

# TRANSPARENT PANELS



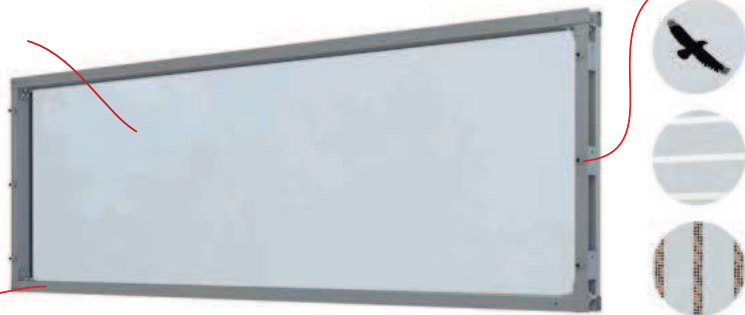
**LAMINATED GLASS panels for railways**

Where do I use this kind of panel?

WITH HE-PROFILES	WITH LATTICE STEEL STRUCTURE	WITH SHAPED PROFILES
✓	✓	X

The transparent panel is composed of:

Laminated glass sheets, total thickness 17,52 mm, composed of:  
 - tempered float thck. 8 mm  
 - transparent PVB film, thck. 1,52 mm  
 - tempered float, thck. 8 mm



Frame in self-passivating Corten steel or galvanized and painted steel, the frame can be painted in all RAL chart colours



Frame detail

Fastening elements thrust bolts for assembly on HE-profiles (patented system of Cir Ambiente) including vulcanised head for dielectric isolation

Possibilities of finishing to minimise bird impact against sound-insulating panels

The panel can be used for railways and High-speed railway lines in order to reduce the vibrations and to increase the acoustic performance. EPDM gaskets in form of "u" are installed between glass panels and frame. It is possible to electrically isolate all barrier components, which is important in the presence of stray currents closed to the railway infrastructure.

**NOMINAL DIMENSIONS**  
 length 3.000 mm  
 variable height: from 500 mm to 2.000 mm  
 plate thickness: 8+1,52PVC+8

## TRANSPARENT GLASS PANEL WITH FRAME

CARATTERISTICHE	HARMOIZED NORM	GLASS PANEL THCK. 8+1,52(PVB)+8 MM. FRAME THCK. 2,5 MM	CLASSE	GLASS PANEL THCK. 8+1,52(PVB)+8 MM. FRAME THCK. 1,5 MM	CLASSE
Sound-insulation DLR	UNI EN 1793- 2 and 3 - UNI EN ISO 717-1	DLr =26 dB - RW=31 dB	cat. B3	DLr =26 dB - RW=31 dB	cat. B3
Self weight resistance: dry weight and reduced wet weight	UNI EN 1794	dry weight: reduced wet weight: NA		dry weight: reduced wet weight: NA	
Wind load resistance	UNI EN 1794 App. A	250 kg/m2 (nominal dim. of panel 3x2 m) thck. 2,5 mm		2,5 kN/m2 (nominal dim. of panel 3x1,5 m)	
Wind load resistance	UNI EN 1794 App. A	2,5 kN/m2 (nominal dim. of panel 3x1,5 m) thck. 2,5 mm		250 kg/mq2 (flexure) - 1/150 H (torsional test)	
Flexural and torsional fatigue test	Specification RFI-DIM\A0011\PA2008\0000721 from the 8th April 2008	250 kg/m2 (flexural test) - 1/150 H		250 kg/m2 (flexural test) - 1/150 H	
Light reflection	UNI EN 1794 - 2	NPD		NPD	
Release of dangerous substances		NPD		NPD	
Shatterproof glass test	UNI EN 356	Positive result	P2A	Positive result	P2A
Accelerated ageing resistance of applied painting cycles on galvanized steel	UNI EN ISO 9227 - UNI EN ISO 6270-1 - UNI EN ISO 2409 - UNI EN ISO 2808 - UNI EN ISO 6272-2	humidity resistance: 1.500 h, corrosion resistance during exposure in spray cabinet: 1500 h - impact test: resistance after falling 1 kg mallet from 1 m - cohesion: grade 0 (maximum adhesion)		humidity resistance: 1.500 h, corrosion resistance during exposure in spray cabinet: 1500 h - impact test: resistance after falling 1 kg mallet from 1 m - cohesion: grade 0 (maximum adhesion)	

## FINISHING

Possibility of completing the product with additional patented accessories to personalize the panels of the barrier, like:

- wood-like effect painting treatment (various colours/essences)
- silk-screen printed, coloured sheets or bird-of-prey dummies/adhesives can be used to minimise bird impact
- self-cleaning treatment to remove impurities on surface
- thermal HST-treatment (Heat Soak Test) to reduce spontaneous glass-breaks

## ADVANTAGES

- high noise-insulation performance
- green product (LCA certificate)
- durability: the glass crystal-like transparency will be preserved over time
- excellent fire resistance
- compatible with other panels of Cir Ambiente used for railway lines (stainless steel, concrete and expanded clay)

