



# SLABS SOLUTIONS

FULL RANGE OF FORMWORKS AND SOLUTIONS FOR SLABS



**NUOVO NAUTILUS**



**NUOVO NAUTILUS EVO**



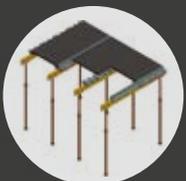
**SKYDOME**



**SKYRAIL**



**AIRPLAST**



**GEOSKY**



**EASY**



**LIGHT**



**MODULAR**

# INDEX



## NUOVO NAUTILUS NUOVO NAUTILUS EVO

Permanent void former for lightweight bidirectional slabs.

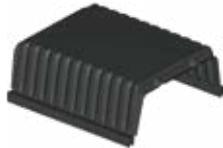
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## SKYDOME

Reusable waffle slab formwork in ABS technopolymer.

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## SKYRAIL

Reusable formwork in ABS technopolymer for one-way ribbed slabs.

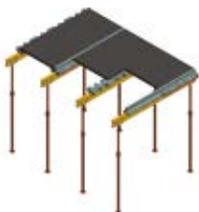
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## AIRPLAST

Permanent void former for lightweight one-way slabs.

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## GEOSKY

Reusable formwork in ABS technopolymer for full concrete slabs.

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# DESIGN & ASSISTANCE

## FROM PREDIMENSIONING TO FINAL DRAWING

Geoplast Technical Unit is at the disposal of architects and engineers to offer the required assistance during the implementation of a project. From the statistical calculations to the working drawings.

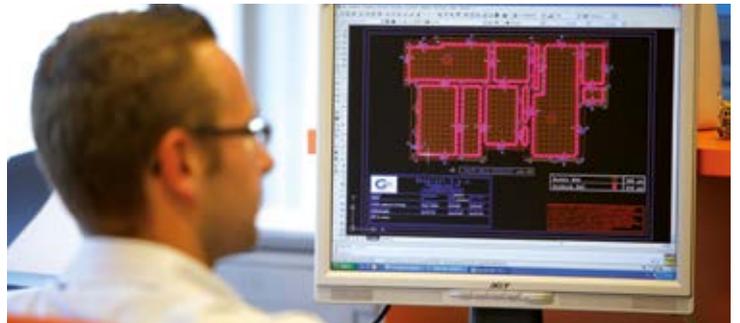
### FEASIBILITY ANALYSIS

Technical Analysis of the project which includes the choice of the most suitable Geoplast's solution, material and manpower estimates and cost analysis.



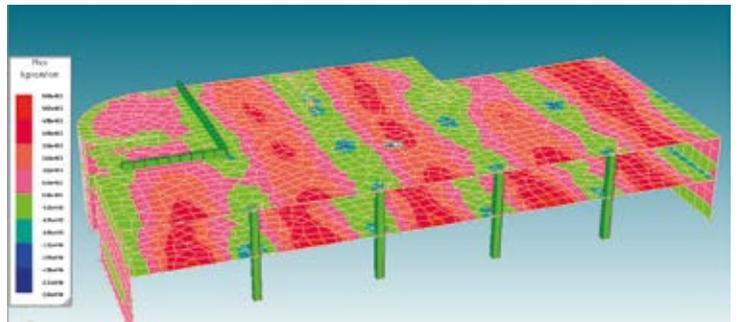
### TECHNICAL ANALYSIS

Structural Analysis and writing of all the documentation that tests the performance of the proposed systems.



### EXECUTIVE DESIGN

Support by design professionals. The in-depth analysis together with the formwork positioning plan and the related accessories can be supplied on request.



### ON-SITE ASSISTANCE

When necessary, Geoplast's technical unit can be present on-site and help the company during the installation stage.



To contact the technical unit : Tel. +39 049 949 0289 - [Engineering@geoplastglobal.com](mailto:Engineering@geoplastglobal.com)

To download the updated technical sheets, the support material, new images and new case studies, visit our website:

**GeoplastGlobal.com**

# NUOVO NAUTILUS - NUOVO NAUTILUS EVO



## PERMANENT VOID FORMER FOR LIGHTWEIGHT BIDIRECTIONAL SLABS



# NEW NAUTILUS ADVANTAGES



System for the construction of lightened bidirectional slabs with flat intrados and large spans.

## LARGE SPANS

NEW NAUTILUS permits the building of slabs with up to 20 m span, without protruding elements (beams or dossierets).

## LIGHTNESS

The bidirectional flat intrados design allows the maximum lightening of the slab while maintaining high structural performances.

## SEISMIC

The slab lightening is the first step to realize a lightweight structure with a great seismic response.

## WATERPROOF

NEW NAUTILUS is made of polypropylene that is a waterproof element; therefore there can't be soaking issues or release of water over time.

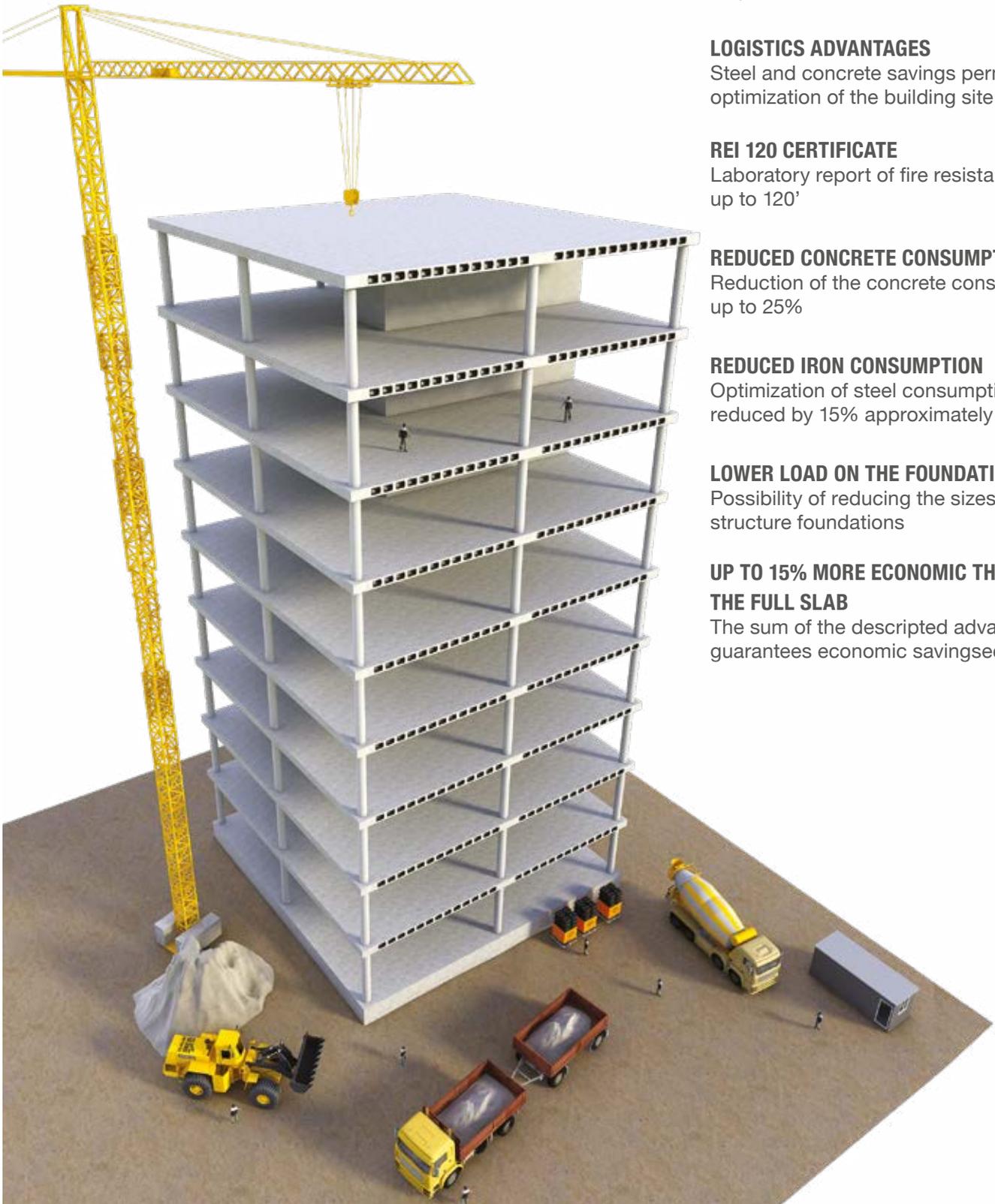
## OPTIMIZATION

The combination between great spans and lightweight slabs permits load limitations over pillars and foundations and the optimization of the layout distribution of the pillars.

## VERSATILITY

NEW NAUTILUS can be used in combination with prefabricated slabs such as predalles, or for the construction of foundation plates combined with post-tensioning systems.

# LIGHTENING SYSTEMS ADVANTAGES



## **REDUCED SEISMIC RISK**

A lighter structure with great seismic response

## **LOGISTICS ADVANTAGES**

Steel and concrete savings permit the optimization of the building site

## **REI 120 CERTIFICATE**

Laboratory report of fire resistance up to 120'

## **REDUCED CONCRETE CONSUMPTION**

Reduction of the concrete consumption up to 25%

## **REDUCED IRON CONSUMPTION**

Optimization of steel consumption reduced by 15% approximately

## **LOWER LOAD ON THE FOUNDATIONS**

Possibility of reducing the sizes of the structure foundations

## **UP TO 15% MORE ECONOMIC THAN THE FULL SLAB**

The sum of the described advantages guarantees economic saving

# NEW NAUTILUS TECHNICAL DATA



## SIZES

Base	520 x 520 mm
Heights	160 - 200 - 240 mm

## NEW NAUTILUS MATERIAL

Polypropylene	PP
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## DOUBLE VERSION



The SINGLE formwork can be set up to be matched with another element in order to form DOUBLE structures:

- ideal for large spans;
- light;
- easy to install.

In all elements there is a spacer tab that allows the correct distancing between the formwork.

\*For slabs from 26 to 68 cm high

# DIMENSIONAL TABLE

## NEW NAUTILUS SINGLE\*



HEIGHT	Actual size (mm)	Weight (kg)	Beam width (mm)	Formwork bearing (pieces/m <sup>2</sup> )	Concrete consumption (m <sup>3</sup> /m <sup>2</sup> )	Formwork volume (m <sup>3</sup> /pcs.)
<b>H16 SINGLE</b>	520 x 520 x H160	1.32	120	2.44	0.079	0.033
			140	2.30	0.084	
			160	2.16	0.089	
			180	2.04	0.093	
			200	1.93	0.096	
<b>H20 SINGLE</b>	520 x 520 x H200	1.43	120	2.44	0.102	0.040
			140	2.30	0.108	
			160	2.16	0.114	
			180	2.04	0.118	
			200	1.93	0.123	
<b>H24 SINGLE</b>	520 x 520 x H240	1.54	120	2.44	0.125	0.047
			140	2.30	0.132	
			160	2.16	0.138	
			180	2.04	0.144	
			200	1.93	0.149	

\*Packaging size: 110 x 120 cm, 400 pcs. Available feet: 0,4,5,6,7,8,9,10 cm

## NEW NAUTILUS DOUBLE\*\*



HEIGHT	Actual size (mm)	Weight (kg)	Beam width (mm)	Formwork bearing (pieces/m <sup>2</sup> )	Concrete consumption (m <sup>3</sup> /m <sup>2</sup> )	Formwork volume (m <sup>3</sup> /pcs.)
<b>H32 DOUBLE</b>	520 x 520 x H160+H160	2.64	120	2.44	0.158	0.066
			140	2.30	0.168	
			160	2.16	0.178	
			180	2.04	0.186	
			200	1.93	0.192	
<b>H36 DOUBLE</b>	520 x 520 x H200+H160	2.75	120	2.44	0.181	0.073
			140	2.30	0.192	
			160	2.16	0.203	
			180	2.04	0.211	
			200	1.93	0.219	
<b>H40 DOUBLE</b>	520 x 520 x H200+H200	2.86	120	2.44	0.204	0.080
			140	2.30	0.216	
			160	2.16	0.228	
			180	2.04	0.236	
			200	1.93	0.246	
<b>H44 DOUBLE</b>	520 x 520 x H240+H200	2.97	120	2.44	0.227	0.087
			140	2.30	0.240	
			160	2.16	0.252	
			180	2.04	0.262	
			200	1.93	0.272	
<b>H48 DOUBLE</b>	520 x 520 x H240+H240	3.08	120	2.44	0.250	0.094
			140	2.30	0.264	
			160	2.16	0.276	
			180	2.04	0.288	
			200	1.93	0.298	

\*\*Packaging size: 110 x 120 cm, 200 pcs. Available feet: 0,5,6,7,8,9,10 cm

## EXAMPLE OF CONSUMPTION CALCULATION

For slabs of 70+160+70 mm width with beams from 160 mm, the concrete consumption will be equal to 0.091 (NEW NAUTILUS H16) + 0.07 (lower slab) + 0.07 (upper slab), for a total of 0.231 m<sup>3</sup>/m<sup>2</sup> and a weight of 577.50 kg/m<sup>2</sup>.



