

Sound Insulation

WOLF[®]
Bavaria



PhoneStar Sound Insulation Board

for floors, walls and ceilings

Better quality of life due to quietness and comfort



Impact Sound Insulation
Airborne Sound Insulation
Dry Screed

PhoneStar - what is it?

PhoneStar is an innovative, effective sound insulation board, consisting of environmentally friendly raw materials - wood and sand. It significantly reduces both airborne and impact sound. At only 15 mm thickness, a PhoneStar board provides up to 36 dB (Rw) of airborne sound insulation.

The PhoneStar boards have the technical approval of the DIBt with the N°: Z-23.21-1605*, and the European-Technical Approval with ETA-N°: 13/0411* and thus a CE-Mark.

The PhoneStar collection of boards:

PhoneStar TRI

- 3 parallel corrugated layers
- optimized for electrical installations
- Size: 1250 x 625 x 15 mm
1200 x 800 x 15 mm

PhoneStar PROFESSIONAL

- 3 cross fluted corrugated layers
- Size: 1200 x 800 x 15 mm

PhoneStar TWIN

- 2 parallel corrugated layers
- for slim constructions
- optimized for electrical installations
- Size: 1250 x 625 x 10 mm
1200 x 800 x 10 mm



high density quartz sand in a cardboard carcass



Nr. Z-23.21-605

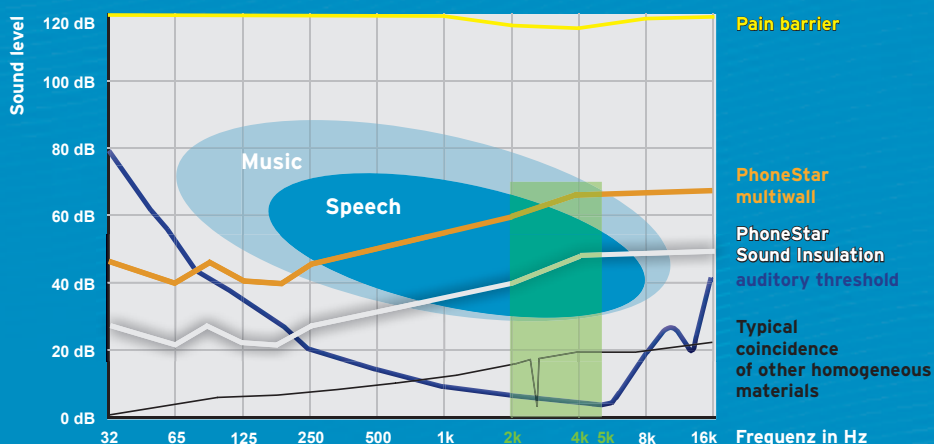


13
ETA N° 13/0411

10 Benefits that inspire

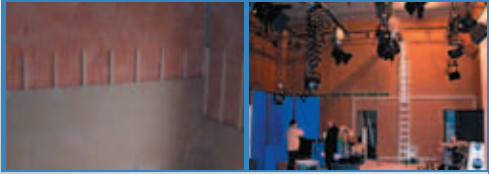
- » Very good airborne and impact sound insulation
- » Slim board thickness of 10 or 15 mm
- » Fast, clean and easy application
- » Natural raw materials for sustainable constructions
- » A universal solution for interior
- » Very high load bearing capacity
- » Can be used with all popular floor coverings
- » Creates a quiet comfortable environment - it stores heat and is breathable
- » Residential space saving due to very slim thickness
- » Increased property value due to superior sound insulation

Where we here good (2000-5000 Hz), the PhoneStar board insulates best.



