

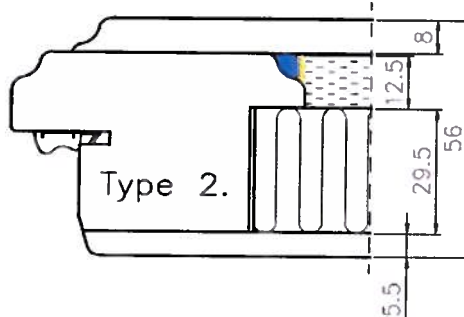
Sound reduction index in accordance with PN - EN ISO 10140-2 (2011)

Laboratory measurements of airborne sound insulation of building elements.

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

Measurement date: **17.04.2014**

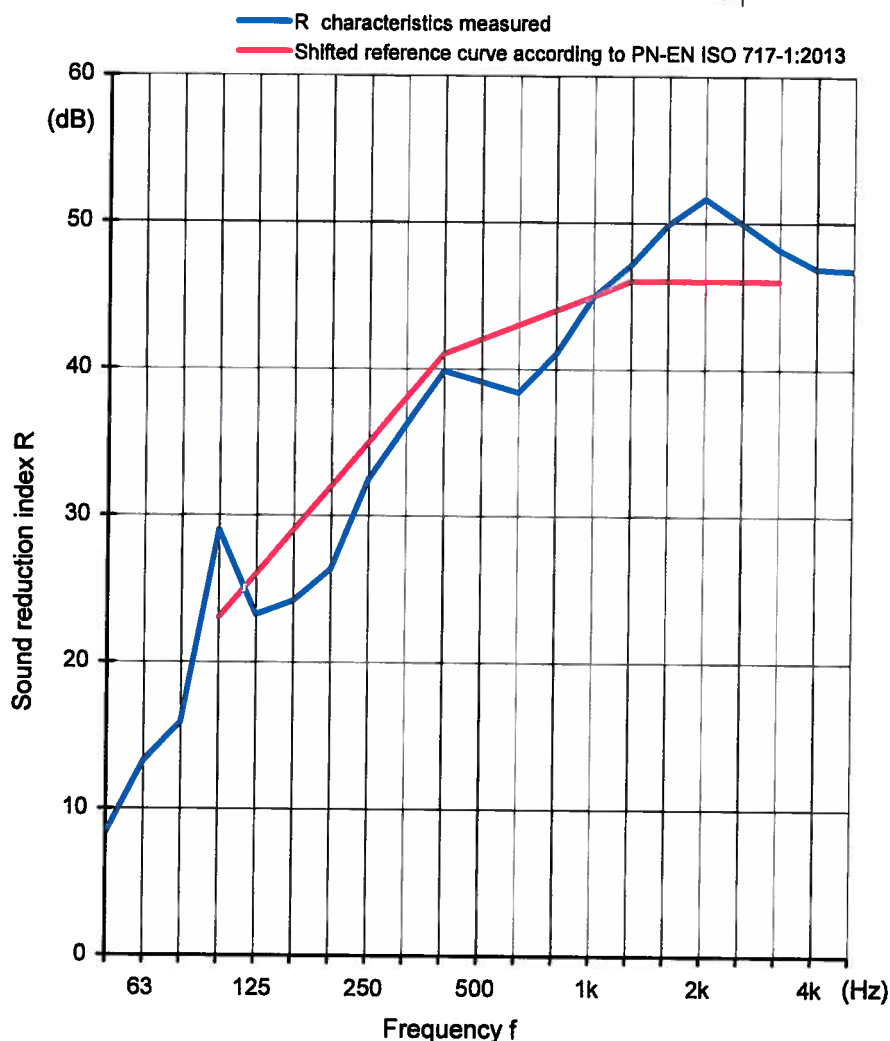
Test specimen: **Air vent with sound door type 2**
The cross section of door leaf type 2 in accordance with drawing
Description of the test facility, test element and test arrangement
Size of tested object **588x1588 mm**
The grille of air vent in front of sound source
Test element mounted by Gryfitlab



Mass per unit area: kg/m^2
The surface area of test specimen: $1,04 \text{ m}^2$

	source room	receiving room
Relative humidity	61%	60%
Air temperature	16,5 °C	16,5 °C
Volume	372 m ³	324 m ³
Ambient pressure	1007 hPa	1007 hPa

Frequency [Hz]	R 1/3 octave [dB]
50	8,4
63	13,2
80	15,9
100	29,0
125	23,2
160	24,2
200	26,3
250	32,5
315	36,2
400	39,8
500	39,1
630	38,4
800	41,0
1000	44,9
1250	47,1
1600	49,9
2000	51,7
2500	49,9
3150	48,2
4000	46,9
5000	46,8



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

$R_w(C; C_{tr}) = 42 (-2; -6) \text{ dB}$

$C_{50-3150} = -3 \text{ dB}$

$C_{50-5000} = -3 \text{ dB}$

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

$C_{tr, 50-3150} = -13 \text{ dB}$

$C_{tr, 50-5000} = -13 \text{ dB}$

$C_{tr, 100-5000} = -6 \text{ dB}$

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

GRYFITLAB Sp. z o.o. Laboratory of Acoustics

No. of test specimen: GLA-1163.2/14

Date: 17.04.2014

Signature: Robert Dybicz

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