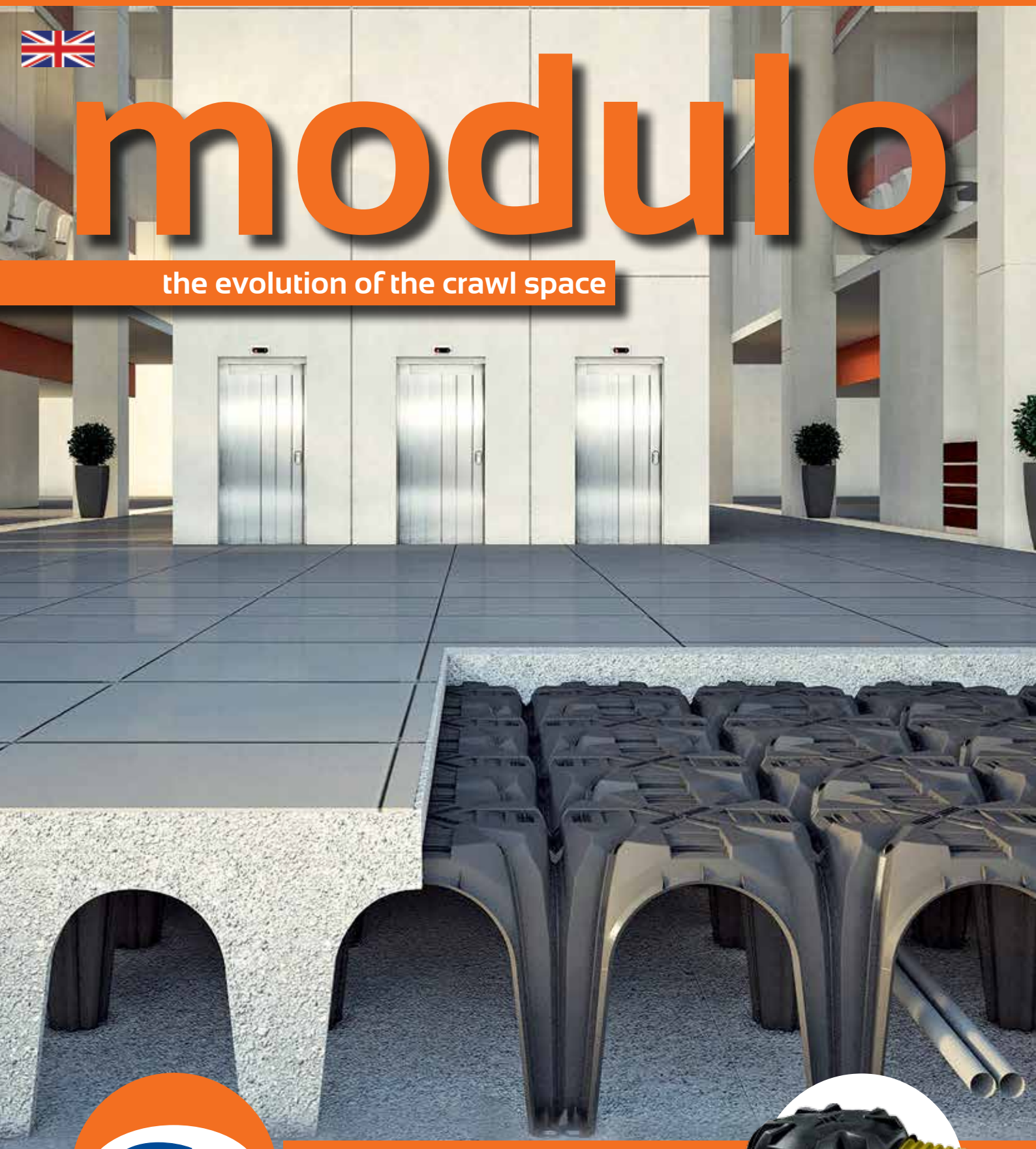
SINGLE USE FORMWORK SYSTEM UP TO 700 MM HEIGHT

modulo

the evolution of the crawl space



- VENTILATED CRAWL SPACE
- HIGH LOAD-BEARING CAPACITY
- LOGISTICAL ADVANTAGES

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MODULO VISION

Humans have always felt the need to live in comfortable houses, experimenting. since the beginning, construction methods to separate the buildings from the ground: Neolithic pile dwellings answered this precise need.
Ancient Romans built elevated floorings to improve air circulation under their houses, eliminating rising damp and at the same time heating the rooms of the upper floors. Today, ventilated foundations are still the best solution to eliminate Radon Gas, a carcinogenic and very harmful gas which is naturally present in the subsoil.
Geoplast has improved these ancient methods in order to allow you to live in healthier and safer buildings.

ANCIENT METHODS FOR NEW NEEDS: HISTORY TAUGHT US HOW TO BUILD WHILE PROTECTING OUR HEALTH

Not only we transform our ideas into innovative and successful products: we are committed also to the study and selection of the most suitable materials in order to guarantee high quality and respect of the environment.

Polypropylene (PP) is a recyclable material that can be obtained from plastic waste regeneration.

Solid and strong, very resistant to both breaking loads and abrasions: regenerated polypropylene is a chemically inert material, neutral to the environment and non-pollutant when in contact with ground or water.

Geoplast S.p.A. in Green Building Council Italy, The Network for Green Building.

MODULO

SINGLE USE FORMWORK FOR:

the creation of ventilated foundations. MODULO is a single use formwork that eliminates rising damp and RADON GAS, that naturally exists in the soil in most parts of the world. MODULO allows the construction of a reinforced concrete structure provided

with a slab and a series of pillars placed at a fixed distance. Such a structure permits a uniform stress distribution all over the surface, thus producing an excellent static and dynamic load-bearing capacity.

APPLICATIONS

- VENTILATED CRAWL SPACE
- LIGHTENING OF SLABS
- TECHNICAL VOID SPACE
- FILLING OF SLABS AND FOUNDATIONS
- ACOUSTIC INSULATION MINIMODULO
- COMPENSATION OF SLAB LEVEL
- GREEN ROOF WALKWAYS
- FRIDGE CELLS
- RESTORATION INTERVENTIONS
- VENTILATED ROOFS
- GEOPLAST HOUSING SYSTEM
- STORMWATER MANAGEMENT
- AEROBIC STABILIZATION SYSTEMS

MODULO ADVANTAGES

Modular and single use formwork system for ventilated crawl spaces for the creation of a physical barrier between the ground and the building

stackable

Unmatched logistical advantages when transporting and storing. At a height of 50 cm, conventional filling requires 50 trucks of filling in comparison to only 1 truck of **MODULO.**

light

By far it is the lightest filling solution; the total weight of the cross section is approximately equal to the thickness of the upper slab

high load bearing

Countless pillars, arches and domes create the highest load bearing structure

void space

The void space created under **MODULO** allows an easy installation of electrical as well as mechanical systems. The void space is also perfect for ventilating damp and **RADON GAS** away from the building

fast

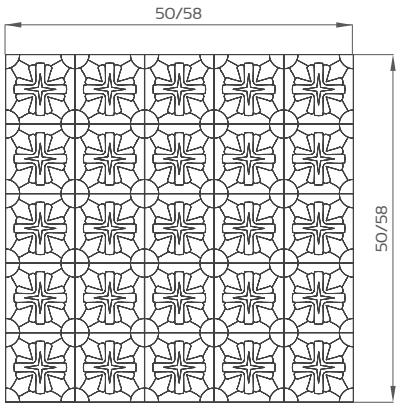
When compared with traditional systems, it guarantees a faster installation up to the 80% (in respect to the use of the traditional inert materials)

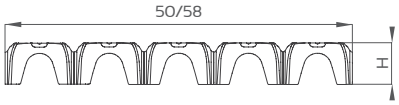
savings

MODULO system allows savings compared to the use of traditional inert materials, especially in terms of transport and installation