Example graphics

PhoneStar on concrete walls



On resilient bars, battens or directly mounted

PhoneStar on ceilings and roofs



On resilient bars, battens or directly screwed

PhoneStar on Timber or Steel Stud Walls

High sound insulation

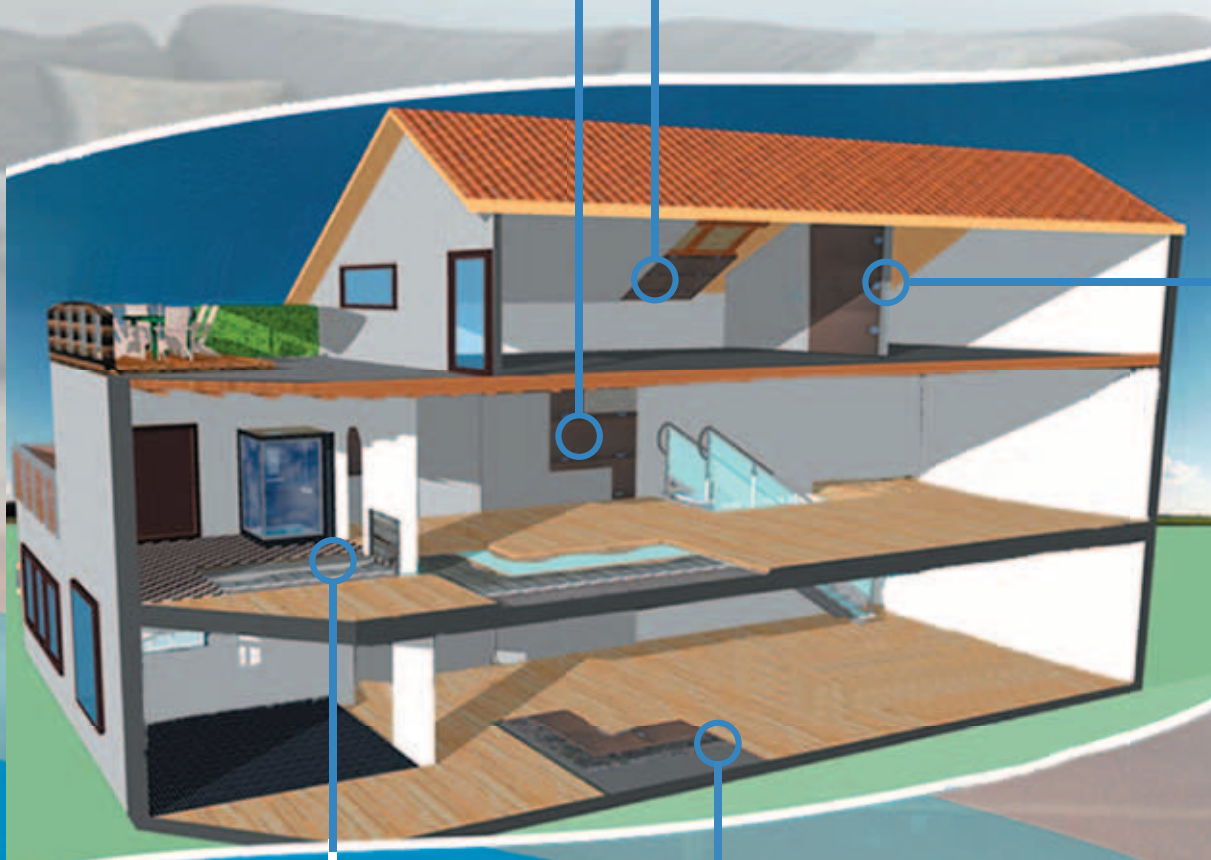


PhoneStar on a stud wall covered by plasterboard

Timber Stud Wall

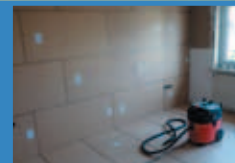


Model - Timber Stud Wall. PhoneStar screwed to the studs and plasterboard screwed to the PhoneStar



PhoneStar for floors

- One or two layers
- Butted tightly together
- Floating or glued
- Walk on immediately
- Immediate finishing
- High compressive strength



PowerFloor Underfloor Heating



PowerFloor Exclusiv System

- with integrated PhoneStar sound insulation
- Element only 35 mm thick

PowerFloor Slimline

- Super-slim underfloor heating system
- Element only 20 mm thick



LAYING:

On floors lay the PhoneStar boards floating and tightly butted together in a brickwork formation. If using a glued floor covering either bond PhoneStar to the floor or bond two layers of PhoneStar together.

For walls and ceilings PhoneStar should be mounted onto resilient bars or battens for best decoupling results. Alternatively it can be mounted directly.

