

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

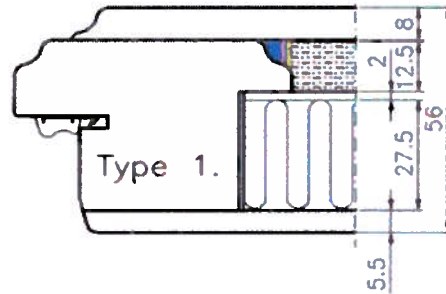
Laboratory measurements of airborne sound insulation of building elements.

Client: **NorDan AS**  
Address: **Stasjonseveien 46, N-4460 Mio Norway**

Measurement date: **16.04.2014**

**Test specimen: Air vent with door type 1**

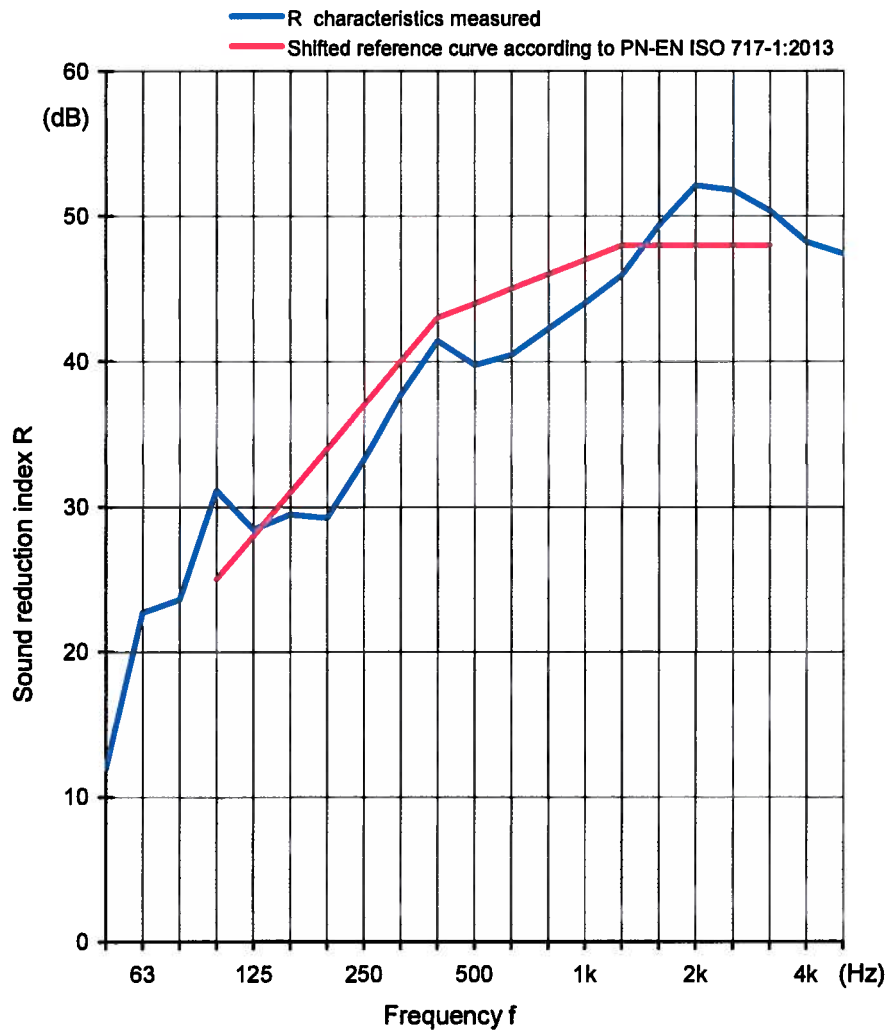
The cross section of door leaf type 1 in accordance with drawing  
Description of the test facility, test element and test arrangements  
Size of tested object **588x1588 mm**  
The grille of air vent in front of sound source  
Test element mounted by Gryffilab  
Mass per unit area: **kg/m<sup>2</sup>**



The surface area of test specimen: **1,04 m<sup>2</sup>**

	source room	receiving room
Relative humidity	59%	54%
Air temperature	16,5 °C	16,8 °C
Volume	372 m <sup>3</sup>	324 m <sup>3</sup>
Ambient pressure	1005 hPa	1005 hPa

Frequency [Hz]	R 1/3 octave [dB]
50	11,9
63	22,7
80	23,6
100	31,1
125	28,5
160	29,5
200	29,2
250	33,3
315	37,7
400	41,4
500	39,7
630	40,4
800	42,3
1000	44,0
1250	45,9
1600	49,4
2000	52,1
2500	51,8
3150	50,4
4000	48,2
5000	47,4



Weighted sound reduction index in accordance with PN-EN ISO 717-1:2013

**R<sub>w</sub> (C; C<sub>tr</sub>) = 44 (-2; -5) dB**

C<sub>50-3150</sub> = -2 dB

C<sub>50-5000</sub> = -2 dB

C<sub>100-5000</sub> = -1 dB

C<sub>tr, 50-3150</sub> = -10 dB

C<sub>tr, 50-5000</sub> = -10 dB

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

Evaluation based on laboratory measurement results obtained by an engineering method.

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

No. of test specimen: **GLA-1163.1/14**

Date: **16.04.2014**

Signature: **Robert Dybicz**

Fig. 4. Characteristics of acoustic insulation of air vent with door.