

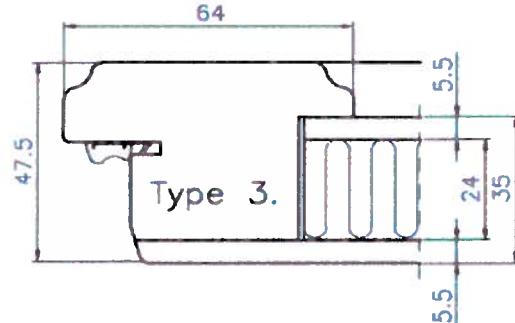
**Sound reduction index in accordance with PN - EN ISO 10140-2 (2011)**

Laboratory measurements of airborne sound insulation of building elements.

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

Measurement date: **17.04.2014**

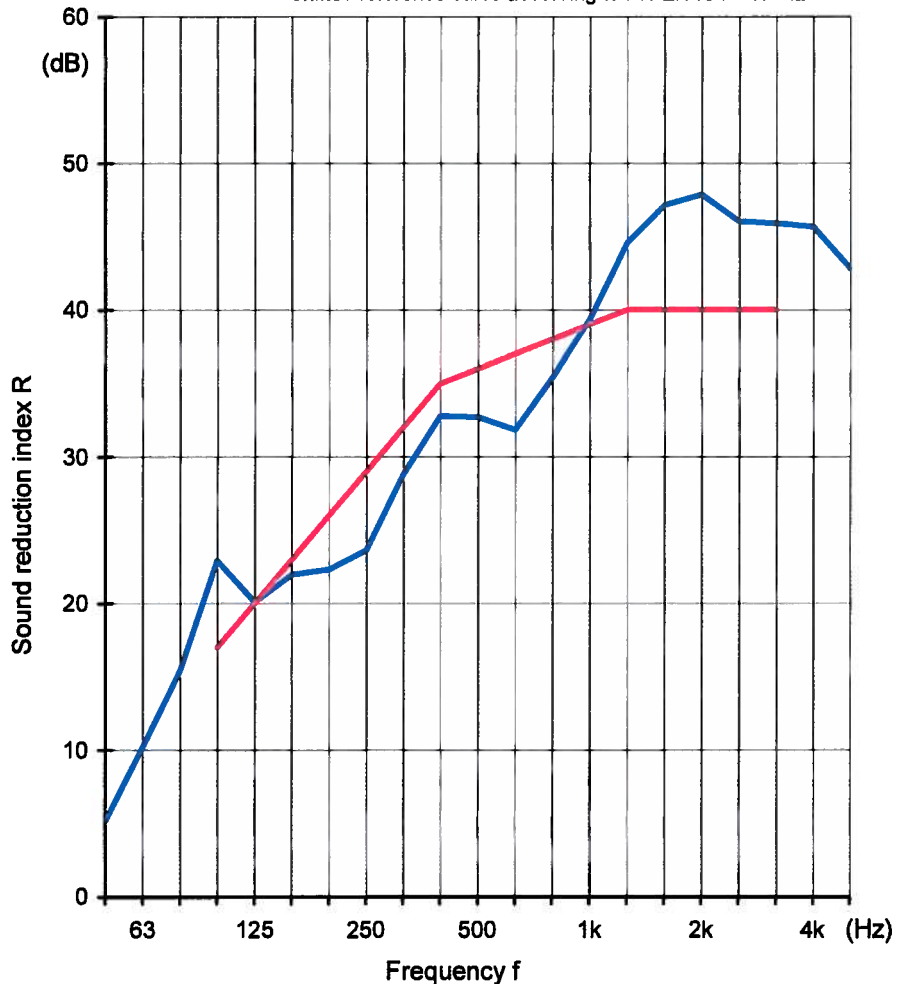
Test specimen: **Air vent with sound door type 3**  
The cross section of door leaf type 3 in accordance with drawing  
Description of the test facility, test element and test arrangement  
Size of tested object **588x1588 mm**  
The grille of air vent in front of sound source  
Test element mounted by Gryfitlab  
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	61%	60%
Air temperature	16,5 °C	16,8 °C
Volume	372 m <sup>3</sup>	324 m <sup>3</sup>
Ambient pressure	1007 hPa	1007 hPa

— R characteristics measured  
— Shifted reference curve according to PN-EN ISO 717-1:2013



Frequency [Hz]	R 1/3 octave [dB]
50	5,1
63	10,2
80	15,4
100	23,0
125	20,1
160	22,0
200	22,3
250	23,6
315	28,8
400	32,8
500	32,7
630	31,8
800	35,4
1000	39,4
1250	44,5
1600	47,1
2000	47,9
2500	46,0
3150	45,9
4000	45,7
5000	42,8

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

**R<sub>w</sub> (C; C<sub>tr</sub>) = 36 (-1; -6) dB**  
 C<sub>50-3150</sub> = -2 dB      C<sub>50-5000</sub> = -1 dB      C<sub>100-5000</sub> = 0 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-1163.3/14**  
Date: **17.04.2014**

Signature: **Robert Dybicz**

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