

BIOMODULO® TECNICAL CHART



ADMISSIBLE LOADS

TYPE OF LOAD	Overload Kg/m ²	Top layer thickness cm	Lean mortar thickness cm	Pressure thickness Kg/cm ²	Gravel thickness cm	Pressure on the ground Kg/cm ²	Bars diameter mm	Netting mesh cm x cm
HEAVY VEHICLES	10,000	6/8	10	5.66	25	0.49	6	20 x 20

CONCRETE CONSUMPTIONS

BIOMODULO®	concrete consumption
h.27	m ³ 0.040 x m ²

DIMENSION AND PACKAGING

BIOMODULO®	packaging	n° pieces	amounting to
cm 50 x 50 h. 27	cm 110 x 110 x 210	200/300	m ² 50/75

ACCESSORIES

- 1) FERMAGETTO BIOMODULO allows lateral closure of the bottom air chamber and the realisation of walls or kerbs round the perimeter.
- 2) FERMAGETTO BIOMODULO does not allow the passage of concrete inside the bottom chamber at camera the time of casting.
- 3) FERMAGETTO BIOMODULO allows partial division of the diffusion concrete bed into areas.



INSTALLATION PROCEDURE

- 1) Realization of foundation with supply and installation of rolled gravel 25 cm thick.
- 2) Supply and installation of poor concrete 10 cm thick. (as an alternative, insulating sheets may be used).
- 3) Installation of Geoplast BIOMODULO® type elements in polypropylene.
- 4) Installation of BIOMODULO® FERMAGETTO elements which allow lateral closure, thus preventing the concrete penetrating inside the bottom air chamber, and the possible subdivision into areas of the bottom air distribution chamber.
- 5) Installation of the dividing reinforcement (electro-welded wire) necessary to resist working stress.
- 6) Possible installation of linings cm 8 x 2 laid over the distribution nozzles to create surface draining channels and to protect holes (only for reinforced concrete 8 cm thick).
- 7) Casting of concrete filling, Class of resistance Rck' = 250 Kg./cm² and class of consistency S4, 6/8 cm thick, cast on site with or without the aid of pumps.
- 8) Vibrating of the casting.

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BIOMODULO®

BIOMODULO® The easy, inexpensive way of making perforated floors

BIOMODULO® The easy, inexpensive way of making perforated floors for the distribution and diffusion of air in COMPOSTING SYSTEMS, WASTE STABILIZATION and AIR DEODORIZING SYSTEMS FOR BIOFILTRATION



PATENT

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The easy, inexpensive way of making perforated floors for the distribution and diffusion of air in **COMPOSTING SYSTEMS, WASTE STABILIZATION** and **AIR DEODORIZING SYSTEMS FOR BIOFILTRATION.**

BIOMODULO® is a self-bearing modular plastic element with special diffusers for making concrete beds and perforated floors for the distribution and diffusion of air with a reinforced concrete finish, accessible also to heavy vehicles.

BIOMODULO® elements are simply laid on a flat surface of smoothed lean mortar, finished on the surface with a limited casting of reinforced concrete. In this way a suitably perforated concrete bed is obtained, with a free bottom chamber into which air is sent and which acts as a distribution and pressurization chamber.

Appropriate accessories allow the containment of the perimeter of the cast finish and also allow the realisation of concrete beds with partial perforations.



ADVANTAGES

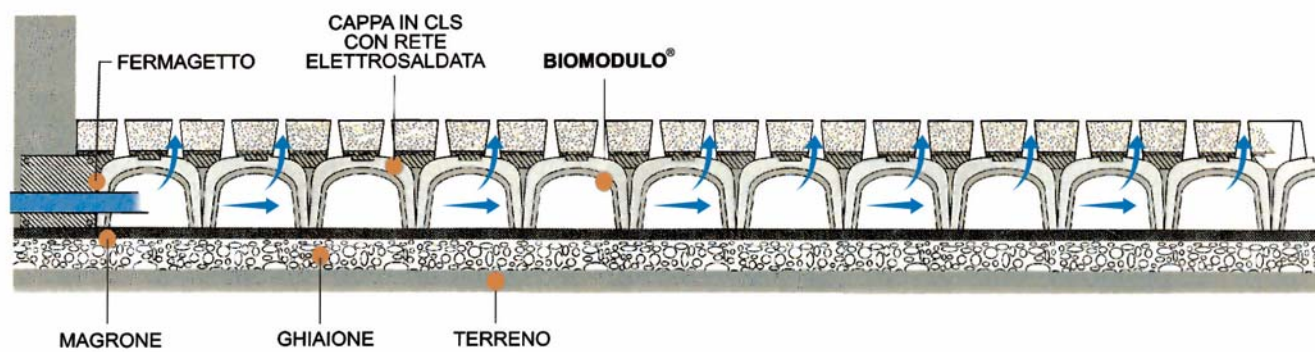
- EXCELLENT DISTRIBUTION OF THE AIR FLOW THANKS TO THE BOTTOM AIR CHAMBER AND TO THE CALCULATION OF THE NECESSARY PERFORATION.
- HIGH RESISTANCE TO SURFACE LOADS, EVEN WITH THE MOVEMENT OF HEAVY VEHICLES.
- POSSIBILITY OF ACCESS TO THE CONCRETE BED, FOR FILLING, EMPTYING, SERVICING AND MAINTENANCE, DIRECTLY WITH HEAVY VEHICLES
- POSSIBILITY OF INSTALLATION EVEN ON PARTIALLY PREPARED FOUNDATIONS WITH WATERPROOFING PLASTIC SHEETS.
- EASE OF ASSEMBLY WITH REDUCTION OF THE REINFORCING TIME.
- 80% REDUCTION OF MANPOWER TIMES FOR ASSEMBLY
- REDUCTION OF THE VOLUME OF CEMENT MATERIALS USED SUCH AS GRAVEL AND CONCRETE.
- POSSIBILITY OF EASY AND INEXPENSIVE MAINTENANCE AND OF MODIFICATIONS TO THE INSIDE OF THE BOTTOM AIR CHAMBER.
- POSSIBILITY OF COLLECTING PERCOLATING LIQUIDS