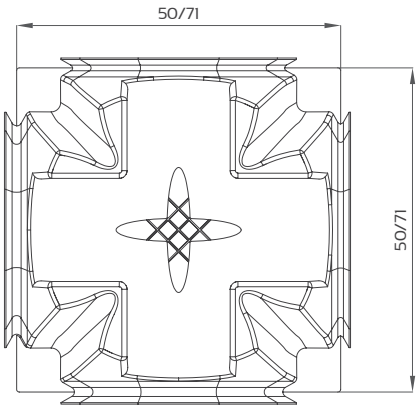
A SUMMARY OF THE TECHNICAL DATA

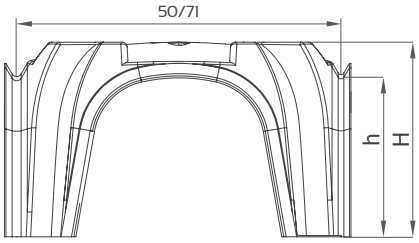
MINI MODULO



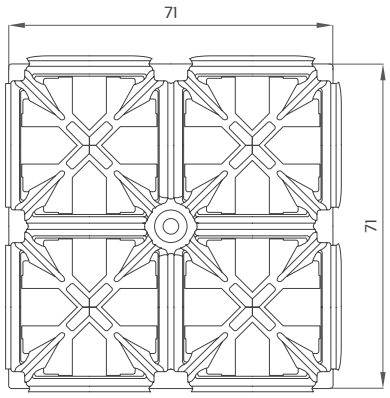


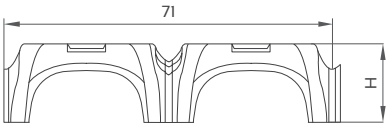
MODULO



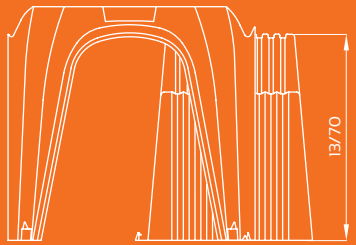


MULTI MODULO



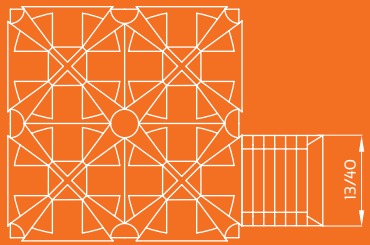


ACCESSORIES FOR VENTILATED FOUNDATIONS



GEOBLOCK MODULO

HEIGHT
from 13 to 70 cm
WEIGHT PCS.
from 0,55 to 4,29 kg



GEOBLOCK MULTIMODULO

HEIGHT
from 13 to 40 cm
WEIGHT PCS.
from 0,37 to 0,98 kg

THE EXTENSION GEOBLOCK

The combination of MODULO and GEOBLOCK allows the creation of a monolithic slab without the risk of cracks or breakage. The extension is an adjustable product, adaptable to any worksite situation and available for every MODULO height.

cutting

no **cutting**

The **planning**

GEOPLAST offers a planning service on the basis of a DWG analysis of the foundation, in order to obtain a graphic file with an accurate counting of the pieces and a detailed installation scheme.

GEOBLOCK

WHAT ARE THE ADVANTAGES?

A

STRUCTURAL CONTINUITY
single pour of crawl space and foundation beams

B

SAFETY IN THE WORKSITE
It is possible to walk over the formwork, especially along the perimeter, as there is always a complete element

C

ELIMINATION OF THE DOUBLE FORMWORK
thanks to **GEOBLOCK** the beams does not need to be formed internally

D

COMPENSATION ADJUSTABILITY
the depth of **GEOBLOCK** extension can be modified

E

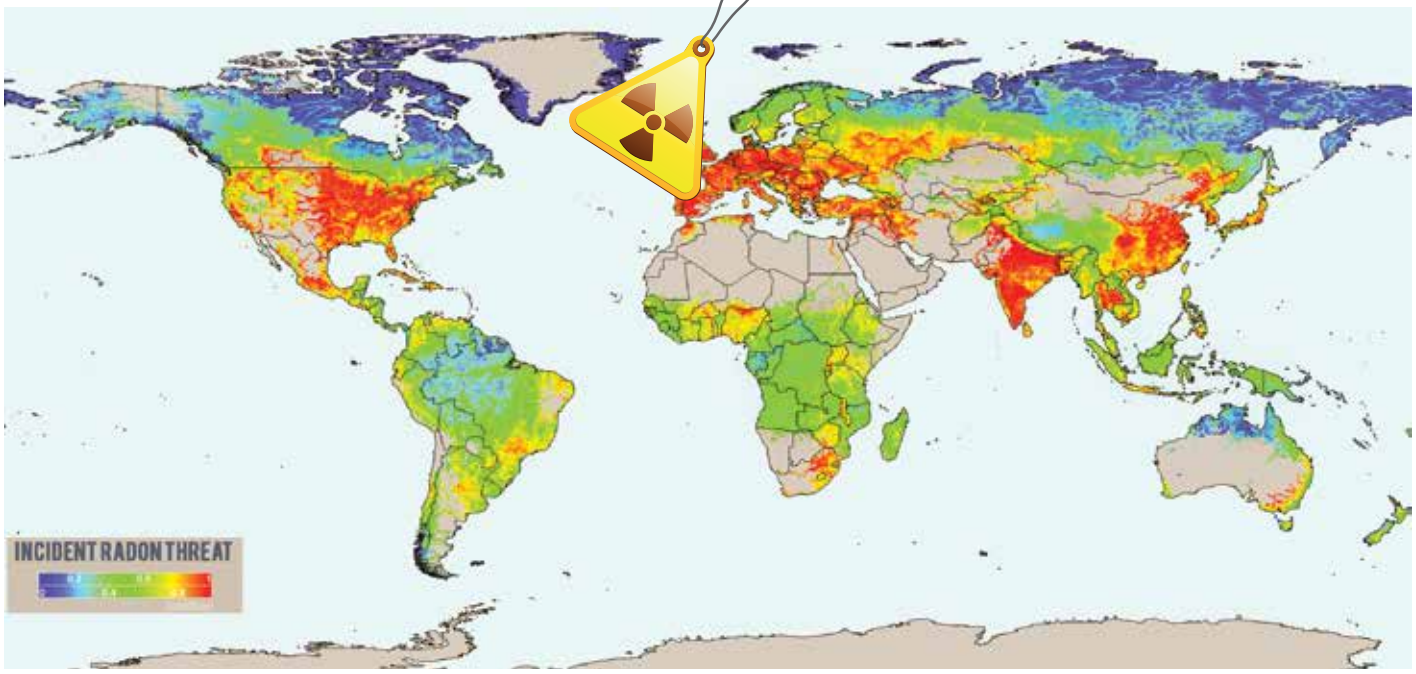
NO CUTTING OF THE FORMWORK
the distances can be compensated without cutting the formwork

SINGLE CONCRETE POUR

The possibility to pour at the same time the crawl space slab and the foundation beams avoids the necessity of installing, pouring and dismantling the formwork for the foundation beams: the construction operations will be reduced to a single pour, with various cost-effective advantages thanks to GEOBLOCK, which works as a side cap of the formwork. Moreover, the single pour produces a higher resistance for the fragile coupling point between the beam and the slab.

1. Lean concrete
2. MODULO formwork
3. GEOBLOCK
4. Wire Mesh
5. Concrete slab

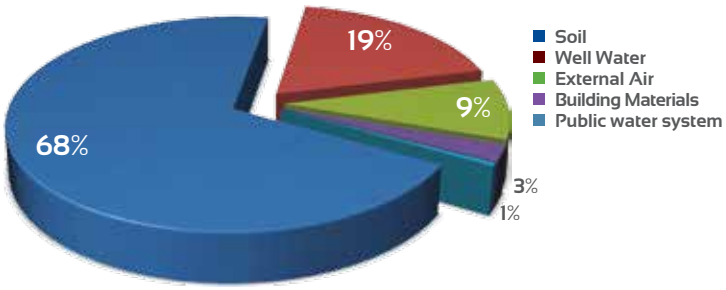
ISSUES CAUSED BY RADON GAS



WHAT IS IT?