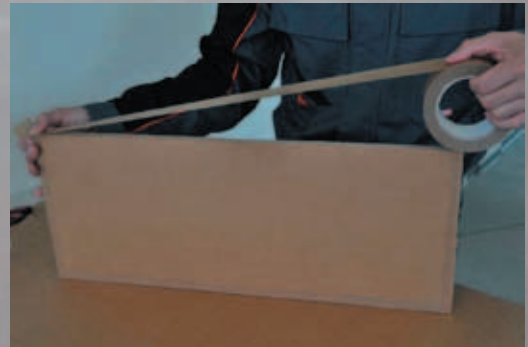
CUTTING

- with Circular Saw
- with Jigsaw



TAPING

After cutting, the edges are sealed with WOLF TAPE



Floor finishing: Most coverings are suitable for fitting over PhoneStar, for example Solid Wood, Engineered Wood, Parquet & Laminate Floors, Linoleum & Vinyl Floors and Tiles.
For details see "Installation Instructions floor".

Wall and Ceiling finishing: plasterboard or wood can be used as the finishing material.

More details see:

www.wolf-bavaria.eu/application+handling

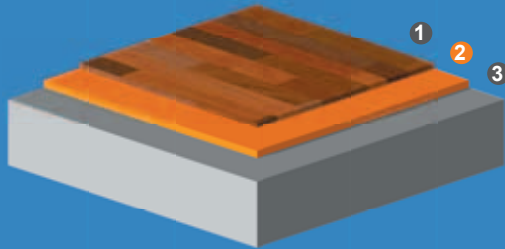


Two layer PhoneStar structures are also possible

Concrete floor

For more examples see www.wolf-bavaria.eu/planning guide

PhoneStar on Solid / Concrete Floors



BM 1.2

- 1 Laminate⁺⁺
- 2 PhoneStar TRI 15 mm
- 3 Concrete floor 180 mm

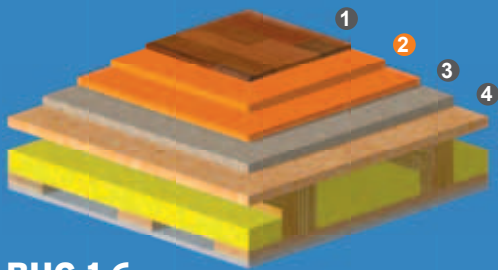
Thickness 15 mm
(without finished
flooring)

Impact Sound:

Concrete Floor without PhoneStar
Concrete Floor with PhoneStar TRI, up to
Impact Sound Reduction, up to:

$L'_{n,w,R} = 73 \text{ dB}^{\dagger}$
 $L'_{n,w,R} = 51 \text{ dB}^{\dagger}$
 $\Delta L_{w,R} = 22 \text{ dB}^{\dagger}$

PhoneStar on Timber Joist Floors



BHG 1.6

- 1 Finished flooring⁺⁺
- 2 PhoneStar TRI 15 mm (2 Layers)
- 3 Wood Fibre 19 mm
- 4 Timber Joist 180 mm

Thickness 49 mm
(without finished
flooring)

Impact Sound:

Timber Joist without PhoneStar
Timber Joist with PhoneStar, up to
Impact Sound Reduction, up to

$L'_{n,w,R} = 75 \text{ dB}^{\dagger}$
 $L'_{n,w,R} = 60 \text{ dB}^{\dagger}$
 $\Delta L_{w,R} = 15 \text{ dB}^{\dagger}$

[†] The values given are approximate and may vary depending on the nature of the overall structure of buildings.

⁺⁺ Installation instructions for the respective floor coverings must be read and observed carefully.

Film Studio Automanager Augsburg



External noise made TV productions very difficult.
PhoneStar mounted on walls solved the problem.

