MODULAR FORMWORK FOR ROUND AND OVAL COLUMNS

geotub

reusable system in ABS

• REUSABLE
• LIGHT
• MODULAR

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CONSTRUCTION and RESPECT: This is the vision which characterizes the work of Geoplast. To build buildings respecting the environment. Beginning from the choice of the 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 resources of timber in Southeast Asia and Central Africa, logging is causing the deforestation of the Amazon Rainforest, which is considered the green lungs of our Planet.

In the last three decades 55 million hectares of rainforest have been cleared, an area corresponding to the territory of France.

This is why we decided to make our contribution creating a line of formwork in plastics, a recyclable material that is the only sustainable alternative to wood and cardboard.

We have made them with special attention to their weight to reduce the amount of energy required for their handling: this is yet another form of respect.
GEOTUB is the first formwork in technopolymer for the construction of round and oval columns; it is a complete system for the production of columns, both for residential and industrial use.

Extremely light and modular, GEOTUB is a new idea of reusable formwork, easy to store and cleanable just with water.

Why ABS
(Acrylonitrile Butadiene Styrene)

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

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GEOTUB

The only light, reusable and modular system for the production of round and oval columns

light

Weighting max 10 kg, GEOTUB can be handled quickly on site without having to use cranes or other mechanical lifting devices.

fast

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

modular

All elements are 600 mm long and only the elements necessary for the pour are used.

reusable

GEOTUB is cost effective as it can be reused more than 100 times when properly used and maintained.

dismantling

Concrete does not stick to plastic: dismantling is extremely easy, the forms can be cleansed using just a little water, avoiding any need of detergents.

storage

GEOTUB can be safely and conveniently stored even in damp places.
GEOTUB
THE MODULAR FORMWORK
Up to 80 KN/m² fresh concrete pressure

**GEOTUB MATERIAL**

<table>
<thead>
<tr>
<th>Acrylonitrile Butadiene Styrene</th>
<th>ABS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient of thermal expansion</td>
<td>0.05 mm/m/°C</td>
</tr>
</tbody>
</table>

**SIZE**

<table>
<thead>
<tr>
<th>Minimum diameter</th>
<th>250 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum diameter</td>
<td>1000 mm</td>
</tr>
<tr>
<td>Height</td>
<td>600 mm (actual size 605 mm)</td>
</tr>
</tbody>
</table>

**The handle**
The standard fixing item for all Geoplast Formwork

Light and intuitive
Firmly locks with a simple 90 degree turn
Strength (guaranteed by specially engineered materials)

**HANDLE MATERIAL:** POLYAMIDE - COEFFICIENT OF THERMAL EXPANSION 7-10 (1/K 10⁻⁵)
## Items and accessories

### DIMENSIONAL TABLES

<table>
<thead>
<tr>
<th>Items and accessories</th>
<th>GEOTUB Ø25</th>
<th>GEOTUB Ø30</th>
<th>GEOTUB Ø35</th>
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</thead>
<tbody>
<tr>
<td><strong>Ø25</strong></td>
<td>Ø250 H605</td>
<td>Ø300 H605</td>
<td>Ø350 H605</td>
</tr>
<tr>
<td><strong>Material</strong></td>
<td>ABS</td>
<td>ABS</td>
<td>ABS</td>
</tr>
<tr>
<td><strong>Weight (kg)</strong></td>
<td>2.96</td>
<td>3.69</td>
<td>4.28</td>
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<tr>
<td><strong>Package size (mm)</strong></td>
<td>810 x 1210 x H2200</td>
<td>930 x 1210 x H2450</td>
<td>1030 x 1210 x H2260</td>
</tr>
<tr>
<td><strong>No. pieces per pallet</strong></td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td><strong>No. handles</strong></td>
<td>6</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Items and accessories</th>
<th>GEOTUB Ø40</th>
<th>GEOTUB Ø45</th>
<th>GEOTUB Ø50</th>
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</thead>
<tbody>
<tr>
<td><strong>Ø40</strong></td>
<td>Ø400 H605</td>
<td>Ø450 H605</td>
<td>Ø500 H605</td>
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<tr>
<td><strong>Material</strong></td>
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<td>ABS</td>
<td>ABS</td>
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<tr>
<td><strong>Weight (kg)</strong></td>
<td>4.78</td>
<td>5.22</td>
<td>5.60</td>
</tr>
<tr>
<td><strong>Package size (mm)</strong></td>
<td>1140 x 1210 x H1900</td>
<td>1210 x 1230 x H2330</td>
<td>770 x 1210 x H2100</td>
</tr>
<tr>
<td><strong>No. pieces per pallet</strong></td>
<td>40</td>
<td>48</td>
<td>20</td>
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<tr>
<td><strong>No. handles</strong></td>
<td>7</td>
<td>8</td>
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</tr>
</tbody>
</table>

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### GEOTUB Ø60
- **Actual size (mm)**: Ø600 H605
- **Material**: ABS
- **Weight (kg)**: 6.48
- **Package size (mm)**: 770 x 1210 x H2350
- **No. handles**: 9
- **No. pieces per pallet**: 20

### GEOTUB Ø70
- **Actual size (mm)**: Ø700 H605
- **Material**: ABS
- **Weight (kg)**: 8.21
- **Package size (mm)**: 870 x 1210 x H2380
- **No. handles**: 10
- **No. pieces per pallet**: 18

### GEOTUB Ø80
- **Actual size (mm)**: Ø800 H605
- **Material**: ABS
- **Weight (kg)**: 8.97
- **Package size (mm)**: 970 x 1210 x H2350
- **No. handles**: 10
- **No. pieces per pallet**: 16