# NEW NAUTILUS EVO TECHNICAL DATA



## SIZES

Base	520 x 520 mm
Heights	100-130-160-200-240-280 mm

## NEW NAUTILUS MATERIAL

Polypropylene	PP
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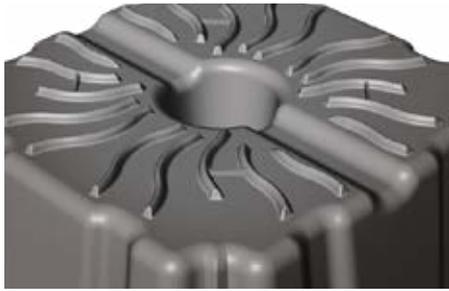
## THE CENTRAL CONE



The CENTRAL CONE helps the operator to work well and accurately:

- actual visual check of the lower slab finishing;
- guarantee of the completeness of the structural section;
- high load-bearing resistance;
- lifting reduction during the pour;
- homogeneous and perfect intrados finishing.

\*For slabs from 20 to 76 cm high



**THE UPPER SPACERS**

**0.8**  
mm



**EC2**

In the upper section of the formwork there are uniformly distributed spacers 8 mm thick. These elements allow the upper reinforcement to be placed directly over the formwork in order to guarantee a suitable concrete covering.



**THE SIDE TAB**

**2**  
x pz.

**100**  
**200**  
mm

**PP**  
polipropilene

Every formwork is provided with side spacers that allow the correct installation of the elements according to the width of the beams, which is to be calculated during the design stage. The elements are marked from 100 to 200 mm and can be hooked to the side loops.



**THE LOWER FOOT**

**50**  
**100**  
mm

**4**  
x pz.

**R.E.I.**

The lower spacer feet are integral elements of the formwork: they are pressed molded with the rest of the item and allow the creation of the lower slab with a thickness evaluated during the design stage. The feet have a variable height from 50 to 100 mm.

# DIMENSIONAL TABLE

## NEW NAUTILUS EVO SINGLE\*



HEIGHT	Actual size (mm)	Weight (kg)	Beam width (mm)	Formwork bearing (pieces/m <sup>2</sup> )	Concrete consumption (m <sup>3</sup> /m <sup>2</sup> )	Formwork volume (m <sup>3</sup> /pcs.)
<b>H10 SINGLE</b>	520 x 520 x H100	1.23	120	2.44	0.041	0.024
			140	2.30	0.045	
			160	2.16	0.048	
			180	2.04	0.051	
			200	1.93	0.054	
<b>H13 SINGLE</b>	520 x 520 x H130	1.30	120	2.44	0.060	0.028
			140	2.30	0.064	
			160	2.16	0.067	
			180	2.04	0.071	
			200	1.93	0.074	
<b>H16 SINGLE</b>	520 x 520 x H160	1.38	120	2.44	0.081	0.032
			140	2.30	0.086	
			160	2.16	0.091	
			180	2.04	0.094	
			200	1.93	0.097	
<b>H20 SINGLE</b>	520 x 520 x H200	1.49	120	2.44	0.104	0.039
			140	2.30	0.110	
			160	2.16	0.116	
			180	2.04	0.120	
			200	1.93	0.125	
<b>H24 SINGLE</b>	520 x 520 x H240	1.60	120	2.44	0.128	0.046
			140	2.30	0.135	
			160	2.16	0.140	
			180	2.04	0.146	
			200	1.93	0.151	
<b>H28 SINGLE</b>	520 x 520 x H280	1.71	120	2.44	0.151	0.053
			140	2.30	0.158	
			160	2.16	0.166	
			180	2.04	0.172	
			200	1.93	0.178	

\*Packaging size: 110 x 120 cm, 400 pcs. Available feet: 0,4,5,6,7,8,9,10 cm

# NEW NAUTILUS EVO DOUBLE\*\*



HEIGHT	Actual size (mm)	Weight (kg)	Beam width (mm)	Formwork bearing (pieces/m <sup>2</sup> )	Concrete consumption (m <sup>3</sup> /m <sup>2</sup> )	Formwork volume (m <sup>3</sup> /pcs.)
<b>H20 DOUBLE</b>	520 x 520 x H100+H100	2.46	120	2.44	0.083	0.048
			140	2.30	0.090	
			160	2.16	0.096	
			180	2.04	0.102	
			200	1.93	0.107	
<b>H23 DOUBLE</b>	520 x 520 x H100+H130	2.53	120	2.44	0.102	0.052
			140	2.30	0.110	
			160	2.16	0.118	
			180	2.04	0.124	
			200	1.93	0.130	
<b>H26 DOUBLE</b>	520 x 520 x H130+H130	2.60	120	2.44	0.123	0.056
			140	2.30	0.131	
			160	2.16	0.139	
			180	2.04	0.146	
			200	1.93	0.152	
<b>H29 DOUBLE</b>	520 x 520 x H130+H160	2.67	120	2.44	0.141	0.060
			140	2.30	0.150	
			160	2.16	0.158	
			180	2.04	0.166	
			200	1.93	0.172	
<b>H30 DOUBLE</b>	520 x 520 x H200+H100	2.72	120	2.44	0.146	0.063
			140	2.30	0.155	
			160	2.16	0.164	
			180	2.04	0.171	
			200	1.93	0.178	
<b>H32 DOUBLE</b>	520 x 520 x H160+H160	2.75	120	2.44	0.162	0.064
			140	2.30	0.171	
			160	2.16	0.181	
			180	2.04	0.189	
			200	1.93	0.195	
<b>H33 DOUBLE</b>	520 x 520 x H130+H200	2.78	120	2.44	0.165	0.067
			140	2.30	0.174	
			160	2.16	0.183	
			180	2.04	0.191	
			200	1.93	0.199	
<b>H34 DOUBLE</b>	520 x 520 x H100+H240	2.83	120	2.44	0.169	0.070
			140	2.30	0.179	
			160	2.16	0.189	
			180	2.04	0.197	
			200	1.93	0.205	
<b>H36 DOUBLE</b>	520 x 520 x H160+H200	2.86	120	2.44	0.185	0.071
			140	2.30	0.196	
			160	2.16	0.207	
			180	2.04	0.214	
			200	1.93	0.222	
<b>H37 DOUBLE</b>	520 x 520 x H130+H240	2.89	120	2.44	0.188	0.074
			140	2.30	0.199	
			160	2.16	0.208	
			180	2.04	0.217	
			200	1.93	0.225	
<b>H38 DOUBLE</b>	520 x 520 x H100+H280	2.94	120	2.44	0.192	0.077
			140	2.30	0.203	
			160	2.16	0.214	
			180	2.04	0.223	
			200	1.93	0.231	
<b>H40 DOUBLE</b>	520 x 520 x H200+H200	2.97	120	2.44	0.208	0.078
			140	2.30	0.220	
			160	2.16	0.232	
			180	2.04	0.240	
			200	1.93	0.250	
<b>H41 DOUBLE</b>	520 x 520 x H130+H280	3.00	120	2.44	0.215	0.081
			140	2.30	0.225	
			160	2.16	0.235	
			180	2.04	0.246	
			200	1.93	0.255	
<b>H44 DOUBLE</b>	520 x 520 x H200+H240	3.08	120	2.44	0.232	0.085
			140	2.30	0.245	
			160	2.16	0.256	
			180	2.04	0.266	
			200	1.93	0.276	
<b>H48 DOUBLE</b>	520 x 520 x H240+H240	3.19	120	2.44	0.255	0.092
			140	2.30	0.269	
			160	2.16	0.281	
			180	2.04	0.292	
			200	1.93	0.302	
<b>H52 DOUBLE</b>	520 x 520 x H240+H280	3.30	120	2.44	0.282	0.099
			140	2.30	0.295	
			160	2.16	0.308	
			180	2.04	0.321	
			200	1.93	0.332	
<b>H56 DOUBLE</b>	520 x 520 x H280+H280	3.41	120	2.44	0.308	0.106
			140	2.30	0.322	
			160	2.16	0.336	
			180	2.04	0.349	
			200	1.93	0.361	

\*\*Packaging size: 110 x 120 cm, 200 pcs. Available feet: 0,5,6,7,8,9,10 cm

## EXAMPLE OF CONSUMPTION CALCULATION

For slabs of 70+160+70 mm width with beams from 160 mm, the concrete consumption will be equal to 0.091 (NEW NAUTILUS H16) + 0.07 (lower slab) + 0.07 (upper slab), for a total of 0.231 m<sup>3</sup>/m<sup>2</sup> and a weight of 577.50 kg/m<sup>2</sup>.

# LARGE SPANS AND ANTI-SEISMIC ALTERNATIVE

NEW NAUTILUS light formwork slab guarantees high structural qualities. It permits the creation of 20 mt wide spans maintaining a reduced weight of the slab up to the 30%. The result is a very firm bidirectional slab that offers an excellent advantage in terms of seismic response thanks to the reduced weight.



# SCHOOL BUILDINGS

School buildings are the structures where prevention and safety must always be guaranteed. Together with the availability of wide spaces for students. NEW NAUTILUS system allows the creation of structural efficient slabs thanks to the bidirectional configuration which can easily face any seismic occurrence due to the reduction of the self-weight of the slab. Moreover, larger spans for a better space management can be easily built.



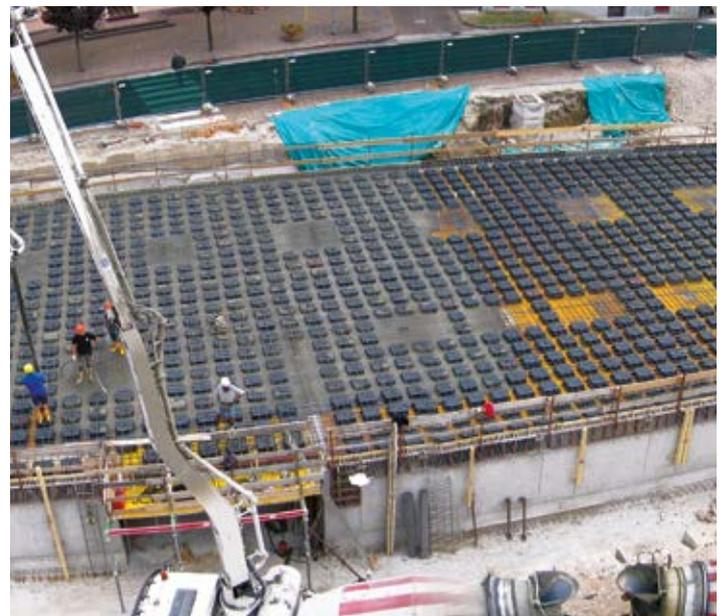
# MULTI-STOREY BUILDINGS

The increasing of the seismic response of a building starts from a correct planning of the bearing structure. The construction of a firm slab whose load doesn't excessively affect the pillars and the foundations is a fundamental aspect; NEW NAUTILUS EVO system completes these concepts by creating a very firm bidirectional slab with a reduction of its self weight up to 30%.



# CAR PARKS

When building basement car parks or multi-storey car parks, the main aspect is the obtainment of the highest number possible of stalls. Through the building of bidirectional slabs and their lightening with NEW NAUTILUS EVO, it is possible to create larger spans than the traditional solutions but also to optimize the pillars position in order to create as much parking and manoeuvring space as possible.



