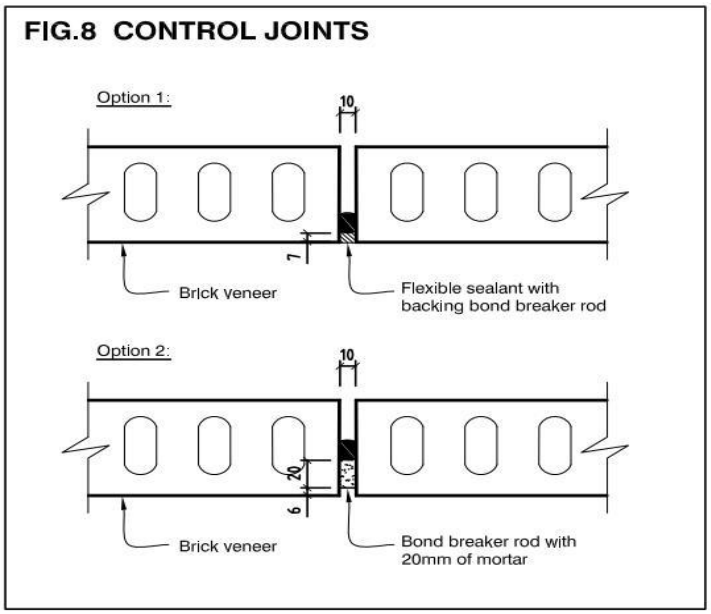
Control joints allow concrete brick veneer to respond to minor movement of the building.



Control Joints

Buildings and building components generally move slightly after construction. Often this relates to normal expansion due to acceptable moisture absorption. Control joints are vertical gaps usually filled with elastic type materials which allow the veneer to respond to these movements, usually by opening in response to expansion.

Generally clay brick veneer does not require control joints. Slight expansion can occur soon after manufacture, but this does not appear to present any issues in normal construction.

Concrete brick veneer however typically requires control joints. Designers and bricklayers should check manufacturers specifications and familiarise themselves with Section 9.2.8.2 of E2/AS1 which you can read here: E2/AS1 (part4).

DESIGNING OF CONTROL JOINTS

Control joints should also be designed and constructed as shown in Figure 73A of E2/AS1.

This requires that control joints consist of:

- A backer rod of compressible foam; and
- Sealant that complies with either Type F, Class 20 LM or 25 LM of ISO11600 or Low modulus Type II Class A of Federal Specification TI-S-00230C

PLACEMENT OF CONTROL JOINTS

To allow for the potential shrinkage in the length of concrete brick veneer E2/AS1 requires that vertical control joints are placed at not more than 6m centres.

Vertical control joints are also required to be located:

- Within 600mm of T joints;
- Within 600mm of L shaped corners or by restricting the space to the next control joint to 3.2m maximum;
- At changes in wall height that exceed 600mm;
- At changes in wall thickness

It is not uncommon to read reports from Geo-Tech Engineering for control joints in clay brick veneers due to expansive clay soils, but this is not necessary. Where such soil types occur, an appropriate foundation should be designed to manage this and there is no evidence that control joints would be necessary.

Control joints should be considered, however in clay and concrete brick veneer in the following circumstances:

- If a wall is 10m or longer and has no window or door openings – a control joint should be installed at an intermediate point.
- Where a small panel of brick work adjoins a large panel of brickwork, as movement within the framing may cause a crack, a control joint may be considered. An alternative however would be to strengthen the framing using additional brick ties and using reinforcing in mortar joints in these areas.

Where a control joint is used it is important to ensure that the framing details provide a stud within 200mm of each side of the joint for the fitting of brick ties.

It is important to remember that if a crack develops in an otherwise well constructed brick veneer it is an aesthetic issue only and should cause no problems as to weather tightness, or the overall integrity of the veneer. A control joint is in effect a controlled crack.