SINGLE-USE FORMWORK SYSTEM UP TO 300 CM

the evolution of crawl space

eo ast®

LOGISTICAL ADVANTAGES THE LIGHTEST FILLING SOLUTION HIGH LOAD-BEARING CAPACITY

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NEW ELEVETOR VISION

Gas Radon does not make distinctions between private and working life: it threatens us even while we are working. Therefore, we extended our interventions to industrial and commercial buildings.

To work in safe and comfortable, human-sized environments is everyone's dream. We are working to make it real.

RECYCLING, OUR CHOICE

Not only we turn our ideas into innovative and successful products but we also commit into the study and selection of more suitable materials to guarantee both high quality and the respect of the environment.

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

It is solid and strong, with high load-bearing capacity and resistant to abrasion. Regenerated polypropylene is a chemically inert material, which does not suffer from natural weathering and does not pollute the environment when in contact with the ground or with water. Geoplast S.p.A. in Green Building Council Italia, The Network of Green Building.



NEW ELEVETORIES SUITABLE FOR:

the construction of a ventilated crawl space with a significant reduction of the concrete consumption and installation time; moreover, it allows the installation of plumbing or electric wires. The system versatility allows the building of foundation slabs of different depths depending on the design requirements. Furthermore, the innovative base GRID guarantees a simple and fast installation of the PVC tubes which sustain the entire system, while mantaining them perfectly vertical during the pour.

BUILDING TYPES

- COMMERCIAL BUILDINGS
- INDUSTRIAL BUILDINGS
- RESIDENTIAL BUILDINGS
- LARGE SCALE STRUCTURES

- FOUNDATIONS
- ALL SORTS OF FILLING APPLICATIONS
- CONCRETE RAISED
 - STEPPED SURFACES

APPLICATIONS

- **SLOPING RAMPS**
- ROOT APPLICATION NEW ELEVETOR ROOTS

STORAGE TANKS NEW ELEVETOR TANK





Modular and single-use formwork system for crawl spaces up to 300 cm for the creation of a physical barrier between the ground and the building



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

light

upper slab

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EN C	By far it is	the	light	e	st

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 **NEW ELEVETOR**

savings

NEW ELEVETOR system

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



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

filling solution; the total weight of

the cross section is approximately

equal to the thickness of the



The void space created under **NEW ELEVETOR** 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

TECHNICAL CHART **NEW ELEVETOR**



CONCRETE CONSUMPTION UP TO THE TOP (m³/m²)

0,037 X (height New Elevetor in m - 0,15) + 0,030 m³/m²



The tube

The supporting structure consists in a classical construction tube of PVC with an external diameter of 125 mm and a thickness of 1.8 mm. When the tubes are inserted into the patented base grid and filled with concrete, they support structurally the upper formwork.

THE SYSTEM NEW ELEVETOR

The concept

This system is ideal for the ventilation of reinforced concrete foundation slabs for residential, industrial and commercial buildings. The product consists of a formwork, PVC tubes and a patented grid that guarantees the system perfect verticality in order to ensure great load-bearing capacity. The system is modular and the formwork can be installed on-site in order to build a walkable and selfsupporting system which is ready for the concrete pour. When the concrete solidifies, it takes the form of NEW ELEVETOR, thus creating a supporting and completely ventilated crawl space.





The formwork

The formwork is a dome made of regenerated PP (polypropylene) with plan size of 58X58 and an height of 15cm, with a bottom click rail to hook it perfectly to the tubes. The dome geometry allows a uniform load-bearing capacity over the four pillars. Moreover, it permits the reduction of the upper slab thickness.

Reinforcement option



To deal with difficult construction sites where the combination between loads and heights is particularly complex, it is recommended to insert iron elements (such as steel bars or forks) in the tubes in order to guarantee the stability of the concrete pillars even when exposed to dinamic loads.

DETAILS AND ADVANTAGES OF THE GRID

The base grid, essential for NEW ELEVETOR system, is made of regenerated PP and allows the perfect verticality of the tubes of PVC. The single grids are locked with one another creating a solid base grid that guarantees the stability and the walkability of the final structure.



VERTICAL TUBES

The verticality of the pillars is guaranteed by the base grip serving two main purposes:

SAFETY: the perfectly aligned system guarantees a safe walkability after installation LOAD-BEARING CAPACITY: The verticality of the pillars guarantees the reinforced-concrete structure's reliability





classic system without grid

NEW ELEVETOR system with grid

PRECISION

The locking system of the base grids allows the mantainment of the vertical alignment of the system (PVC tubes + formwork) and it also guarantees the extreme precision during installation. The grid is very lightweight and easy to cut: thus it can be placed even in correspondence of walls.



QUICK INSTALLATION

The use of the base grid is a major advantage for **NEW ELEVETOR** system. It is an extremely lightweight and space-saving element that can be installed quickly thanks to the male/female locking system.



ON-SITE **POSITIONING** The correct installation of New Elevetor system





Installation of the base grid, essential for the tubes verticality and the structural resistance.



2 TUBES

Place the tubes of PVC in the base grids.



3 FORMWORK

Place **NEW ELEVETOR** from right to left and interlock in the tubes to guarantee safe walkability.



(4) COMPENSATION

In the starting sides, where the formwork leans against the wall, the listels of polystyrene avoid the concrete dispersion.