RADON is an odourless and colourless radioactive gas that can be found in variable quantities in the Earth's crust. The main source of environmental emission of this gas is the soil itself. Radon tends to accumulate in closed, unventilated rooms of buildings, especially in ground floors. In these areas, RADON can reach high concentration levels, hus could create very serious health hazards. This problem could be easily prevented if considered at the planning stage of the building.

The origin of Radon in our houses



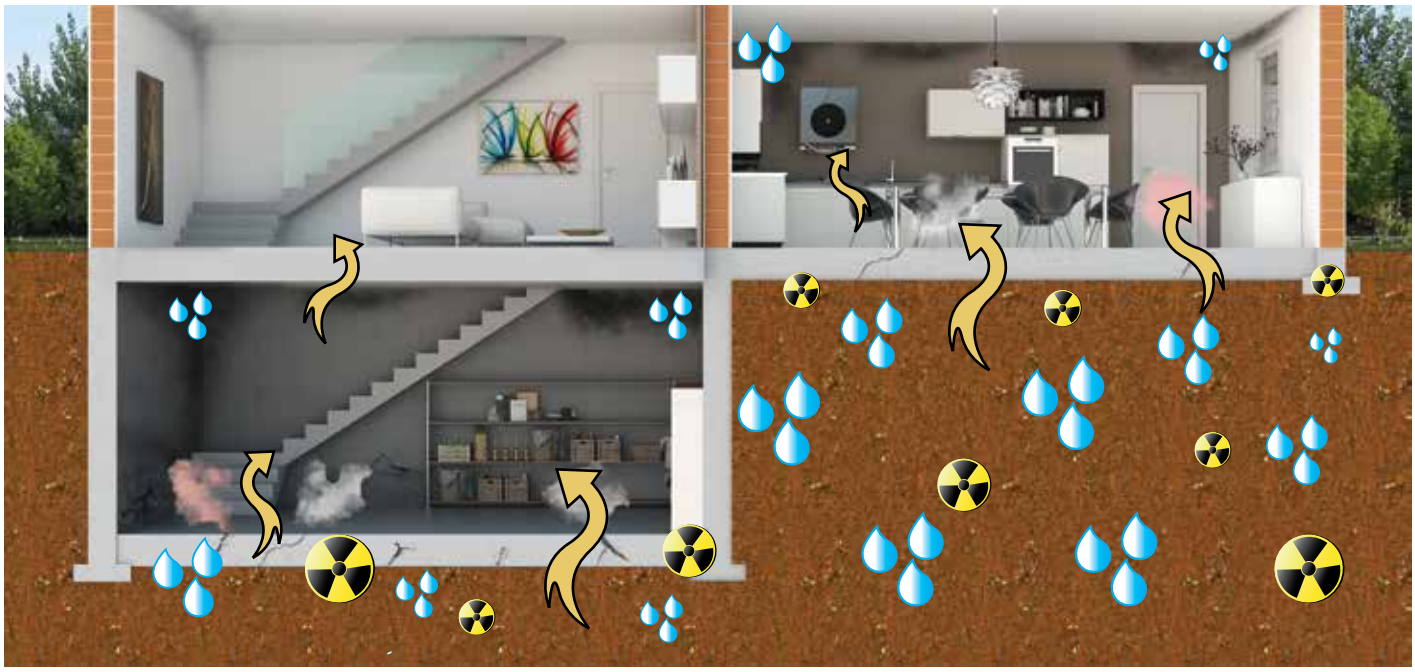
Source: ©Bob's Radon Mitigation

RISING

Where does it come from?

The soil is a heterogeneous mixture of solid elements, air and water. The last one is the most subject to fluctuation, due to meteoric and groundwater contribution, evaporation and deep percolation. Water can cause serious issues when in contact with a traditional foundation: infiltrations, cold, humid and unhealthy environments, condensation, fungi and mold, as well as the possibility of deterioration of the timber elements of the structure. The direct contact with the ground causes rising damp issues to people and buildings. Rising damp is the most common type of humidity and can be found both in old and new buildings.

RISKS FOR YOUR HEALTH



W.H.O.
World Health Organization

RADON is the second cause of lung cancer after cigarette smoking. The World Health Organization supports this statement and classifies RADON GAS as one of the most carcinogenic and harmful substances for humans.

World Health Organization

DAMP

What are the consequences?

- STATIC DAMAGES: the salts that can be found in the building material and in the soil melt down in the water. They rise up to the upper layer of the wall and increase their volume up to 12 times. The plaster will start to come off and the entire structure will deteriorate
- AESTHETICAL DAMAGES: damp spots or marks, mould, paint that splits apart, deterioration of the structures and of the wooden furniture
- HEALTH DAMAGES: the mould feeds on rising damp and releases harmful spores, moreover the places become unhealthy and cold facilitating deaseases and physical discomfort

THE VENTILATED CRAWL SPACE

WHY?

It is possible to defend ourselves against RADON GAS and rising damp that are all caused due to direct contact with the ground; VENTILATED FOUNDATION. This innovative yet simple solution guarantees uniform and natural air circulation between the ground level and the ground floor. A properly ventilated crawl space avoids contact of the building with the ground, creates an "EMPTY SPACE" with many benefits to the building's health. GEOPLAST suggests a specific system for the creation of a ventilated crawl space: MODULO SYSTEM.

The history

Even the ancient Romans understood that the direct contact with the ground was not healthy: in fact, they built crawl spaces in order to eliminate rising damp from the building while heating their houses.
The concept of VENTILATED FOUNDATION, synonymous with healthy houses, developed in this way.

ADVANTAGES

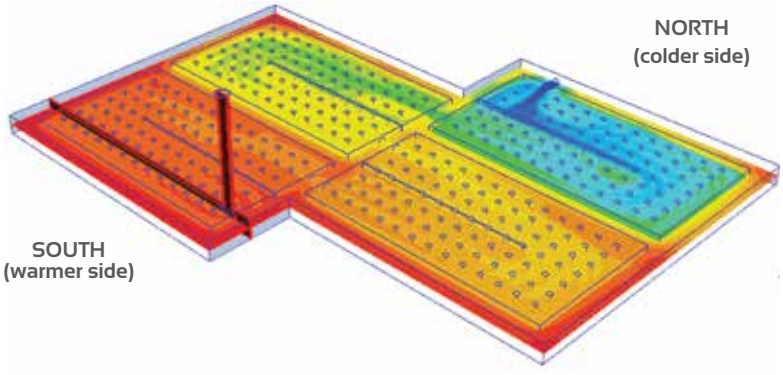
- RADON GAS MITIGATION
- RISING DAMP ELIMINATION
- BARRIER GROUND/FLOORING
- NO MOULD

HOW IS IT CREATED?

In order to improve the ventilation of the foundation created with MODULO, it would be useful to take advantage of the CHIMNEY EFFECT. For a proper ventilation, the system should be oriented from North to South or where not possible, from East to West. The greater the difference in height, the greater the air draught. The inlet pipes must be placed with:

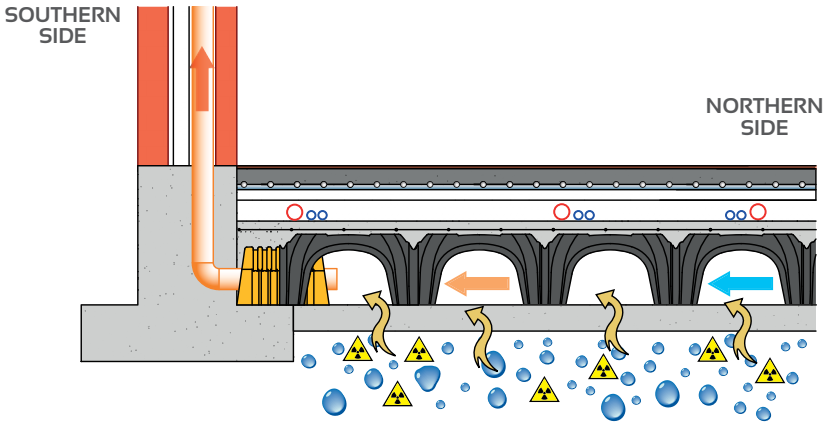
- INLET: colder side (NORTH or EAST) and close to the ground level (~50 cm)

- OUTLET: warmer side (SOUTH or WEST) and in an higher position (usually at the height of the interfloor, if possible).



