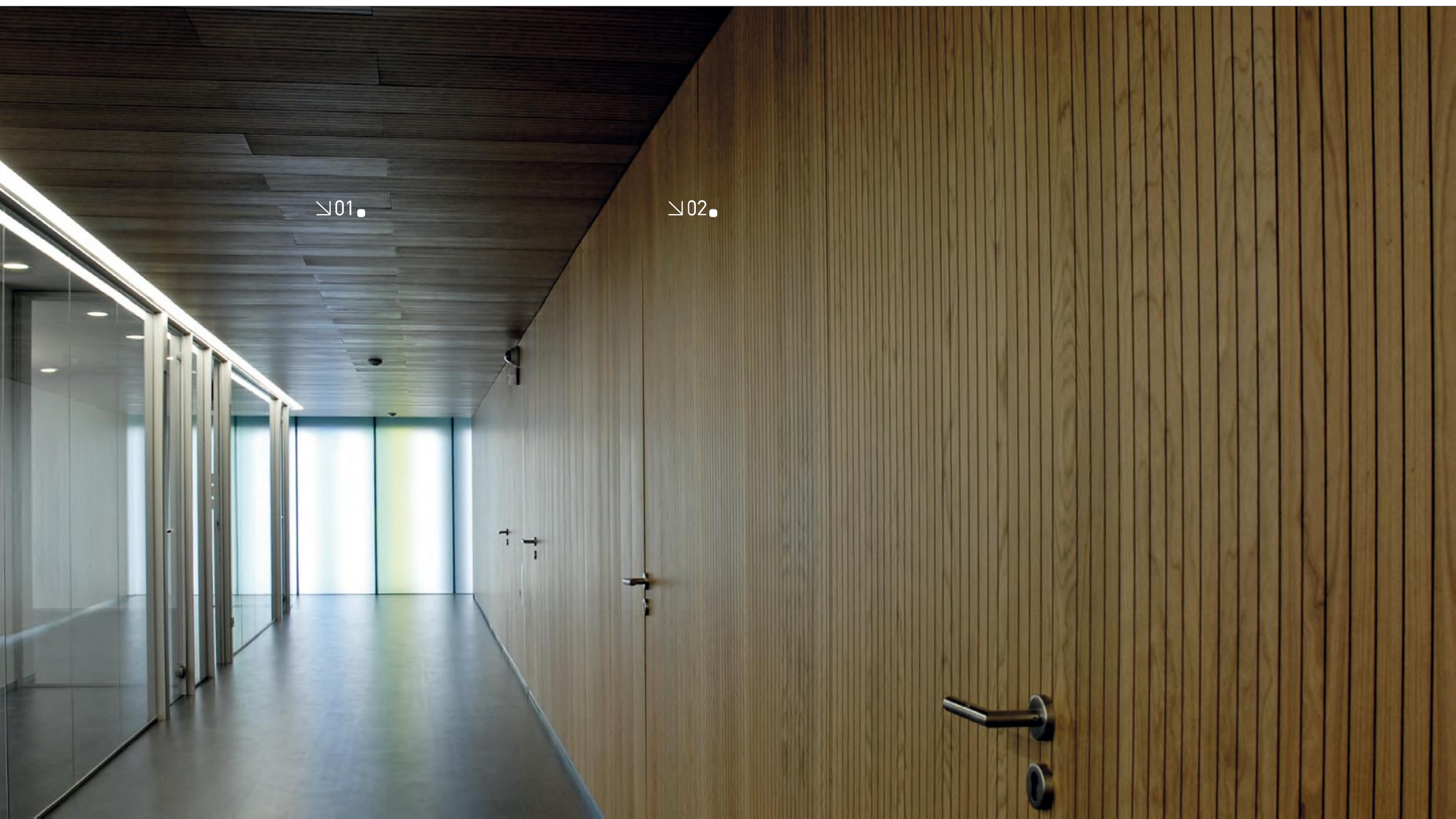


El sonido en la madera  
The sound of wood

  
**spigo**acoustic®  
SISTEMA FONO-ABSORBENTE



▷01.

▷02.

# El sonido en la madera

**Spigoacoustic** es el **sistema** formado por **paneles fonoabsorbentes** diseñado para ofrecer un óptimo rendimiento acústico. Según las exigencias de absorción de sonido para cada recinto, el sistema **Spigoacoustic** ofrece diferentes modelos con distintas capacidades de absorción. Así ofrece solución a los parámetros planteados en recintos como salas de conciertos, auditorios, teatros, estudios de grabación, iglesias, salas de reuniones, aulas, restaurantes, hospitales, etc.

## The sound of wood

**Spigoacoustic** is the **system** made up of **sound-absorbent panels** designed to offer an optimum acoustic performance. Depending on the sound absorption demands for each venue, the **Spigoacoustic** system offers different models with different absorption capacities. In this way, it provides solutions for the specifications present in venues such as concert halls, auditoriums, theatres, recording studios, churches, meeting rooms, classrooms, restaurants, hospitals, etc.