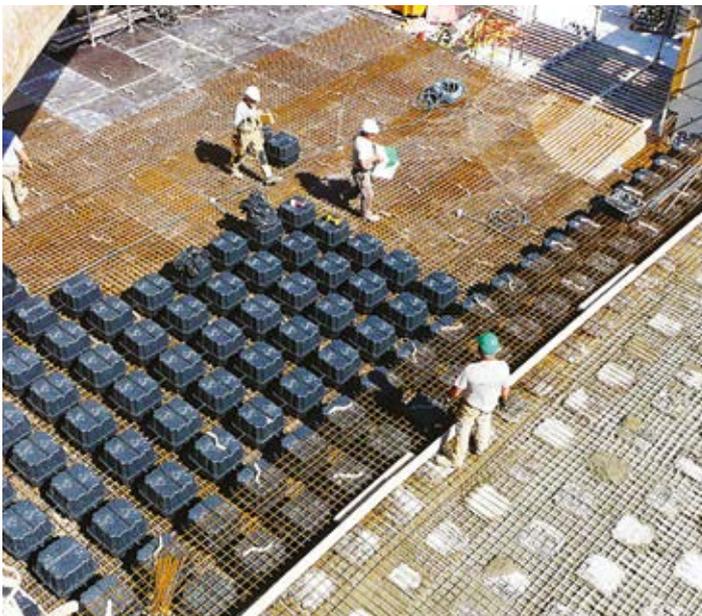
# HOSPITALS

Hospitals are submitted to higher seismic standards of the high numbers of people they host. NEW NAUTILUS is a perfect method to bestow a seismic response on a building. Moreover, it allows the lightening of the structure maintaining even so high structural performances in order to face the huge loads typical of these buildings.



# SLABS FOUNDATION

Usually buildings erected on grounds with poor load-bearing capacity need expensive and difficult to build foundation piles. NEW NAUTILUS makes possible the building of very stiff foundation slabs which can distribute the loads on a wide surface. Therefore a structure composed by a lattice of beams between two slabs, which can reduce to the minimum the differential settlements, is created.



# ON-SITE INSTALLATION



① **BASE DECK PREPARATION**



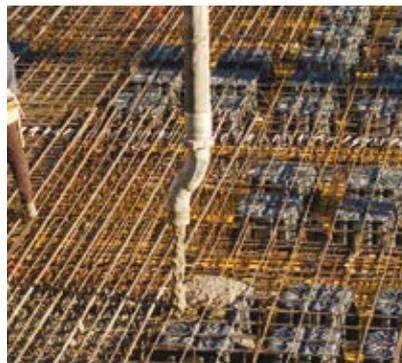
② **LOWER REINFORCEMENT & FULL ZONES**



③ **INSTALLATION OF NEW NAUTILUS**



④ **UPPER REINFORCEMENT INSTALLATION**



⑤ **1<sup>st</sup> STAGE OF THE CONCRETE POUR**



⑥ **PAUSE BETWEEN THE 1<sup>st</sup> AND THE 2<sup>nd</sup> POUR**



⑦ **2<sup>nd</sup> STAGE OF THE CONCRETE POUR**



⑧ **POST PROPPING**

# PRELIMINARY DESIGN ANALYSIS

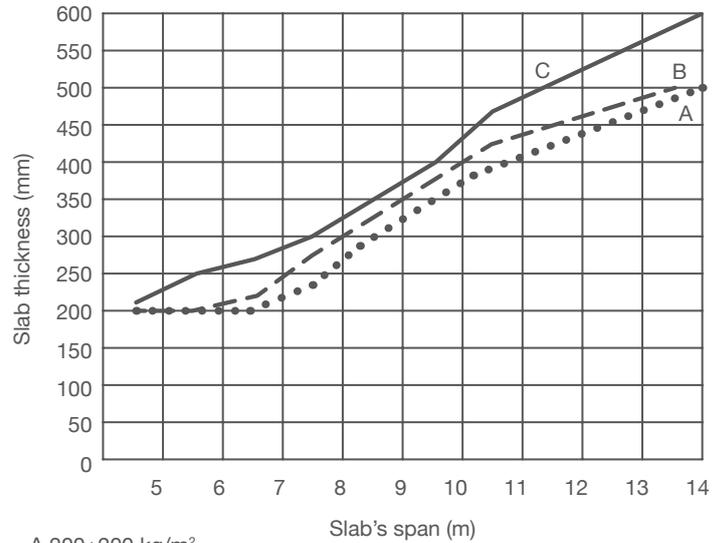
## THICKNESS EVALUATION

For preliminary design of a lightened slab with NEW NAUTILUS EVO: from the chart at the right it is possible to obtain the thickness of the slab on the basis the loads that act on the slab.

## EXAMPLE

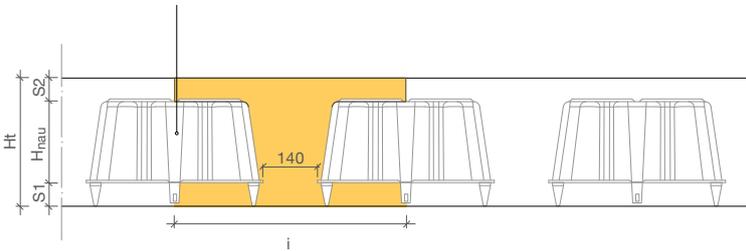
For a load of 400+300 kg/m<sup>2</sup> (live + dead) and spans (distance between the pillars) of 8 m, the thickness should be at first approximation of around 300 mm (lower base + lightening+ upper base).

For different duty conditions or particular load situation, some ad hoc modellings may be necessary. Please contact Geoplast Technical Unit first.

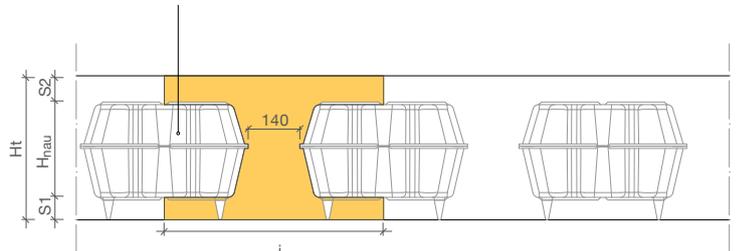


A 200+200 kg/m<sup>2</sup>  
 B 400+300 kg/m<sup>2</sup>  
 C 600+300 kg/m<sup>2</sup>

New Nautilus Evo Single



New Nautilus Evo Double



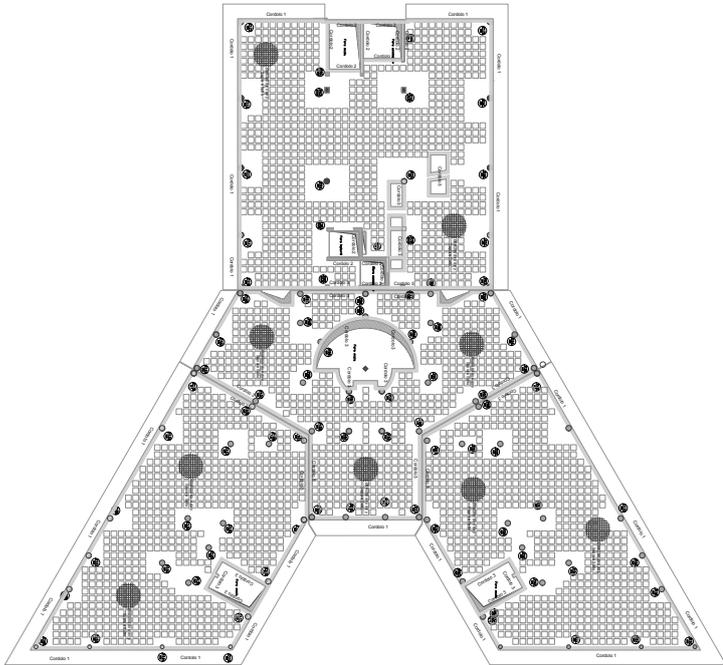
Pillar spacers L <sub>x</sub> x L <sub>y</sub>	Overload G <sub>k</sub> + Q <sub>k</sub>	Propose thickness Ht	S <sub>1</sub>	H <sub>nau</sub>	S <sub>2</sub>	Lightned slab inertia J <sub>nau</sub>	Full slab inertia J <sub>full</sub>	Self weight of lightned slab P <sub>nau</sub>	Self weight of full slab P <sub>full</sub>	Concrete / weight	Load reduction / steel
[m]	[kN/m <sup>2</sup> ]	[cm]	[cm]	[cm]	[cm]	[cm <sup>4</sup> ]	[cm <sup>4</sup> ]	[kN/m <sup>2</sup> ]	[kN/m <sup>2</sup> ]	%	%
5	5.00	20	5	10	5	60821.26	66666.67	3.63	5.00	-27.4	-13.0
6	5.00	23	5	13	5	88537.95	101391.67	4.15	5.75	-27.8	-14.2
7	5.00	25	6	13	6	117362.62	130208.33	4.65	6.25	-25.6	-13.6
8	5.00	28	6	16	6	158952.73	182933.33	5.18	7.00	-26.0	-14.5
9	5.00	32	7	20	5	226197.71	273066.67	5.78	8.00	-27.8	-16.4
10	5.00	34	7	20	7	280664.38	327533.33	6.28	8.50	-26.1	-15.8
11	5.00	36	7	24	5	307772.12	388800.00	6.38	9.00	-29.1	-18.0
12	5.00	40	8	24	8	452305.45	533333.33	7.38	10.00	-26.2	-16.8
13	5.00	44	8	28	8	581150.55	709866.67	7.98	11.00	-27.5	-18.2
14	5.00	50	7	36	7	779649.39	1041666.67	8.48	12.50	-32.2	-22.3
15*	5.00	58	10	41	7	1236413.18	1625933.33	9.98	14.50	-31.2	-22.5
16*	5.00	64	8	48	8	1561851.26	2184533.33	10.73	16.00	-32.9	-24.4
17**	5.00	68	10	48	10	1997584.59	2620266.67	11.73	17.00	-31.0	-23.4
18**	5.00	72	10	52	10	2317962.12	3110400.00	12.43	18.00	-30.9	-23.6
19**	5.00	74	10	56	8	2386739.39	3376866.67	12.65	18.50	-31.6	-24.3
20**	5.00	76	10	56	10	2668006.06	3658133.33	13.15	19.00	-30.8	-23.8

\*It is recommended high performance concrete. \*\*Post-tension.

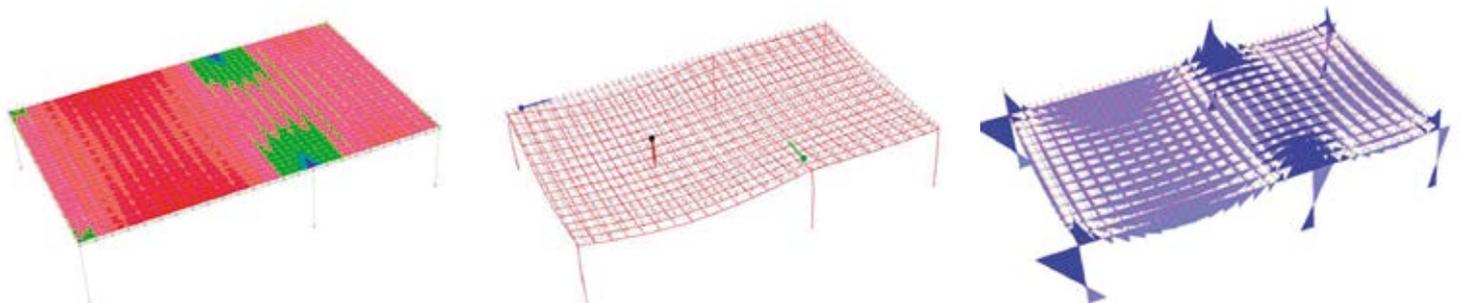


# DEVELOPMENT AND ASSISTANCE

## HOW TO OPTIMIZE THE PERFORMANCES OF A LIGHTENED SLAB



## MODELLING OF THE FINISHING ELEMENTS FOR STRUCTURAL CHECKS



## GEOPLAST TECHNICAL ASSISTANCE

Geoplast Technical Unit, with its staff of structural engineers, guarantees the needed support during all the stages in the worksite. After the analysis of the technical details and the possible restrictions of the construction, the technical staff defines the formwork system's configuration and develops the project, specifying the accessories. Prior agreement, when required, assistance in the worksite during the system's installation, the pouring stage and the removal, is provided.

# SKYDOME



## REUSABLE WAFFLE SLAB FORMWORK IN ABS TECHNOPOLYMER



# SKYDOME ADVANTAGES



Reusable formwork system for the realization of bi-directional waffle slabs with large spans.

## SEISMIC RESISTANCE



SKYDOME hollowed slab reduces the mass of the structure producing considerable advantages in seismic performance.

## LIGHTNESS



The composing elements are very light and can be easily installed and handled.

## REUSE



ABS plastics does not stick to concrete, thus dismantling is extremely easy making the formwork very quickly available for the next cycle.

