

# ACOUSTIC FENCING PANELS

PANACOR AL 4G

SPECIALLY DESIGNED TO  
REDUCE NOISE GENERATED BY ROAD AND RAIL TRAFFIC.

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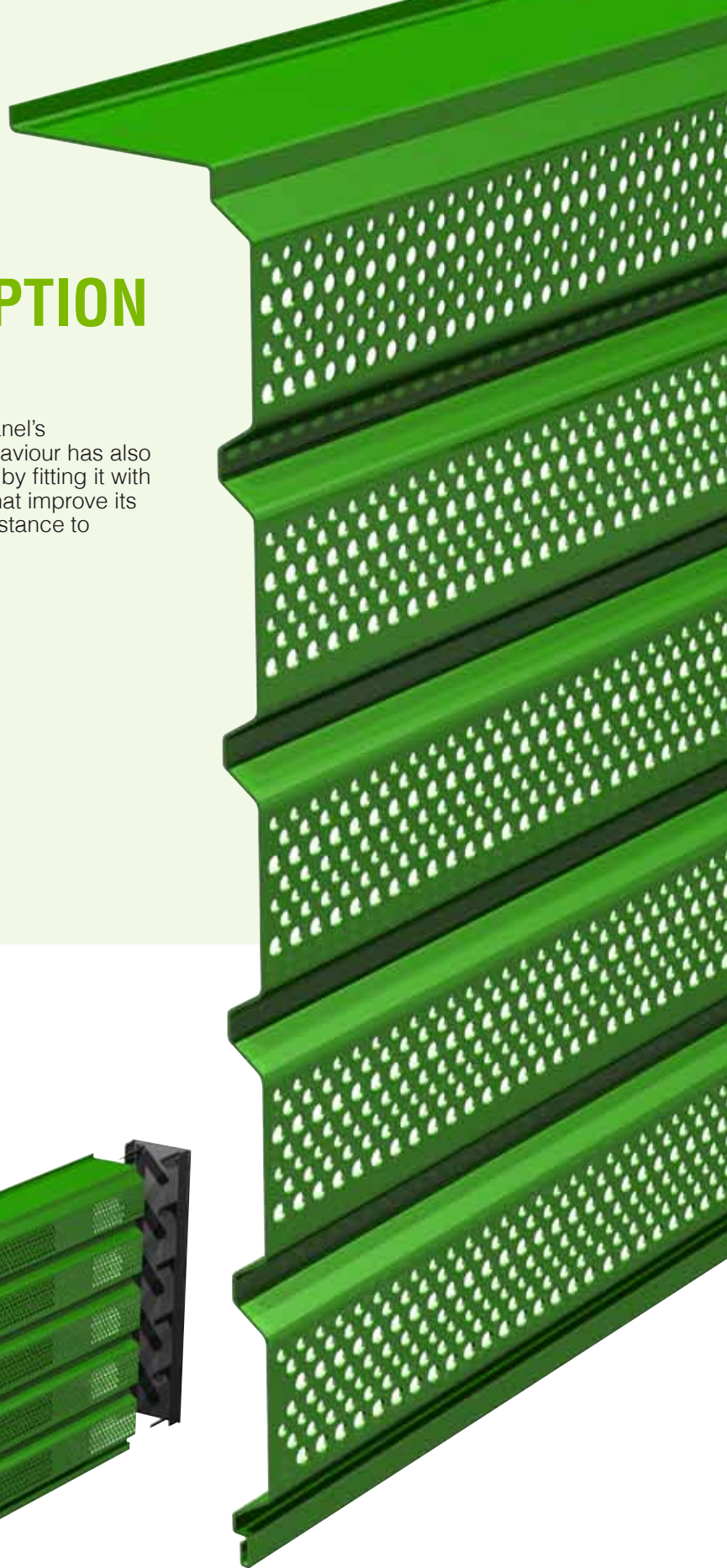
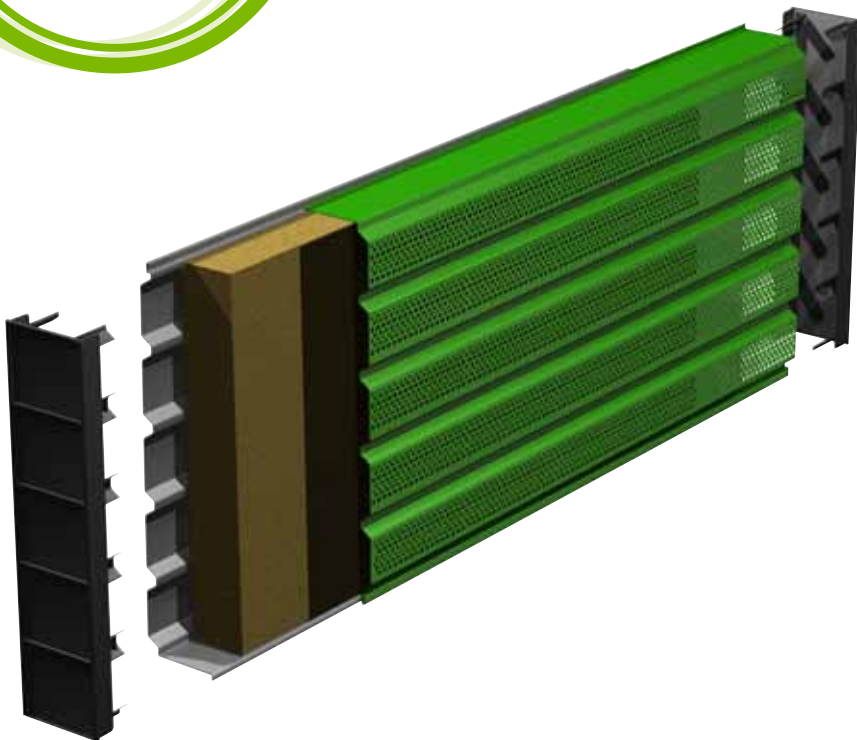


