CHELMSTONE
MAKERS OF CAST STONE

Chelmstone COLUMNS

Installation Procedure for the Classical & Heritage Columns

To ensure a high quality finish is attained the following steps are recommended:

Classical & Heritage Columns Installation
Chelmstone columns are supplied as a non-structural decorative cladding with a hollow centre core. For structural use the hollow core can be used to accommodate a reinforced concrete on structural steel member. The columns are supplied in a component form ie capital, shaft(s) and base or half components. A column should be erected on a suitable foundation designed to suit loading and ground conditions. We strongly recommend that professional advice be taken to ensure that any proposal is designed to be structurally sound.

Bedding and Jointing
All components should be bedded and jointed using sikaflex ensuring it does not spill out past the joint line. Joints should be approximately 6 mm wide; a spirit level must be used to ensure vertical alignment of all the pieces allow for any irregularities in the mating surfaces and provide a full bedding and pointing joint. The joint mortar should be left slightly recessed from the surface of the stonework or subsequently raked out, leaving a rebated joint. Pointing should be carried out using Chelmstone colour matched mix. Alternatively use the bedding mix, colour matched to suit, in which case white cement may be necessary. The joint between the capital stonework and the structure above should be formed using a compressible filler or a weak mortar mix, to form a soft joint and ensure that any loading is carried by the central structural core and not the reconstructed stonework.

Infilling Techniques
It is important that the hollow core of each column section is lined with polystyrene, cauflute (or similar) to act as an isolating medium when column cores are in-filled with concrete. This will accommodate any possible differential movement between the stonework and the concrete core. The isolating material, when inserted, should make continuous contact with the inner core surface. Care should be taken to ensure sufficient overlap of material at both vertical and horizontal joints.
Concrete used to infill the cores should ideally have rounded gravel aggregate of 10 mm maximum size. The concrete should be of medium to high workability to assist core filling whilst minimising the effort required during hand compaction. The use of proprietary concrete plasticising admixtures can assist this operation. All columns with shaft drum sections should be concreted one section at a time. Subsequent concrete pours should only take place after the concrete in the proceeding section has reached its initial set. If the column is used to sleeve a structural steel member, the resulted void between the stone and the steelwork can be left as a void. All materials other than stonework to be supplied by others.

With freestanding decorative columns it is suggested using a starter bar from ground level to 200 mm into the second column shaft. Fill core of gate pier to 150 mm above the started bar. This will also require an isolating medium. With decorative/structural columns it is essential to get the hight accurate. There will only be a 20 mm maximum tolerance. This tolerance will be taken up in the joint between the capital and shaft.

FURTHER POINTERS

1. Measure all pieces to ensure the correct sides are together.

2. All components should be bedded and jointed using sikaflex, ensuring it does not spill out past the joint line.

3. Check for parallel as each section goes on.

4. Once completed ensure the internal bore of the column is surrounded by cauflute, before pouring in concrete. This allows for expansion and contraction (ie expansion joint), which reduces any chance of the column cracking.

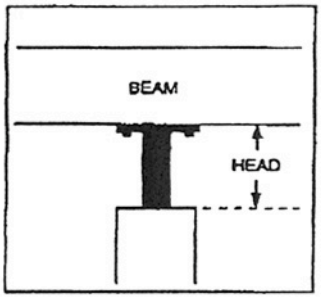
5. Ensure grouting instructions are followed and to clean up any spillage, spots and smears before it dries.

Suggested Methods Of Installation (Columns)

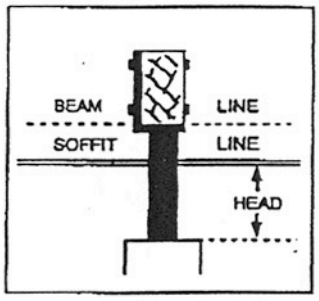
All precast concrete columns manufactured with a continues length of galvanised pipe cast into barrel of column, this pipe carries any load and allows for fixing (Contact supplier for information on pipe loading capacity).

TOP PLATE FIXING

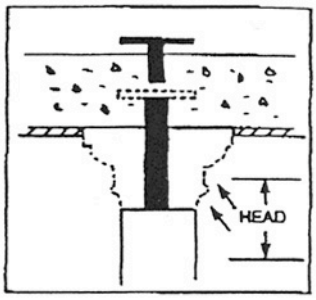
Method (A)



Method (B)



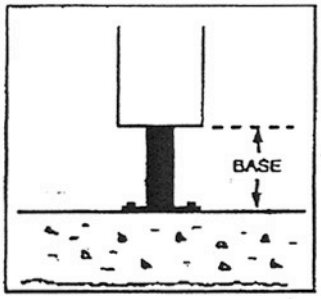
Method (C)



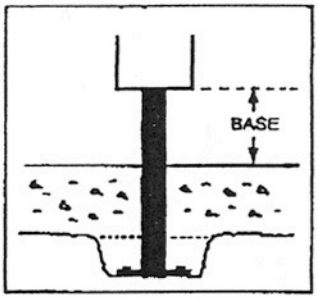
* Standard Top Plate fixing is a rectangular flat plate or a L shape plate.
(Plates generally 8 to 10mm thick with 2 x 12mm holes for fixing).
* For usually fixing special plates can be manufactured on request.

