HORIZONTAL LOAD-BEARING GLASS PANEL

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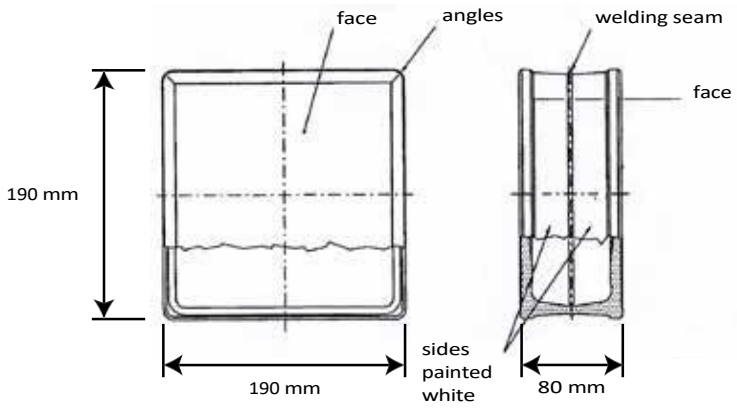
1. DATA AND DOCUMENTATION

Code	Description	Colour	Dimensions (mm)	Weight	Pkg. / Pallet
VET01-5030	Horizontal Bearing Glass Panel	-	190 x 190 x 80	2.88 kg/pc.	1 pc. / - pcs.

MATERIAL Made of cast glass, laminated and side-painted to increase its lustre.

2. USE

Used for the construction of load-bearing floor portions (for axial loads) and/or horizontal structures (including flat roofs) where it is necessary to provide lighting to rooms and/or spaces below.



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Horizontal structures are understood to be works with linear or curved development, for interior and exterior use. They may be either in-situ or prefabricated, in each case the following parameters must be considered:

- dimensions of the surface to be realised.
- own weight of the glazed structure to be assembled.
- positioning of the structure to be realised.
- number of glass blocks and repeatability.
- complexity and type of geometric shape to be covered.

PRELIMINARY PHASE

With the wide range offered, Dakota allows you to realise various walkable architectural solutions with the transparency of glass, while maintaining safety and stability.

DIMENSIONING AND LOADING

Dakota glass blocks and all accessories are to be used for horizontal structures that can be defined as simply supported panels.
It is therefore to be avoided, for the sake of correct design, that structures made of Dakota glass bricks form part of load-bearing elements or that they are interlocked. This caution should be used since glass blocks do NOT constitute structural elements, being purely lightening.
The loads supporting the elements are considered to be predominantly static, this characteristic allows the floor made of glass blocks to be walkable.
The larger the size of the bricks, the lower the load-bearing capacity of the structure, since the escape routes (at least 3 cm) are the load-bearing part of the structure itself. For proper glass cleaning in the case of skylights made of glass bricks, an adequate slope must be considered.

Format (mm)	Horizontal Glazing		Approximate weight of structure kg/m2	Number of pieces per m²
	Model	Unit weight (kg)	3 cm leaks	3 cm leaks
190 x 190 x 80	**VET01-5030**	2,90	≈ 105	≈ 21
200 x 200 x 22	**VET03-5020**	2,30	≈ 100	≈ 19
145 x 145 x 55	**VET01-5033**	1,40	≈ 90	≈ 33
190 x 190 x 70	**VET01-5034**	2,60	≈ 95	≈ 21

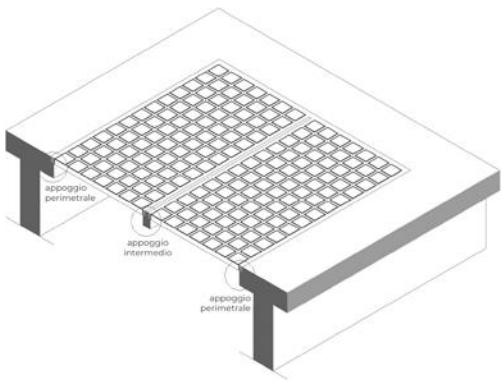
The above data refer to structures with cement mortar weighing 1800 kg/m3 and with a reinforcement for each escape route equal to two ø 8 bars (0.39 kg/m).
In the case of VET01-5033, only a ø 8 bar was considered. For escape routes larger than 3 cm, special calculations must be carried out.