# TECHNICAL DESCRIPTION OF PRODUCT

The PANACOR AL 4G aluminium acoustic fencing panel is specially designed to reduce noise generated by road and rail traffic.

Its design criteria take the noise signature of road and rail traffic as the reference on which to base the panel's efficient noise abatement performance.

Likewise, the panel's mechanical behaviour has also been optimised by fitting it with 4 deep pleats that improve its mechanical resistance to strong winds.



#### OVERALL DIMENSIONS :

LENGTH: 2000 - 6000mm

HEIGHT: 500mm

THICKNESS: 80 - 120mm



# COMPOSITION OF THE FENCING PANEL

The panel is made of 1050/H24 or 3105/H24 grade aluminium plate as per UNE EN standard 573-3, thermosetting polyester powder coated in any colour on the RAL colour chart according to customer's choice.

The inside of the sandwich panel is made of sound-absorbing material based on a 50mm thick layer of rock wool (density of 100 kg/m<sup>3</sup>), with a black protective cloth.

Fencing panels comprise two metal parts: the inner side (the one that faces the noise source) has perforated holes over 36% of its surface area to absorb noise, while the outer side is a non-perforated flat isolating surface. The panels are fitted between HEB/HEA vertical posts up to the desired height in steps of 500 mm, while the distance between posts is variable.



side seal made of polypropylene

plain aluminium noise-reflecting face

rock wool

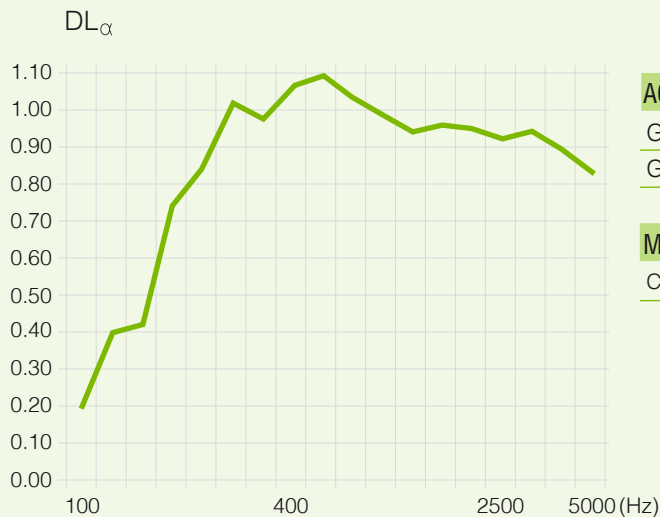
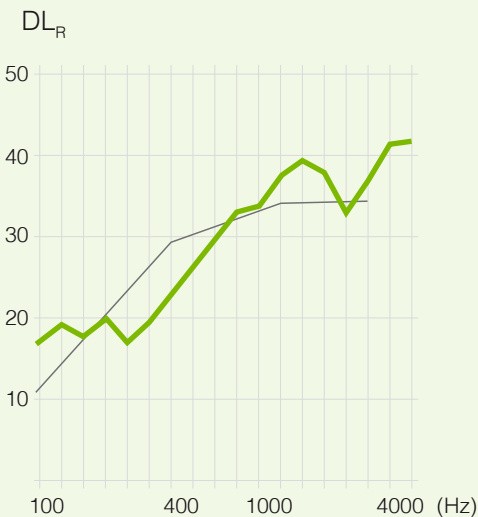
glass veil