5 UPPER MESH

The upper mesh has to be placed right over the formwork or when required by the project over the spacers with an appropriate overlapping.



6 CONCRETE POUR

The pour comes after the end of the mesh installation. Pour concrete gradually from a side to the other and vibrate it properly.

_AYING SEQUENCE





NEW ELEVETOR | CALCULATION

NEW ELEVETOR THE FINISHED SYSTEM

The construction of a ventilated crawl space with NEW ELEVETOR requires different stratigraphies depending on the final destination of the building and the working loads. The main sections of a finished stratigraphy with NEW ELEVETOR system are depicted in the following picture:



 Lean concrete
 Grid New Elevetor
 Tube

New Elevetor

New Elevetor

Formwork

Listel



7 Foundation slab

8) Pavement



_OAD TABLE

Load increments perm.+acc. (kg/m²)	Minimum slab thickness (cm)	Minimum wire mesh	Concrete thickness (cm)	Gravel thickness (cm)	Pressure on the soil (kg/cm²)
up to 500	4	Ø5/25x25	5	0	0.593
up to 1,000	5	Ø6/20x20	8	0	0.633
up to 2,500	6	Ø8/20x20	10	0	1.095
up to 5,000	8	Ø8/20x20	5	12	1.031
up to 10,000	10	Ø8/20x20	5	20	1.119
over 10 000	(For further infor	mation please contact Geo	plast Technical Departr	ment (ufficiotecnico	(aneonlast it)



Easy creation of **crawl spaces**

Thanks to its easy installation, with NEW ELEVETOR system it is possible to fill excavations filling and overcoming gaps quickly even in the case of large foundations. With low concrete consumption it creates a slab over pillars that guarantees very high load-bearing capacity and permits the transit of vehicles. Compared to a traditional filling with inert material, it simplifies the logistics and installation. Moreover, the socreated void space can be used for the installation of conduit or the creation of water storage tanks. Easy execution Simplified logistics Material savings





Material storage in the construction site



Systems with high **load-bearing capacity**

The systems allows the construction on-site of high crawl spaces, avoiding having to fill them with inert material and making it possible to use the so-created space for the installation of wires or pipes. The structure of reinforced concrete that can be built with NEW ELEVETOR is comparable to a floor slab supported by pillars. This guarantees high load-bearing capacity against both permanent and accidental loads, which are typical of industrial environments. High crawl space Suitable for heavy loads Technical compartment





Reinforcement of the pillar with steel forks



Gas Radon: protect your house!

NEW ELEVETOR creates a gap of variable height in order to protect the residential buildings from the rising damp and RADON, a radioactive gas from the subsoil which is harmful to human health. In the case of a low

load-bearing capacity ground it is necessary to build deeper foundations. NEW ELEV-ETOR system allows to avoid the filling with inert material creating a large crawl space that can be used for various purposes.

Natural ventilation Gas Radon dispersion Moisture elimination







The system for **sloping surfaces**

Thanks to its modularity, NEW ELEVETOR system allows the overcoming of the level differences, even for the transit of heavy vehicles or trucks. The ramp can be built in two ways: • Inserting the inclined domes in the tube (inclination up to 5%);

• Shaping the tubes in order to create a step and placing the domes horizontally (step's maximum height: 8 cm); the maximum slope and applied loads must be first arranged with Geoplast Technical Department.

Easy construction Gradual slope Material savings





Ramp with finished slope



Protecting the growth **of green in our cities**

NEW ELEVETOR ROOTS is used to preserve the growth of tree roots along the roadway. Usually, the rooting space is hindered by cables, sewages or road underground layers. All these hindrances steal space to the roots which cause the typical upheaval of the road surface. Our solution considers the use of a slab placed at the top of a column grid in order to let the roots grow between the tubes. Roots protection Avoids roads upheaval Greening of traffic areas





Section of New Elevetor Root system



Rainwater **storage tanks**

NEW ELEVETOR TANK is the ideal solution for the fast construction of storage concrete tanks of variable height which can be used for the storage of high quantities of rainwater in

a small space. The tank can be inspected through a pit that allows cleaning, checking the water level, the systems' functionality and the microbiological status of the water. Customizable size and shape Inspectionable No lifting devices required





Rainwater storage tanks up to 300 cm





The system for **stepped surfaces**

NEW ELEVETOR allows the construction of structures with various levels such as staircases or stepped extensions. The simple and fast installation of the system avoids the fill-

ing with inert material whom would be very complicated to deal with, especially in the contact points between areas placed at different heights.

Variable height High stability during pour Fast installation





Safety and **inspectionability**

The inspection man-holes facilitate to check and maintain the storage tanks. The gap between the pillars make it easy to move within the structure, thus giving the possibility to inspect the tank even afterwards. Customizable size and shape Easy inspection Easy maintenance



BUILDING

INSTALLATION INSTRUCTIONS



Cut the base as in the picture and place the first row against the wall, starting from the right.



Place the tubes in PVC in the base grids and lock them pushing at the top of the tubes.





Install NEW ELEVETOR paying attention in order to wedge it perfectly.





Place the last row of NEW ELEVETOR with the cut dome against the curb.



Place the lintels against the curb.



Place the wire mesh and the steel reinforcement in the pillars.







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