

LIFTING & INSTALLING CONSIDERATIONS

Satu Bumi Cityscape planters are built to be strong, durable, and last for decades when installed properly. However, large GRC planters can be quite heavy. Therefore, the weight of each GRC planter and the method of lifting them into position should be known prior to ordering and then taken into consideration in their design and installation planning.

■ Forklift Lifting

Satu Bumi's CityScape planters typically come packed in cardboard/timber on individual timber pallets with a convenient four-way forklift entry. However, if the planters are required to be moved with a forklift or trolley jack after or during initial installation without the pallets, consideration should be given to designing forklift entry points into the actual planters.



EXAMPLES OF CARDBOARD PACKING WITH STANDARD PALLETS

■ When Using Pods & Pavers

When heavy planters are going to be installed on high rise buildings in conjunction with pods & pavers, consideration should be given to the inclusion of forklift holes or non-standard high planter feet at the bottom of the planters to facilitate installation. These forklift holes or high planter feet can be positioned below the level of the pavers so they cannot be seen after installation. However, they can also be used with lifting slings. Lifting slings can be a better alternative to the use of lifting lugs with a crawler crane if there is a concern about the crawler crane damaging the waterproof tanking on the destination slab.

Crane Lifting

Planters can be lifted with a crane using slings, brick cages or lifting lugs.

Using Slings for Lifting

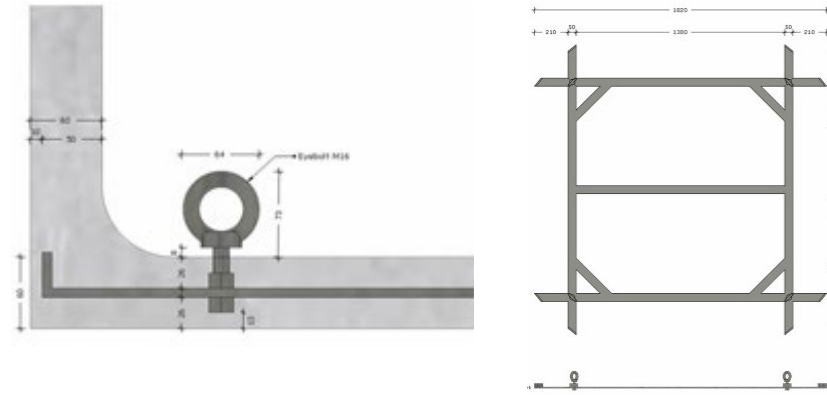
If planters are going to be lifted onto a high-rise building using slings attached to pallets, even though Satu Bumi's standard pallets are normally more than adequate for use with a forklift, it is recommended that the planters should be ordered with AS 4068 compliant pallets. AS 4068 pallets have very specific dimensions for general purpose applications and will add slightly to the overall cost of the planters.



THE PICTURES ABOVE SHOW SATU BUMI PLANTERS, THAT EACH WEIGH JUST UNDER A TON, BEING SLING-LIFTED ONTO A HIGH-RISE BUILDING.

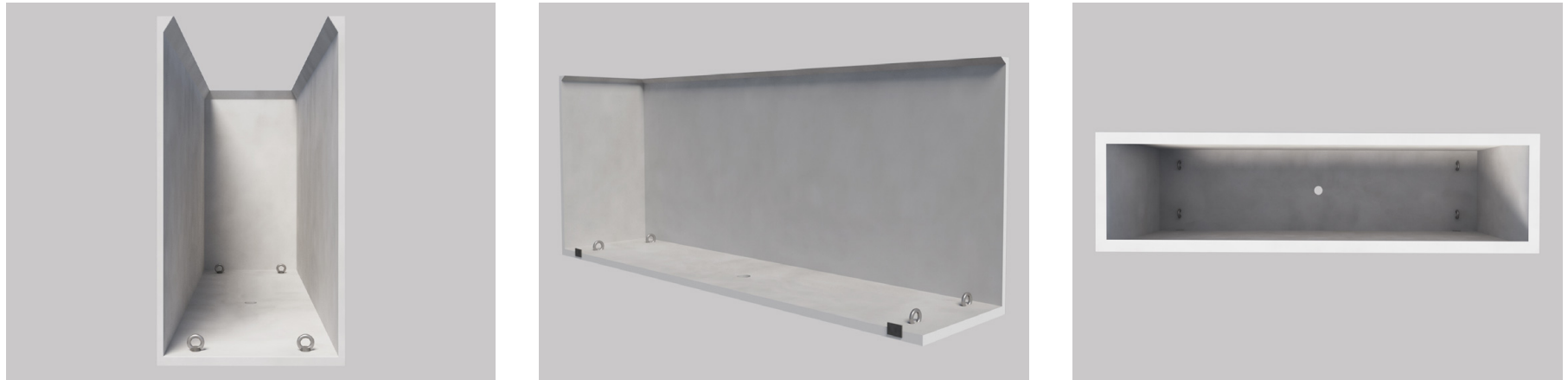
Using Lifting Lugs for Lifting

Satu Bumi GRC planters have the option of imbedded lifting lugs which can be very helpful, or even essential, during the final planter-installation and maneuvering process. In addition, they can also be used for lifting heavy planters onto buildings with large cranes. Satu Bumi's lifting lugs are not just ferrules with imbedded eye bolts. They are an assembly of ferrules, eye bolts and a strong steel frame that is embedded into the bottom of the planters during manufacture as shown in the following schematics: -



LIFTING LUGS

Satu Bumi’s lifting lug design has been rigorously tested at Satu Bumi’s factory with both round and rectangle GRC planters of up to 800Kgs each and has been certified by a structural engineer for crane lifting for several high-rise projects.



THE SCHEMATICS ABOVE SHOW WHERE THE LIFTING LUGS ARE LOCATED ON GRC PLANTERS

However, if lugs are required for use for crane-lifting planters onto high rise buildings, specific certification for the lifting lugs will generally be required on a project-by-project basis. Therefore, this issue should be discussed with a Satu Bumi representative before it is assumed that the lifting lugs will be suitable for any specific project.

■ Satu Bumi Packaging – During Lifting

To avoid damage, it is recommended that GRC planters should be kept in their factory packaging until they are as close as possible to their final installation destination.

Satu Bumi planters come with a unique heavy-duty cardboard top rim cover to protect the planter rims from damage during transport, installation, and planting. Therefore, when the planter packaging is being removed, this cover should be retained on the top rim of the planter whilst lifting or moving the planters and while they are being filled with plants and planting material.



EXAMPLES OF THE USE AND EFFECTIVENESS OF CARDBOARD PLANTER RIM PROTECTORS BEFORE INSTALLATION

Warranty Considerations

Satu Bumi's packing materials and designs for all its GRC products have been carefully considered to ensure they provide appropriate protection from damage during shipping, transport, lifting and installation. Damage caused during shipping and transport arranged by Satu Bumi is covered by Satu Bumi's product warranty. However, chips, scratches and cracking that are caused during installation are not. Satu Bumi will provide direction on how to fix any damage caused during installation. However, it will be the responsibility of the installers to ensure these issues are addressed.

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