perforated aluminium noise-absorbing face

# ACOUSTIC AND MECHANICAL CHARACTERISTICS

## REFERENCE STANDARDS

UNE EN 1794-1:2011 ; UNE EN 1794-2:2011 ; UNE EN 1793-1:2011 ; UNE EN 1793-2:2011



**ACOUSTIC CHARACTERISTICS:**

Grade **B3** according to EN1793-2

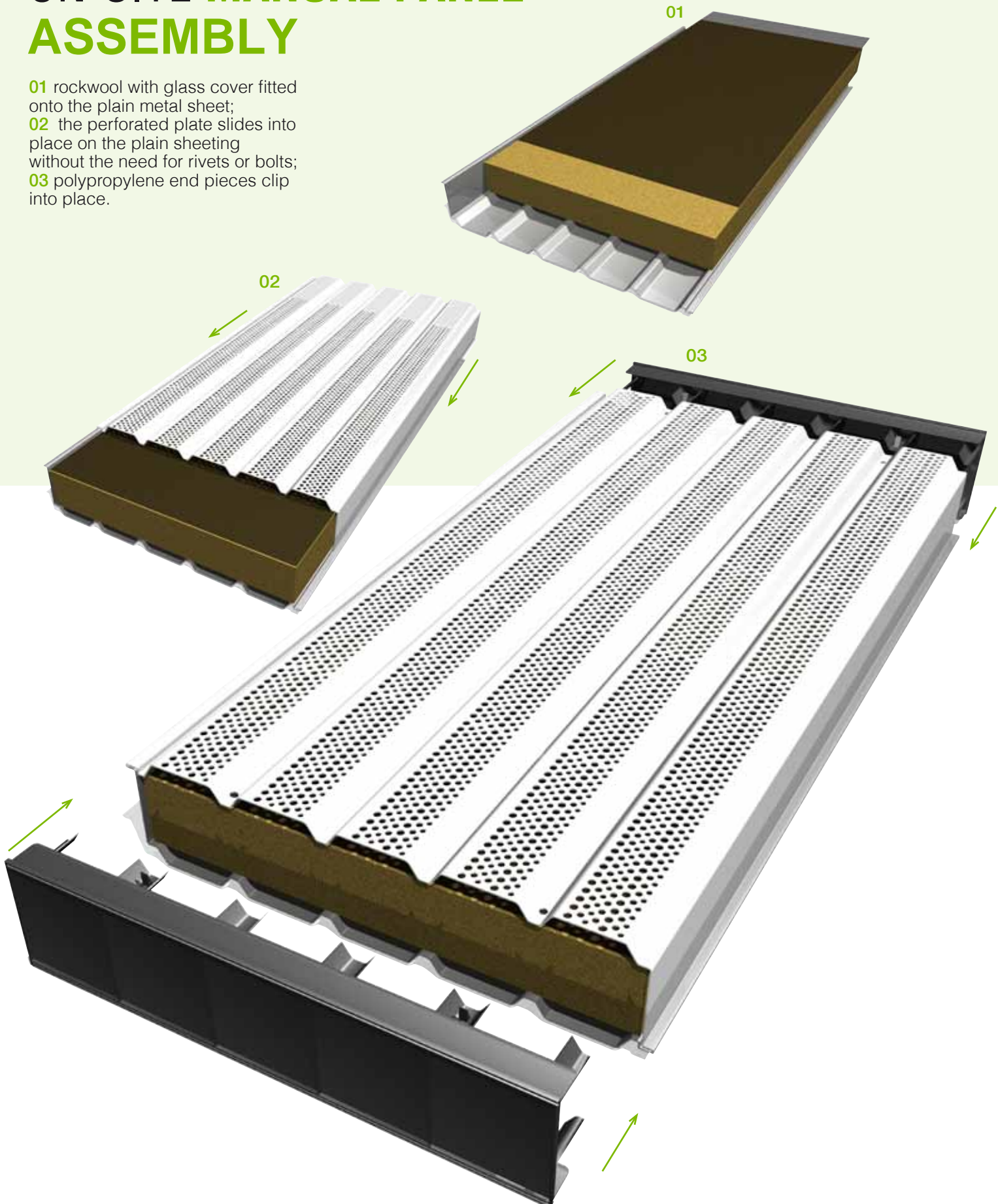
Grade **A4** according to EN1793-1

