

**Sound reduction test to ISO 140-3, EN 20 140-3
and DIN 52 210-3**

P-BA 428/1995
Illustration 5

Applicant: Franz Nüsing GmbH & Co KG
48031 Münster
Germany

Test of building
element

Test specimen:

Twin shell, movable partition wall of wood panel construction, Type NW 100 KA (see illustrations 1 to 4 and Table 2). The movable wall consisted of 4 individual panels, each 1022 mm wide x 2860 mm high, one of which was a telescopic panel.

Panel construction

16 mm outer cladding of wood particle board
68 mm void
16 mm outer cladding of wood particle board

Movable wall thickness: 100 mm
Mass per unit area: 24 kg / m²
For further description,
see text on Page 2

Surface area of wall: 12.5 m²

Test rooms:

Volumes: V_S = 68.7 m³
V_R = 76.3 m³

Type: Laboratory
Condition: Empty

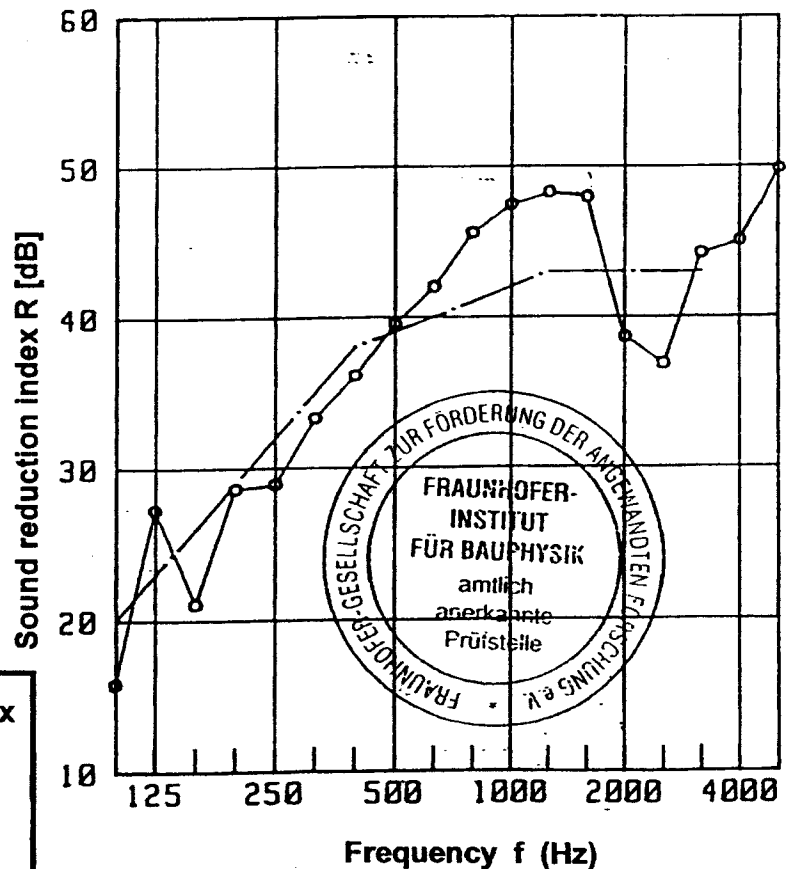
Test conditions:

Ambient air temperature: 19° C
Relative humidity of air: 46 %

Date of test: 10 May 1995

**Weighted Sound Reduction Index
and Spectrum frequency ranges**

R_w (C; C_{tr}; C₁₀₀₋₅₀₀₀; C_{tr 100-5000}) =
39 (-2; -6; -1; -6) dB



Stuttgart,

12 September 1995

Fraunhofer-Institut für Bauphysik



Test facility director:

Dr.-Engineering W Scholl

SOUND INSULATION VALUES
 to DIN 52210 Part 3
 of a twin-shell, movable partition wall, Type EP
 Client: Franz Nüsing GmbH + Co.KG, 4400 Münster

Test of a
 sample building
 element

Construction of element tested :

P-BA 22/1991

Partition wall without additional sound insulation, inner cavity
 without mineral fibre sheets. See overleaf.