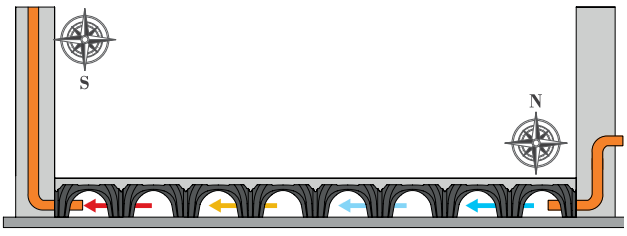
To guarantee a uniform air circulation, all the areas must be connected together even when interrupted by foundation beam or kerbs. GEOBLOCK extensions need to be perforated in order to insert the pipe into the element to connect the crawl space with the outside. The connection must be made with worksite PVC pipes.

The air flow can be obtained creating holes of 80/120 mm diameter over the perimetral beams, every 3,50/4,00 m, provided with the PVC pipe connection and external stainless steel grids with anti-intrusion net. The pipe with the lower inlet must reach half of the formwork in order to guarantee an efficient air channeling and to generate a chimney effect.



The chimney **effect**

The chimney effect is a natural phenomenon generated within ventilated areas connected with the outside and it is produced by pressure differences. These differences are caused by the air density and the fluids temperature. It is possible to take advantage of this effect to improve the ventilation of a crawl space, thus creating the ideal air circulation for the elimination of rising damp and the dispersion of Radon Gas in the atmosphere.

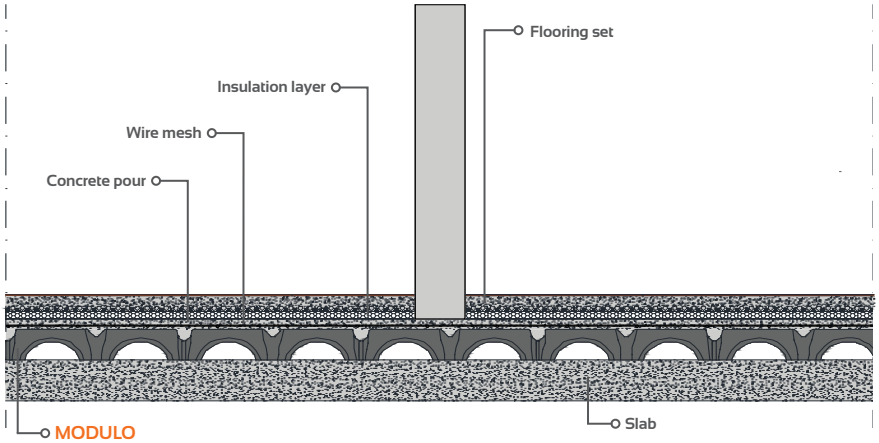


LIGHTENING OF SLABS

Thickness of the slab reduced

MODULO is also a lightening system that can offer many benefits. First, it is particularly useful in multi-storey buildings as the total structure becomes lighter with MODULO system. This lightness reduces the thickness of the slab, as well as the total load of the structure burdening on pillars and foundations. Second, there are savings both in terms of time, labour and material costs, because the amount of concrete and steel used is highly reduced. Finally, thanks to the creation of a void space in multi-storey buildings, MODULO ensures noise reduction, heat insulation and an higher living comfort.

Simplified logistics
Heat insulation
Crack prevention



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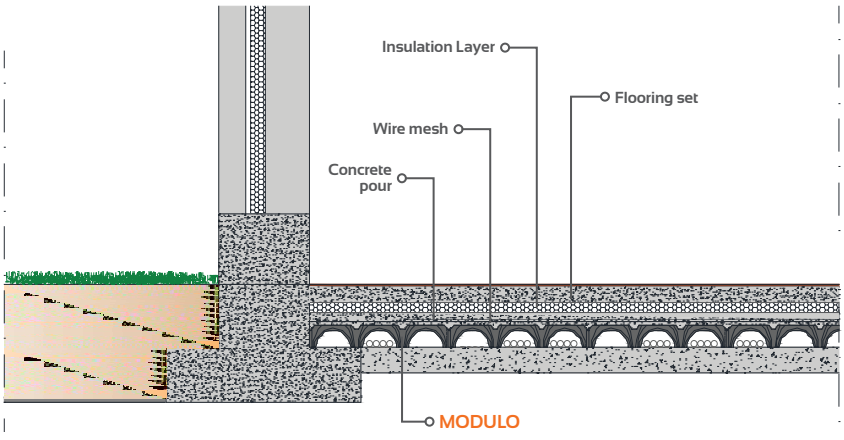
TECHNICAL
VOID SPACE

Void space for the **passage of technical installation**

With MODULO it is possible to raise the level of the floor and also create a structural void space that allows the passage of electrical, heating, ventilation, air conditioning and plumbing systems. This space allows an easy and economic functioning of the building. Cables and pipes can be laid before or after the construction and the maintenance is not invasive. Moreover, the implementation can be done both in new and renovated buildings. The surface is continuous unlike modular raised floors and has a very high load bearing capacity.

High energy efficiency
High load bearing surface
Easy to install systems

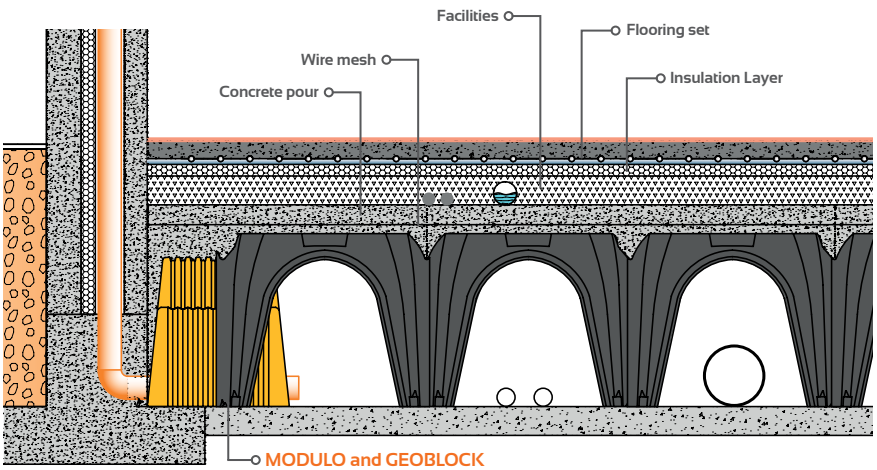


FILLING OF SLABS AND FOUNDATIONS

The best filling system

Thanks to its logistical advantages and lightness, MODULO is the best filling system. In comparison with traditional filling materials (such as: sand, gravel, etc...), MODULO is lightest since the extra load of the filling is only the concrete that comes on top of the system. Moreover, when used on the roof of a building, it lightens the entire structure, favouring also ventilation.