### Edificio Visesa | Visesa Building

Pared | Wall. Spigoacoustic. Modelo | Model BS [ 28-16-32 ] 2400 x 293 mm

Techo | Ceiling. Spigoacoustic. Modelo | Model BS [ 28-16-32 ] 1200 x 293 mm

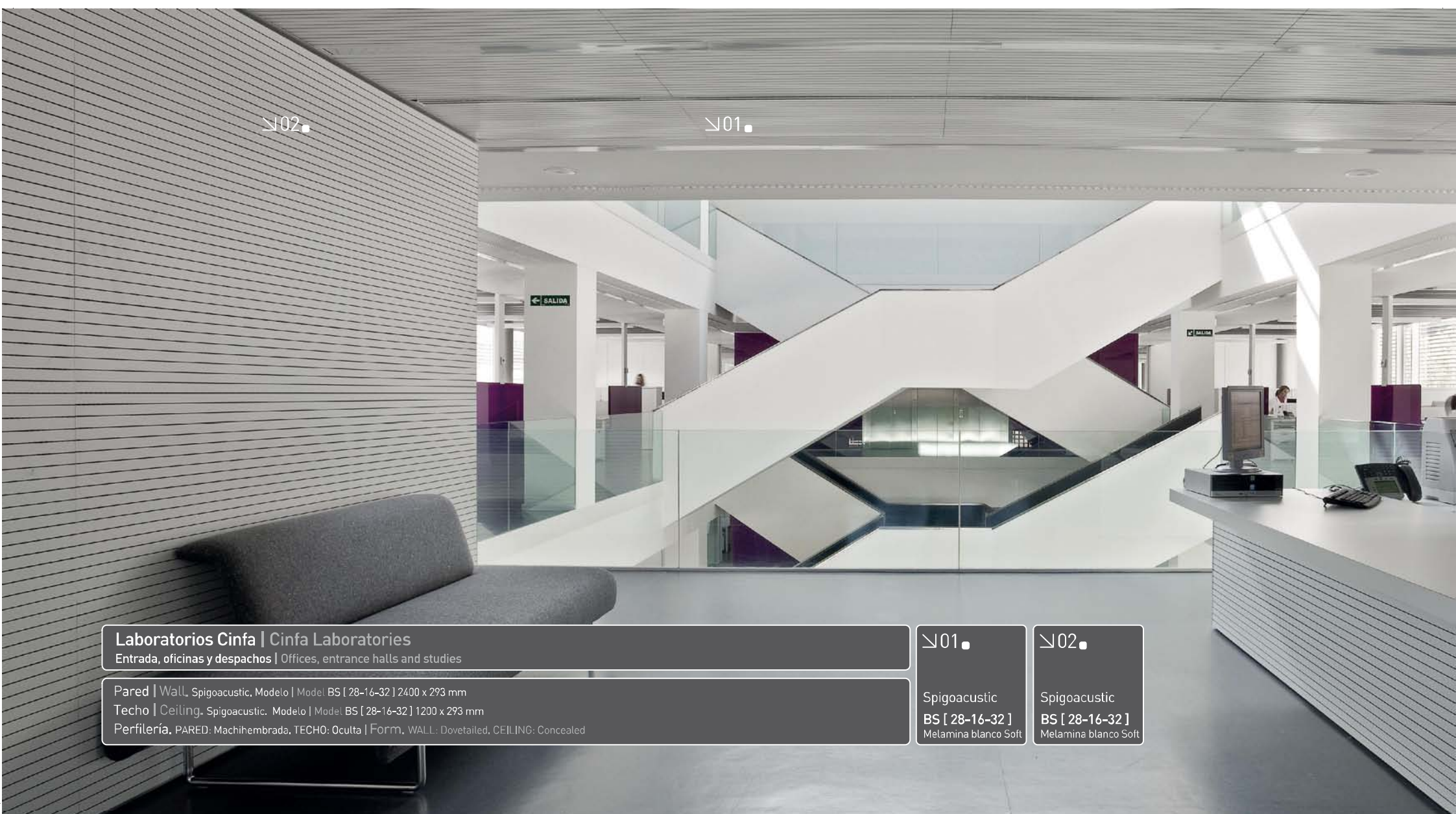
Perfilería, PARED: Machihembrada, TECHO: Oculta | Form, WALL: Dovetailed, CEILING: Concealed

01

Spigoacoustic  
BS [ 28-16-32 ]  
Madera natural cerezo

02

Spigoacoustic  
BS [ 28-16-32 ]  
Madera natural cerezo



↘02.

↘01.

**Laboratorios Cinfa | Cinfa Laboratories**  
Entrada, oficinas y despachos | Offices, entrance halls and studies

Pared | Wall, Spigoacustic, Modelo | Model BS [ 28-16-32 ] 2400 x 293 mm  
Techo | Ceiling, Spigoacustic, Modelo | Model BS [ 28-16-32 ] 1200 x 293 mm  
Perfilería, PARED: Machihembrada, TECHO: Oculta | Form., WALL: Dovetailed, CEILING: Concealed

↘01.  
Spigoacustic  
BS [ 28-16-32 ]  
Melamina blanco Soft

↘02.  
Spigoacustic  
BS [ 28-16-32 ]  
Melamina blanco Soft



▷02.

# Acondicionamiento acústico y absorción

Para desarrollar un proyecto de acústica hay que diferenciar el aislamiento del acondicionamiento acústico. Este último concepto es lo que desarrollan los paneles de alta calidad **Spigoacustic**, diseñados para ofrecer los niveles de inteligibilidad y tiempos de reverberación óptimos para cada lugar. Gracias a sus diferentes combinaciones de canales - en su cara vista - y perforaciones circulares - en su cara oculta - **Spigoacustic** es no sólo el producto idóneo para conseguir un acondicionamiento óptimo sino que también incorpora una cuidada armonía estética a los más exigentes proyectos.