USE

CONCRETE BEDS AND PERFORATED FLOORS FOR COMPOSTING , WASTE STABILIZATION AND AIR DEODORIZING SYSTEMS, COMPOSTING YARDS, BIOCELLS, DEODORIZING BIOFILTERS

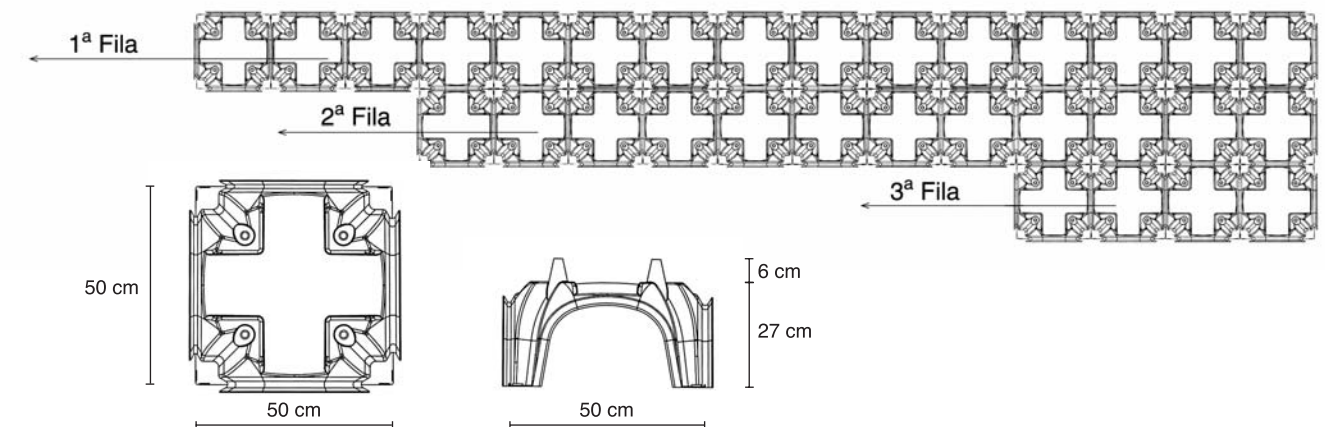


The concrete bed made with the **BIOMODULO®** is rapidly completed with a filling casting of 6/8 cm of concrete cast on site with the aid of a pump.



BIOMODULO® has been designed with a perforation suited to the air flow rates commonly contemplated in composting and air deodorization systems and optimum for guaranteeing the distribution of the flow over the whole surface involved. The distribution and the density of the perforation may usually be varied according to the specific requirements of the individual systems. The self-bearing structure offers an optimum loading capacity and, after the surface finishing in reinforced concrete, makes it resistant even to loads of heavy vehicles (working load 10,000 kg/m₂).

BIOMODULO® may be trafficable even before the final casting and it is realized with mixtures of non-toxic, recycled plastic materials with high resistance that remain unchanged over time.



- The fully overlapping fixture of the **BIOMODULO®** allows fast, rapid laying with an 80% reduction of manpower time
- **BIOMODULO®** may be installed even on partly prepared foundations.
- **BIOMODULO®** may be cut with standard tools such as flexible disks, circular saws, etc. close to kerbs or various pits.
- **BIOMODULO®** is completely trafficable even before casting.
- The **BIOMODULO®** is installed laying the forms from right to left and from top to bottom, always keeping the printed arrow facing up

