

INFOTEC:	<b>B-006</b>
Date/ Rev.:	<b>06.07.2017 / 1</b>
Reference:	<b>BIGSYSTEM</b>

General Features:  
**Isothermal Panel GS 112 Bs1**  
**tongue and groove joint**



Sandwich panels with tongue and groove joint produced on a continuous line shaper, in compliance with European regulation EN 14509, appropriate for the realization of cold rooms at both positive and negative temperatures. Labelled **CE** in compliance with European technical approval ETA 10/0001. The Bigsystem panels from the GS 112 Bs1 line are created to provide high thermal isolation performance, as well as mechanical resistance, a pleasing appearance, hygiene and easy assembly.

Available in 2 versions:

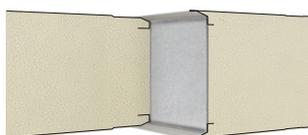
1. **GS 112 Bs1\_N** with 0.5 micro-ribbed surface finishing on 2 sides
2. **GS 112 Bs1\_L** with smooth surface finishing on 2 sides

Available thicknesses: mm 60 - 80 - 100 - 120 - 150 - 180 - 200 - 240.



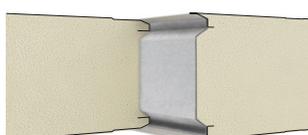
Tongue and groove joint with polyurethane sealing gasket.

**Thickness: mm 60 ÷ 120**



Tongue and groove double joint with polyurethane sealing gasket.

**Thickness: mm 150 ÷ 240**



**Panel dimensions and features:**

<b>Module</b>	Useful width = mm 1120.
<b>Dimensions</b>	Length: minimum 2000 mm, maximum 14000 mm.
<b>Appearance</b>	<b>GS112 Bs1_N:</b> Micro-ribbing on two sides. <b>GS112 Bs1_L:</b> Smooth on two sides.
<b>Compliance</b>	Labelling <b>CE</b> in compliance with EN regulation 14509



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<b>Insulation</b>	Standard rigid polyisocyanurate foam (PIR), density 40 Kg/m <sup>3</sup> ± 10%. Initial thermal conductivity λ = 0.023 W/m K, CFC and HCFC-free. The panels are produced with constant insulation and density characteristics, which is guaranteed even at the junction location, since during assembly the insulation on each panel comes into contact with the polyurethane seal integrated on the groove of the consecutive panel, impeding any air penetration and ensure perfect thermal insulation (see image).
<b>Certification Fire resistance</b>	Euroclass <b>B s1 d0</b> in compliance with EN 13501-1, obtained through polyisocyanurate (PIR) foam insulation, thanks to that described in the point above, fire resistance performance is constant throughout the exposed surface, including the junctions. This means the certification also applies to the completed product (finished cold room). Its special feature is the low emission of fumes.
<b>Certification Fire resistance</b>	<b>Thicknesses ≥ 100 mm: EI 30, E 60</b> in compliance with EN 13501-2; nominal plate thickness ≥ 0.5 mm <b>Thicknesses ≥ 200 mm: EI 60, E 90</b> in compliance with EN 13501-2; nominal plate thickness ≥ 0.55 mm Applications: performance of partition walls for which a combination of the following characteristics is necessary: <b>E</b> = maintenance of the tightness characteristic (integrity of the manufactured product) <b>I</b> = maintenance of the insulation characteristic <b>EI</b> = maintenance of the tightness and insulation characteristics Limitations: max. height of 12 m in compliance with EN 15254-5:2010. Installation method: According to the specific instructions provided together with the order.
<b>Junctions and hygiene guarantee</b>	The shape of the junction sees the lip of the groove overlapping that of the tongue, which eliminates any cracks and creates a proper sanitary finish, avoiding the use of silicone which over time can give rise to mould. Up to a thickness of 120 mm, the joint is a simple junction, and from 150 to 240 mm is a double (labyrinth) junction (see image).
<b>Structural Guarantee</b>	The panel is specifically designed for the creation of cold rooms. The design took into account the specific stresses to which it is subjected during operation, including thermal dilation, the temperature gradient in the case of operation at positive or negative temperatures. Due to its special design, it guarantees stability for the cold room without the need for anchoring to any particular structures, thanks to the panels own weight-bearing capacity.
<b>Panel Reuse</b>	Due to its special design, the panels are easy and quick to assemble - and removal is the same. This makes it easy to adjust warehouse cold rooms to changes in layout requirements or if a move to another location is required.
<b>Environmental Compatibility</b>	Global warming potential index GWP ≤ 11 Ozone destruction potential ODP = 0
<b>Sound Insulation:</b>	Rw = 25 dB
<b>Standard Coating</b>	PR: Sendzimir hot-dip galvanised S 250 GD steel plate, pre-painted with 25 μ polyester paint, Ral 9010 white.
<b>Optional Coating</b>	IX: Stainless steel panel, EN 1.4301-2B (AISI 304). VX: Stainless steel panel EN 1.4301-2B (AISI 304) pre-painted with 25 μ polyester paint, Ral 9010 white.
<b>Tolerances</b>	Panel thickness and flatness according to UNI - EN 10143. Difference in coating colour ΔE < 1 Insulation density ± 10% - Panel thickness ± 2 % - PUR/metal non-adhesion max 0.5%. Panel corrugation and panel planarity 0.6 ÷ 1.5 mm. Panel length: L ≤ 3000 ± 5 mm; L ≥ 3000 ± 10 mm. Panel width: ± 2 mm. Curve along panel length: 2 mm/m, max 10 mm.

#### AIR PERMEABILITY AT JUNCTIONS, IN COMPLIANCE WITH EN REGULATION 12114

Thickness mm	Pressure differential Pa	Air flow without use of seals m <sup>3</sup> /h m <sup>2</sup>
60 ÷ 240	50	< 0,2

#### WATER PERMEABILITY AT JUNCTIONS, IN COMPLIANCE WITH EN REGULATION 12685

Thickness mm	Pressure differential Pa	Class based on EN 14509
60 ÷ 120	600	B = Normal uses, impermeable up to 1200 Pa
150 ÷ 240	1200	A = Use with high rain and wind, impermeable up to 1200 Pa



