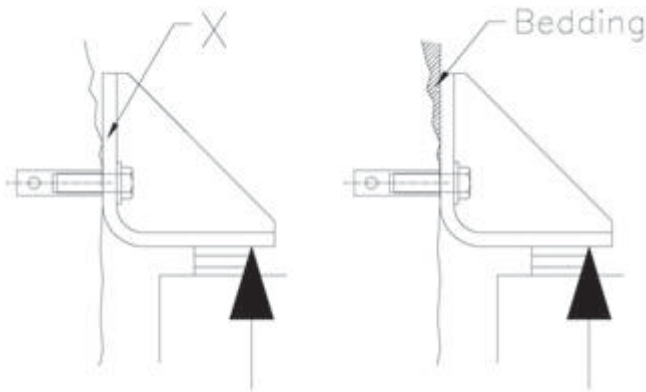


## Bedding angles

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When support angles are bolted to the face of units, it is essential that they can work in the way the designer intended. One of the important factors is how the angle might rotate under load.



Many such angles are incorporated in to the top face of the unit when cast, and therefore they need a strap across the unit to hold the sockets or channel in place. This strap can easily cause irregularities in the concrete surface since it prevents efficient floating of the area.

Without bedding, the angle will tend to rotate about the high point at 'X'. Whilst the rotation itself might be minimal and even un-noticeable, the change in lever arms will cause a far higher tension force in the fixing, perhaps 2 - 3 times higher than designed for, with obvious risks of failure.

Another condition where this can occur is if the socket or channel is cast proud of the concrete surface. Again, this causes different mechanics to those assumed in the design.

If a smooth bed is provided as in the second diagram, the angle can only rotate about its top edge, which is what the design would normally be based on initially.

**For this reason, all support angles should be bedded, even if the face appears reasonably true.**

Angles should be fitted, with bedding in the yard prior to delivery to site. The bedding is applied as a 'battered on' layer, and the angle bolted into place to seat firmly into the bed. Setscrews etc should not be torqued until the bedding has reached sufficient strength to avoid local crushing. The process must not be left until the last minute since this would not allow the bedding to gain sufficient strength, and also not allow time to rectify any 'lack of fit' errors which might be found

The normal material used for such bedding is a mixture of 1 part fine sand, 1 part cement, with a bonding agent added.

If angles have to be bedded within 2 days of the time of load being applied, then consideration should be given to an epoxy mortar being used instead of the sand/cement mix to gain quicker strength. If bedding is carried out in inclement (rainy) weather, protection should be given to avoid wash-off.