



## SCAFFOLDING SECTION

# SSFI TECHNICAL BULLETIN

## Erecting to Manufacturer's Instructions : Bracing

Federal OSHA requires that all erectors be trained in the correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in question. Bracing scaffold properly is critical to providing a safe scaffold.

All scaffolds, whether fabricated frames, tube and coupler, system, or Euro-style frames need to be properly braced. Braces serve several purposes. They secure the vertical members (legs) together. They square and align the legs so the scaffold stays plumb. And they resist sway forces that result from horizontal loads imposed on scaffolds from wind and worker movement.

The scaffold manufacturer is the final authority on how to properly brace their scaffolds. They have the most knowledge of their products, have conducted tests on their products and know how their products will perform. Most manufacturers recommend, for example, that cross braces be installed on both the inside and outside legs of frame scaffolds. Braces may be left out under certain circumstances, but check with the manufacturer to make sure it is done properly and safely.

A leg without a crossbrace will not support as much load as one with a crossbrace. Crossbraces on frames reduce the unbraced length of the leg, which strengthens the leg and allows it to attain its maximum load carrying ability. Crossbraces need to be installed on both the inside and outside frame legs whenever the maximum load carrying capacity is required.

Most manufacturers of system scaffolds have instructions or guidelines on installing horizontal, horizontal diagonal, and vertical diagonal braces. Horizontal braces secure one leg to another, set and maintain the bay length along the run and transmit horizontal loads to bays that have sway bracing. Horizontal diagonals square the bays in plan and provide rigidity between ties. Vertical diagonals act as sway bracing to resist horizontal loads, plumb the scaffold and provide rigidity to the scaffold.

When designing a scaffold, the qualified person will specify the bracing necessary for the scaffold. Properly trained erectors, under the supervision of a competent person will install the bracing per the design. This will ensure a safe scaffold for the user. For more information, consult the latest editions of the following OSHA and ANSI standards.

- 29CFR1926, Subpart L (OSHA scaffold standards)
- ANSI A10.8

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This Technical Bulletin was prepared by members of the SSFI Scaffolding Section. SSFI is a trade association comprising manufacturers of scaffolding, shoring, forming, and suspended scaffolding. The institute focuses on engineering and safety aspects of scope products.

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