Description of Test :
 Test DIN 52 210-03-M-L-PFL-W
 Thickness of wall : 100 mm
 Panel surface weight :
 24 kg / m²

Surface area of test piece :
 11 m²

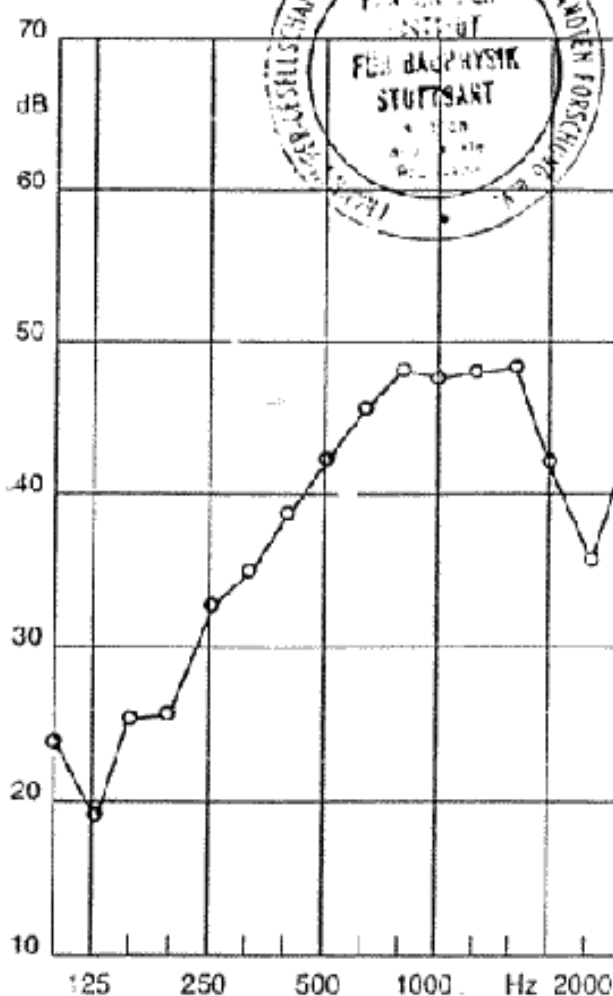
Test rooms :
 Volumes : V_S 56 cu.m.
 V_E 70 cu.m.

Condition: Empty
 Type : Laboratory

Test noise : 1/3 octave
 continuous
 spectrum

Receiving
 filter : 1/3 octave
 band filter

Weighted apparent
 Sound Reduction
 Index $R'_w = 41$ dB



Frequency →

Stuttgart,
 11 Feb 1991

FRAUNHOFER-INSTITUT FÜR
 BAUPHYSIK

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48031 Münster
Germany

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Test specimen:

Twin shell, movable partition wall of wood panel construction, Type NW 100 KA (see illustrations 1 to 4 and Table 2). The movable wall consisted of 4 individual panels, each 1022 mm wide x 2860 mm high, one of which was a telescopic panel.

Panel construction

- 16 mm outer cladding of wood particle board
- 68 mm void containing 2 layers of loose laid 15/10 mineral fibre
(Manufacturer's description: G+H, 73T 15/10)
- 16 mm outer cladding of wood particle board

Movable wall thickness: 100 mm
Mass per unit area: 26 kg / m²
For further description,
see text on Page 2

Surface area of wall: 12.5 m²

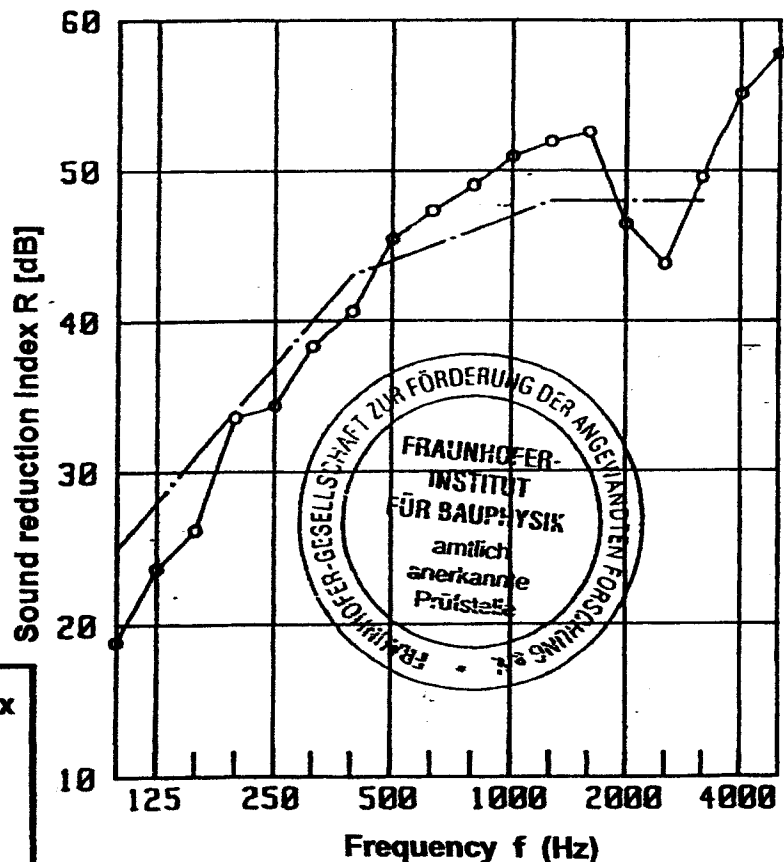
Test rooms:

Volumes: V_S = 68.7 m³
V_R = 76.3 m³
Type: Laboratory
Condition: Empty

Test conditions:

Ambient air temperature: 19° C
Relative humidity of air: 42 %

Date of test: 9 May 1995



**Weighted Sound Reduction Index
and Spectrum frequency ranges**

R_w (C; C_{tr}; C₁₀₀₋₅₀₀₀; C_{tr-100-5000}) =
44 (-2; -8; -1; -8) dB

Stuttgart,

12 September 1995

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Dr.-Engineering W Scholl

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and DIN 52 210-3**

P-BA 426/1995
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Applicant: Franz Nüsing GmbH & Co KG
48031 Münster
Germany

Test of building
element

Test specimen:

Twin shell, movable partition wall of wood panel construction, Type NW 100 KA (see illustrations 1 to 4 and Table 2). The movable wall consisted of 4 individual panels, each 1022 mm wide x 2860 mm high, one of which was a telescopic panel.

Panel construction

- 16 mm outer cladding of wood particle board
- 68 mm void containing 4 layers of loose laid 15/10 mineral fibre
(Manufacturer's description: G+H, 73T 15/10)
- 16 mm outer cladding of wood particle board

Movable wall thickness: 100 mm
Mass per unit area: 29 kg / m²
For further description,
see text on Page 2

Surface area of wall: 12.5 m²

Test rooms:

Volumes: V_S = 68.7 m³
V_R = 76.3 m³

Type: Laboratory

Condition: Empty

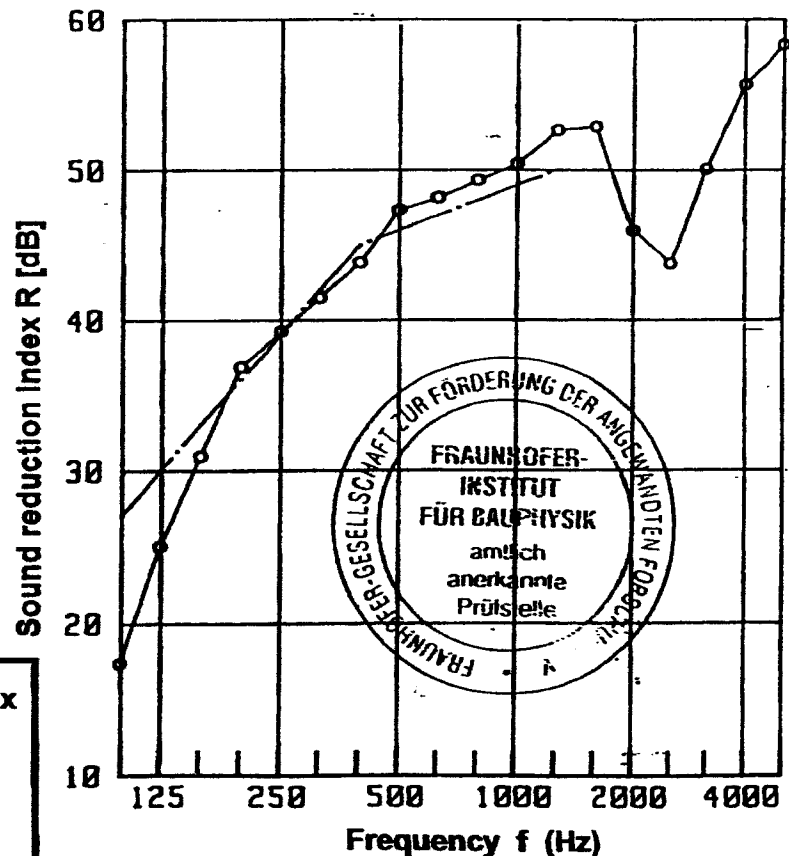
Test conditions:

Ambient air temperature: 19° C
Relative humidity of air: 44 %

Date of test: 9 May 1995

**Weighted Sound Reduction Index
and Spectrum frequency ranges**

R_w (C; C_{tr}; C₁₀₀₋₅₀₀₀; C_{tr 100-5000}) =
46 (-3; -10; -2; -10) dB



Stuttgart,
12 September 1995

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Panel construction

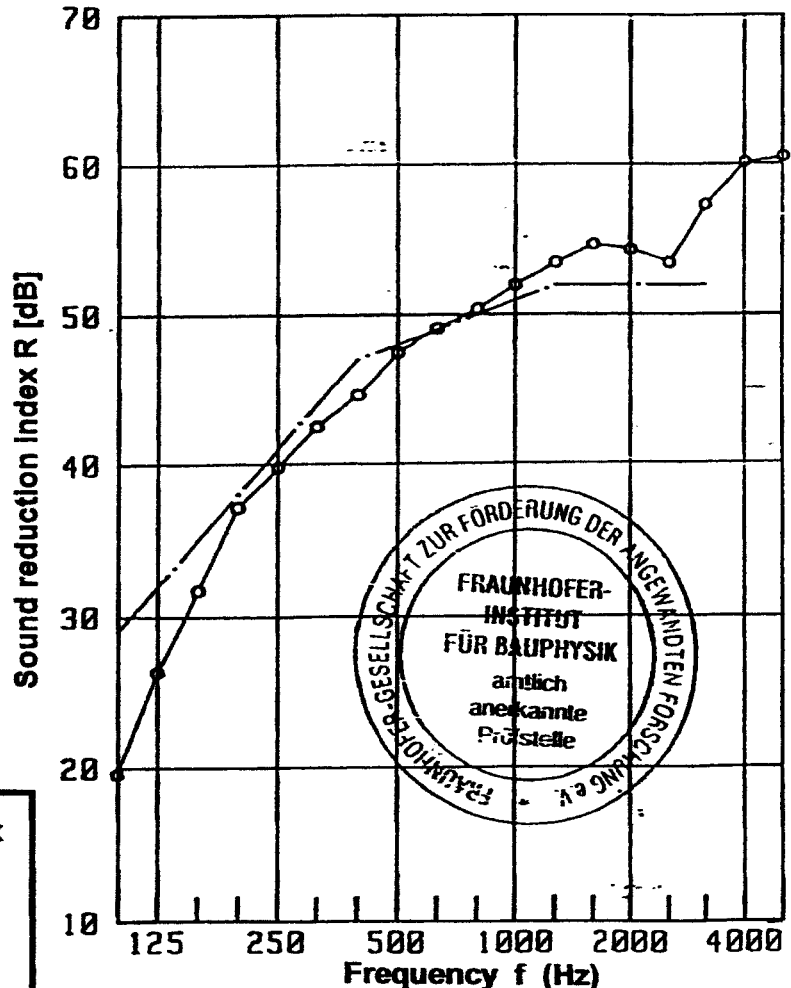
- 16 mm outer cladding of wood particle board
- 3.2mm resin bonded hardboard (fixed with staples), mass per unit area: 3 kg/m²
- 65 mm void containing 4 layers of loose laid 15/10 mineral fibre
(Manufacturer's description: G+H, 73T 15/10)
- 16 mm outer cladding of wood particle board

Movable wall thickness: 100 mm
Mass per unit area: 34 kg / m²
For further description,
see text on Page 2

Surface area of wall: 12.5 m²
Test rooms:
Volumes: V_S = 68.7 m³
V_R = 76.3 m³
Type: Laboratory
Condition: Empty

Test conditions:
Ambient air temperature: 20° C
Relative humidity of air: 47 %

Date of test: 9 May 1995



**Weighted Sound Reduction Index
and Spectrum frequency ranges**

R_w (C; C_{tr}; C₁₀₀₋₅₀₀₀; C_{tr 100-5000}) =
48 (-3; -10; -2; -10) dB

Stuttgart,

12 September 1995

Fraunhofer-Institut für Bauphysik



Test facility director:

Dr.-Engineering W Scholl