



CANZAC[®] COLUMN ISOLATION FORM

BACKGROUND

Many types of building i.e. distribution centres, manufacturing facilities, warehouse and retail buildings are constructed with vertical structural steel column supports that carry the load of the structure, roof and other building components. When constructing these buildings concrete foundations are generally poured at pre-determined locations through the length and width of the building. These foundations support the columns and column loads and are usually connected by the way of anchor bolts that are cast into the foundation on which the column is supported.

The main slab on grade is prepared and poured after the structure and the roof is in place but sometimes the slab is poured first.

What is the Canzac Column Isolation Form (CIF)?

The innovative Canzac Column Isolation Form was developed to optimise programme flexibility, minimise forming time, eliminate stripping and deliver a superior floor finish.

It is a robust galvanised steel leave-in-place profile manufactured to any shape including square, half-square, round and half-round. Supplied with fixing brackets to panels and height adjustable brackets that fix to the top of column foundations. The form is left in place, so no stripping is required.

KEY BENEFITS

- Enhance programme flexibility
- No stripping or patching required
- Eliminates waste
- Can be manufactured to specific requirement
- Allows for expansion and contraction
- Superior floor finish
- Optional capping rebate formers to the top of the former for placement of joint filler



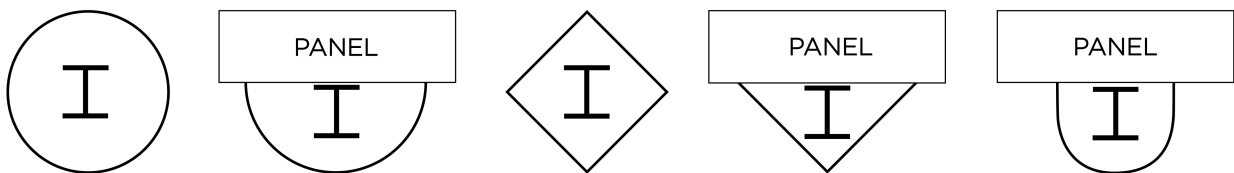
Design Considerations

The placement of columns on or into a concrete ground bearing slab has always required careful consideration by the design engineer and the contractor. In a modern build, the speed of construction to meet tight project delivery programmes demands the contractor to place large areas of a concrete slab in fewer pours than has been done historically.

Concrete cracking propagates from slab-column penetrations and cast in columns in every ground bearing concrete slab as it cures and shrinks. Quality control of concrete slabs requires a superior concrete knowledge with the careful placing of appropriate formwork systems, under-slab vapour barriers and reinforcing detailing.

Column isolation block-outs are typically constructed as illustrated below. At the panel interface, half round or square. While in-slab columns, are diamond shaped with four outer most corners inline with the construction/contraction joints. When the slab is poured it is very important to isolate the columns from the main slab on grade to minimise or eliminate restraint cracking from the columns into the slab. Attention to detail of the reinforcing trimmer bars around the column is key. This specialised reinforcing detailing is required by the design engineer for each of these applications.

Plan View



Where can this system be used?

The Canzac Column Isolation Form can be used in small or large concrete and steel structures where isolated columns are placed through the concrete slab and directly onto the bolted connections embedded in the concrete foundations. The slab is then placed over the foundations and subgrade. This system can be used for conventional, fibre-reinforced and post-tensioned concrete slabs.

The associated cost of the system is negated by:

1. Not having to fabricate the formwork on site.
2. Enabling the column penetration/void concrete to be placed at the same time as the main pour.
3. The steel form is permanently cast into the concrete negating the need for formwork stripping.
5. Compatibility with existing Canzac jointing systems and adaptability to other systems.
6. Optional capping rebate forms to the top of the formwork for the placement of joint sealant.
7. Reinforcing the top concrete edge, reducing spalling and remedial work.