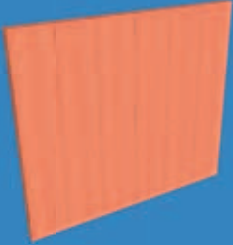
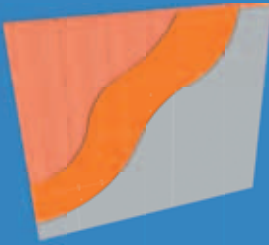
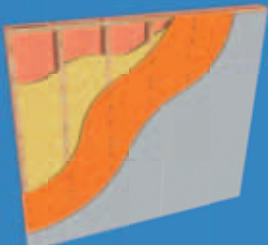
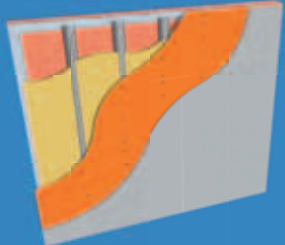
Hotel Jungbrunn - Tannheimer Tal



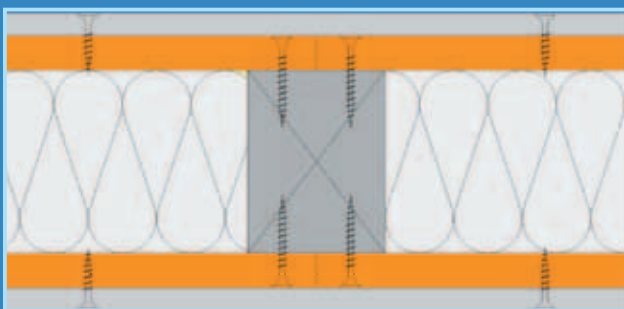
Noise from the Fitness Centre disturbed other guests.
PhoneStar solved the problem.

Exemplary wall structures

For more examples see [www.wolf-bavaria.eu/planning guide](http://www.wolf-bavaria.eu/planning-guide)

Existing wall	PhoneStar directly...	... on battens	...on resilient bars
			
Solid Brick 115 mm Airborne sound insulation $R'_{w,R}=42$ dB	WMZ D 1.2 ... up to $R'_{w,R}=48$ dB ⁺	WMZ L 1.2 ... up to $R'_{w,R}=53$ dB ⁺	WMZ H 1.2 ... up to $R'_{w,R}=57$ dB ⁺

PhoneStar on Wood Stud Wall for high sound insulation



Plasterboard 12,5 mm
PhoneStar TRI 15 mm

$R'_w = 65$ dB ⁺
Test Report Nr.: MB 0214

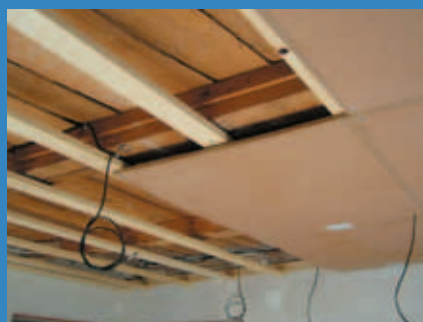
Wood Fibre 40 mm

PhoneStar TRI 15 mm
Plasterboard 12,5 mm

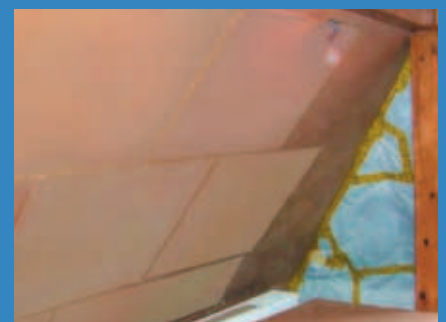
PhoneStar on ceilings and roofs



PhoneStar directly on OSB...



screwed to joists



on sloped attic roofs

PhoneStar on concrete ceiling



- 1
- 2
- 3
- 4

- 1 concrete ceiling 180 mm
- 2 Resilient bars, 27 mm
infilled with Wood Fibre
- 3 PhoneStar TRI 15 mm
- 4 Plasterboard 12,5 mm

Thickness 54,5 mm

DM H 1.2

- 2 Impact sound
- 3 Concrete Ceiling without PhoneStar
- 4 Concrete Ceiling with PhoneStar, up to
Impact sound reduction, up to:

$L'_{n,w,R} = 73$ dB⁺
 $L'_{n,w,R} = 63$ dB⁺
 $\Delta L_{w,R} = 10$ dB⁺

PhoneStar PROFESSIONAL



Cut Section: PhoneStar PROFESSIONAL

PhoneStar TRI



Cut Section: PhoneStar TRI

PhoneStar TWIN



Cut Section: PhoneStar Twin

Approximate value

L x W x D

1200 x 800 x 15 mm

1250 x 625 x 15 mm

1250 x 625 x 10 mm

Area

0,96 m²

1200 x 800 x 15 mm

0,78 m²

1200 x 800 x 10 mm

0,78 m²

Weight approx. / m²

18,00 kg

18,00 kg

12,00 kg

Sound Reduction

Impact, up to

$\Delta L_{nw} = 21$ dB

$\Delta L_{nw} = 22$ dB

$\Delta L_{nw} = 19$ dB

Airborne up to

$R_w = 36$ dB

$R_w = 36$ dB

$R_w = 26$ dB

Fire Behaviour

B2

B2

B2

Pressure Solidity

5 kN/m²

5 kN/m²

5 kN/m²

Punctual Load

4 kN

4 kN

4 kN

Sd-Value, approx.

0,2 m

0,2 m

0,2 m

Thermal Conductivity

0,17 W/(mK)

0,17 W/(mK)

0,17 W/(mK)

Bending Tensile Load

2107 N Lengthwise

650,8 N Lengthwise

278,4 N Lengthwise

Bending Tensile Load

2123 N Widthwise

414,4 N Widthwise

159,4 N Widthwise

Bending Tensile Strength

≥ 16 N/mm² Lengthwise

≥ 5 N/mm² Lengthwise

$\geq 4,5$ N/mm² Lengthwise

Bending Tensile Strength

≥ 16 N/mm² Widthwise

≥ 3 N/mm² Widthwise

$\geq 2,5$ N/mm² Widthwise

Dynamic Stiffness

$s' = 32,6$ MN/m³

Application Areas:

A1

Converted Attic

Converted Attic

Converted Attic

A2, A3

Living rooms and lounges

Living rooms and lounges

Living rooms and lounges

B1-B3

Office, work spaces, floor

Office, work spaces, floor

Office, work spaces, floor

C1-C3, C5

Meeting rooms

Meeting rooms

Meeting rooms

D1, D2

Salesrooms

Salesrooms

Salesrooms

Possible

Application areas

Floors

Floors, Walls, Roofs, Ceilings

Floors, Walls, Roofs, Ceilings

The information given in this brochure reflects our current expertise and experience based on the latest knowledge available. Values given are approximate values and are not to be used as contractual data. Sound insulation values may vary depending on the type of construction in question, flanking conditions and workmanship standards. No commitment is implied. We reserve the right to amend this data as technology progresses and further developments are made. Our information describing the nature of our products and services is not guaranteed. The customer is not exempt from a careful review of the functions and applications of the products by qualified personnel.

NEW! Sound Insulation Planning Guide online: [www.wolf-bavaria.eu/ Planning Guide](http://www.wolf-bavaria.eu/PlanningGuide)



Approximately 100 examples with PhoneStar on floors, walls and ceilings.

Sound Insulation

WOLF[®]

Bavaria



WOLF BAVARIA GmbH is a company based in Germany, D-91560 Heilsbronn near Nürnberg.

WOLF BAVARIA develops, manufactures and markets innovative Sound Insulation products and underfloor heating systems with and without integrated sound insulation. The Sound Insulation products are produced by an innovative method using environmentally, friendly materials. Wolf products are used in the private, public and industrial areas.

Phonewell (the original brand name, prior to re-branding to **PhoneStar Professional** in 2010) was awarded the 'Federal Prize for an Outstanding Innovative Construction Product' by the German Federal Minister for the Economy and Technology in 2007.

Under the patronage of the German Federal Minister for Transport, Building and Urban Development, the **PhoneStar TRI** was awarded during BAU 2011 by Messe München, Bauverlag BV and the "Bundesarbeitskreis Altbauerneuerung" within the „Praxis Altbau - Preis für Produktinnovation 2011“.

We strive to be a strong partner to our customers by offering you commitments and incentives in the field of sound insulation and innovative underfloor heating systems.



Sound Insulation Boards / Dry Screed



Underfloor Heating Systems

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Notes

presented by	  13 ETA N° 13/0411	 Nr. Z-23.21-605	 Wolf Bavia GmbH Z-23.21-1605
<p>* More data and information please refer to the European Technical Approval ETA-13/0411 or the General Technical Approval DIBt Z 23.21-1605</p>			