**La propuesta decorativa de Spigoacustic es el sonido en la madera.**

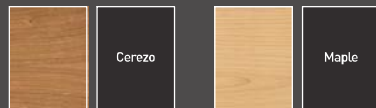
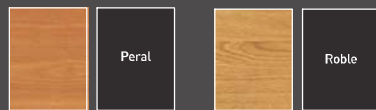
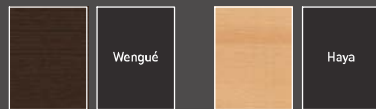
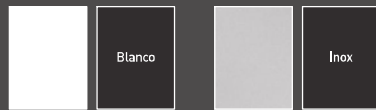
## Acoustic conditioning and absorption

In order to develop an acoustic project, it is necessary to differentiate between insulation and acoustic conditioning. Acoustic conditioning is provided by the high-quality **Spigoacustic** panels, which are designed to offer the optimum levels of intelligibility and reverberation times for each site. Thanks to the different combinations of channels - on its exposed face - and circular perforations - on its concealed face - **Spigoacustic** is not only the ideal product for achieving optimum conditioning but also adds a well-considered aesthetic harmony to the most demanding projects.

**Spigoacustic's decorative design is 'the sound of wood'.**

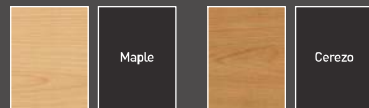
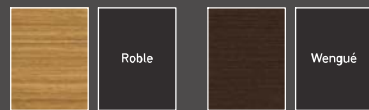
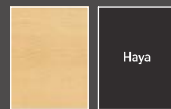
# Acabados | Finishes

**Melaminas.** Grueso: 16 mm  
**Melamine.** Thickness: 16 mm



**Madera natural**  
 Maderas naturales y barnizadas  
 Grueso: 16 mm

**Natural wood**  
 Natural and varnished woods  
 Thickness: 16 mm



**Lacados, Carta Ral, NCS...** | **Lacquers.** Carta Ral, NCS, etc

**Aplacados de alta densidad** | **High-density cladding**

Nota. Para otros acabados, consultar

\* Las muestras de colores impresas en este catálogo pueden presentar variaciones de color respecto al producto

Note. For other finishes, refer to

\* The colour samples displayed in this catalogue can vary depending on the product.

# Modelos

# Models

## COMPOSICIÓN

### Acabados

Melaminas, madera natural, lacados y aplacados de alta densidad

### Soporte

MDF estándar, hidrófugo o ignífugo  
 Contrachapado estándar, hidrófugo o ignífugo  
 OSB  
 Compacto

### Capa fonoabsorbente

Velo negro de 0,25 mm, termoadherido al dorso

## COMPOSITION

### Finishes

Melamine, natural wood, lacquers and high-density cladding

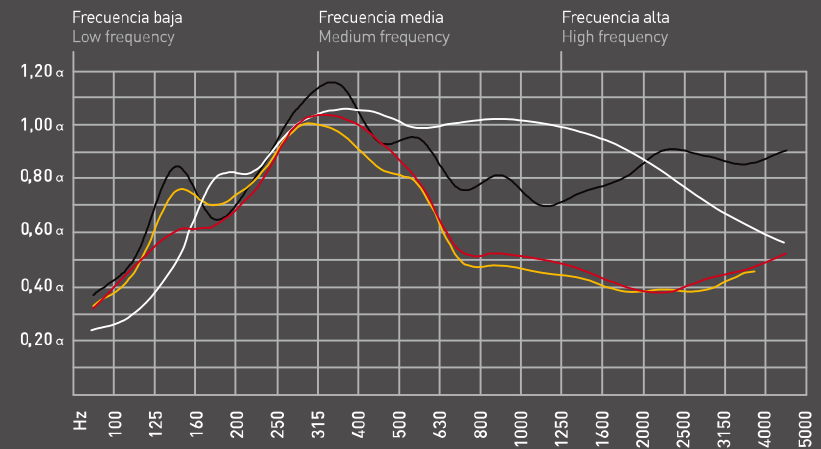
### Support

MDF: Standard, water-resistant or fire-resistant  
 Plywood: Standard, fire-resistant and phenolic  
 OSB  
 Compact

### Sound-absorbent layer

0,25 mm black veil, thermally attached to the back

## COEFICIENTE MEDIO DE ABSORCIÓN | AVERAGE ABSORPTION COEFFICIENT

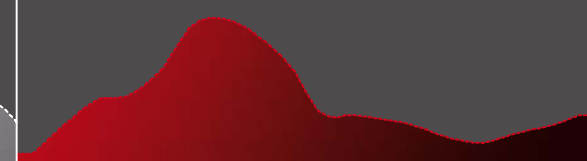
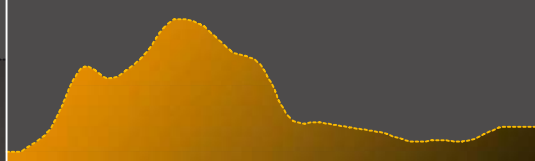
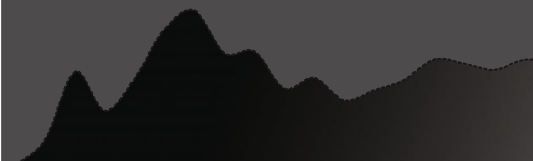