Overload		Structures NOT walkable 200 kg/m2			Walkable structures 400 kg/m2		
iron diameter (mm)		ø 6	ø 8	ø 10	ø 6	ø 8	ø 10
Model							
VET01-5030	m2	4,5	8,0	9,5	2,7	4,8	6,0
VET01-5034	m2	4,0	6,5	8	2,3	4	4,5
VET01-5033	m2	3,5	4,5	5,5	2,0	2,5	3,0

The data above are the maximum dimensions of horizontal panels with 3 cm joints depending on the overload, the dimensions of the reinforcement rods and the product.
The data were calculated considering these assumptions:

- panels with recessed joists resting on all four sides.
- uniformly distributed overload.
- permissible stresses:
  - iron 1000 kg/cm2
  - concrete 50 kg/cm2
- joint 3 cm.

PERIMETER ANCHORAGE POINTS



Horizontal Dakota glass elements must always be kept at a minimum distance of **3 cm from** the supports in order to avoid disregarded loads.
This avoids direct contact with the support of the glazing row.
The joint should preferably be all round with **a slip joint**.
Both joint and panel must be modified accordingly.
In the event that the glass bricks are flush with the roof or floor, an **elastic** expansion **joint** sealed with **cold-stretched** materials must be pre-specified at the top of the panel.

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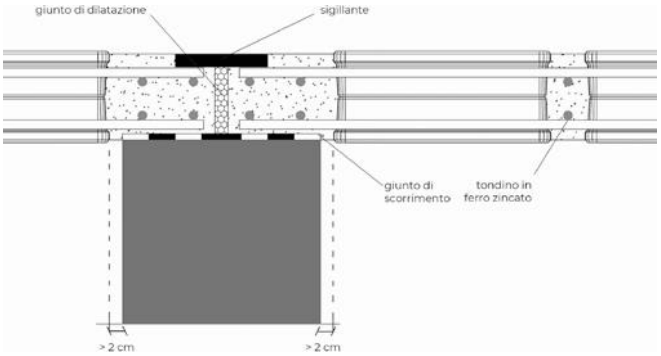
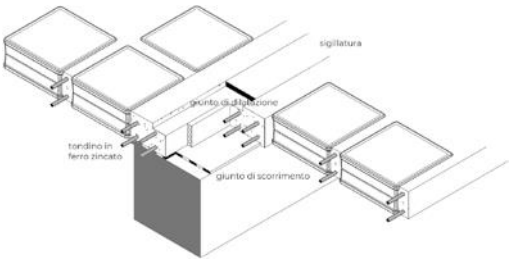
INTERMEDIATE SUPPORT POINTS



In this case, too, the horizontal Dakota glass elements must always be kept at a minimum distance of **3 cm from** the supports in order to avoid unconcidered loads.
This avoids direct contact with the support of the glazing row.
Obviously, the **interruption on the support of t h e reinforcement bars** must also be considered in order to avoid internal stresses in the structure.



3. SPECIFICATION ITEM

Entry	Description	Unit	Price
Dak.I.VET01.5030	Supply and installation of glass block produced according to high quality standards that guarantees the maintenance of its characteristics (transparency, gloss, colour) over time. Used for the construction of load-bearing floor portions (for axial loads) and/or horizontal structures (including flat roofs) where it is necessary to provide lighting to rooms and/or spaces below. The price includes and compensates for the costs of getting the work done in a workmanlike manner. Dimensions 190 x 190 x 80 mm.....	pc.	-