The universal formwork for columns

• UNIVERSAL
• SIMPLE
• FAST

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CONSTRUCTION and RESPECT: this is the vision that characterizes the work of Geoplast. To erect buildings respecting the environment. Starting from the choice of raw materials. Our plastic formwork perfectly embodies this principle.

THE ANNUAL WORLD CONSUMPTION OF WOOD IS EQUAL TO 1.5 BILLION M³, OF WHICH 55% IS USED IN CONSTRUCTION

After having exhausted the sources of timber in South-East Asia and Central Africa, logging is causing the deforestation of the Amazon rainforest which is considered the green lung of our planet.

During the last 3 decades almost 55 milion hectares of forest were cleared in this zone, a surface equal to France surface.

In view of this problem, we decided to contribute realizing plastic formworks, using a recyclable material which is the only possible eco-friendly alternative to wood and cardboard.

We realized them taking into consideration their weight in order to reduce the energy consumption. Energy is necessary for their movement and we think that this is a form of respect too.

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**THE ALTERNATIVE**

**TECHNOPOLYMER FORMWORK**

**GEOPANEL STAR** is an adjustable formwork for square and rectangular concrete columns. Made of ABS technopolymer, it is a new idea of formwork: light and modular, it’s easy to handle and maintain, convenient to transport and to store for further use.

**Why ABS**

(Acrylonitrile Butadiene Styrene)

- High mechanical resistance •
- Shock resistance •
- Thermal stability •
  (-30°C / + 70°C; -22°F / + 158°F)
- Very high surface quality •
- Recyclable •

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GEOPANEL STAR

ADVANTAGES

The only light, reusable and modular system for the construction of reinforced concrete columns

light
Weighting just 11 kg, GEOPANEL STAR can be handled quickly on-site without the use of cranes or mechanical lifting devices

fast
Light and easy to assemble, it can be installed and handled by a single person

modular
All the elements are 60 cm long. The elements needed for the pour are assembled and used as required

reusable
GEOPANEL STAR is cost effective as it can be used more than 100 times with an appropriate cleaning and use

dismantling
Concrete doesn’t stick to plastic: dismantling is extremely easy, the form can be cleaned using just a little water, without any need of detergents

storage
GEOPANEL STAR can be safely and conveniently stored even in a damp and wet environment
GEOPANEL STAR

MODULAR FORMWORK

Up to 80 kN/m² fresh concrete pressure

GEOPANEL STAR MATERIAL

<table>
<thead>
<tr>
<th>Material</th>
<th>Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylonitrile Butadiene Styrene</td>
<td>ABS</td>
</tr>
<tr>
<td>Coefficient of thermal expansion</td>
<td>0,05 mm/m/°C</td>
</tr>
</tbody>
</table>

SIZE

<table>
<thead>
<tr>
<th>Size</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smallest side</td>
<td>12 cm</td>
</tr>
<tr>
<td>Largest side</td>
<td>100 cm</td>
</tr>
<tr>
<td>Height</td>
<td>60 cm (60,5 cm)</td>
</tr>
</tbody>
</table>

The handle

The standard fixing element for all Geoplast Formworks

- Light and intuitive
- Firmly locks with a simple 90 degree turn
- Strength guaranteed by special engineered materials

HANDLE MATERIAL: POLYAMIDE - COEFFICIENT OF THERMAL EXPANSION 7-10 (1/K 10⁻⁵)
FORMWORK

Items and accessories

DIMENSIONAL TABLES

<table>
<thead>
<tr>
<th>GEOPANEL STAR 20-60</th>
<th>GEOPANEL STAR 25-65</th>
<th>GEOPANEL STAR 70-100</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>actual size (cm)</strong></td>
<td><strong>68 x 60,5 x 8</strong></td>
<td><strong>73 x 60,5 x 8</strong></td>
</tr>
<tr>
<td><strong>material</strong></td>
<td><strong>ABS</strong></td>
<td><strong>ABS</strong></td>
</tr>
<tr>
<td><strong>weight (kg)</strong></td>
<td><strong>6,40</strong></td>
<td><strong>6,80</strong></td>
</tr>
<tr>
<td><strong>package size (cm)</strong></td>
<td><strong>75 x 120 x H258</strong></td>
<td><strong>75 x 120 x H258</strong></td>
</tr>
<tr>
<td><strong>No. pieces per pallet</strong></td>
<td><strong>64</strong></td>
<td><strong>58</strong></td>
</tr>
<tr>
<td><strong>No. handles</strong></td>
<td><strong>8</strong></td>
<td><strong>8</strong></td>
</tr>
</tbody>
</table>

GEOPANEL

<table>
<thead>
<tr>
<th>GEOPANEL 35 x 60</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>actual size (cm)</strong></td>
</tr>
<tr>
<td><strong>material</strong></td>
</tr>
<tr>
<td><strong>weight (kg)</strong></td>
</tr>
<tr>
<td><strong>package size (cm)</strong></td>
</tr>
<tr>
<td><strong>No. handles</strong></td>
</tr>
<tr>
<td><strong>No. handles</strong></td>
</tr>
</tbody>
</table>

Dimensions and holes

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The GEOPANEL STAR panel range is adjustable to a range of column sizes from 12 to 100 cm. The different panels can be combined with each other in order to obtain the desired size combination.
GEOPANEL STAR INSTALLATION GUIDE

- A HANDLE
- B SPACER
- C GEOPANEL STAR
- D TIE ROD
- E ALIGNMENT BAR
- F ANCHOR NUT

Handle locking

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Scan the QR-code with your smartphone or click here to access the video!
## ACCESSORIES