Quick installation
Economical advantages
Time and material savings



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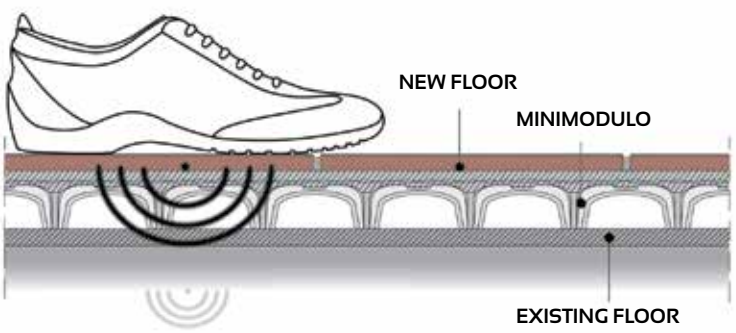
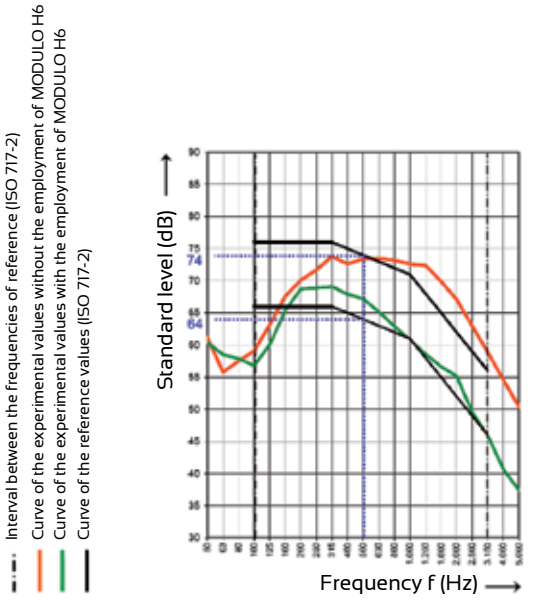
ACOUSTIC INSULATION
MINIMODULO

Modulo H6
application example

Thanks to MODULO H6, Geoplast manages to reduce the slab noise impact up to 10 dB compared to what would happen in the same building without MODULO.
The law disposal, n° 447 dated 26/10/95, on noise pollution establishes the basic principles for the safeguard of the outdoor and indoor settings. As for the building sector, a Prime Minister's Decree, dated 5/12/97, on the "passive acoustic requisites for the buildings", was published. The decree defines the reverberation time, the apparent soundproofing power of the partition walls, the standardized soundproofing of the facade and the standard level of slabs noise impact.



Acoustic insulation
Soundproofing power
Reduction of the noise impact

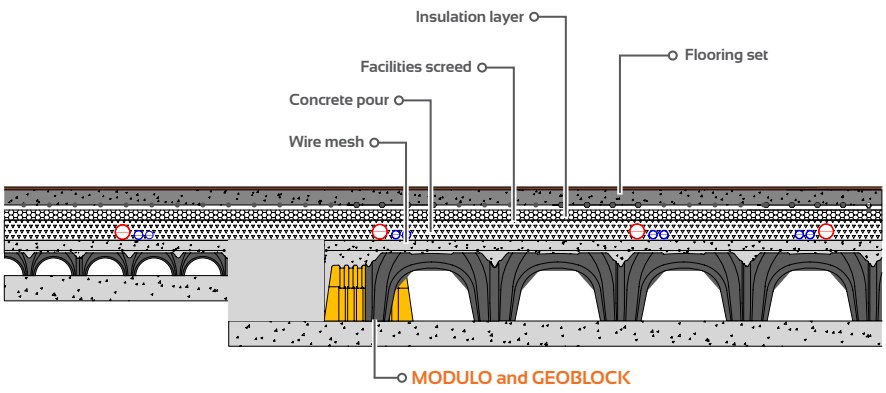


COMPENSATION OF SLAB LEVEL

An alternative to the **traditional inert filling systems**

Thanks to its high versatility MODULO can be used as an alternative to the traditional inert filling systems. In the offices where the spaces are divided in different levels, MODULO is the perfect solution. It fills the gap between different levels without adding extra weight on the entire structure.

Simplified logistics
High lightening
Labour savings

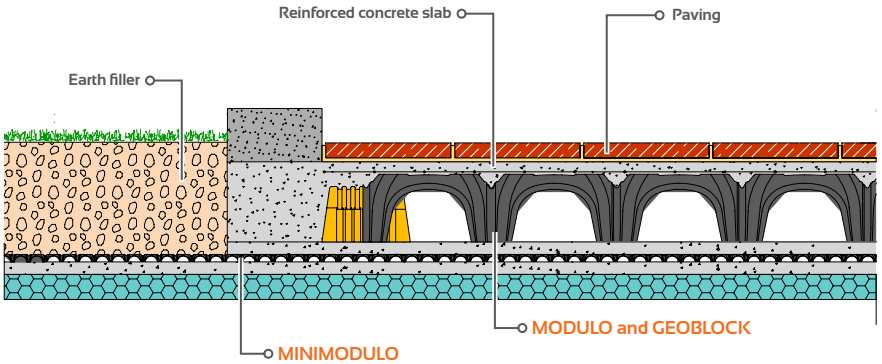


GREEN ROOF WALKWAYS

Walkways to cross the green areas

Green areas have always been an additional value in our cities. In small areas where there is not enough space to use, different levels solutions had to be taken into considerationso, the concept of green roof had to be introduced. Green roofs need walkways to cross the green areas as it happens in our gardens and MODULO large range of heights are the best solution.

Load weight reduction
high load bearing capacity
Quick to install

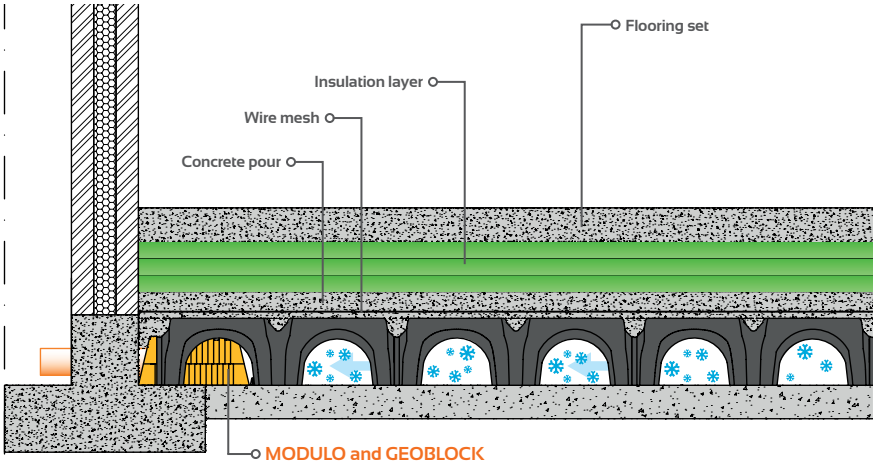


FRIDGE CELLS

Fresh products, **stored in safe environments**

In warehouses and fridge cells the cold reaches the ground, lowering its temperature to below 0°C. This produces the freezing of the soil, thus increasing the water volume and causing cracks and deformations of the floor. The most cost-effective and safe solution to this problem is the building of a ventilated foundation between the ground and the building, in order to eliminate moisture infiltrations completely.

No frost heaving
High load-bearing capacity
Technical void space



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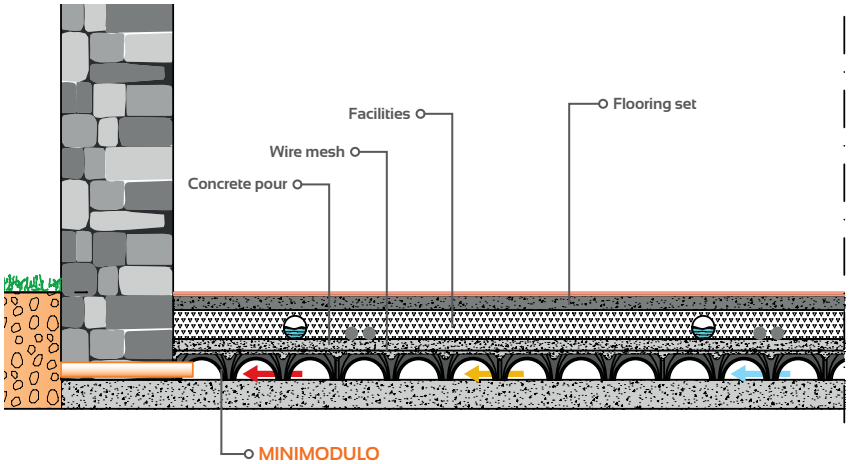
RESTORATION INTERVENTIONS

The innovative **ventilated crawl space**

MINIMODULO system is very useful in renovation interventions, as it allows the creation of ventilated floors with mini technical void spaces suitable for hydraulic pipes and electrical installations. The products's heights range permits to intervene also with reduced thickness, thus avoiding loss of useful height. Moreover, in difficult to access areas, like historical centres, it simplifies logistics and transport as it is space-saving and easy to handle.