## AS [ 28-16-16 ]

## BS [ 28-16-32 ]

## CS [ 28-32-16 ]

## DS [ 28-32-32 ]



### COEFICIENTE MEDIO DE ABSORCIÓN AVERAGE ABSORPTION COEFFICIENT

**0,791 [ NRC 0,85 ]**

Frecuencia baja | Low frequency.  $\bar{\alpha} = 0,687$

Frecuencia media | Medium frequency.  $\bar{\alpha} = 0,860$

Frecuencia alta | High frequency.  $\bar{\alpha} = 0,827$

ISO 354 Cod. 251005L021-A

### COEFICIENTE MEDIO DE ABSORCIÓN AVERAGE ABSORPTION COEFFICIENT

**0,585 [ NRC 0,65 ]**

Frecuencia baja | Low frequency.  $\bar{\alpha} = 0,670$

Frecuencia media | Medium frequency.  $\bar{\alpha} = 0,668$

Frecuencia alta | High frequency.  $\bar{\alpha} = 0,418$

ISO 354 Cod. 251005L021-D

### COEFICIENTE MEDIO DE ABSORCIÓN AVERAGE ABSORPTION COEFFICIENT

**0,705 [ NRC 0,85 ]**

Frecuencia baja | Low frequency.  $\bar{\alpha} = 0,533$

Frecuencia media | Medium frequency.  $\bar{\alpha} = 0,900$

Frecuencia alta | High frequency.  $\bar{\alpha} = 0,683$

ISO 354 Cod. 251005L021-C

### COEFICIENTE MEDIO DE ABSORCIÓN AVERAGE ABSORPTION COEFFICIENT

**0,502 [ NRC 0,60 ]**

Frecuencia baja | Low frequency.  $\bar{\alpha} = 0,532$

Frecuencia media | Medium frequency.  $\bar{\alpha} = 0,603$

Frecuencia alta | High frequency.  $\bar{\alpha} = 0,373$

ISO 354 Cod. 251005L021-E

### PERFORACIÓN | PERFORATION

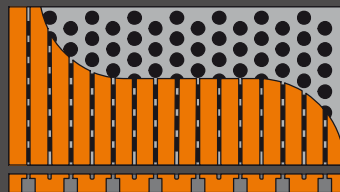
**11,25 %**

Canal | Channel. 2,8 mm

Diámetro taladro | Diameter drilled. 10 mm

Distancia taladros | Distance drilled. 16 mm

Distancia canales | Distance of channels. 16 mm



### PERFORACIÓN | PERFORATION

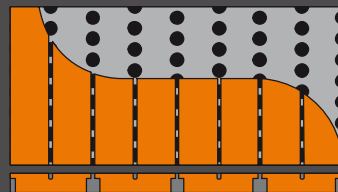
**5,45 %**

Canal | Channel. 2,8 mm

Diámetro taladro | Diameter drilled. 10 mm

Distancia taladros | Distance drilled. 16 mm

Distancia canales | Distance of channels. 32 mm