## LARGE SPANS



SKYDOME system makes it possible to design slabs spanning up to 10 m without drop beams or other protruding elements.

## ARCHITECTURE



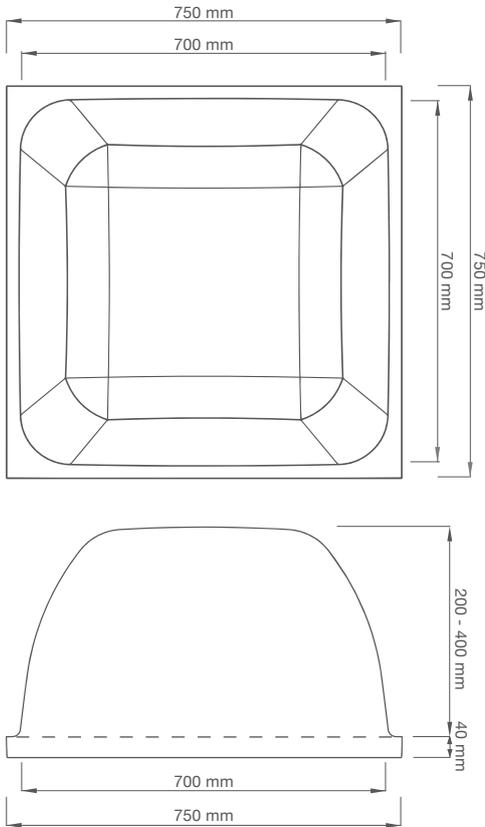
The waffle slab is pleasing to the eye and can be left exposed, creating aesthetically enjoyable environments.

## ACOUSTICS



The shape of the domes reduces sound waves, improving the acoustics of the structure.

# SKYDOME TECHNICAL DATA



## SIZES

Base	750 x 750 mm
Heights	200 - 250 - 300 - 350 - 400 mm

## SKYDOME MATERIAL

Acrylonitrile Butadiene Styrene	ABS
---------------------------------	-----

## BEAM AND CUBE



These two items are part of the supporting structure of the dome:

- light and easy to handle;
- fits onto standard H20 timber beams;
- resistant and reusable.

Made of abs, easy to clean with water, ready for reuse.

# DIMENSIONAL TABLE

## SKYDOME



HEIGHT	Actual size (mm)	Material	Weight (kg)	Package dimension (mm)	Nr. pieces per pallet
<b>SKYDOME H200</b>	750 x 750 x H200	ABS	5.07	750 x 1500 x H2310	100
<b>SKYDOME H250</b>	750 x 750 x H250	ABS	5.41	750 x 1500 x H2360	100
<b>SKYDOME H300</b>	750 x 750 x H300	ABS	5.89	750 x 1500 x H2400	100
<b>SKYDOME H350</b>	750 x 750 x H350	ABS	6.23	750 x 1500 x H2500	100
<b>SKYDOME H400</b>	750 x 750 x H400	ABS	6.56	750 x 1500 x H2550	100

## BEAM



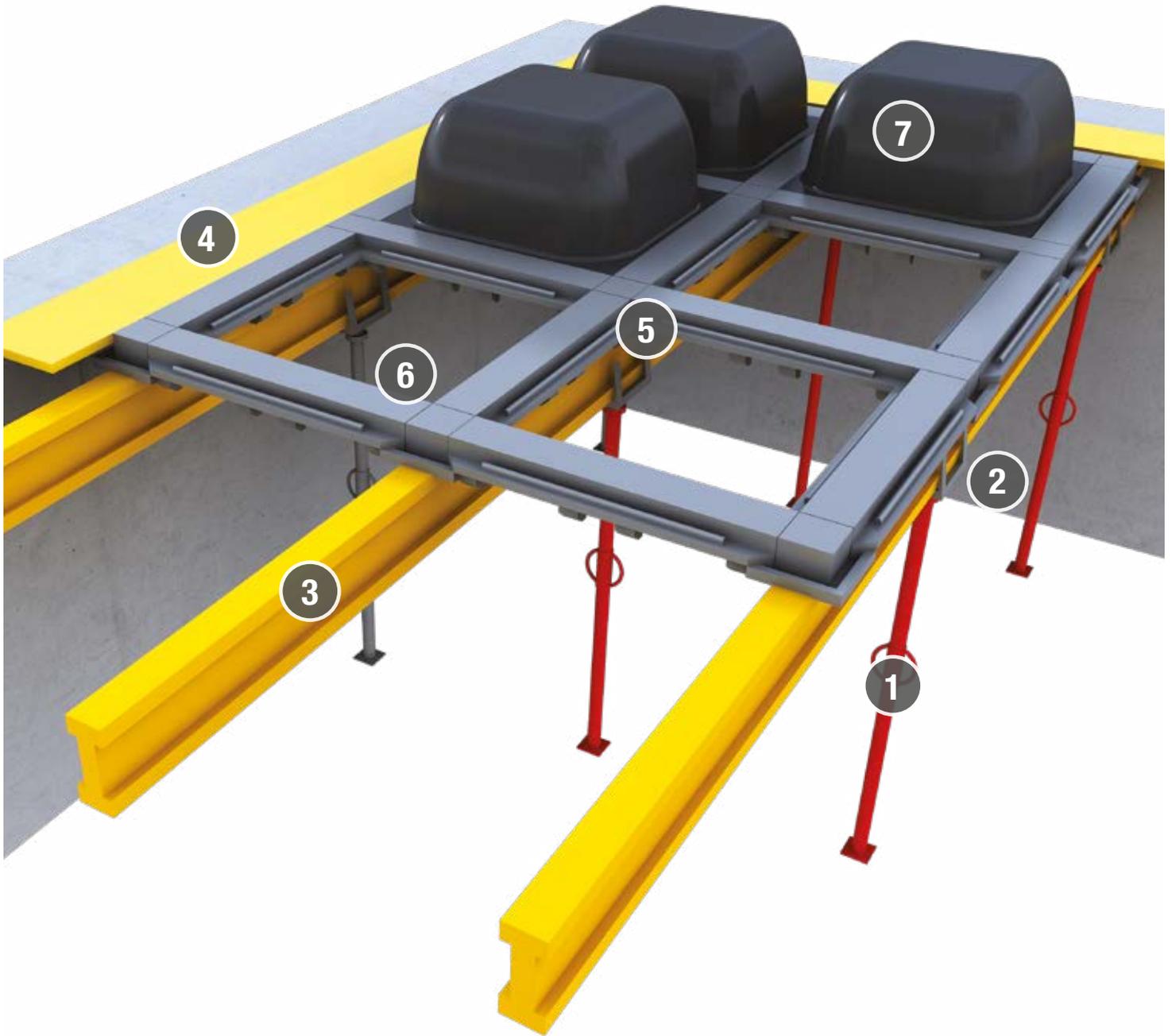
BEAM	Actual size (mm)	Material	Weight (kg)	Package dimension (mm)	Nr. pieces per pallet
<b>BEAM T120</b>	140 x 750 x H100	ABS	1.54	750 x 1200 x H2160	200
<b>BEAM T160</b>	180 x 750 x H100	ABS	2.06	750 x 1200 x H2180	120
<b>BEAM T200</b>	220 x 750 x H100	ABS	2.51	750 x 1200 x H2190	100
<b>FLAT T120</b>	140 x 750 x H100	ABS	0.99	750 x 1200 x H2360	200
<b>FLAT T160</b>	180 x 750 x H100	ABS	1.18	750 x 1300 x H2350	120
<b>FLAT T200</b>	220 x 750 x H100	ABS	1.46	750 x 1200 x H2410	100

## CUBE



CUBE	Actual size (mm)	Material	Weight (kg)	Package dimension (mm)	Nr. pieces per pallet
<b>CUBE C120</b>	150 x 150 x H100	ABS	0.34	750 x 1200 x H2100	500
<b>CUBE C160</b>	190 x 190 x H100	ABS	0.58	1000 x 1200 x H2100	500
<b>CUBE C200</b>	230 x 230 x H100	ABS	0.77	1000 x 1200 x H2200	300
<b>FLAT C120</b>	150 x 150 x H100	ABS	0.27	750 x 1200 x H1600	500
<b>FLAT C160</b>	190 x 190 x H100	ABS	0.36	750 x 1200 x H2200	500
<b>FLAT C200</b>	230 x 230 x H100	ABS	0.48	1200 x 1200 x H2200	300

# ITEMS AND ACCESSORIES



- ① SUPPORTING PROP
- ② PROP FORK
- ③ WOODEN BEAMS
- ④ TIMBER INFIL
- ⑤ SKYDOME CUBE
- ⑥ SKYDOME BEAM
- ⑦ SKYDOME DOME

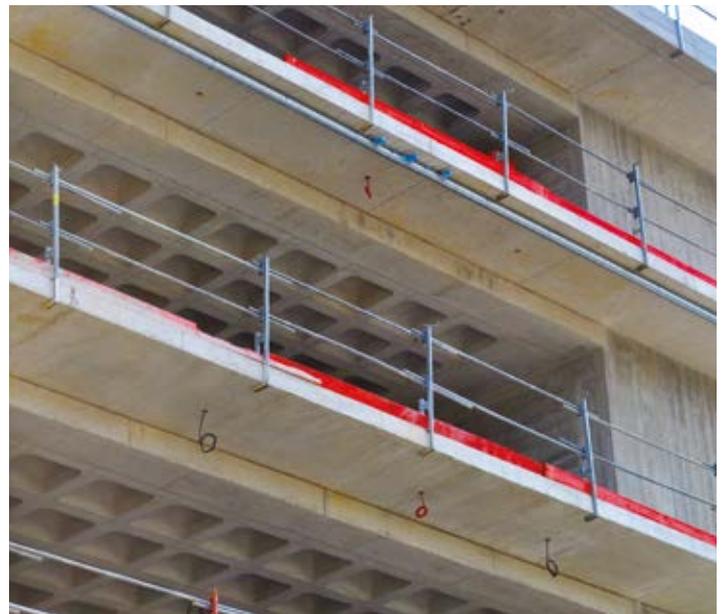
# FLAT SYSTEM

SKYDOME flat can be installed directly on a flat slab formwork. The final result is a two-way waffle slab - is identical to the one obtained with standard SKYDOME elements. All system items are easy to dismantle and can be cleaned just with water before being ready for reuse.



# LARGE SPANS

SKYDOME system allows the creation of two-way hollowed slabs which reduce the use of concrete, thus decreasing the self weight of the structure. SKYDOME reusable elements are used to form decks on which the concrete can be poured. Once the concrete has cured, SKYDOME will be removed, thus obtaining a smooth and pleasing ceiling often left exposed by design.



# MULTI-STOREY CAR PARKS

A waffle slab formed with SKYDOME virtually eliminates the need for drop beams and column heads. This makes the soffit completely flat removing all obstacles to the passage of tubes, plumbing and all systems, making their installation easier and more economical.



# MULTI-LAYER BUILDINGS

The self-weight of concrete slab formed with SKYDOME is up to 30% lower than a full concrete slab. This is a distinct advantage as it reduces the oscillation of a building during an earthquake, thus increasing its structural resistance. Moreover the weight reduction of the slab allows design and cost advantages for the overall concrete frame.





# ACOUSTIC PERFORMANCE

The shape of the dome guarantees a perfect acoustic behaviour in the buildings. This is particularly important in environments such as schools or classrooms where the noise otherwise tends to reverberate reducing speech intelligibility, rendering the room less productive for learning.



# BUILDING RENOVATION

SKYDOME system is a winning solution in terms of restoration.

Its bidirectional configuration is perfect when building slabs, because it allows an homogeneous load distribution all over the existing walls, limiting their solicitation.



