

# G-CAST<sup>®</sup>



## ECO-MODULE

### Modular Precast Concrete Tanking System

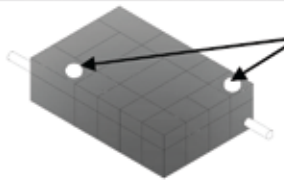
*Underground OSD (On-site Detention) for Urban Stormwater Management*

Patent Pending



## ECO-MODULE for Urban Stormwater Management

Patent Pending



Inspection/  
Maintenance  
Opening

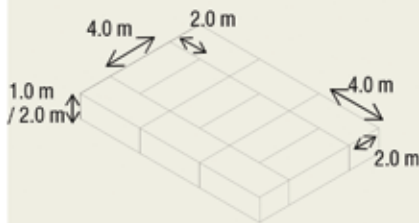
**STANDARD PRODUCT RANGE: 1000 - 4000** MM HEIGHT

**SPECIAL DESIGN:** G-Cast is able to design and manufacture special design modules to suit individual project requirements

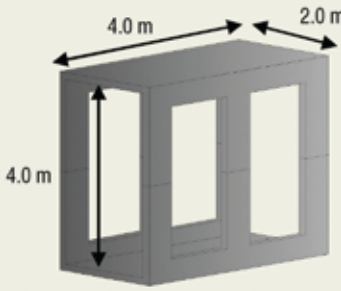
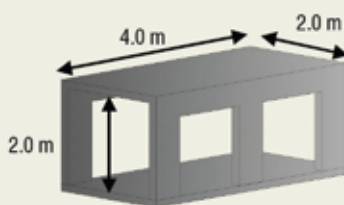
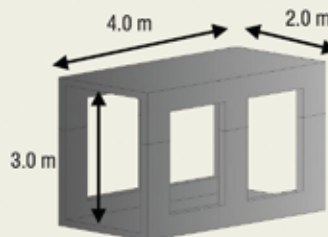
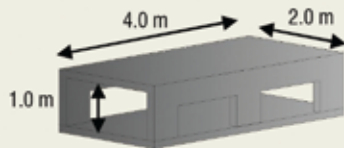
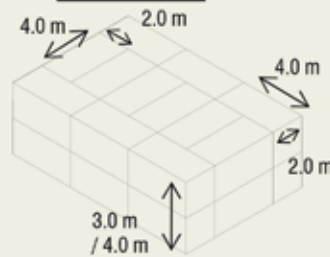
G-Cast's ECO-MODULE is a customized underground stormwater storage tanking system made of high strength precast concrete units. ECO-MODULE consists of a number of individual precast modules installed side by side to form a much larger storage tank. All products are manufactured under a Quality Management System complying to ISO 9001:2008. Customized designs are available to suit project requirements.

### Eco-Module Types & Setup

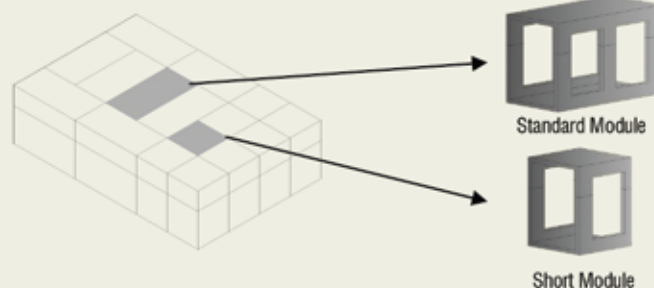
#### Single Module



#### Double Module



**Figure 1**



**Figure 2**

### Applications

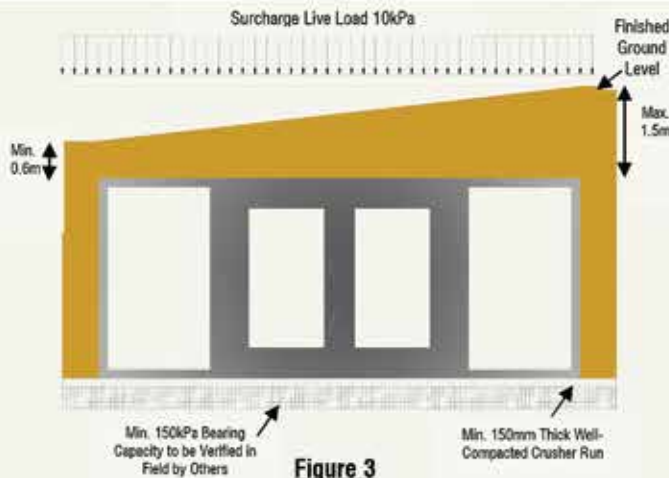
- Water Detention Tank
- Water Retention Tank
- Combined Water Detention & Retention Tank