Reduced thickness
Moisture elimination
Downstream intervention

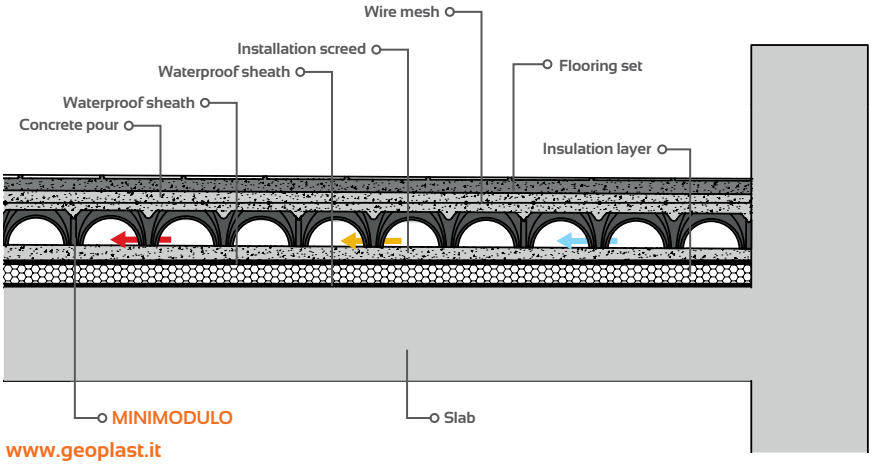


VENTILATED ROOFS

Thermal comfort
with ventilated roofs

Recently the construction world has increasingly focused on the planning of high energy-efficient buildings with high environmental comfort: this is possible also through the ventilation of roofs and walls. MINIMODULO is ideal for the creation of ventilated surfaces designed to reduce heat transmission and thermal shock. This system cools down the roof and walls during summer and warms them during winter. The form of the element and the short-distanced feet allow the creation of a ventilation chamber in both directions.

Condensation effect elimination
Ventilation in both directions
Reduced weight of the elements



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GEOPLAST HOUSING **SYSTEM**

High productivity **low-cost houses**

MODULO is particularly suitable for the creation of pre-fabricated "low cost houses". This is a particularly easy and fast system that improves life quality by separating the floor from the ground thanks to innovative construction methods. MODULO can be a winning solution also with last generation timber lodges: their only weakness is the necessity to create a ventilated foundation in order to thermally insulate the house. The ventilation created with MODULO eliminates rising damp protecting and sealing the timber frame.

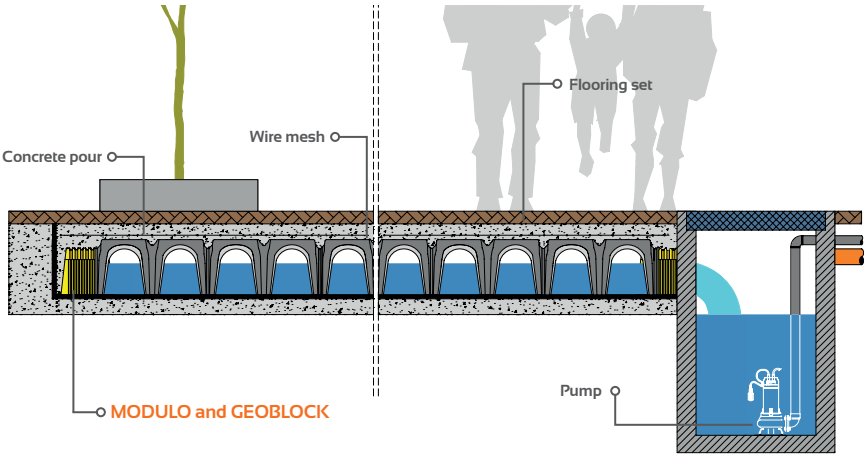
Costs reduction
Healthy and safe house
Fast construction

STORMWATER MANAGEMENT

Creation of storage tanks **with reduced height**

MODULO allows the creation of rainwater storage and lamination tanks with a reduced height and a large surface. This is the ideal solution when the groundwater is close to the ground-level or during urban requalification interventions that could modify the hydraulic system of a certain area. The wide range of heights and the system resistance allow the creation of storage ponds adaptable to any situation.

Reduced digging depth
Good storage capacity
High load-bearing capacity

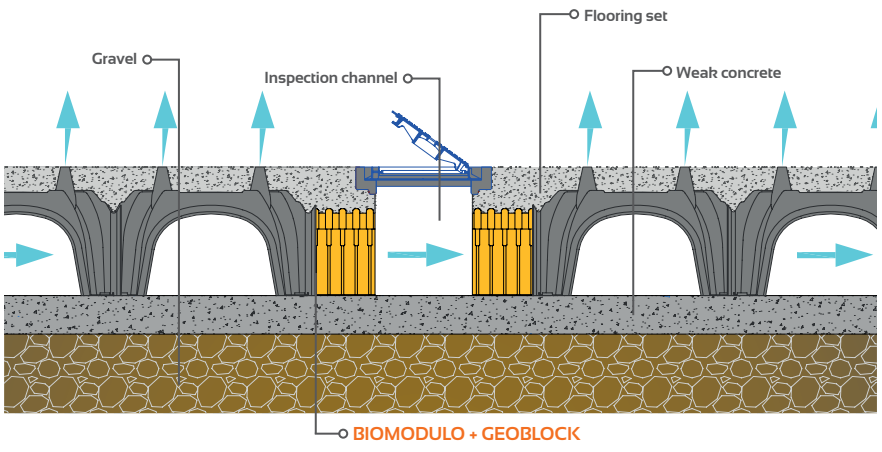


AEROBIC STABILIZATION SYSTEMS

Optimal treatment of organic waste

MODULO allows the creation of a perforated flooring, with a uniform distribution of the holes all over the surface. This facilitates a uniform diffusion of the air within the waste, in order to optimize the process and optain an high quality final-product. MODULO structure has an high resistance to loads, allowing the transit of the machinery for the load and unload of the material or for the waste mechanic treatment.