**MECHANICAL CHARACTERISTICS:**

Certified according to EN 1794

# ON-SITE MANUAL PANEL ASSEMBLY

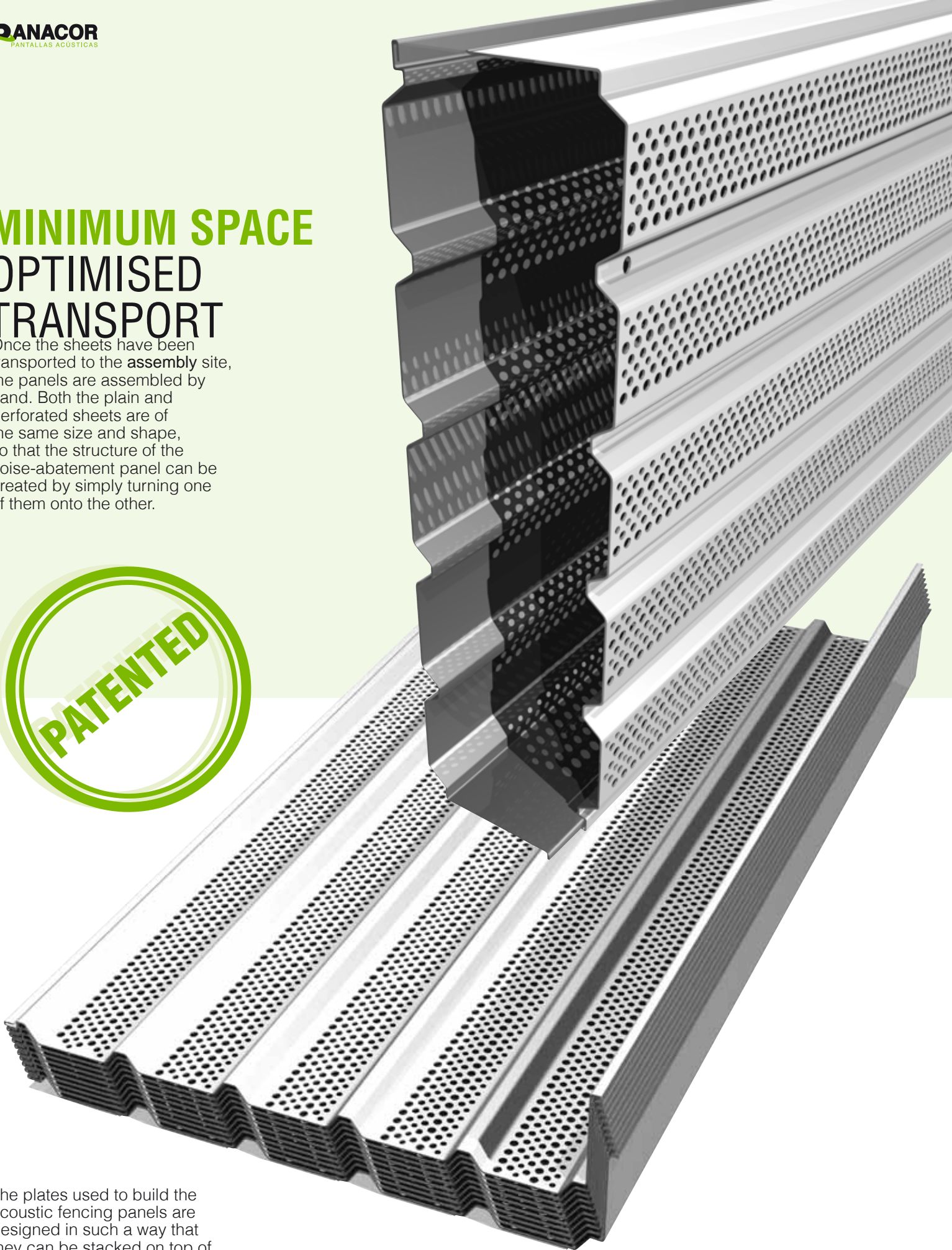
**01** rockwool with glass cover fitted onto the plain metal sheet;  
**02** the perforated plate slides into place on the plain sheeting without the need for rivets or bolts;  
**03** polypropylene end pieces clip into place.