### Advantages

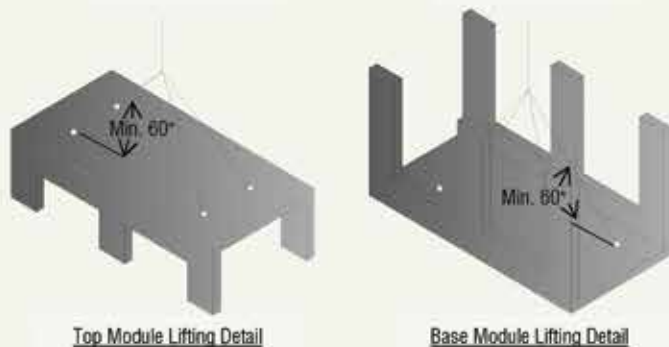
- Tremendous land cost saving since it is built below ground, either underneath parking area, access road or landscape area
- Solution to site with limited available space
- Modular design allows flexible layout to suit available space
- Accessibility for long term maintenance
- Trafficable
- Quick and easy installation
- Available in different heights to cater for different site areas and depths (as shown in Figure 1)
- Units of shorter lengths are available to fulfil individual site requirements such as constraints to handling (as shown in Figure 2)

## ECO-MODULE for Urban Stormwater Management

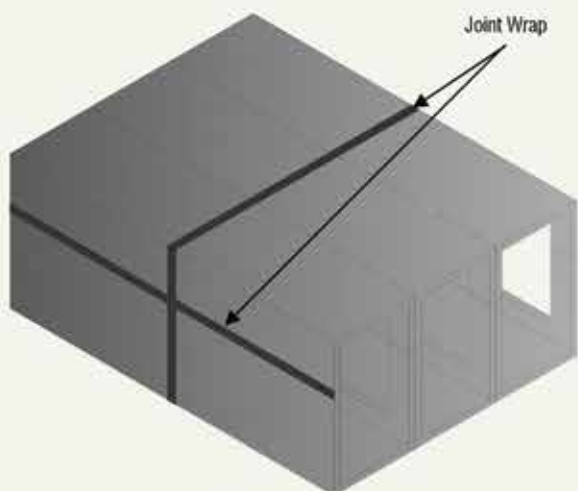
Patent Pending



**Figure 3**



**Figure 4**



**Figure 5**

### Specifications

- Concrete Characteristic Strength at 28 days: 40 N/mm<sup>2</sup>
- Concrete Cover: 30 mm
- Design Loading Criteria  
G-Cast "Eco-Modules" are designed for the load condition shown in Figure 3.

### Handling

- Cables and lifting anchors are to be used to lift "Eco-Modules" as shown in Figure 4.

### Laying

- "Eco-Modules" must be laid on level and compacted bedding to ensure uniform support is provided to eliminate undesirable loads to the modules.

### Jointing

- "Eco-Modules" come with butt end joints.
- Joint wrap is used to cover all exterior joints of adjacent modules as shown in Figure 5.
- G-Cast recommends using SikaBit W-15 or equivalent as the joint wrap of choice. SikaBit provides added advantages compared to others, such as:
  - Providing a silt and soil tight system
  - Safe, easy and fast installation
  - Crack-bridging ability
  - High tear resistance
  - High puncture resistance
- Joint sealant is used between top and base leg connection of the modules to provide additional silt and soil tightness to the system.

### Backfilling

- Backfill material adjacent to "Eco-Modules" should be granular soil and properly compacted.

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**SIRIM**  
ECO-LABEL

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