Uniform air diffusion
Quick and easy installation
High resistance to loads



DIMENSIONS OF MODULO H3/H60

Height	Size cm	Weight kg	Concrete Consum. m^3/m^2	Packaging size m^3/m^2	m^2 per pallet	no. pcs. per pallet
3	50 x 50	0,76	0,004	120 x 102 x H220	180	720
6	50 x 50	0,99	0,009	120 x 102 x H220	180	720
9	58 x 58	1,11	0,010	120 x 120 x H240	240	720
13	50 x 50	1,17	0,028	102 x 102 x H235	90	360
15	50 x 50	1,18	0,030	102 x 102 x H240	90	360
17	50 x 50	1,35	0,035	102 x 102 x H235	90	360
20	50 x 50	1,38	0,037	102 x 102 x H240	90	360
25	50 x 50	1,40	0,038	102 x 102 x H235	90	360
27	50 x 50	1,44	0,040	102 x 102 x H235	75	300
30	50 x 50	1,55	0,044	102 x 102 x H240	75	300
35	50 x 50	1,61	0,052	107 x 107 x H230	75	300
40	50 x 50	1,78	0,056	107 x 107 x H230	75	300
45	71 x71	2,97	0,064	151 x 151 x H230	150	300
50	71 x71	3,50	0,076	151 x 151 x H230	150	300
55	71 x71	3,55	0,078	151 x 151 x H225	120	240
60	71 x71	4,05	0,079	153 x 153 x H230	120	240

DIMENSIONS OF **MODULO** H65/H70

	Height	Size cm	Weight kg	Concrete Consum. m^3/m^2	Packaging Size m^3/m^2	m^2 per pallet	no.pcs per pallet
	65	71 x71	4,25	0,084	153 x 153 x H230	120	240
	70	71 x71	4,10	0,083	153 x 153 x H240	120	240

DIMENSIONS OF **MULTIMODULO** H13/H40

	Height	Size cm	Weight kg	Concrete Consum. m^3/m^2	Packaging Size m^3/m^2	m^2 per pallet	no. pcs. per pallet
	13	71 x71	2,14	0,020	151 x 151 x H225	180	360
	15	71 x71	2,19	0,027	151 x 151 x H225	180	360
	17	71 x71	2,24	0,028	151 x 151 x H226	180	360
	20	71 x71	2,45	0,032	151 x 151 x H250	150	300
	25	71 x71	2,62	0,033	151 x 151 x H235	180	360
	27	71 x71	2,59	0,035	151 x 151 x H235	180	360
	30	71 x71	2,99	0,042	151 x 151 x H250	150	300
	35	71 x71	2,73	0,045	151 x 151 x H240	180	360
	40	71 x71	3,19	0,050	151 x 151 x H265	150	300

GEOBLOCK

GEOBLOCK MODULO*

GEOBLOCK Modulo	Min Ext. Max (cm)	Packaging size (cm)	No. pcs.
H13	3,5 - 25	110 x 110 x H180	500
H15	3,5 - 25	110 x 100 x H180	500
H17	3,5 - 25	110 x 120 x H190	500
H20	3,5 - 25	110 x 120 x H195	500
H25	3,5 - 25	110 x 120 x H195	500
H27	3,5 - 25	115 x 120 x H200	500
H30	3,5 - 25	115 x 120 x H200	500
H35	3,5 - 26	115 x 120 x H210	500
H40	3,5 - 26	120 x 130 x H210	500
H45	3,5 - 36	100x120xH220	200
H50	3,5 - 37	100x120xH225	200
H55	3,5 - 39	106x120xH230	200
H60	3,5 - 38	106x120xH240	200
H65	3,5 - 39	110x120xH240	200
H70	3,5 - 39	110 x 120 x H245	200

*pitch: 3,5 cm

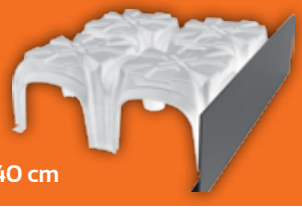
GEOBLOCK MULTIMODULO*

GEOBLOCK Multimodulo	Min Ext. Max (cm)	Packaging size (cm)	No. pcs.
H13	2,4 - 23	120 x100 x H110	500
H15	2,4 - 23	110 x 93 x H110	500
H17	2,4 - 23	121 x 93 x H110	500
H20	2,4 - 23,5	110 x 97 x H120	500
H25	2,4 - 24	122 x 100 x H120	500
H27	2,4 - 24,5	120 x 102 x H130	500
H30	2,4 - 25	120 x 102 x H130	500
H35	2,4 - 25	124x 103 x H140	500
H40	2,4 - 26	125 x 107 x H140	500

*pitch: 3,5 cm

ACCESSORIES OF MULTIMODULO SYSTEM

fermagetto in **plastic paperboard**



Side closure element for MULTIMODULO heights from 13 to 40 cm

ACCESSORIES OF MODULO SYSTEM

*ring

retaining for MODULO H65 e H70

fermagetto **modulo**

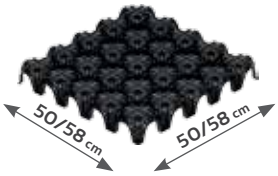
This element prevents the intrusion of concrete in the crawl space. It is available for MODULO heights from 13 to 40 cm

fermagetto **in plastic paperboard**

Side closure element for MODULO heights from 45 to 70 cm

LOAD TABLES

MINIMODULO



LOAD (Kg/m²)	THICKNESS of the slab (cm)	WIRE MESH (mm)	THICKNESS lean concrete (cm)	THICKNESS gravel (cm)	GROUND pressure (Kg/cm²)
500	5	Ø5/25x25	5		0,21
1,000	5	Ø6/20x20	5		0,42
2,500	5	Ø6/20x20	5		1,06
5,000	5	Ø8/20x20	10		0,76
10,000	6	Ø10/20x20	5	10	0,77
> 10,000	To evaluate each case, please contact Geoplast Technical Department				

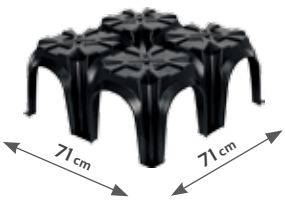
MODULO 50 x 50

LOAD (Kg/m²)	THICKNESS of the slab (cm)	WIRE MESH (mm)	THICKNESS lean concrete (cm)	THICKNESS gravel (cm)	GROUND pressure (Kg/cm²)
500	5	Ø5/25x25	5		0,29
1,000	5	Ø6/20x20	5		0,58
2,500	5	Ø8/20x20	10		0,72
5,000	7	Ø8/20x20	5	10	0,90
10,000	6	Ø10/20x20	5	15	1,10
> 10,000	To evaluate each case, please contact Geoplast Technical Department				

MODULO 71 x 71

LOAD (Kg/m²)	THICKNESS of the slab (cm)	WIRE MESH (mm)	THICKNESS lean concret (cm)	THICKNESS gravel (cm)	GROUND pressure (Kg/cm²)
500	5	Ø5/25x25	5		0,42
1,000	6	Ø6/20x20	5		0,85
2,500	7	Ø8/20x20	10		1,14
5,000	8	Ø8/20x20	5	10	1,42
8,000	10	Ø10/20x20	5	15	1,35
> 10,000	To evaluate each case, please contact Geoplast Technical Department				

MULTIMODULO



LOAD (Kg/m²)	THICKNESS of the slab (cm)	WIRE MESH (mm)	THICKNESS lean concret (cm)	THICKNESS gravel (cm)	GROUND pressure (Kg/cm²)
500	5	Ø5/25x25	5		0,21
1,000	5	Ø6/20x20	5		0,41
2,500	5	Ø6/20x20	5		1,03
5,000	6	Ø8/20x20	10		0,85
10,000	8	Ø8/20x20	5	15	1,07
> 10,000	To evaluate each case, please contact Geoplast Technical Department				

MODULO + GEOBLOCK
INSTALLATION

① PREPARATION

Creation of a laying surface with lean concrete and ins tallation of the external formwork and the reinforcements of the perimetral beams.

② FACILITIES

Installation of the pipes to place them into the perimetral ventilation holes and then place of the possible channeling systems for the pipes.

③ FORMWORK

Installation of MODULO formwork following the instructions, from right to left as marked in the formwork, without any cutting.

④ GEOBLOCK

Installation of GEOBLOCK to get closer to the reinforcements of the foundation: in this way GEOBLOCK permits the shuttering of the beams.

⑤ REINFORCEMENT

Installation of the load distribution mesh on MODULO formwork and connect it to the foundation beams reinforcement.

