

TAB 3 - BENEFITS

Important Advantages of Threaded Inserts

- Greater clamping pressure in softer materials - provides higher strength, better seals
- Better use of high-tensile-strength fasteners
- Resistance to vibration in assembly
- High-quality standard threads without tapping
- Permanent, wear-resistant threads
- Protective of expensive castings and moldings
- Reduced performance loss from cold flow of plastic
- Reduce risks in molding cycle
- Easy to install in a drilled or molded hole
- Suitable for automatic installation
- Wide variety of types to fit virtually any application

Cold Flow Resistance

When used in plastics, inserts reduce the loss of clamping pressure due to creep or cold flow of the base material. The inserts are designed to better distribute clamping forces to soft base materials. The insert will act as a metal bushings, providing a metal bearing surface for both fastener and mating component.

Molding Advantages

The use of post-molding inserts in plastic parts simplifies and reduces risks in the press cycle. Since inserts are quickly installed after the part leaves the mold, the press is not left idle while inserts are loaded into the mold and the potential for damage to the mold from dislodged or misplaced inserts is eliminated.

Wear Resistance

Groov-Pin inserts are designed to be permanent fasteners. The internal standard machine screw threads feature a lead-in chamfer or a counterbore to readily accept standard threaded fasteners during production or service. Threaded inserts can be used almost indefinitely, unlike thread-forming screws which cannot maintain clamping pressure after repeated use. Also, the risk of crossed or stripped threads in expensive moldings or castings is dramatically reduced. Should the need arise, inserts can be replaced in the field or at a service site.

Simple Installation

Groov-Pin inserts are designed for simple, economical installation and are compatible with automatic installation methods. Just one step provides permanent, reinforced threads in metal, plastic, cast, or molded parts. Since they cover the spectrum of installation methods, Groov-Pin inserts are widely chosen by OEMs for medium- and high-volume productions.

Greater Clamping Pressure

The use of threaded inserts from Groov-Pin in a drilled or molded hole provides up to 50% more clamping pressure than the same fastener used in a drilled or tapped hole without an insert. In plastic and softer metal, stronger assembly forces and better seals are achieved. In basic terms, the external diameter of the threaded insert is larger than the internal threaded diameter which accepts the fastener. The insert increases the effective load-bearing area, thereby increasing the shear force required to pull the fastener and insert from the base material.

In softer metals and plastics, the shear force required to tear the fastener from the base material is much less than the tensile strength of the fastener. The threaded insert distributes forces from the fastener over a larger area to realize a much greater clamping force with the same fasteners.

Vibration Resistance

Threaded inserts, once installed, remain firmly locked into the base material and will withstand vibration without loosening. Proprietary features on the outside of the threaded insert capture the base material during the installation process in a way that resists axial and rotational forces. The vibration resistance of threaded inserts has been proven time and again in tests conducted by independent laboratories, government agencies, and commercial users.

High-Quality Threads

High-quality, standard tolerance threads can be installed quickly into simple drilled or molded holes, without a tapping operation.