# PRELIMINARY DESIGN ANALYSIS

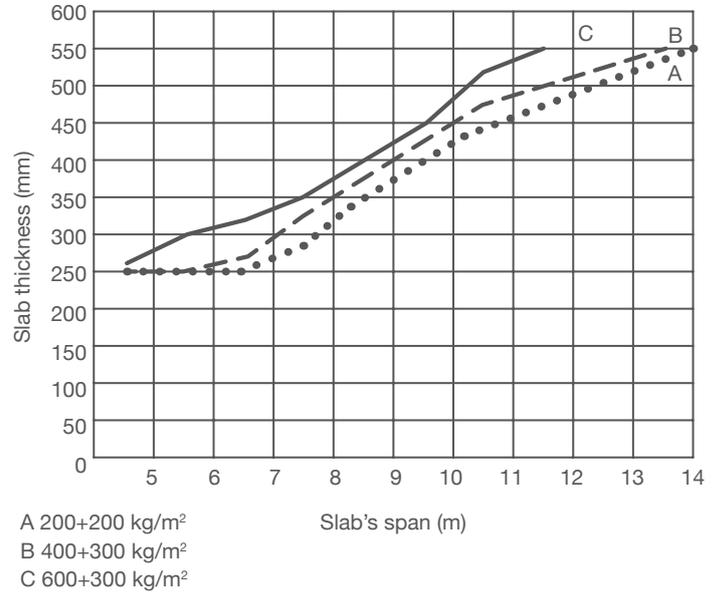
## SLAB DEPTH CALCULATION

On the basis of the design span and the imposed load it is possible to make a preliminary assessment of the required thickness of a SKYDOME slab, as shown in the chart on the right.

### EXAMPLE

Given a load of 600+300 kg/m<sup>2</sup> (live + dead loads) and clear spans (distance between columns) of 8m, the slab thickness is approximately 350 mm (dome + topping slab).

In the case of specific loads or specific design Geoplast's Technical Unit is available for custom modeling and calculation.



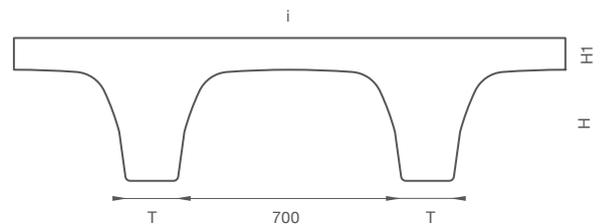
## CONCRETE CONSUMPTION

ITEM	Ribbing width (T) mm	On centres (l) mm	Concrete consumption ribbing m <sup>3</sup> /m <sup>2</sup>	Concrete consumption of the slab m <sup>3</sup> /m <sup>2</sup>		
				Topping slab depth H1 = 50 mm	Topping slab depth H1 = 100 mm	Topping slab depth H1 = 150 mm
SKYDOME H200	120	820	0.080	0.130	0.180	0.230
	160	860	0.091	0.141	0.191	0.241
	200	900	0.100	0.150	0.200	0.250
SKYDOME H250	120	820	0.099	0.149	0.199	0.249
	160	860	0.113	0.163	0.213	0.263
	200	900	0.125	0.175	0.225	0.275
SKYDOME H300	120	820	0.123	0.173	0.223	0.273
	160	860	0.139	0.189	0.239	0.289
	200	900	0.153	0.203	0.253	0.303
SKYDOME H350	120	820	0.151	0.201	0.231	0.301
	160	860	0.169	0.219	0.269	0.319
	200	900	0.185	0.235	0.285	0.335
SKYDOME H400	120	820	0.185	0.235	0.285	0.335
	160	860	0.205	0.255	0.305	0.355
	200	900	0.222	0.272	0.322	0.372

The table to the left allows to calculate the concrete consumption and consequently the self-weight of the floor according to the height of the dome and the width of the ribbing.

### EXAMPLE

For a slab of 300 + 50 mm (300 mm dome + 50 mm topping slab) with ribbing width of 160 mm, the concrete consumption is 0.189 m<sup>3</sup>/m<sup>2</sup> and the self-weight is 472.50 kg/m<sup>2</sup>.



## GEOPLAST TECHNICAL ASSISTANCE

Geoplast Technical Unit, with its staff of structural engineers, guarantees the needed support during all the stages in the worksite. After the analysis of the technical details and the possible restrictions of the construction, the technical staff defines the formwork system's configuration and develops the project, specifying the accessories. Prior agreement, when required, assistance in the worksite during the system's installation, the pouring stage and the removal, is provided.

# SKYDOME INSTALLATION



**1** After the creation of the supporting system (steel props + timber beams) the beams and cubes in ABS are installed in order to build a regular grid where the domes have to be placed. Once the grid is created, the domes will be installed, too.



**2** Working from below, i.e. in maximum safety, the SKYDOME domes are installed on the previously created grid. Once the first elements are in place the system is walkable.

# SKYDOME DISMANTLING



**1** After 6-7 days from the pour, it is possible to dismantle the SKYDOME system removing in sequence steel props, timber beams, cubes in ABS and beams in ABS. The dismantling is done working from below, in complete safety.



**2** After having removed the first two rows of beams and cubes in ABS, remove also the SKYDOME domes. After the dismantling, it is necessary to post-prop the slab until full curing of the concrete.

# SKYRAIL



**REUSABLE FORMWORK IN ABS TECHNOPOLYMER  
FOR ONE-WAY RIBBED SLABS**



# SKYRAIL ADVANTAGES



Reusable formwork system to build mono-directional slabs.

## TECHNOLOGY

SKYRAIL system allows the slab's lightening without any material between the ribs.

## LIGHTNESS

The elimination of the typical lightnings allows weight reductions and a reduced load over beams, pilars and foundations.

## REUSE

ABS plastic allows an easy removal of the formwork for later use.

## SEISMIC MASS REDUCTION

The elimination of the brick elements allows the slab's weight reduction and the obtainment of huge seismic advantages.

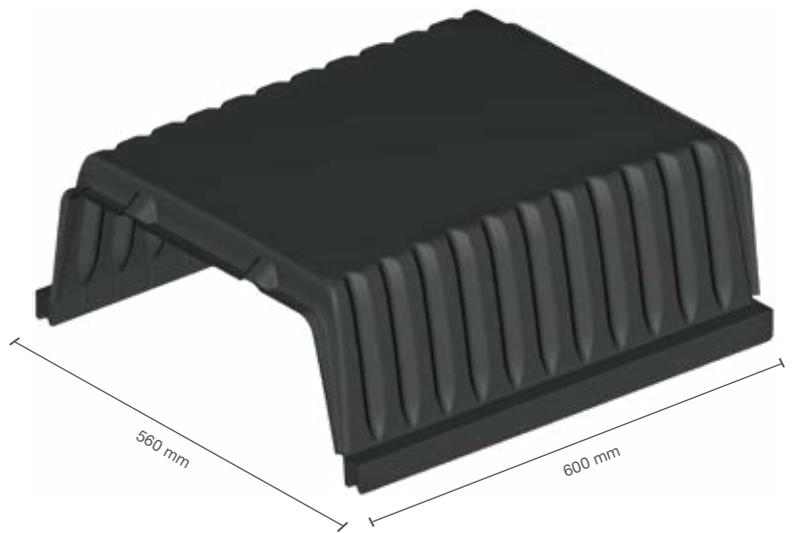
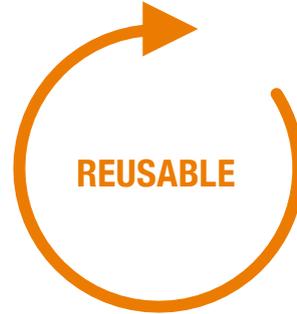
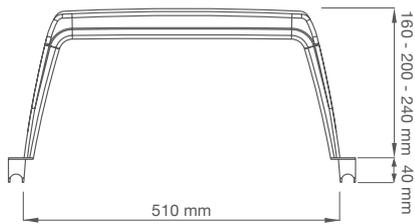
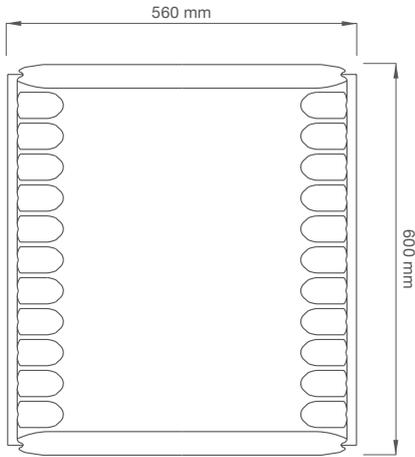
## TECHNICAL EMPTY

The empty which was created with the lightening of the structrute, can be used as a technical room to place the pipes.

## HANDLING

The system's elements are very light and easy to handle, and guarantees the workers safety.

# SKYRAIL TECHNICAL DATA



## SIZE

Base	600 x 560 mm
Heights	160 - 200 - 240 mm

## SKYRAIL MATERIAL

Acrylonitile Butadiene Styrene	ABS
--------------------------------	-----

## SKYBLOCK



The closure element that guarantees the single pour of beams and slab:

- light and easy to handle;
- walls compensation;
- resistant and reusable.

Made of abs, they can easily be cleaned with water before being reused.

# DIMENSIONAL TABLE

## SKYRAIL AND SKYBLOCK



PRODUCT	Actual size (mm)	Material	Weight (kg)	Package dimension (mm)	Nr. pieces per pallet
<b>SKYRAIL H16</b>	560 x 600 x H160	ABS	2.84	1100 x 1250 x H2300	208
<b>SKYRAIL H20</b>	560 x 600 x H200	ABS	2.94	1100 x 1250 x H2320	204
<b>SKYRAIL H24</b>	560 x 600 x H240	ABS	3.05	1100 x 1250 x H2350	200
<b>SKYBLOCK H16</b>	504 x 370 x H130	ABS	1.31	1000 x 1200 x H2300	420
<b>SKYBLOCK H20</b>	504 x 370 x H170	ABS	1.42	1000 x 1200 x H2330	420
<b>SKYBLOCK H24</b>	504 x 370 x H210	ABS	1.52	1000 x 1200 x H2350	420

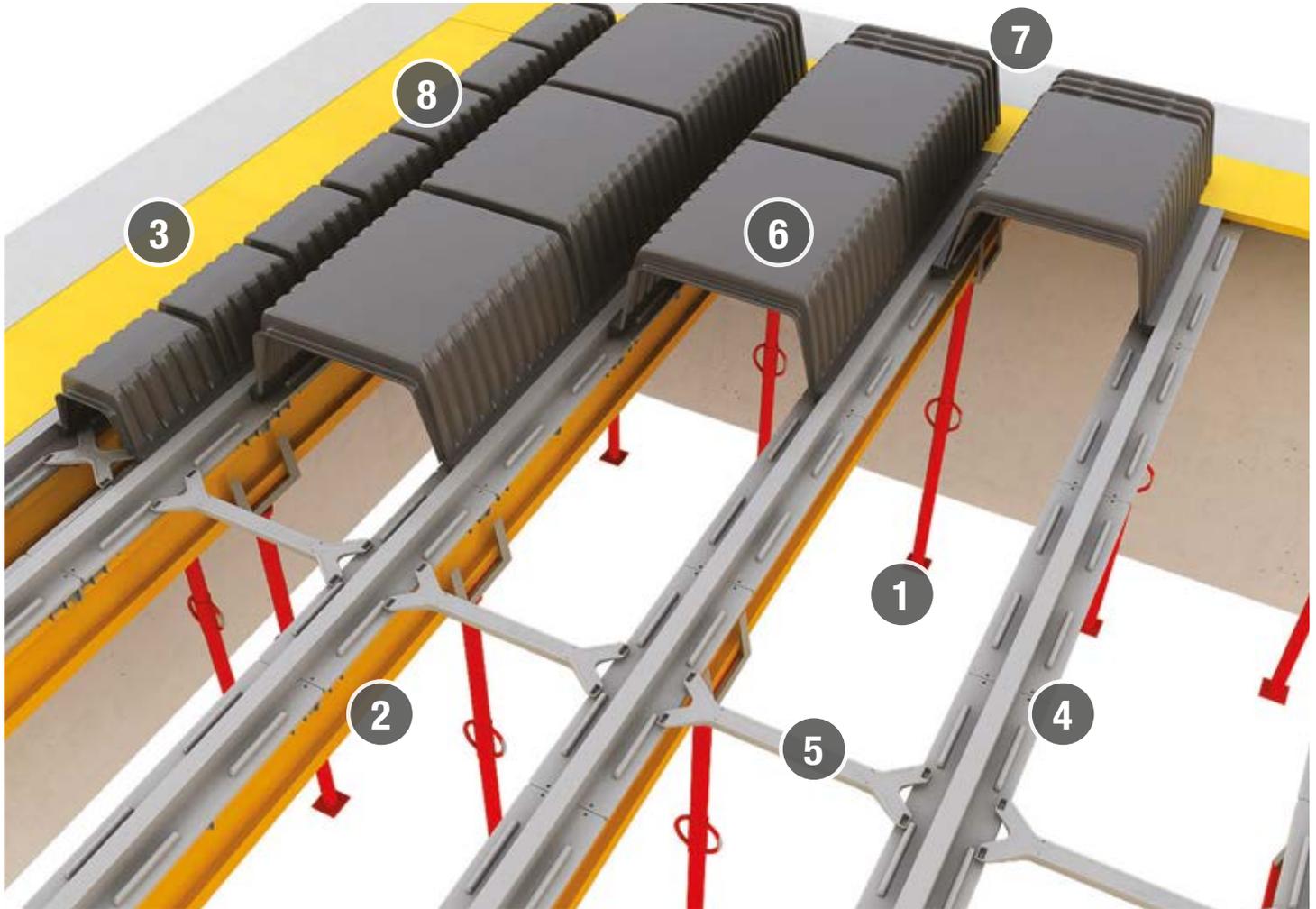
## ACCESSORIES



PRODUCT	Actual size (mm)	Material	Weight (kg)	Package dimension (mm)	Nr. pieces per pallet
<b>MINI SKYRAIL</b>	260 x 300 x H160	ABS	0.74	800 x 1200 x H2300	650
<b>MINI SKYBLOCK</b>	144 x 208 x H130	ABS	0.34	1000x 1200 x H2330	650
<b>BEAM T</b>	160 x 600 x H124	ABS	1.26	1000 x 1200 x H2200	300
<b>SPACER SK30</b>	300	ABS	0.06	BAGS	
<b>SPACER SK60</b>	600	ABS	0.16	BAGS	

# COMPONENTS AND ACCESSORIES

SKYRAIL is a complete system that covers all the worksite needs. Thanks to its complete range of accessories, it allows both side and longitudinal compensations. The shoring is extremely easy using props and reinforced beams.