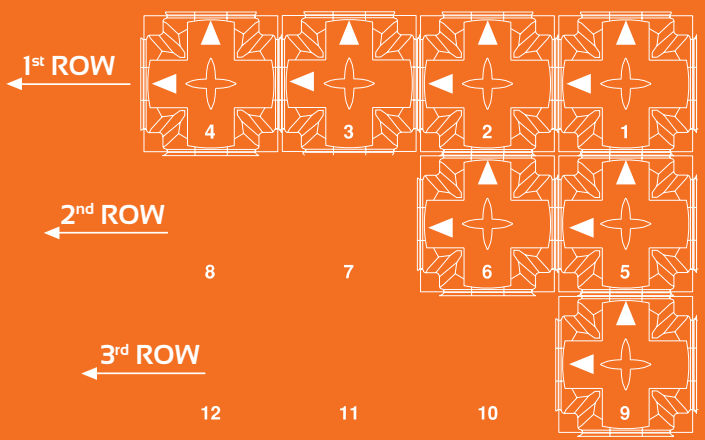
⑥ SINGLE POUR

Pour of the beams and the foundation slabs. Follow the instruction in order to pour correctly.

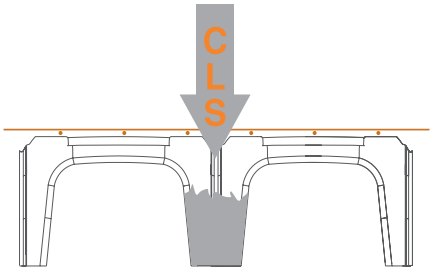
WARNING

MODULO formwork system must be installed FROM RIGHT TO LEFT AND FROM TOP TO BOTTOM, keeping the molded arrows pointing towards and to the left.

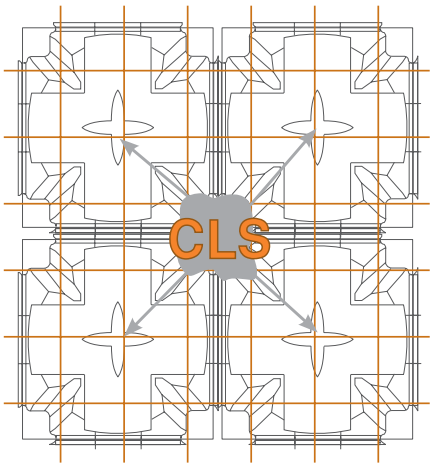
It is essential to verify the correct anchoring of the feet!



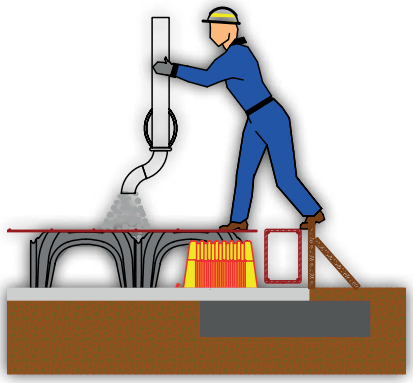
CONCRETE POURING



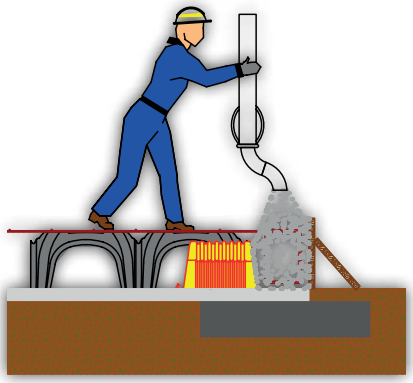
After having installed some MODULO elements, it is possible to walk on the formwork, being careful to walk only in proximity of the pillars and not directly over the dome. Once the distribution welded wire mesh is placed, the whole surface is walkable. In the case of pumped concrete, keep the pump outlet at a maximal distance of 20 cm from the formwork, in order to avoid an excessive pressure. The pour should be performed by first filling partially the feet and then the upper part of MODULO, not vice-versa. Pour only after the place of the welded mesh and after having verified the correct installation of the formwork.



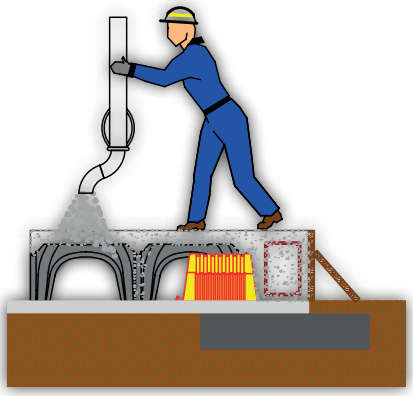
Stage 1
Partially fill MODULO feet



Stage 2
Partially fill all kerbs and foundation beams



Stage 3
Complete the pour of the feet, kerbs and foundation beams



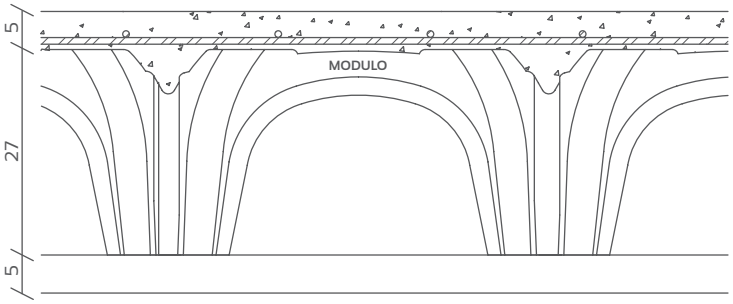
DESIGN & ASSISTANCE

From predimensioning to load tests

Our technical unit is at your complete disposal .

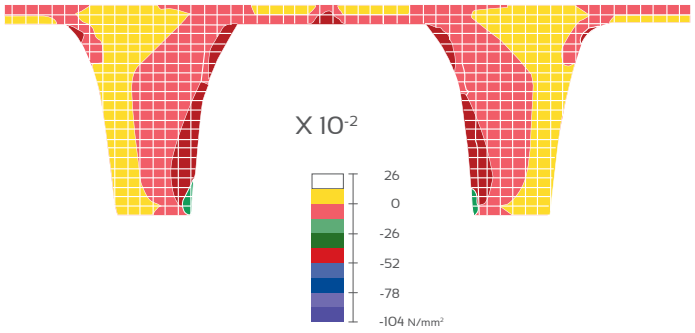
OUR STRENGTHS ARE:

- FEASIBILITY ANALYSIS
- PREDIMENSIONING OF THE STRUCTURES
- ASSISTANCE DURING THE EXECUTIVE DESIGN



ANALISI F.E.M.

The F.E.M. analysis (Finite Element Method) allows the study of structures built with MODULO system. The research shows that the system's leg has a solid body behaviour: that means that the system is not subjected to bending nor torsional strains.



Tension stress diagram

Study results

- SOLID BEHAVIOUR
- REDUCED SYSTEM DEFORMATION
- DOES NOT NEED REINFORCEMENT FEET

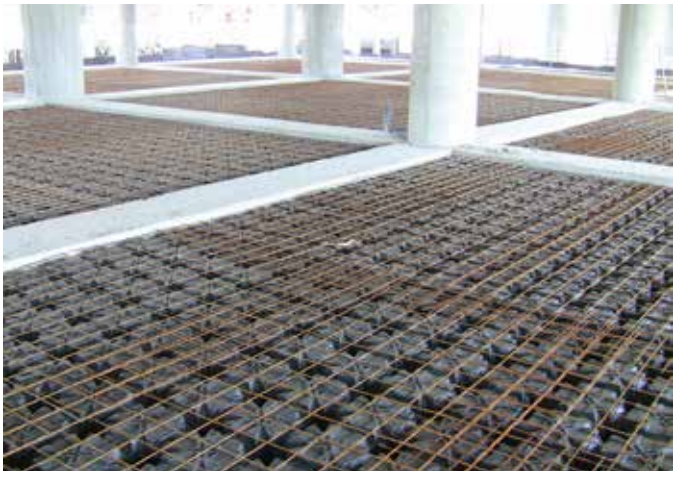
CASE HISTORY

Ciudad de las artes y las ciencias
Spain

Modulo
Geoblock

Morocco Mall
Morocco

Multimodulo



Adnan Menderes Airport
Turkish

Modulo
Geoblock

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