### PERFORACIÓN | PERFORATION

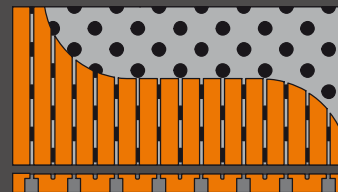
**5,45 %**

Canal | Channel. 2,8 mm

Diámetro taladro | Diameter drilled. 10 mm

Distancias taladro | Distance drilled. 32 mm

Distancia canales | Distance of channels. 16 mm



### PERFORACIÓN | PERFORATION

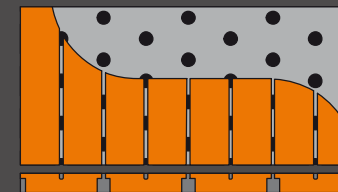
**2,81 %**

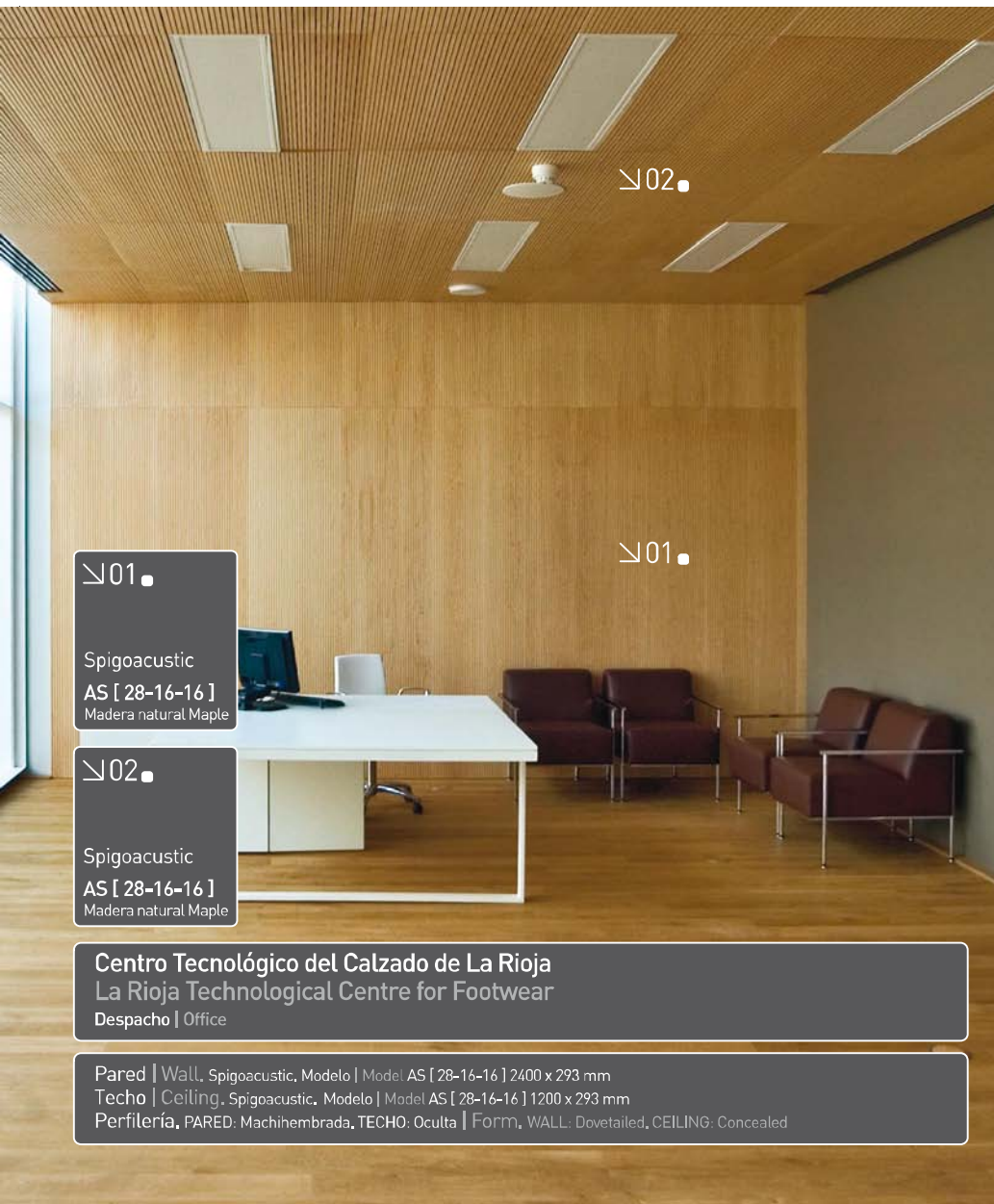
Canal | Channel. 2,8 mm

Diámetro taladro | Diameter drilled. 10 mm

Distancias taladro | Distance drilled. 32 mm

Distancia canales | Distance of channels. 32 mm





01

Spigoacoustic  
AS [ 28-16-16 ]  
Madera natural Maple

02

Spigoacoustic  
AS [ 28-16-16 ]  
Madera natural Maple

Centro Tecnológico del Calzado de La Rioja  
La Rioja Technological Centre for Footwear  
Despacho | Office

Pared | Wall: Spigoacoustic, Modelo | Model AS [ 28-16-16 ] 2400 x 293 mm  
Techo | Ceiling: Spigoacoustic, Modelo | Model AS [ 28-16-16 ] 1200 x 293 mm  
Perifería, PARED: Machihembrada, TECHO: Oculta | Form, WALL: Dovetailed, CEILING: Concealed

# Modelos

## MEDIDAS

**Revestimientos.** 2400 x 293 mm [ 288 mm reales ]  
1200 x 293 mm [ 288 mm reales ]

**Techos.** 2400 x 293 mm [ 288 mm reales ]  
1200 x 293 mm [ 288 mm reales ]

**Otras medidas.** Consultar según proyecto

**Curvatura.** Manteniendo todas las características, se pueden realizar proyectos que necesiten paneles curvos.

**Tolerancia.** +/- 1 mm [largo] / +/- 0,2 mm [ancho]

**Spigoacoustic no acústico.** Cualquier modelo de Spigoacoustic se puede realizar sin perforaciones circulares traseras, manteniendo la misma calidad estética y decorativa.

Los modelos son:

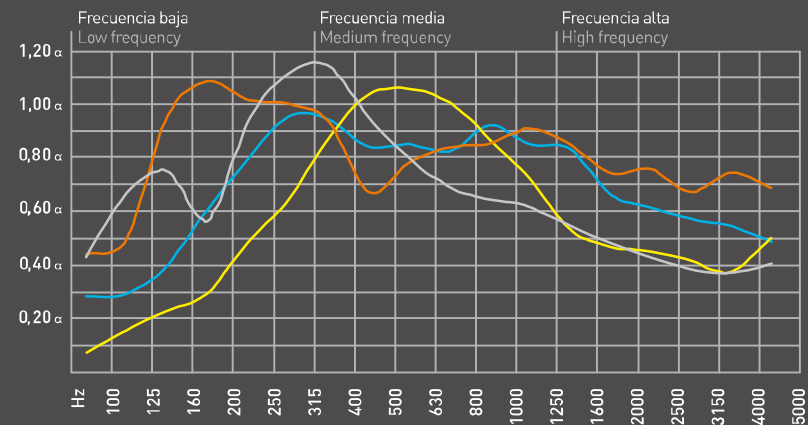
**28-NO-16** (Mod. AS 28-16-16 y CS 28-32-16 sin perforaciones traseras)