## MINIMUM SPACE OPTIMISED TRANSPORT

Once the sheets have been transported to the assembly site, the panels are assembled by hand. Both the plain and perforated sheets are of the same size and shape, so that the structure of the noise-abatement panel can be created by simply turning one of them onto the other.

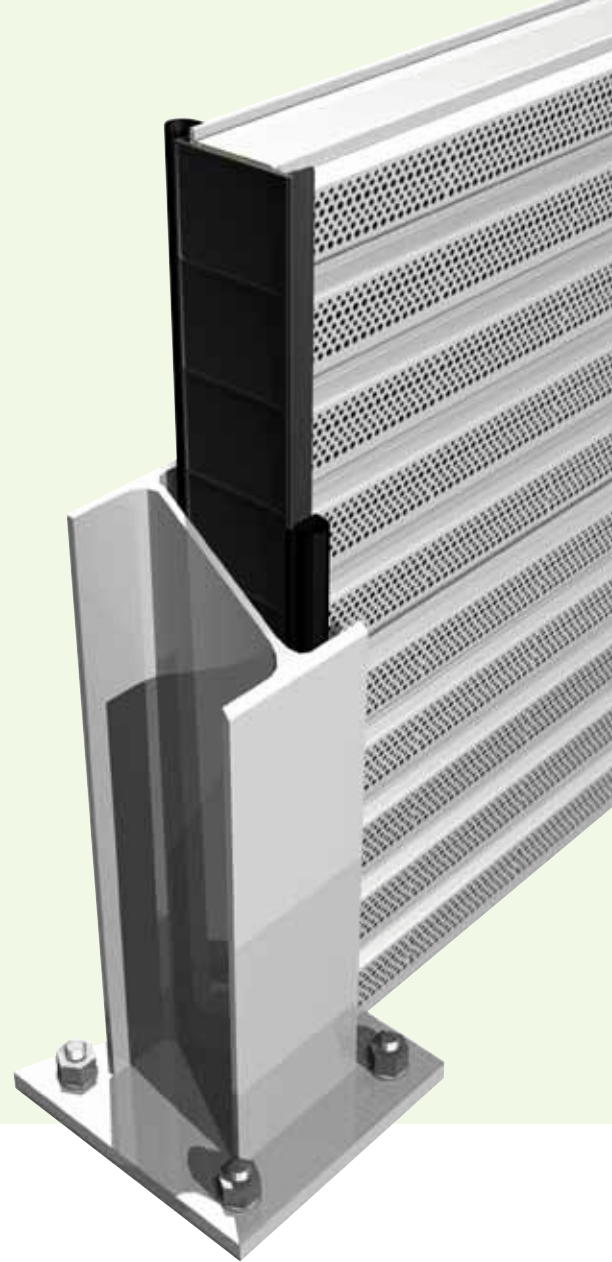


The plates used to build the acoustic fencing panels are designed in such a way that they can be stacked on top of each other to reduce storage space, thus making it easier and considerably more cost-effective to transport them.

# STRUCTURAL COMPONENTS

The support structure for the fence is made up of HEA/HEB metal posts on a welded base plate, both complying with grade S275JR according to standard EN 10025. Posts and base plates are galvanised and thermosetting polyester powder coated to meet the requirements of standards EN 1461 and EN 15773.

Posts are anchored to the foundations using anchor rods that vary in diameter, length and grade depending on the specific requirements of each individual project.