BOTTOM PLATE FIXING

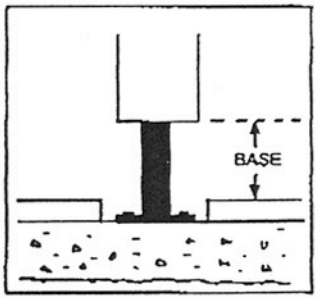
Method (D)



Method (E)

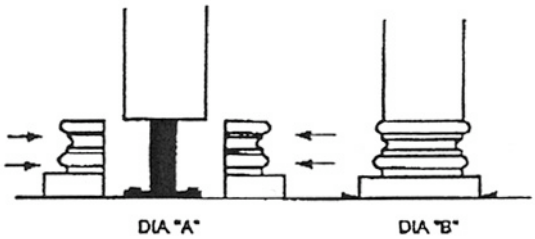


Method (F)



* Standard Bottom Plate fixing is a flat rectangular plate 8 to 10mm thick with 2 x 12mm holes for fixing.
* Should square or larger plates be needed inform supplier when ordering.

HEAD/BASE FIXING

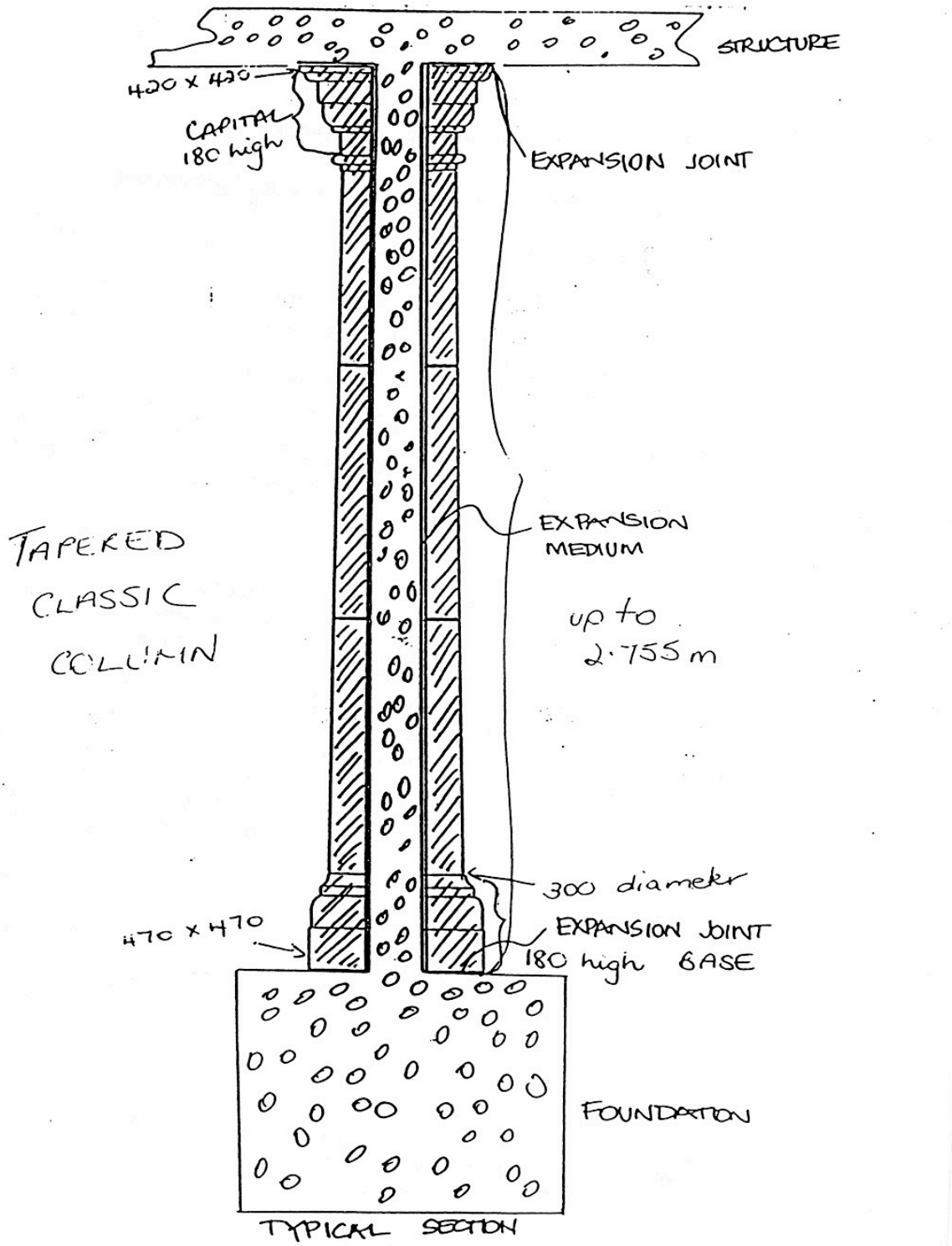


When fixing split heads & bases glue is used to secure as illustrated in the diagram “A”.

(1) Tape halves together using masking tape or similar.
(2) Wedge base and head to correct level and allow glue to dry as in diagram “B”.
(3) Once glue has dried remove wedges and fill gapes with mortar.

Follow manufactures instructions when using glue.

*** This installation sheet is a guide only. Chelmstone Architectural Precast Stone will not be held responsible for any incorrect installations.**



ALL MATERIALS OTHER THAN STONEWORK TO BE SUPPLIED BY OTHERS