

# PEMHEX® Self-Clinching Prevailing Torque Locknuts

## Prevent Mating Screws from Loosening - Available Now at Zygology

Self-clinching fasteners were created approximately 80 years ago to provide load-bearing threads in metal sheets too thin to tap and continue to help engineers achieve their fastening goals and save production costs through shorter assembly times, fewer parts and increased fastener reliability.



The PEMHEX locknuts from PEM's range of self-locking fasteners integrate a nylon hexagonal insert that further increases reliability by preventing mating screws from loosening. They can be installed permanently, are reusable, and they are available now from Zygology. ([Click here for our PEMHEX locknuts range.](#))

Whilst PEMHEX locknuts are not a new product to the market, their efficiency and manufacturing benefits ensures they remain an important product to our customers.

Screws can loosen as the result of multiple factors including vibration, thermal cycling and disruptive forces, potentially causing complete attachment failure. The nylon insert in the PEMHEX locknuts provides the necessary torque resistance to securely grip mating screws and allow for their repeated installation and removal over time whilst reducing the chance of conductive debris forming. Thread-locking torque performance is equivalent to applicable NASM25027 specifications.

During installation using a PEMSERTER® or other standard press, the locknut's knurled collar embeds in the host sheet and displaces sheet material, which then fills the undercut cavity beneath the collar to permanently captivate the fastener in the sheet. The strong knurled collar effectively receives the installation force and resists torque, exhibiting spin resistance greatly exceeding the torque exerted by the self-locking feature. Both the self-clinching shank of the locknut and the undercut contribute to high pushout values.

### Key Advantages Of Self-Clinching Fasteners:

- Provide strong threads or attachment in metal as thin as 0.20 mm / .008".
- May be installed using any parallel acting squeezing force.
- Provide high pushout and torque-out resistance.
- Do not require special hole preparation, such as chamfering and deburring.

- Reverse side of metal sheet remains flush – no swaged rim protrusion.
- No retapping necessary after application.
- Low installed costs.
- Can be installed using automated equipment for high volume applications.

### **Applications Suited To PEMHEX Locknuts:**

- Automotive & Aerospace components
- Medical devices
- Electronic equipment
- Communications systems

### **Designed For Assembly - Self-clinching fasteners help designers meet DFA parameters, which include:**

- Fewer parts to handle. Hardware such as washers, lock washers and loose nuts are no longer required in final assembly.
- Fewer assembly steps. Since the task of hardware installation is done during fabrication, the number of steps required for final assembly time is reduced.
- Less total assembly time. Fewer parts and less steps mean shorter assembly time.

Zygology Sales Director Richard Avery said, “In addition to their main function of withstanding external forces and holding mating components securely, self-clinching locknuts offer yet another layer of reliability, thanks to self-clinching technology.”

He continued, “Once installed, the locknuts become permanent and integral parts of a thin metal assembly, will not loosen or fall out, never have to be restrained from rotation with a spanner, and never have to be handled again.”

If you’d like to find out more and discover how PEMHEX self-clinching locknuts provide an ideal attachment solution for thin metal assemblies and can increase your manufacturing, get in touch with our friendly team of experts today on 0808 123 1221 or email [sales@zygology.com](mailto:sales@zygology.com).