OLD WORLD CONCRETES

COLUMNS – PRODUCT INFORMATION AND INSTALLATION GUIDELINES

1. **Hollow, non-structural FRC columns**
   - Certain columns are available as lightweight, hollow, non-structural columns manufactured from Fibre Reinforced Concrete (FRC).
   - A 15% premium applies to the price of these columns.
   - Caps and bases are supplied solid.
   - Please allow sufficient lead time when ordering, as columns are made to order.
2. **Ordering and product information**
   - Caps and bases are supplied loose.
   - Doric or Tuscan caps and bases are included in the per-metre rate, except where otherwise stated.
   - Most columns are also available as pilasters, at 10% less than the corresponding column price.
   - Maximum manufacturing accuracy is 10 mm.
   - Columns measuring 1.5 m or less attract a 30% surcharge on the usual per metre rate.
   - When requesting a quotation, please specify the overall height, including caps and bases.
3. **Reinforcing**
   - Columns are wet-cast in 30 MPa steel-reinforced concrete.
   - Reinforcing cages consist of four steel bars, ranging from Y8 to Y12, depending on the shaft diameter and length.
   - Stirrups consist of 3 mm or 4 mm wire at 200 mm centres.
   - Specialised steel reinforcing can be incorporated during manufacture if required.
   - While Old World Concretes does not accept responsibility for engineering design, we are happy to discuss your requirements with your engineer, if necessary.
4. **Fixing of free-standing columns**

4.1 Foundation preparation

- Columns must be installed on properly prepared and designed concrete foundations.
- Foundation design should take into account:
  - The size and weight of the column.
  - Any anticipated external forces.
  - The nature of the soil conditions.
- A typical free-standing column foundation would have approximate dimensions of 500 × 500 × 200 mm.

4.2 Fixing the base

- Once adequate foundations have been prepared, drill into the foundation and epoxy two or more steel rods of 12 mm diameter.
- Position the rods to correspond with the hole in the centre of the precast base. They should be as close as possible to the sides of the hole to avoid clashing with the shaft reinforcing.
- Alternatively, the steel rods may be positioned during the casting of the foundation.
- Position the precast base over the rods and bed it down using a strong mortar mix (approximately 2 parts crusher sand to 1 part cement by volume).
- Take care not to fill the hole in the precast base.
- Leave the bases undisturbed until at least the following day before positioning the column shafts.

4.3 Positioning and fixing the column shaft

- Immediately before placing the shaft, fill the hole in the precast base with a strong concrete mix consisting of approximately:
  - 2 parts small concrete stone.
  - 2 parts crusher sand.

    - 1.5 parts ordinary Portland cement.
- Lower the column shaft onto the precast base, ensuring that the reinforcing bars extending from the shaft are embedded in the newly placed concrete.
- Check the length of the reinforcing bars before installation and trim them if necessary to avoid delays during installation.
- Plumb the shaft and support it using wedges and timber planks.
- Leave the installation undisturbed until the following day.

4.4 Fixing the cap and completing the installation

- Position the cap on top of the column shaft.
- Fill the hole in the cap using the same concrete mix specified for the base.
- At this stage, incorporate any items required for the next stage of construction into the cap. These may include bolts, wire ties, brackets, reinforcing rods or hoop irons.
- Complete the installation by pointing the joints between the base and shaft, and between the shaft and cap.
- Fill any scratches resulting from handling.
- Do not test the rigidity of the installed column until the concrete has had sufficient time to gain strength.

Disclaimer

The above information is intended as a guide to the correct installation of precast concrete columns. Old World Concretes accepts no responsibility for installations not undertaken by its own representatives.