① SUPPORTING PROP

② WOODEN BEAMS

③ TIMBER BEAMS

④ SKYRAIL BEAM IN ABS

⑤ SPACER

⑥ SKYRAIL DOME IN ABS

⑦ SKYBLOCK CAP

⑧ MINISKYRAIL + MINI SKYBLOCK

## REUSABLE FORMWORK FOR SLABS



SKYRAIL is a reusable formwork system that allows the building of one way slabs with many advantages: structural, weight reduction; on the worksite, easy and safe installation; building advantages, creation of a technical empty between the slab's ribs. The system is completely walkable and guarantees the workers safety.

SAFE WORKING  
CREATION OF A TECHNICAL ROOM  
REUSABLE FORMWORK



# TECHNICAL VOID

In the technical void of SKYRAIL, it is possible to place the pipes (plumbing and electrical systems). The intrados needs to be combined with a ceiling to have a flat finishing; the ceiling system allows the simplification and the modification of the light spans location to make easier a potential maintenance and reparation of the systems.



# REDUCTION OF SEISMIC MASS

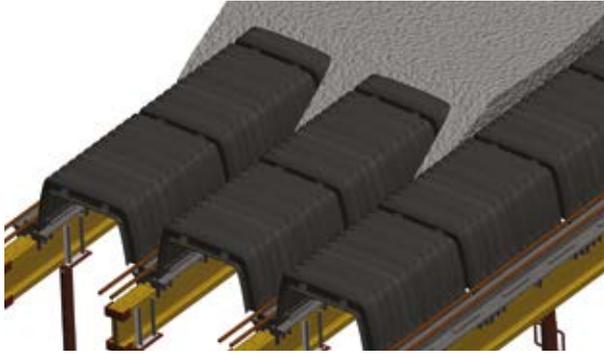
A fundamental advantage of the lightened slabs system SKYRAIL, is the reduction of the slab's weight of the 20%. This leads to the reduction of the seismic mass avoiding structural failures. Furthermore, it is also possible to non-invasively size the vertical structure of the building.



# COMPARISON WITH TRADITIONAL SYSTEMS

## SKYRAIL

Reusable formwork in ABS technopolymer for one-way ribbed slabs.



## BRICK CEMENT

System for the creation of monodirectional slabs that imply the place of brick-cement blocks on the beams.

## PRECAST FLOOR PLATE IN EPS

Lightening system for monodirectional slabs with polystyrene elements.

## SOLID FULL SLAB

Creation of concrete solid ceilings without lightening elements.

	SKYRAIL	BRICK CEMENT	PLATES IN EPS	FULL
LIGHT SLAB	✓	✗	✓	✗
MASS REDUCTION	✓	✓	✓	✗
REDUCTION LOAD ON VERTICAL STRUCTURE	✓	✗	✓	✗
CREATION A TECHNICAL VOID	✓	✗	✗	✗
EASY TO INSTALL	✓	✗	✓	✓
INSTALLATION FROM BOTTOM	✓	✗	✗	✗
REUSABLE	✓	✗	✗	✗
SPACE-SAVING IN THE WORKSITE	✓	✗	✗	✓
WITHSTANDS WHATHERINGS	✓	✗	✗	✓

# PRELIMINARY DESIGN ANALYSIS

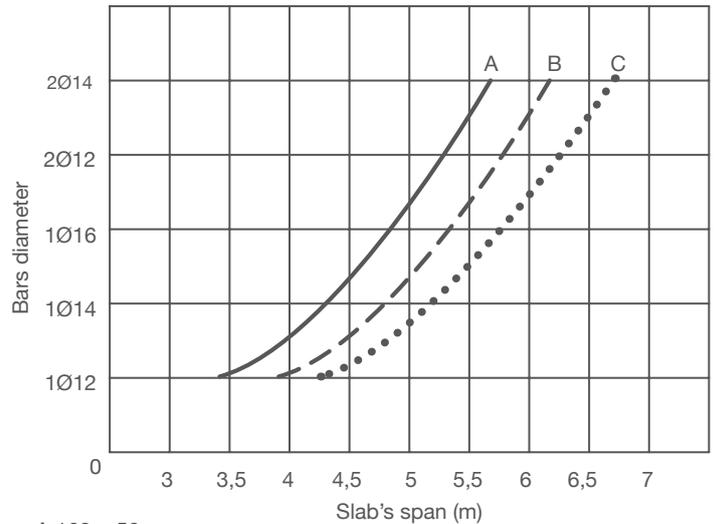
## THICKNESS EVALUATION

From the adjacent table, it is possible to determine the thickness and the minimal reinforcement to insert in the beams according to the calculation and the loads over the slab.

## EXAMPLE

For a load of 200+200 kg/m<sup>2</sup> (live + dead) and light spans (distance between the beams) equal to 6m, the thickness will be of 240+50 mm (dome + slab) with a minimal reinforcement from 2Ø12.

For particular loading conditions it is recommended to carry out ad-hoc modellings and contact Geoplast's technical unit.



- A 160 + 50 mm
- B 200 + 50 mm
- C 240 + 50 mm

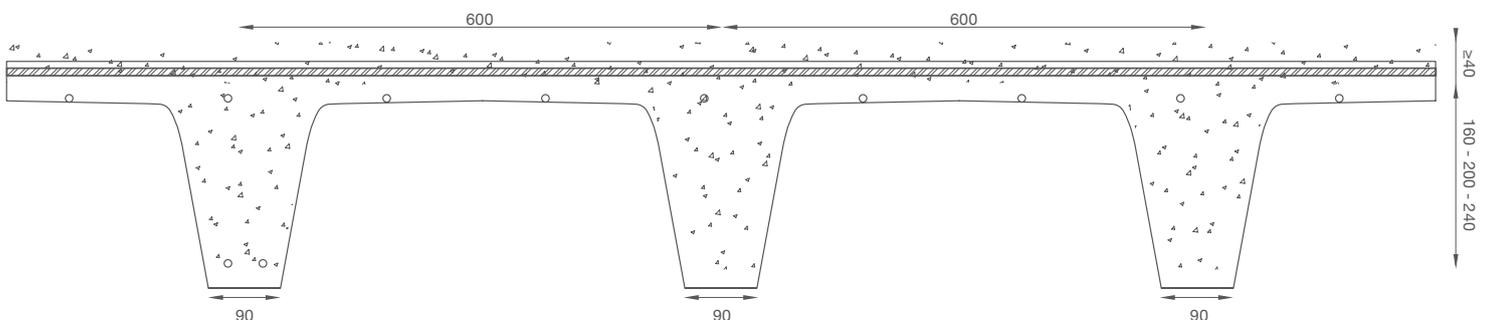
## CONCRETE CONSUMPTION

PRODUCT	Edge filled concrete consumption m <sup>3</sup> /m <sup>2</sup>	Slab mm	Total concrete consumption m <sup>3</sup> /m <sup>2</sup>	Slab's weight kg/m <sup>2</sup>
SKYRAIL H16	0.037	40	0.077	192.50
		50	0.087	217.50
		60	0.097	242.50
SKYRAIL H20	0.055	40	0.092	230.00
		50	0.102	255.00
		60	0.112	280.00
SKYRAIL H24	0.064	40	0.104	260.00
		50	0.114	285.00
		60	0.124	310.00

The adjacent table allows the calculation of the concrete consumption and consequently the slab's self-weight according to the dome's height and the thickness of the upper slab.

## EXAMPLE

For a slab of 240 + 50 mm (240 mm dome + 50 mm upper slab) the concrete consumption will be equal to 0.114 m<sup>3</sup>/m<sup>2</sup> for a weight of 285 kg/m<sup>2</sup>



## GEOPLAST TECHNICAL ASSISTANCE

Geoplast Technical Unit, with its staff of structural engineers, guarantees the needed support during all the stages in the worksite. After the analysis of the technical details and the possible restrictions of the construction, the technical staff defines the formwork system's configuration and develops the project, specifying the accessories. Prior agreement, when required, assistance in the worksite during the system's installation, the pouring stage and the removal, is provided.

# SKYRAIL FORMWORK



**1** Once the supporting system is built (props+ wooden beams), place the beam elements made of ABS that create a regular support base for the domes.

**2** Starting from the bottom, SKYRAIL domes and SKYBLOCK closure accessories are placed. Once the installation is completed, the system is dry walkable.

# SKYRAIL FORMWORK REMOVAL



**1** 6-7 days after the pouring, it is possible to start SKYRAIL system's removal, removing the props, the yellow beams and the ABS beams in sequence. The operation starts always from the bottom.

**2** After the removal of the first two rows of ABS beams, it is possible to remove SKYRAIL and SKYBLOCK domes. When this operation is completed, the system should be shored again, in order to keep the shoring until 28 days after the concrete maturation.

# AIRPLAST



## PERMANENT VOID FORMER FOR LIGHTWEIGHT ONE-WAY SLABS



# AIRPLAST ADVANTAGES



The most advanced system for the lightening of prefabricated slabs and the construction of completely cast on-site slabs

## STORAGE



As the lightnings are made of plastics, the forms can be stored in any place without any damage.

## FAST



Installation is extremely fast, the lower locking system allows anchoring to the fresh concrete.

## WALKABLE



AIRPLAST is completely walkable, without the risk of breakage at the edges as it happens with polystyrene.

## NO SOAKING



AIRPLAST is made of polypropylene, a waterproof element which prevents and avoids any soaking issue.

## NO VENTS



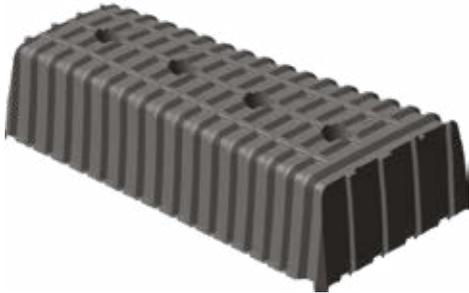
Within the formwork there is only air. There is no need of ventings as on polystyrene systems.

## FINISHING



The previous advantages ensure a perfect finishing of the intrados in a workmanlike and long lasting over time.

# AIRPLAST AND GEOSOL TECHNICAL DATA



## AIRPLAST SIZES

Lenght	850 mm
Heights	120-160-200-240 mm
Width	400 mm

## AIRPLAST MATERIAL

Polypropylene	PP
---------------	----



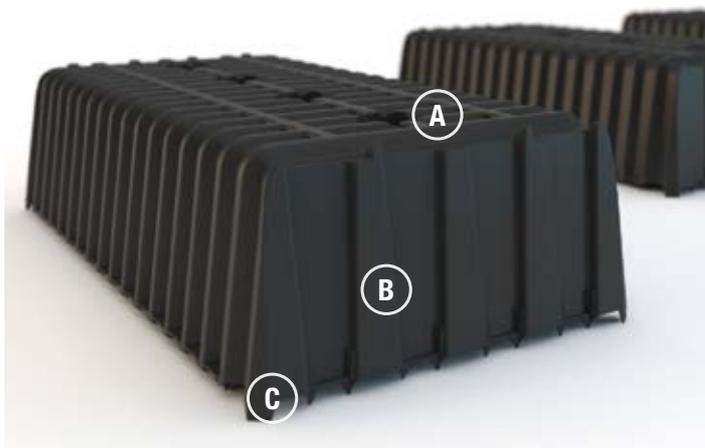
## GEOSOL SIZES

Lenght	735-750 mm
Heights	90-130-170-210 mm
Width	315-325 mm

## GEOSOL MATERIAL

Polypropylene	PP
---------------	----

## AIRPLAST, THE VERSATILE FORMWORK



## WHY THE CENTRAL CONES?

The cones works as storage elements, in order to avoid the slackining of the formwork.