### GEOTUB Ø90
- **Actual size (mm)**: Ø900 H605
- **Material**: ABS
- **Weight (kg)**: 9.80
- **Package size (mm)**: 1070 x 1210 x H2530
- **No. handles**: 11
- **No. pieces per pallet**: 16

### GEOTUB Ø100
- **Actual size (mm)**: Ø1000 H605
- **Material**: ABS
- **Weight (kg)**: 10.70
- **Package size (mm)**: 1170 x 1210 x H2400
- **No. handles**: 11
- **No. pieces per pallet**: 14

### HANDLE
- **Material**: NYLON
- **Weight (kg)**: 0.1
- **Package size (mm)**: 200 pcs. (bag)
- **No. pieces per pallet**: 5000

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GEOTUB INSTALLATION GUIDE

Handle locking

A GEOTUB
B HANDLE

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GEOTUB

POUR HEIGHTS

GEOTUB configuration of a column of 3 mt

<table>
<thead>
<tr>
<th>Ø</th>
<th>Nominal diameter (mm)</th>
<th>Length of single form (mm)</th>
<th>Forms per column of 3 mt (pcs.)</th>
<th>No. handles per column of 3 mt (pcs.)</th>
<th>Column Length (mm)</th>
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<tbody>
<tr>
<td>25</td>
<td>250</td>
<td>605</td>
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<td>60</td>
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<td>90</td>
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<td>100</td>
<td>1000</td>
<td>605</td>
<td>10</td>
<td>110</td>
<td>3600</td>
</tr>
</tbody>
</table>
GEOTUB is the first reusable plastic formwork for the construction of round columns. It allows a fast and easy dismantling without using releasing agents. The panels are very light: they can be handled and installed by a single person. Properly assembled and dismantled, and cleaned just with water, the product can be reused more than 100 times.
MARINE SOLUTIONS

As for all Geoplast formwork, GEOTUB is particularly suited to build columns when working in presence of water, which can make the work difficult and complicated. In this case the use of GEOTUB is the only possible solution, since it is made of ABS. In fact this material, compared to cardboard and steel, does not suffer from degradation due to natural weathering. Moreover, thanks to its lightness and modularity, the work of the laborers is much easier even in difficult situations such as those mentioned above.

Water resistant

Easy to handle
Does not suffer weathering
Reusable

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The size of the columns should be adjusted, extending their cross section, to prevent the hazard of earthquakes. **GEOTUB** modular formwork are easy to handle manually and they allow to work even in narrow spaces, where steel formwork, too heavy and non-dismantlable, can not be used. Moreover the handles allow a lateral installation, thus avoiding to insert the formwork from the top, as with cardboard ones.
In the case of deteriorated concrete and exposed rebar it is necessary to repair columns restoring an adequate concrete cover. The GEOTUB formwork system is ideally suited for this kind of repair job as it is installed around the existing columns (unlike cardboard tubes which are hindered by the presence of any structure above the columns). Its lightweight makes it much easier to use than heavy metal forms.

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The ideal solution for car parks

Most of the GEOPLAST formwork panels share the same module and different systems are compatible with one another. GEOPANEL and the GEOTUB circular column formwork work together very efficiently to produce elliptic columns. This is a very useful tool for the production of elliptic columns in multi-storey car-parks, much appreciated for their slender looks and the better maneuvering space given to vehicles.
Serial production of columns

**GEOTUB** system is highly competitive not just for the construction of in-situ poured columns, but also for the creation of precast columns which can be assembled later. ABS formwork are ideal for the mass production of serial columns as it is very strong and it produce a very smooth concrete finish. Additionally it can be reused over than 100 times.

**Extreme strength**
**Easy to handle inside industrial buildings**
**No dismantling agent required**

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Foundations for electricity pylons

GEOTUB is particularly suited for the construction of new foundations for electricity pylons: this kind of construction site consists of relatively small jobs, often in remote or scarcely accessible locations. The low weight and ease of use make it very simple to handle and transport the GEOTUB forms, reducing the production cycle time and improving safety. GEOTUB elements are easily assembled around existing foundations, greatly simplifying rebuilding or reinforcing jobs.
A) SHORING

The shoring is performed using a steel bracket to connect push-pull props to the formwork. The brackets are available in various sizes to suit any commercially available props.

B) GROUND ANCHORING

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

POUR
Only immersion concrete vibrators are allowed. ABS formworks are not fireproof, so do not place them close to hot objects or open flame.

HANDLING
Use the Geoplast lifting hook to move the assembled GEOTUB elements with a crane. Before lifting make sure that the lifting cables have an uniform draft.

PANEL CLEANSING
After every use, cleanse the panels 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 contact surface of the panels shows no signs of wear, no releasing agent is required.

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

RATE OF RISE DIAGRAM

SAFETY REQUIREMENTS
The operations of positioning, assembling, dismantling, plumbing, handling and cleaning of GEOTUB products, as well as the pouring of the concrete, must be carried out by competent and properly trained personnel 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 formworks is equipped with suitable tools and personal protective equipment to perform all necessary actions in full compliance of the safety standards,
- All panels and the supplied accessories are checked before use, discarding those which should not meet the minimum standard of reliability and safety because of the presence of any breakage and/or deformation,
- The formwork is installed on a perfectly flat surface, so as to work safely and ensure a perfect shoring and plumbing,
- All connection, alignment and plumb accessories of the formworks are properly tightened and secured to the ground before starting the pour.

Geoplast S.p.A. disclaims any liability or responsibility arising from improper use of GEOTUB formwork. Any assembly of molds and/or use of accessories otherwise described in these guidelines must first be approved by Geoplast S.p.A.