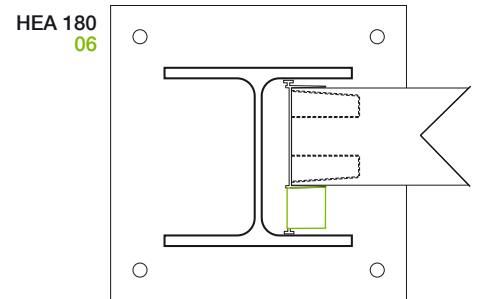
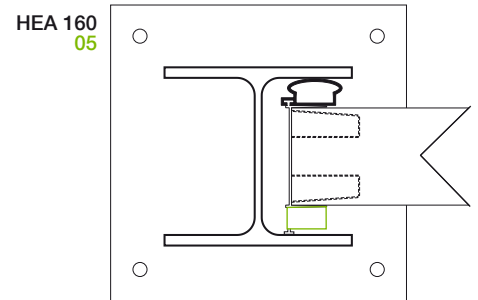
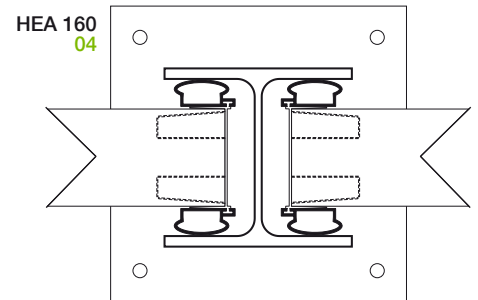
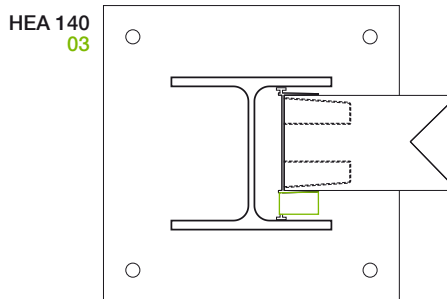
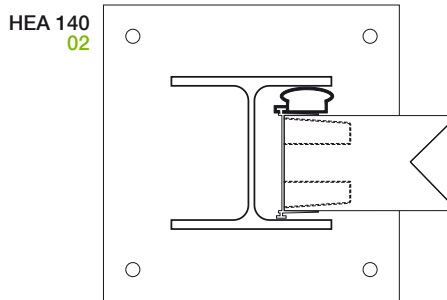
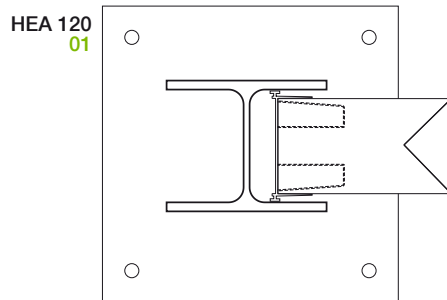


# TWO-COMPONENT RUBBER SEALS FOR IMPROVED PERFORMANCE

The acoustic panel is designed so that it can house optional rubber seals made of one rigid PVC part and a second part made of flexible EPDM rubber, so that the panel fits the size of the different types of sections used. These seals prevent the fence panels from vibrating due to wind pressure or suction forces caused when trains and vehicles rush past. They also help to prevent any noise leaks in the contact between the panel and the support post.

# TYPES OF INSTALLATION

- 01 Panel installation with T0 polypropylene side caps;
- 02 Panel installation with two-component rubber seal;
- 03 Panel installation with adapted T1 polypropylene side cap;
- 04 Panel installation with double two-component rubber seal;
- 05 Panel installation with polypropylene side cap and two-component rubber seal;
- 06 Panel installation with adapted T2 polypropylene side cap;





# SURFACE FINISHES

The thermosetting polyester powder coating process to which PANACOR AL 4G acoustic fence panels are subjected produces excellent resistance to the effects of adverse weather, heat or continued exposure to sunlight, by providing enhanced corrosion-resistance and thus a product that requires practically no maintenance.

## STAGE 1 PRE-TREATMENT

Automatic process to prepare panels for electrostatic application of paint powder.

### Dip 1

Tank capacity: 5600 l  
Dip temperature: 35 to 45°C  
Composition of dip liquid:  
De-greasing agent; passivator; water;  
Daily monitoring of concentration levels in pre-treatment dip tank 1 according to specific procedure.

### Dip 2

Tank capacity: 2300 l  
Dip temperature: room temp.  
Composition of dip liquid: water

### Dip 3

Tank capacity: 2300 l  
Dip temperature: room temp  
Composition of dip liquid: water

## STAGE 2 DRYING

All metal parts are placed in a blow drying tunnel at a temperature of between 80 and 100°C to eliminate any moisture prior to the subsequent spray coating stage.

## STAGE 3 PAINT BOOTH

Automatic process using robots and touch-up guns with spray nozzles that guarantee a perfectly smooth, uniform coat is applied to the panels to ensure an excellent finish.

## STAGE 4 POLYMERIZING OVEN

Process in which the paint finish is achieved by applying heat for at least 10 minutes at an average temperature of 200 °C  
Oven temperature: 165 to 230°C.



# CERTIFICATES GUARANTEED QUALITY





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