**28-NO-32** (Mod. BS 28-16-32 y DS 28-32-32 sin perforaciones traseras)

**42-NO-16** (Mod. ES 42-16-16 y GS 42-32-16 sin perforaciones traseras)

**42-NO-32** (Mod. FS 42-16-32 y HS 42-32-32 sin perforaciones traseras)

## COEFICIENTE MEDIO DE ABSORCIÓN AVERAGE ABSORPTION COEFFICIENT



# Models

## MEASUREMENTS

**Panelling.** 2400 x 293 mm [ 288 mm real ]  
1200 x 293 mm [ 288 mm real ]

**Ceilings.** 2400 x 293 mm [ 288 mm real ]  
1200 x 293 mm [ 288 mm real ]

**Other measurements.** Defined according to project

**Curvature.** Projects demanding curved panels can be carried out, retaining all of the above features.

**Allowance.** +/- 1 mm (length) / +/- 0,2 mm (width)

**Non-acoustic Spigoacoustic.** Any Spigoacoustic model can be created without rear circular perforations, retaining the same aesthetic and decorative quality.

The models are as follows:

**28-NO-16** (models AS 28-16-16 and CS 28-32-16 without rear perforations)

**28-NO-32** (models BS 28-16-32 and DS 28-32-32 without rear perforations)

**42-NO-16** (models ES 42-16-16 and GS 42-32-16 without rear perforations)

**42-NO-32** (models FS 42-16-32 and HS 42-32-32 without rear perforations)

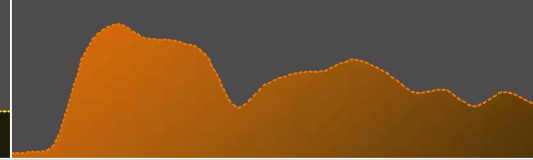
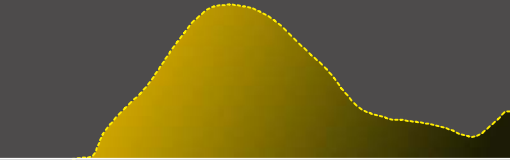
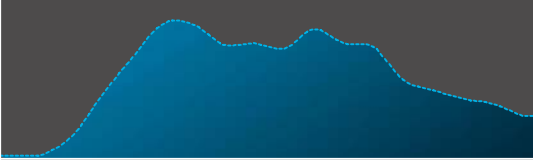


**ES [ 42-16-16 ]**

**FS [ 42-16-32 ]**

**GS [ 42-32-16 ]**

**HS [ 42-32-32 ]**



**COEFICIENTE MEDIO  
DE ABSORCIÓN**  
AVERAGE ABSORPTION COEFFICIENT

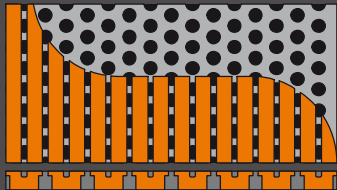
**0,698 [ NRC 0,85 ]**

Frecuencia baja | Low frequency,  $\alpha = 0,570$   
Frecuencia media | Medium frequency,  $\alpha = 0,890$   
Frecuencia alta | High frequency,  $\alpha = 0,635$   
ISO 354 Cod. 251005L021-F

**PERFORACIÓN | PERFORATION**

**17,50 %**

Canal | Channel, 4,2 mm  
Diámetro taladro | Diameter drilled, 10 mm  
Distancia taladros | Distance drilled, 16 mm  
Distancia canales | Distance of channels, 16 mm



**COEFICIENTE MEDIO  
DE ABSORCIÓN**  
AVERAGE ABSORPTION COEFFICIENT

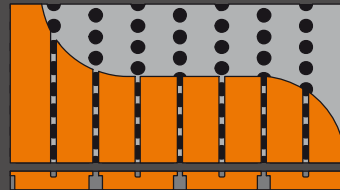
**0,550 [ NRC 0,70 ]**

Frecuencia baja | Low frequency,  $\alpha = 0,308$   
Frecuencia media | Medium frequency,  $\alpha = 0,895$   
Frecuencia alta | High frequency,  $\alpha = 0,448$   
ISO 354 Cod. 251005L021-H

**PERFORACIÓN | PERFORATION**

**8,18 %**

Canal | Channel, 4,2 mm  
Diámetro taladro | Diameter drilled, 10 mm  
Distancia taladros | Distance drilled, 16 mm  
Distancia canales | Distance of channels, 32 mm



**COEFICIENTE MEDIO  
DE ABSORCIÓN**  
AVERAGE ABSORPTION COEFFICIENT

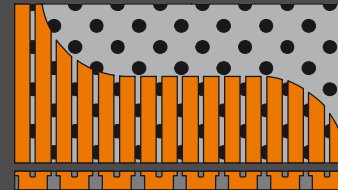
**0,593 [ NRC 0,65 ]**

Frecuencia baja | Low frequency,  $\alpha = 0,615$   
Frecuencia media | Medium frequency,  $\alpha = 0,615$   
Frecuencia alta | High frequency,  $\alpha = 0,550$   
ISO 354 Cod. 251005L021-G

