,3	1,9

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 717-1:2013

R_w (C; C_{tr})= 37 (-2; -5) dB

$C_{50\text{-}3150}$= -2 dB $C_{50\text{-}5000}$= -1 dB $C_{100\text{-}5000}$= -1 dB

$C_{tr,\ 50\text{-}3150}$= -7 dB $C_{tr,\ 50\text{-}5000}$= -7 dB $C_{tr,\ 100\text{-}5000}$= -5 dB

R_w = 37,8 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics
No. of test specimen: GLA-1305.17/17
Date: 01.03.2017 Signature: Robert Dybicz