- (A) CENTRAL CONES**
- (B) SIDE STIFFENERS**
- (C) FEET**

# DIMENSIONAL TABLE

## AIRPLAST



PRODUCT	Actual size (mm)	Material	Weight (kg)	Package dimension (mm)	Nr. pieces per pallet
<b>AIRPLAST H12</b>	850 x 400 x H120	PP	1.77	850 x 1200 x H2320	300
<b>AIRPLAST H16</b>	850 x 400 x H160	PP	2.11	850 x 1200 x H2360	300
<b>AIRPLAST H20</b>	850 x 400 x H200	PP	2.49	850 x 1200 x H2400	300
<b>AIRPLAST H24</b>	850 x 400 x H240	PP	2.77	850 x 1200 x H2440	300

## GEOSOL SERIES



PRODUCT	Actual size (mm)	Material	Weight (kg)	Package dimension (mm)	Nr. pieces per pallet
<b>AIRPLAST GEOSOL H9</b>	735 x 315 x H90	PP	1.32	1000 x 1200 x H2400	350
<b>AIRPLAST GEOSOL H13</b>	750 x 325 x H130	PP	1.38	1000 x 1200 x H2400	350
<b>AIRPLAST GEOSOL H17</b>	750 x 325 x H170	PP	1.43	1000 x 1200 x H2400	350
<b>AIRPLAST GEOSOL H21</b>	750 x 325 x H210	PP	1.49	1000 x 1200 x H2400	350

## APPLICATION WITH PREFABRICATED SLABS



Precast floor plates in EPS slabs are commonly identified as a semi prefabricated slab which is composed by a base slab, reinforcement cages and a lightning system; it is produced in a factory and then moved to the construction site. The construction is finished there with the installation of the upper reinforcement and the final pour.



# CURB AND SIDE OFFSETS

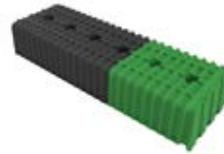
As AIRPLAST is made of recycled polypropylene, it can be cut quickly and easily to make offsets. In the upper side the formwork the cutting point is marked, in this way possible to obtain a correct overlapping of the forms. The cut formwork allows also to follow very precisely any possible inclination of the walls.



LENGTH 850 mm



LENGTH 1040 mm



LENGTH 1240 mm



LENGTH 1430 mm

# WHY IS IT BETTER TO AVOID POLYSTYRENE?

## MAIN ADVANTAGES

**WATERPOOF**

**IMPROVED ADHESION TO THE FRESH CONCRETE THANKS TO THE LOWER FEET**

**PERFECT FINISHING OF THE INTRADOS BECAUSE IT DOES NOT HOLD WATER**

**DOES NOT NEED VENTS FOR OVER-PRESSURES**

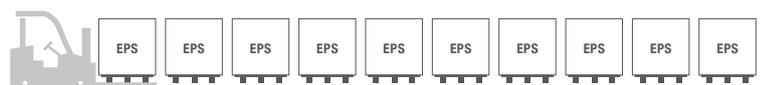
**STACKABLE AND EASY TO STORE IN SMALL PLACES**



1 OF AIRPLAST

=

10 PALLETS OF POLYSTYRENE

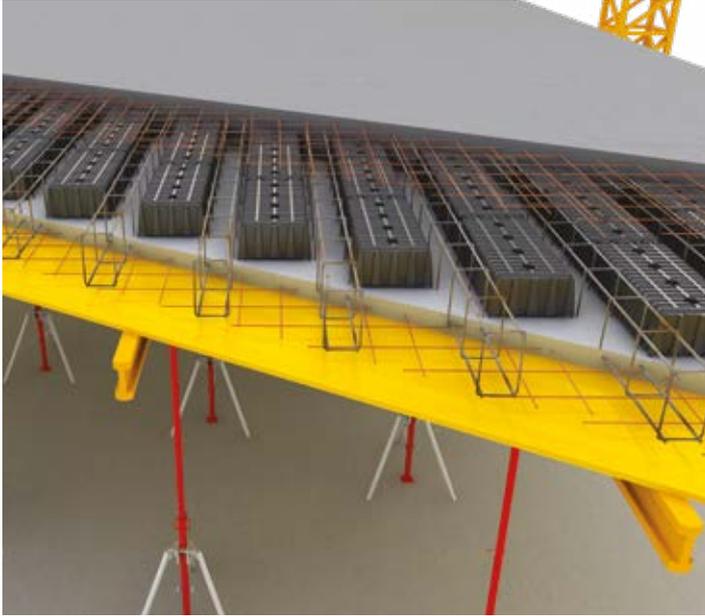


1 TRUCK FOR THE TRANSPORT INSTEAD OF 10



# ON-SITE LIGHTENING

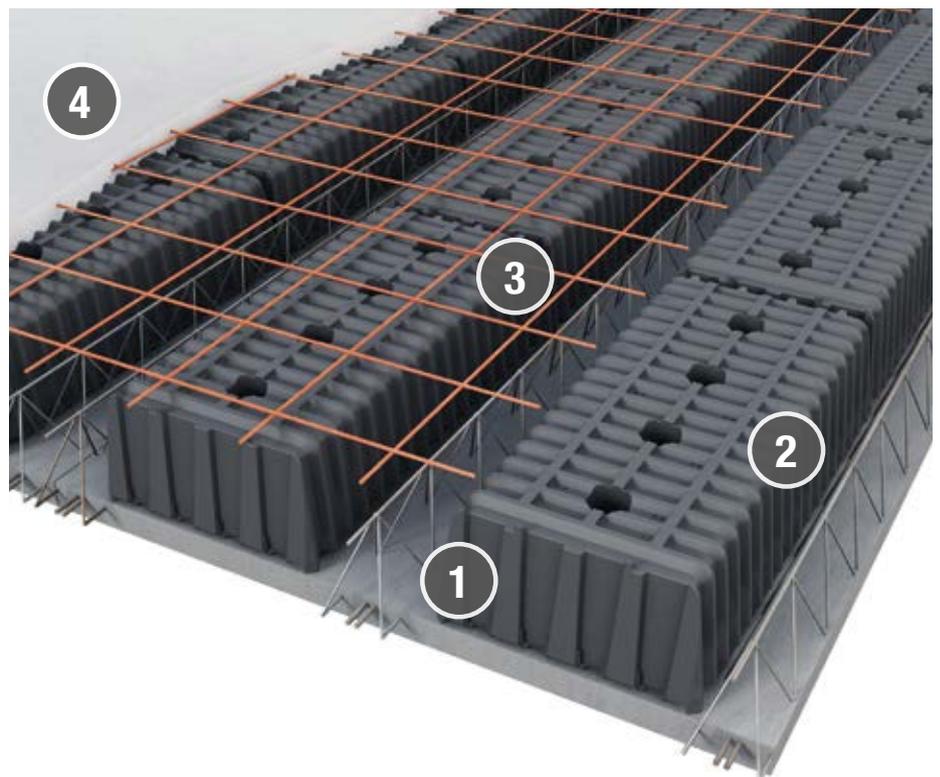
With AIRPLAST it is possible to build cast on-site slabs, such as unidirectional and bidirectional slabs with large spans. AIRPLAST eliminates the use of polystyrene and steel and concrete consumptions are greatly reduced. The high load-bearing capacity and impermeability of AIRPLAST formwork facilitate building operations, allowing the creation of a perfect slab.



## INSTALLATION STAGES:

AIRPLAST formwork can easily be combined with prefabricated slabs. The elements are placed over the fresh concrete and then moved to the construction site ready to be installed. Compared to the polystyrene, AIRPLAST, allows lots of logistics and efficiency advantages.

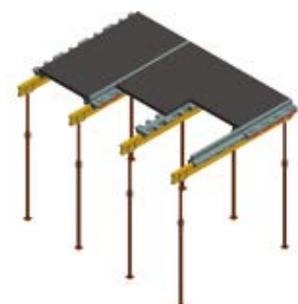
- ① Lower base built in the factory with already inserted reinforcement bars and trellis
- ② AIRPLAST formwork have a precalculated height and it is installed in the factory over fresh concrete
- ③ Pre-installed load-sharing welded mesh
- ④ Final pour of the ribs + upper slab



# GEOSKY



## REUSABLE FORMWORK IN ABS TECHNOPOLYMER FOR FULL CONCRETE SLABS



# GEOSKY SYSTEM ADVANTAGES



Reusable formwork system for the creation of flat decks to place slabs.

## EARLY STRIPPING



The concrete does not stick to plastic, allowing an easy dismantling and a fast cleaning, without using any particular detergent, but just a little water.

## MODULARITY



GEOSKY system is used in combination with GEOPANEL system. GEOPANEL is the only commercially available panel, that allows the creation of flat decks for walls.

## NO RELEASING AGENTS



GEOSKY consists of ABS elements which do not require releasing agents.

## LIGHTNESS



Weighting only 11 kg GEOPANEL can be quickly handled in the construction site, without using cranes or mechanical lifting devices.

## REUSE



GEOSKY is a cost-effective system because it can be used more than 100 times with an appropriate cleaning and use.

## STORAGE



GEOSKY can be completely dismantled and stored in damp locations.

# FORMWORK FOR SLABS



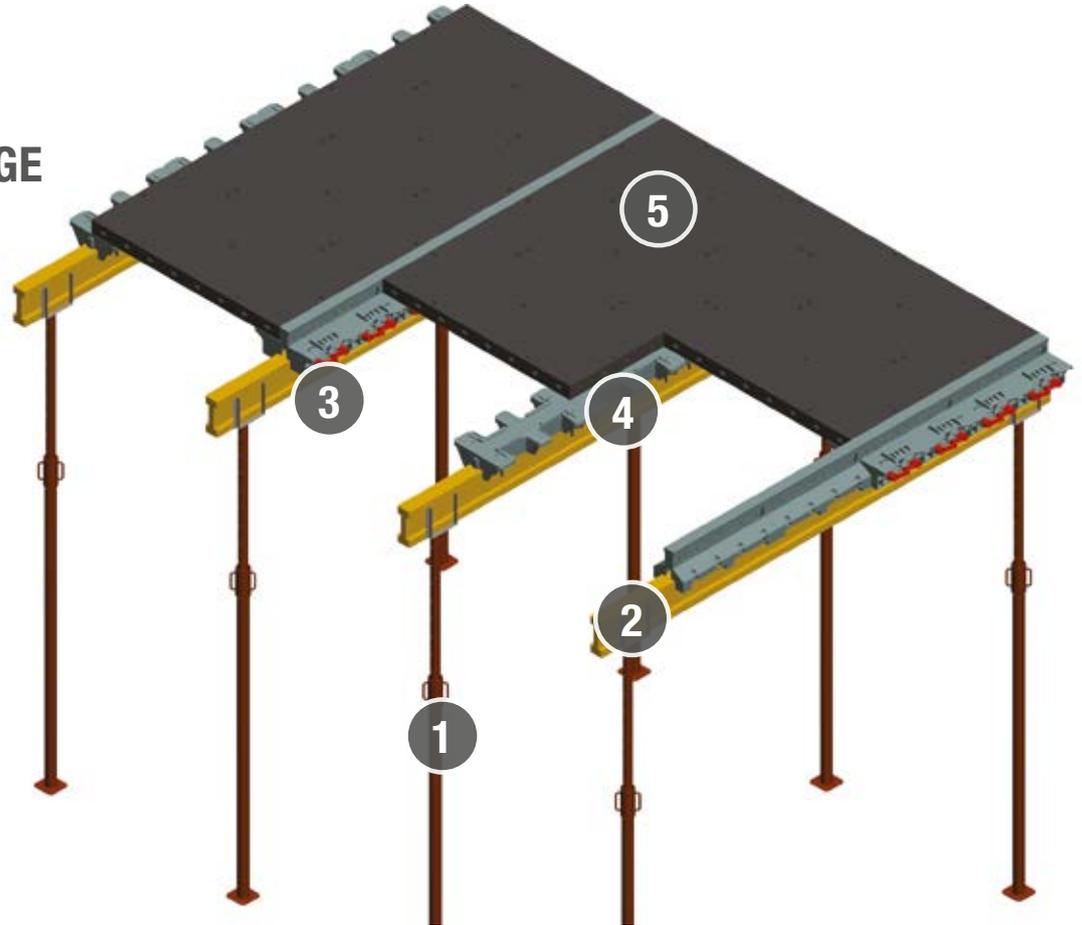
## GEOPANEL INVENTS THE SLAB

GEOSKY, is a reusable formwork system made of plastic for the creation of flat decks to place the slabs. Its innovative system allows, thanks to the main beam with a sliding wedge, a quick installation and disarming. Moreover, it is also possible to reduce the rotation of the formwork material in the construction site, in order to accelerate the pouring stages. The system consists of GEOPANEL panels 1200x600 mm (with maximum weight of 11 kg) and 3 plastic beams that should adequately be placed on H20 wood traditional trusses that allow the early stripping of the formwork system.

