

EVOLUTION OF FASTENERS FOR WOOD FRAME CONSTRUCTION

In the early 1900's, "pole barns" became popular in the United States. The name arose from the use of telephone poles as the primary structural member. They were less expensive than conventional construction methods at the time, and they could be erected quickly. Corrugated steel, developed in the 1800's, quickly became the cladding of choice for pole barns.



NAILS

Initially, the panels were attached to the wood substructure with nails. These nails were fitted with a lead washer. The nails were driven into the apex of the high rib of the corrugation because the lead washer did not provide good sealing qualities. The nails, being hammered into the panels, were unsightly and difficult to install. Nails were eventually replaced by self-piercing fasteners.

THE MB MICRO-BIT POINT MAY GENERATE SMALL METAL SHAVINGS UPON INSTALLATION. IT IS RECOMMENDED TO CLEAN/SWEET THE METAL PANELS AFTER INSTALLATION TO PREVENT PREMATURE RUST SPECKS.



SELF-PIERCING FASTENERS

- Self-piercing fasteners are designed with a sharp point. The screw rotation helps the sharp point pierce the metal, allowing the threads to engage the metal panel & the wood.
- A rubber & metal washer combination will create a tight seal around the hole created. This allows the fastener to be installed in the flat of the metal panel instead of the high rib, creating a stronger connection.
- Fasteners do not require an impact to the head to be installed, unlike nails. This protects the paint finishes & corrosion resistant coatings on the metal panels & fasteners.
- Fasteners are installed with an electric screw gun or battery drill. They can be painted to match any panel color creating a more aesthetic appearance. These panels have evolved with high quality pain systems & finished, & are not longer only used on pole barns.
- The primary complaint about self-piercing fasteners is the inconsistency of the drilling process. The points may not penetrate the steel panel quickly. This leads to a slow drill or no drill situation. The introduction of the WOODBINDER® Micro-Bit resolves this issue.



SELF-DRILLING FASTENERS (NEW TECHNOLOGY)

- The Kwik-Seal® MB™ Woodbinder® combines metal to metal fastener point technology with ST Fastening Systems' unique deep crested thread design for maximum holding strength in all wood substrates.
- The Micro-Bit point acts as a drill bit, consistently drilling single or multiple thicknesses of high strength steel panels. It requires less end pressure to penetrate the metal & engage the wood.
- The Micro-Bit will eliminate the metal "pigtails" commonly formed by self-piercing screws, which can embed themselves in the rubber washer, tearing the rubber. These can cause premature corrosion or a roof leak.
- The Micro-Bit creates small metal shavings that are ejected away from the fastener hole, which can easily be swept off the roof each day.