# **THREADED INSERTS**

## For plastic and metal applications

With their strong, wear-resistant threads and high load bearing capability, threaded inserts provide the ideal protection against thread stripping in soft materials such as plastics and non-ferrous metals. Threaded on inside diameter and locked with knurls on outside diameter, inserts ensure secure threaded joints throughout the life of the application.



### **Features & Benefits**

- Permanent, wear-resistant threads
- Increased resistance to loosening allows repeatable assembly and disassembly of joint
- Resistance to vibration in assembly
- High torsional strength on joint
- Higher pull-out and strip-out torque values
- · May be plated for corrosion protection or post-assembly processes

Material : Brass, carbon steel, stainless steel, aluminium and titanium

Size Range : M1.0 - M5.0

## **Types of Inserts**

Installation Method	Description	
Molded-In	Widely used in thermoset plastics, molded-in inserts are designed to be placed into the mold cavity prior to plastic injection. They provide optimal torque performance and pull-out resistance.	
Press-In	Press-in inserts are ideal for use in softer plastics, where they are pressed into a pilot hole without melting the plastic prior to installation. They offer quick installation with no specialized equipment and achieve good overall joint performance	
Self-tapping	Ideal for use in a wider range of plastics including thermoset plastics, self-tapping inserts provide the best pull-out resistance for a post-mold installed part.	
Expansion	Ideal for light-duty applications, expansion inserts are pressed into the plastic and they expand when the assembly screw is tightened.	
Ultrasonic / Thermal	Designed for post-mold installation in thermoplastics, inserts are "welded" into the plastics using ultrasonic vibrations or heat. Ultrasonic/ thermal inserts provide fast, positive anchoring.	

#### **Knurl Types**

Available in straight, helical and diamond designs, knurls are used to increase resistance to torque. Various combinations of knurls can be designed on the same insert to achieve an optimum combination of torque and pull-out resistance.







Straight Knurl	Helical Knurl	Diamond Knurl
Offers the highest torque resistance	Offers a higher axial pull-out resistance than straight knurl, but with a lower resistance to torque	Offers a high resistance to both tensile pull and rotational torque loads

#### **Technical Support**

China Micoffers discussed in just manufacturing. You can count on our partnership to provide end-to-end solutions for your needs.

#### **Product Design Assistance**

Machined holes should be the correct size for the insert used. If the hole is too large, both strip-out torque and pull-out values will drop. For optimum performance:

- Boss Diameter = 2 to 3 times that of the insert diameter
- Hole Depth = exceed insert length by 0.5mm. A 1° inclusive moldings taper must be used, slightly increasing the hole diameter at the top of each bore.

Please consult China Micro specificing Inc. for

recommendations on your applications.

#### **Prototype Development**

The prototyping process provides a good opportunity to not only test out the component's performance and enhance its design, but also to finitestupreduction methods. With full in-house tooling and manufacturing capabilities at China Micro Machining Inc., we catefficientally and develop prototypes from bluteprint to product, without compromising quality.

#### **Performance and Application Testing**

China Micro Machining Inc. test facilitieshade fully equipped with state-of-the-art apparatus to carry out performance testsprafile quality checks of both incoming raw materials to products. Tests include statistical process control (SPC) measurements, 2D analysis, pull-out and stripping test, surface roughness, hardness, tensile strength, torsional analysis and concentricity measurement etc.