

**Erection tolerances for cladding**

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Erection tolerances are recommended to achieve the intended appearance of the cladding. This is particularly important at joints and corners etc.

BS8297 clause 11.5 gives the following –

- a) The average width of an individual joint between panels compared with nominal design width of joint should not vary by more than 6 mm otherwise unacceptable variations to straightness of line of joint vertically, floor-to-floor, and horizontally may occur.*
- b) Panel edges at a joint out of parallel should not taper by more than 5 mm in overall height of joint between panels.*
- c) Difference in alignment of a panel edge, from one panel to another, should not exceed 6 mm.*

*The offset in planes formed between vertical faces of one panel to another should not exceed 6 mm.*

*Bowed panels (within manufacturing tolerances) should be arranged so that offset between adjacent panels caused by bowing does not exceed offset tolerances.*

*The width of joints should be such as to ensure that joints perform as intended and conform to the recommendations of the joint sealant or gasket manufacturer.*

In addition to these erection tolerances, it is vital that due allowance is made for inaccuracies in the structure the panels are fixed to. A column may be positioned 'in the wrong place' and it might also be out of plumb as it goes up. The cladding is however required to be 'in the right place'. Therefore there must always be a clear gap between the frame and any cladding to allow for such problems. It is poor practice not to allow a significant tolerance gap between a structure and any cladding units. It is obviously beneficial from the point of bracketry to keep the gap to a reasonable minimum, but each project requires careful consideration and the intended design tolerances must be stated by the Design Team at the onset. A figure of 50mm of 'fresh air' is likely to overcome all but the worst of errors on site. This gap is between the inner face of the cladding (including any pre-fixed insulation) and the outer face of the frame.

With a steel frame it is important to be aware of the position and type of any column splices. Flange plates are typically the same thickness as the flange, and if these are bolted on the outside of the flanges, the bolts could easily project as much as 75 mm or more beyond the flange. Similarly, flange plates may also extend beyond the face of the flange. Far preferable is to have the splice plates inside the flanges, or a welded splice with no flange plates.