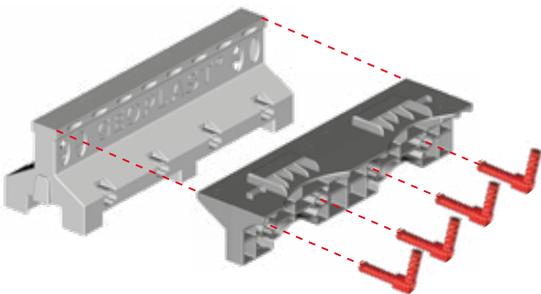


# EARLY DISMANTLING

- ① PROP
- ② WOODEN BEAM
- ③ Y BEAM + WEDGE
- ④ H BEAM
- ⑤ GEOPANEL



## Y BEAM & WEDGE

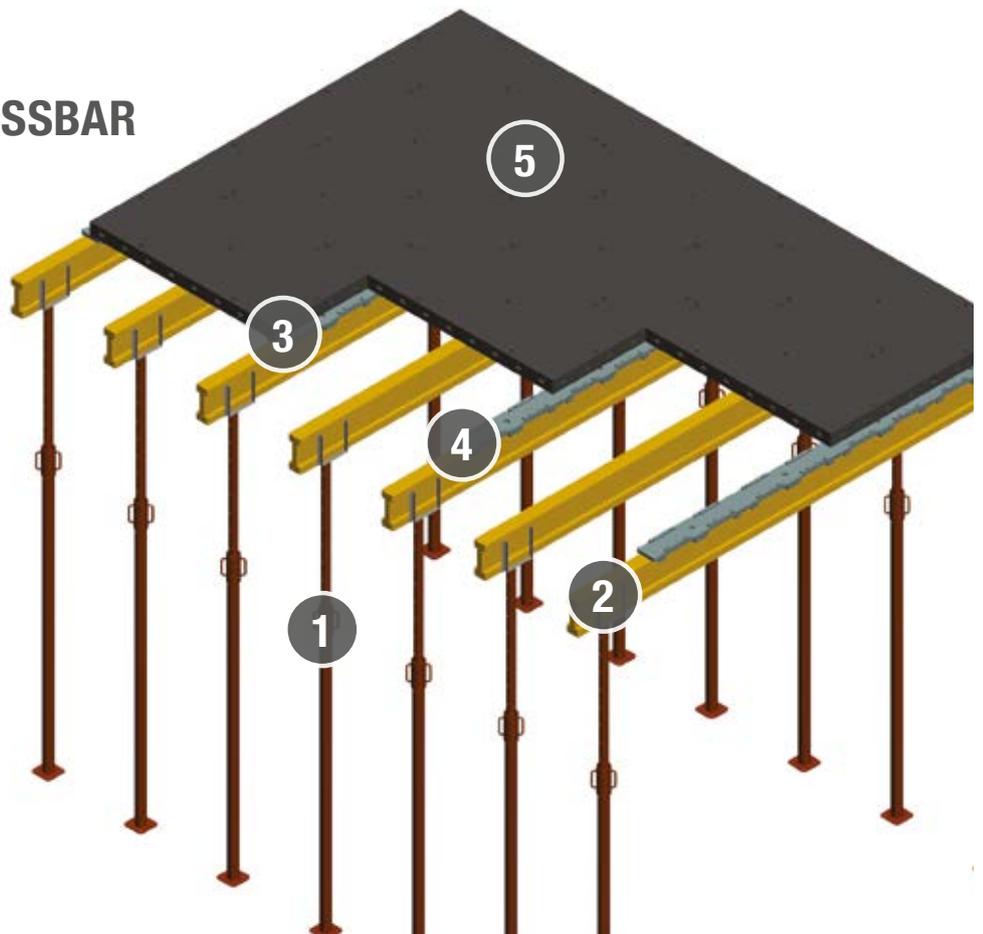


THE WEDGE ALLOWS AN EARLY REMOVAL OF THE FORMWORK  
 The WEDGE is hooked to the Y BEAM through GEOPLAST universal handles, creating a flat deck for GEOPANEL. Once the pouring is completed, it is possible to release the handles and remove the WEDGE, in order to reuse GEOPANEL.

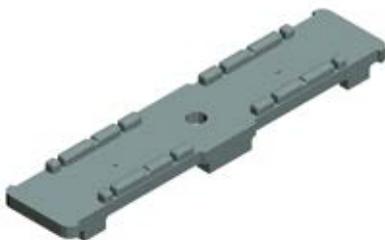
The H BEAM integrates the accessories. It functions as a crossbar. The elements of GEOPANEL are simply placed on it. During the removal stage the first element is removed along with the reinforcement beam.

# STANDARD SLAB FORM SOLUTION

- ① PROP
- ② WOODEN BEAM
- ③ HS PLASTIC BEAM
- ④ WOODEN BEAM CROSSBAR
- ⑤ GEOPANEL



## HS PLASTIC BEAM



HS beam is an alternative to the typical beams we described before (Y, H e WEDGE).

This element allows the maximal reduction of the plastic thickness and it is possible to have just one element for GEOPANEL installation. The HS BEAM does not allow the early removal of the formwork, that is the formwork has to remain operational until the 28° day after the concrete pouring.

# EARLY DISMANTLING

Thanks to its accessories, GEOSKY system, allows the early dismantling of the slab. The early dismantling consists on the removal of a large part of the elements that are included in the system before reaching 28 days of concrete complete consolidation. This operation is facilitated by the Y-BEAM system + WEDGE that allows the removal of GEOPANEL keeping the slab shored and avoiding deformations.



# GEOPANEL SLABS & WALLS

GEOPANEL that is included in GEOSKY system is the only panel that allows the creation of both walls and slabs. As it is made of ABS, it is very resistant (reusable for more than 100 times) and lightweight. It guarantees the handling without any mechanical lifting mean. With a single system it is possible to carry out more than one operation, vertical and horizontal structure, of the same worksite.





# DIMENSIONAL TABLE

## BEAMS



PRODUCT	Actual size (mm)	Material	Weight (kg)	Package dimension (mm)	Nr. pieces per pallet
<b>BEAM Y</b>	191 x 605 x H200	ABS	2.89	1000 x 1210 x H2160	140
<b>WEDGE</b>	160 x 605 x H118	ABS	1.89	750 x 1200 x H1900	204
<b>BEAM H</b>	310 x 605 x H121	ABS	2.96	1200 x 1240 x H1960	120
<b>BEAM HS</b>	130 x 605 x H58	ABS	0.63	750 x 1210 x H2280	594

## GEO PANEL



PRODUCT	Actual size (mm)	Material	Weight (kg)	Package dimension (mm)	Nr. pieces per pallet
<b>GEO PANEL 120 x 60</b>	1210 x 605 x H80	ABS	11.03	750 x 1210 x H2580	38
<b>GEO PANEL 20 x 60</b>	202 x 605 x H80	ABS	2.36	770 x 1210 x H2350	204
<b>GEO PANEL 25 x 60</b>	252 x 605 x H80	ABS	2.73	770 x 1210 x H2400	166
<b>GEO PANEL 30 x 60</b>	303 x 605 x H80	ABS	3.05	770 x 1210 x H2400	140
<b>GEO PANEL 35 x 60</b>	353 x 605 x H80	ABS	3.47	750 x 1210 x H2350	118
<b>GEO PANEL 40 x 60</b>	404 x 605 x H80	ABS	3.68	770 x 1210 x H2400	104

## ACCESSORIES



PRODUCT	Actual size (mm)	Material	Weight (kg)	Package dimension (mm)	Nr. pieces per pallet
<b>GEO PANEL WP</b>	61 x 605 x H80	ABS	6.28	750 x 1200 x H2550	76
<b>HANDLE</b>	-	NYLON	0.1	200 (bag)	

# THE SHORING EARLY DISMANTLING

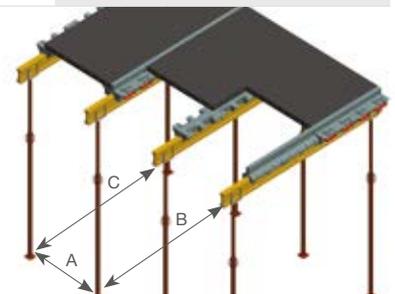
Slab thickness (mm)

FORMWORK INSTALLATION: PROPPING LAYOUT	100	150	200	250*	300	350	400
A - Distance between the reinforcement beams [A] (m)	1.24	1.24	1.24	1.24	0.635	0.635	0.635
B - Distance between the props on Y beams [B] (m)	2.00	1.60	1.40	1.30	1.80	1.60	1.40
C - Distance between the props on H beams [C] (m)	1.80	1.80	1.80	2.20	1.80	1.80	1.60

FORMWORK REMOVAL: PROPS	100	150	200	250	300	350	400
A - Distance between the support beams [A] (m)	-	-	-	-	-	-	-
B - Distance between the props on Y beams [B] (m)	2.00	1.60	1.40	1.30	1.80	1.60	1.40
C - Distance between the props on H beams [C] (m)	3.60	3.30	3.30	2.80	3.30	3.30	2.80

\* insert the crossbar with props spaced 2.2 m

NOTE.: concrete temperature 20°, partial removal presumed on the 5th day, presumed crop type B, opening of 3 m, Q1300 kg



# STANDARD SLAB FORM

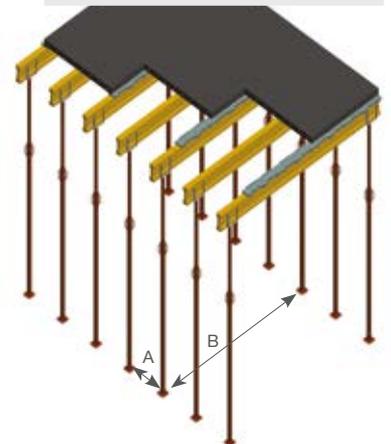
Slab thickness (mm)

PROPPING	100	150	200	250*	300	350	400
A - Distance between the reinforcement beams [A] (m)	0.61	0.61	0.61	0.61	0.605	0.605	0.605
B - Distance between the props on HS beams [B] (m)	3.60	3.30	2.70	2.40	2.10	1.90	1.70

POST - PROPPING	100	150	200	250*	300	350	400
A - Prop layout [1/m]	5.60	4.60	3.70	3.20	2.80	2.40	2.20

\* insert the crossbar

NOTE.: concrete temperature 20°, partial removal presumed on the 5th day, presumed crop type B, opening of 3 m, Q1300 kg



# GEOPLAST TECHNICAL ASSISTANCE

Geoplast Technical Unit, with its staff of structural engineers, guarantees the needed support during all the stages in the worksite. After the analysis of the technical details and the possible restrictions of the construction, the technical staff defines the formwork system's configuration and develops the project, specifying the accessories. Prior agreement, when required, assistance in the worksite during the system's installation, the pouring stage and the removal, is provided.

# INSTALLATION PROCESS

## FORMWORK INSTALLATION



① PLACE THE Y BEAMS +WEDGE



② PLACE THE H BEAMS



③ PLACE GEOPANEL

## REINFORCEMENT AND POUR



④ ADD THE REINFORCEMENT



⑤ CONCRETE POUR

## EARLY REMOVAL



⑥ REMOVAL OF THE H BEAM



⑦ WEDGE REMOVAL



⑧ REMOVAL OF GEOPANEL



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