Installation Principles

**Self-clinching fasteners** install into a round hole which can be punched or drilled into ductile materials. Typically they are pressed into holes in sheet metal by applying a steady squeezing force. This results in the cold-flow of sheet material which is displaced by the knurl into the undercut area on the shank of the fastener. Once fully embedded, the knurled area prevents torque-out during tightening of mating part.

**Boaching fasteners** install into a round hole, which can be drilled into non-ductile materials. Once pressed into a printed circuit board or non-ductile material, they are held permanently in place by an interference fit.

**Weld nuts** are designed for attachment to carbon steel and stainless steel sheet material. They are self piloting into holes and are round, eliminating the need for indexing. Pilot shanks protect threads from weld splatter.

Both self-clinching and broaching types withstand high push-out and torque-out forces. Captive fasteners provide added value by speeding initial assembly as well as servicing in the field, keeping costs to a minimum.

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![Nuts Diagram](image1)

- **Press**
- **Sheet**
- **Anvil**

Max. Length of Standoff + .125 in. (3.175mm)

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![Standoffs Diagram](image2)

- **Press**
- **Sheet**
- **Anvil**

Max. Length of Stud + .125 in. (3.175mm)

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![Studs Diagram](image3)

- **Press**
- **Sheet**
- **Anvil**

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**Fastener must be installed squarely in hole**

**Squeezing force is applied to head of fastener**

**Install bolt or screw from opposite side of head of fastener**