**PERFORACIÓN | PERFORATION**

**8,18 %**

Canal | Channel, 4,2 mm  
Diámetro taladro | Diameter drilled, 10 mm  
Distancia taladros | Distance drilled, 32 mm  
Distancia canales | Distance of channels, 16 mm



**COEFICIENTE MEDIO  
DE ABSORCIÓN**  
AVERAGE ABSORPTION COEFFICIENT

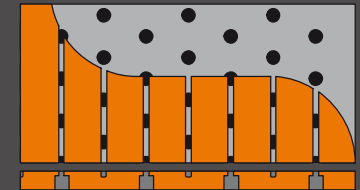
**0,671 [ NRC 0,80 ]**

Frecuencia baja | Low frequency,  $\alpha = 0,723$   
Frecuencia media | Medium frequency,  $\alpha = 0,817$   
Frecuencia alta | High frequency,  $\alpha = 0,475$   
ISO 354 Cod. 251005L021-B

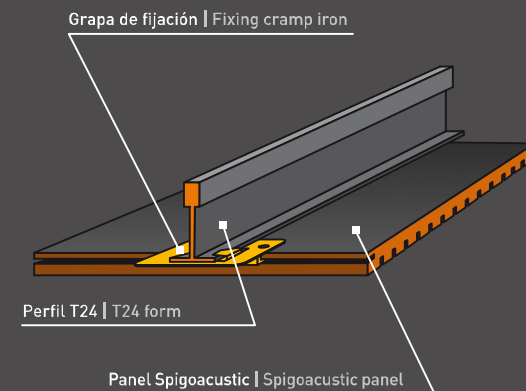
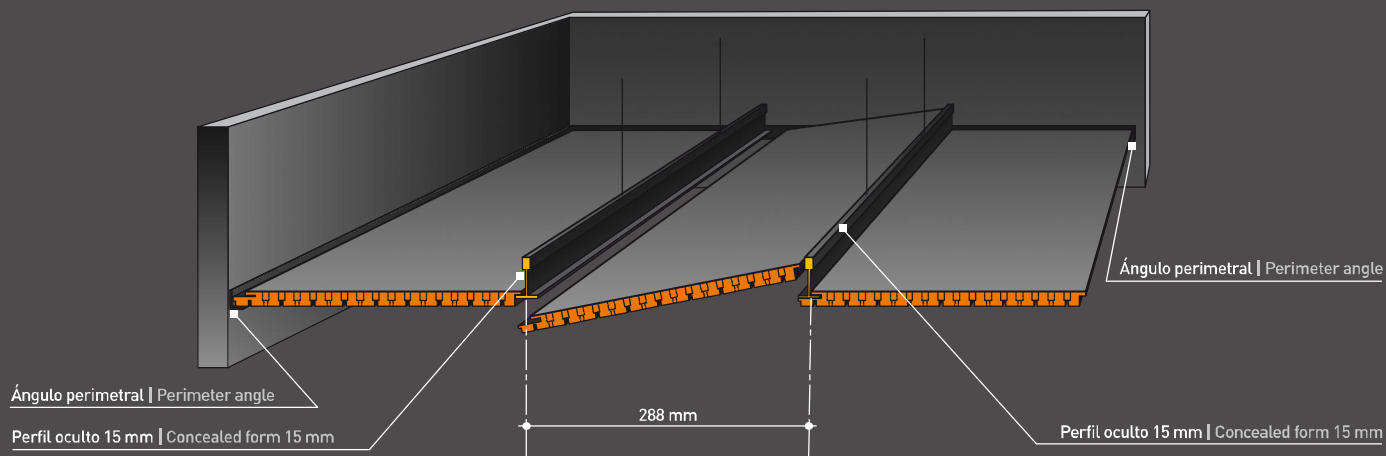
**PERFORACIÓN | PERFORATION**

**4,36 %**

Canal | Channel, 4,2 mm  
Diámetro taladro | Diameter drilled, 10 mm  
Distancia taladros | Distance drilled, 32 mm  
Distancia canales | Distance of channels, 32 mm



# Instalación | Installation



## TECHOS DESMONTABLES

El proceso de instalación es similar al del techo fijo. Se coloca con perfilera T15 y placas mecanizadas para perfil oculto estándar.

## TECHOS FIJOS

Se monta la perfilera metálica perpendicular a las placas. Es recomendable dejar 60 cm de separación entre los perfiles. Se monta el ángulo perimetral en la pared, desde donde se comienza la instalación. Se debe dejar una distancia de 18 mm entre el ángulo perimetral y el perfil metálico (T24 o con perfil OMEGA 26 mm).

Se apoya la primera placa de **Spigoacoustic** sobre el ángulo perimetral y se fija al perfil con grapas metálicas. Se encaja la siguiente placa con un sistema macho-hembra y se fija con su perfil.

Se repite la operación hasta completar la colocación del techo.