<table>
<thead>
<tr>
<th>ACCESSORIES</th>
<th>WEIGHT (kg)</th>
<th>MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>HANDLE</td>
<td>0,1</td>
<td>NYLON</td>
</tr>
<tr>
<td>CAP 43</td>
<td>0,014</td>
<td>ABS</td>
</tr>
<tr>
<td>CAP 25</td>
<td>0,006</td>
<td>HDPE</td>
</tr>
<tr>
<td>ANCHOR NUT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>for tie rod</td>
<td>0,370</td>
<td>NYLON</td>
</tr>
<tr>
<td>BRACE CONNECTOR</td>
<td>1.180</td>
<td>STEEL</td>
</tr>
<tr>
<td>CONNECTOR</td>
<td>0,85</td>
<td>STEEL</td>
</tr>
<tr>
<td>SPACER 15/20/25/30/35/40</td>
<td>0,035 -&gt; 0,070</td>
<td>HDPE</td>
</tr>
<tr>
<td>TIE ROD 75/100/150</td>
<td>0,430 -&gt; 2,150</td>
<td>STEEL</td>
</tr>
<tr>
<td>ALIGNMENT BAR</td>
<td>2,60 -&gt; 9,50</td>
<td>STEEL</td>
</tr>
<tr>
<td>CHAMFER 22x10 / 32x15</td>
<td>0.05 -&gt; 0,08</td>
<td>PVC</td>
</tr>
</tbody>
</table>
COLUMN APPLICATION

The versatile formwork

GEOPANEL STAR is a high-strength column formwork made of tough ABS polymer. It can take all the wear and tear of a construction site while simplifying the concrete forming tasks, reducing the crane workload and improving the site logistics. Adjustable to a range of column sizes, GEOPANEL STAR as a very useful tool for construction sites of any size.

Easy to use
Crane workload reduction
Reusable 100 times

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GEOPANEL STAR panels are perfectly compatible with the GEOPANEL wall formwork. All panels of the two ranges interlock creating very interesting possibilities: extend over and beyond the size limits of the GEOPANEL STAR panels, seamlessly to form columns inserted in RC walls and produced in a single pour.

The GEOPANEL 35x60 panel doubles as as GEOPANEL STAR I2-I5: it is used to form column size of 120 and 150 mm and combines with all panels of the GEOPANEL STAR as well as the GEOPANEL EL ranges.
LARGE BUILDINGS

Ideal for serial columns

GEOPANEL STAR reinforced concrete frames typically include a large number of columns repeating both vertically and horizontally. The GEOPANEL STAR formwork is the ideal tool for RC frames: fast to erect and dismantle, can be handled both with and without a crane, is adjustable to large size range, does not need highly trained personnel for operation. A time saver, and a cost-cutter.

Simplifies operations
Long life-time
Costs reduction

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The GEOPANEL STAR formwork panels come into its own when used as a foundation formwork. Its versatility and ease of use make it ideal as footing and plinth-formwork, making the task really easy: no alteration, cutting or trimming is necessary and site waste is greatly reduced.

Geopanel Star back to basics

High production rate
No lifting equipment needed
Large size range

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GEOPANEL STAR
TECHNICAL GUIDELINES

A) SHORING

Shoring is performed using a connector plate to connect push-pull props to the formwork. Connector plates are available in various sizes to suit any commercially available prop.

B) GROUND ANCHORING

Anchoring to the ground to avoid lifting of the formwork is done using metal brackets and timber.
OPERATION AND MAINTENANCE REQUIREMENTS

POUR
Only immersion concrete vibrators systems are allowed. ABS formwork are not fireproof so do not place it close to hot objects or open flames.

HANDLING
Use GEOPANEL lifting hook to lift the already assembled panels with a crane. Before lifting make sure that the lifting cables have an uniform draft.

PANEL CLEANSING
After every use, cleanse the panel with water (preferably with a pressure washer) any deposit of concrete should be removed with a spatula or a wire brush.

RELEASING AGENT
As long as the panels surface does not show signs of wear, no releasing agents are required.

STORAGE
In order to facilitate the handling and the lifting of the panels and all the accessories, store them on pallets or battens to keep them off the ground. Although the product does not suffer weathering, its preferable to store the panels in a dry place away from direct sunlight.

RATE OF RISE DIAGRAM

SAFETY REQUIREMENTS

The operations of placing, assembling, dismantling, plumbing, handling and cleaning of the product GEOPANEL STAR, as well as the pouring of the concrete, must be carried out by competent and properly trained personal or under supervision of the site manager or a technician of GEOPLAST S.p.A., who must ensure that:

- All above mentioned operations are carried out properly,
- Every person working with the formwork is equipped with suitable tools and personal protective equipment to perform all necessary actions in full compliance of the safety standards,
- All panels and supplied accessories have to be checked before use, those which do not meet the minimum standard of reliability and safety due to any brealage and/or deformation must be discarded,
- The formwork are installed on a perfect flat surface, so as to work safe and ensure a perfect shoring and plumbing of the pillars,
- All connection, alignment and plumb accessories of the formwork need to be properly tightened and secured to the ground before starting the pour.

GEOPLAST S.p.A. disclaims any liability or resposability arising from improper use of GEOPANEL STAR formwork. Any assembly of molds and/or use of accessories not otherwise described in these guidelines must first be approved by GEOPLAST S.p.A.