

Tolerance and Fit

Architecture

Nothing is built to the dimension you drew; the joint absorbs the rest.

Tolerance is the permitted deviation between the drawn dimension and the built one. Fit is achieved by designing joints large enough to absorb the deviations that will actually occur.

**ABSORBED BY
the joint**

**WORST DETAIL
flush, no gap**

- In-situ concrete moves more than factory steel.
- Deviations accumulate along a run of components.
- The joint, not the component, absorbs the error.
- A 10 mm shadow gap hides 10 mm of deviation.
- Flush junctions between trades expose every error.
- Set out from one datum, not from the last piece.

LOOK FOR IT

A shadow gap is a tolerance device before it is an aesthetic one, which is why it appears in careful buildings.

Educational reference. Permitted deviations are set by product standards and by the specification, and vary widely.