## CEILINGS WHICH CAN BE DISMANTLED

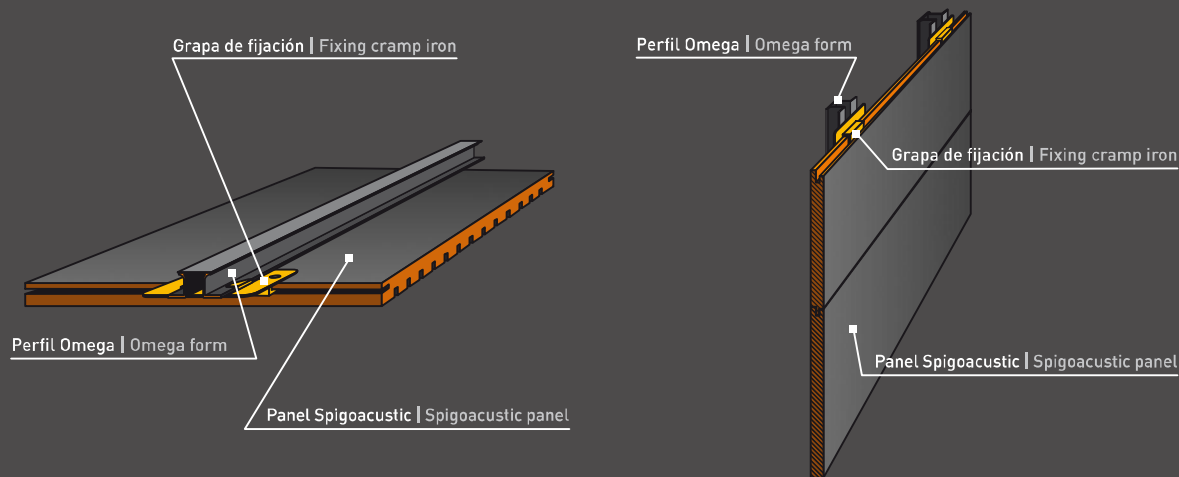
The installation process is similar to that for the fixed ceiling. It is put into place with a T15 structure and mechanised panels for the standard concealed model.

## FIXED CEILING

The metallic structure is mounted perpendicular to the panels. It is advisable to leave 60 cm between the panels. The perimeter angle is mounted onto the wall, from where the installation starts. A distance of 18 mm should be left between the perimeter angle and the metallic structure (T24 or with OMEGA 26mm form).

The first **Spigoacoustic** panel rests on the perimeter angle and is attached to the structure with metal clamp irons. The following panel is put into place using a nut and bolt system and is fixed with its structure.

This action is repeated until the ceiling is completed.



## PAREDES Y REVESTIMIENTOS

Se fija la perfilera metálica perpendicular a los paneles. Es recomendable dejar 60 cm de separación entre los perfiles.

**Paneles horizontales.** El orden de instalación es de abajo a arriba, con el macho apoyado en el pavimento [seccionándolo si procede] y se fija la hembra al perfil metálico (OMEGA 26 mm) con sus grapas metálicas. Se repite la operación hasta completar la colocación de la pared.

**Paneles verticales.** La estructura de soporte debe ser horizontal. La instalación comienza por un lado hasta completar la pared.

Se puede sustituir la perfilera metálica por rastreles de madera, procediendo del mismo modo.

## WALLS AND PANELLING

The metallic structure is mounted perpendicular to the panels. It is advisable to leave 60 cm between the panels.

**Horizontal panels.** The order of installation is from low to high, with the bolt supported at ground level [cutting down if necessary] and the nut is fixed to the metallic structure (OMEGA 26 mm) with its metal clamp irons. This action is repeated until the wall is completed.

**Vertical panels.** The support structure should be horizontal. Installation starts on one side until the wall is completed.

The metallic structure can be substituted for wooden spacers, using the same procedure.

## CONDICIONES PARA LA INSTALACIÓN

Los locales deben estar cubiertos

El entorno debe estar seco, sin humedad

La temperatura ambiente no debe ser inferior a 15°C

La humedad ambiental debe oscilar entre el 40 y el 60%

El material debe ser desembalado en el momento de su colocación

Para la idónea adaptación de los paneles al ambiente, se recomienda mantenerlos entre 24 y 48 h. antes en el lugar donde se vayan a instalar

## INSTALLATION CONDITIONS

The premises should be covered

The surrounding area should be dry, with no humidity

The room temperature should not be below 15°C

The atmospheric humidity should be between 40 and 60%

The material should be unpacked immediately before installation

In order for the panels to adapt to the environment adequately, it is recommended to keep them in the site where they are to be installed for between 24 and 48 hours previously

Todos los datos proceden de ensayos testados según la norma ISO 354 en Acústica Arquitectónica, S.A. (25,10,05 y 23,11,05). Muestra ensayada: panel de Spigoacustic + lana de roca de 60 mm de espesor y 70 Kg/m<sup>3</sup> de densidad.

Volumen sala de ensayos (m<sup>3</sup>): 126,12. Temperatura (°C): 21. Humedad (%): 70. Salvo en el modelo AS 28-16-16, que la humedad es de 65. Superficie ensayada (m<sup>2</sup>): 8,28

All of this data comes from tests carried out according to regulation ISO 354 in Acústica Arquitectónica, S.A. (25,10,05 and 23,11,05). Tested sample: Spigoacustic panel + glass wool of 60 mm thickness and 70 Kg/m<sup>3</sup> density.

Test room volume (m<sup>3</sup>): 126,12. Temperature (°C): 21. Humidity (%): 70. Except in the case of model AS 28-16-16, where the humidity is 65. Tested surface area (m<sup>2</sup>): 8,28

**spigo GROUP**<sup>®</sup>  
PROYECTOS EN MADERA

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