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: **26.04.2018**

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

Test specimen: **Window TEST no. 2**
ZD ND Ntech One 105/80 mm Wooden window, Tilt and turn, frame thickness: 105 mm
Glazed with glass: 8 - 20 Ar - 8,38 aku

Size of test specimen: **1230 x 1480 mm**

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

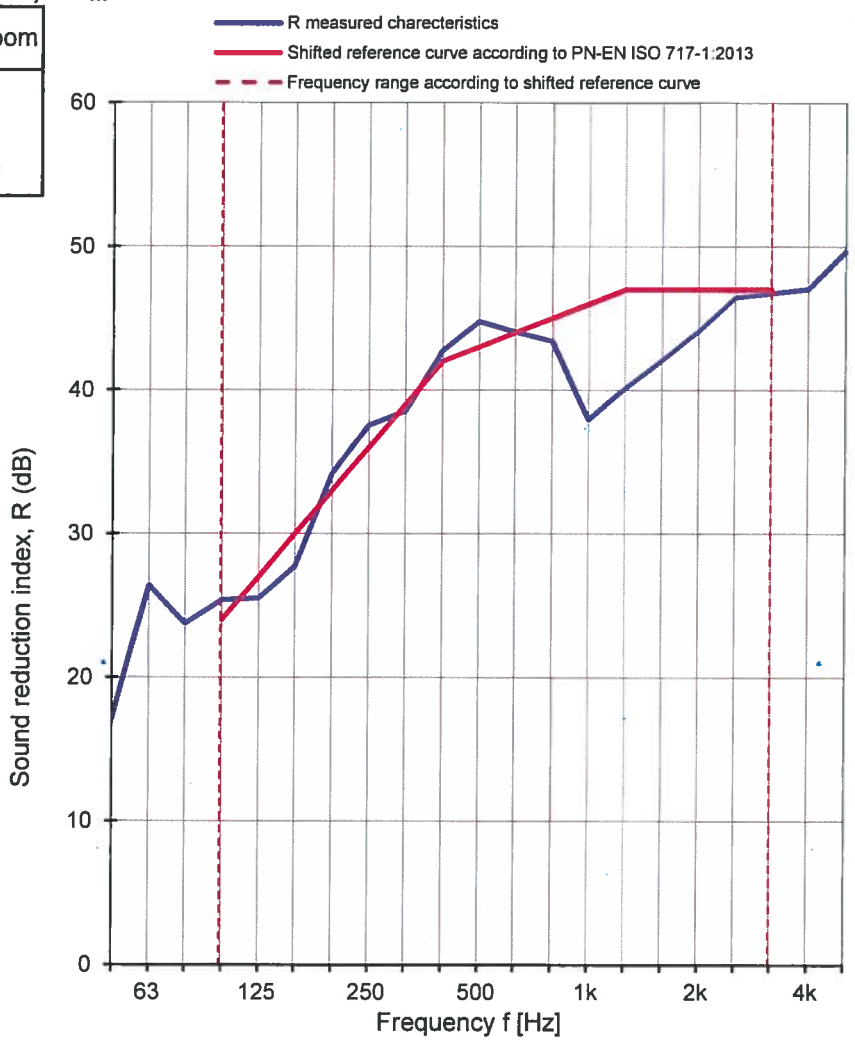
Mass per unit area: **kg/m²**

The surface area of test specimen: **1,87 m²**

Parameter	Receiving room	Source room
Air temp. [°C]	20,6	21,5
Humidity [%]	60	60
Pressure [hPa]	1009	1009
Volume [m³]	372	324

Frequency [Hz]	Test results with uncertainty R [dB]	U_{CR} [dB]
50	17,0	3,8
63	26,4	2,7
80	23,7	3,2
100	25,4	2,7
125	25,5	2,5
160	27,7	2,5
200	34,2	2,3
250	37,5	2,0
315	38,5	2,2
400	42,7	2,0
500	44,8	1,9
630	44,0	2,0
800	43,4	1,9
1000	38,0	2,0
1250	40,1	1,9
1600	42,1	1,9
2000	44,1	1,9
2500	46,5	1,9
3150	46,7	1,9
4000	47,0	1,9
5000	49,7	2,0

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})= 43 (-2; -5) dB

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

Rw = 43,2 dB

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1372.21/18

Date: 26.04.2018

Signature: Krzysztof Mech