FASTENER SYSTEMS
SOLUTIONEERING
NEWSLETTER

Product and Application News from PennEngineering® Fastener Divisions

Service is Our Business

This year, PennEngineering (the parent Company of PEM® Fastening Systems and Atlas Engineering®) is celebrating a significant business milestone...our 60th continuous year.

We could not have reached this mark without the ongoing faith, trust, and support of our customers, who turn to us for brand-name products and services recognized for their quality and reputation around the world.

We remain proud of the many relationships that we have cultivated over the years and welcome those new customers who have discovered how we can partner with them in arriving at solutions for application challenges.

Our response in today's marketplace is to strive to practice the "basics of business," where customer service is the order of the day. This philosophy has played a primary role in our longevity and success.

As we look back and then ahead, we continue to see a future of opportunities...both for us and for our customers.

Kenneth A. Swanstrom,
Chairman and CEO
PennEngineering

THREADED ACCESS HARDWARE:

Two New Types Join Panel Fastener Line

New PEM® Types PF13™ and PF14™ self-clinching panel fasteners are designed to enable easy access to components in completed assemblies.

Ideal for attaching thin metal panels, these threaded access hardware products feature a captive screw to keep hardware to a minimum, promote quick installation, and eliminate any risk of loose parts falling out and causing damage.

Newest Panel Fasteners ...Types PF13 and PF14

Type PF13 panel fasteners (with knurled knobs) and Type PF14 panel fasteners (with smooth knobs) are complete spring-loaded panel fastener assemblies for use in aluminum or steel sheets as thin as .036”/0.92mm.

They are available in three screw lengths and in thread sizes #4-40 through 1/4-20 and M3 through M6. Each type can be ordered with DuraBlack™ finish to satisfy front-panel cosmetic requirements.

Permanent installation is accomplished simply by inserting the fastener into a properly sized punched or drilled hole and pressing the fastener into place. The side opposite installation remains flush.

Both types feature a universal slot/Phillips recess as standard; other recesses are available. The large knurled knob on Type PF13 fasteners allows for finger operation.

Profiles of Our Panel Fasteners:
www.pemnet.com

AUTOSPEC® FASTENERS:
The Solution for Automotive Applications

Our Newest Advantage: MAThread® Technology

PEM® Fastening Systems has become a licensed manufacturer of MAThread® technology, which enables selected PEM self-clinching studs to feature the added benefit of self-aligning threads.

MAThread fasteners (used primarily in automotive applications and gaining popularity in other industry applications) cannot be cross-threaded or jammed and can correct off-angle installations and thus improve assembly line productivity.

MAThread fasteners are now available for PEM self-clinching studs from #4-40/M3 up to our largest diameters.

These fasteners include our AUTOSPEC® line of self-clinching fasteners for reliable and secure attachment of vehicle components.

AUTOSPEC self-clinching fasteners

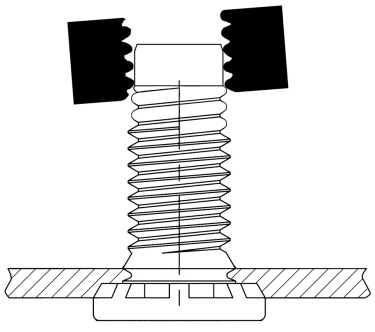
AUTOSPEC fasteners install permanently in thin metal sheets and are designed to reduce the number of parts needed for attachment and promote neater and lighter component designs.

Types HFHD and HFED high-strength threaded studs in the AUTOSPEC product line are designed for thin and ultra-thin metal sheets. Their dog point enables quick nut positioning and assembly, while protecting first threads from damage.

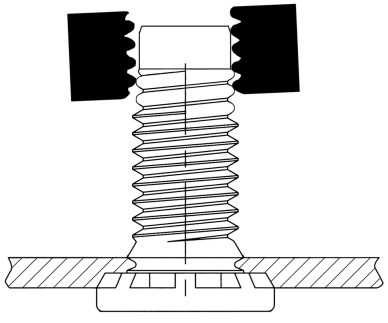
(MAThread is a registered trademark of MAThread Inc.)

www.pemnet.com

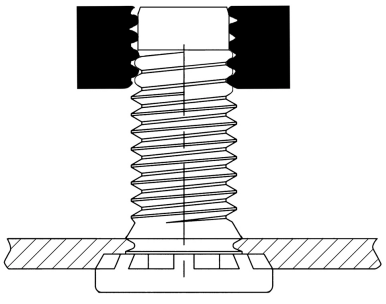
MAThread...*in Action*



Misaligned Axis:
The versatile MAThread design allows the designer to select the point shape best-suited to feed well in the application.



Threads Cam:
As the threads come into contact, the patented anti-cross thread MAThread begins to cam over the female thread.



Threads Drive Normally:
The MAThread forces the two thread helixes to align every time without fail. The fasteners then drive easily with reduced effort.

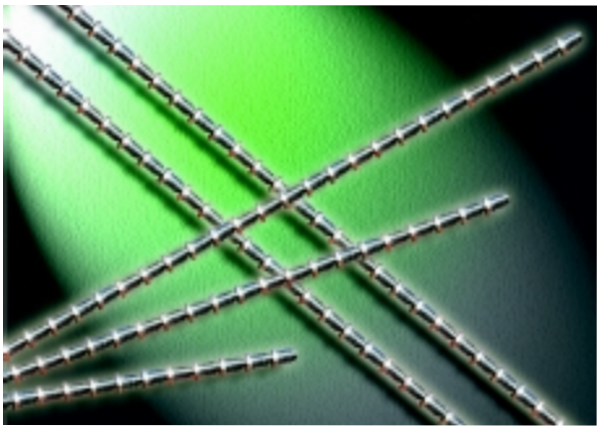
HANDLING SMALL-SCREW INSERTION:
Our Solution is the StickScrew® System

The process of installing small screws presents challenges on the production line.

When loose screws must be inserted by hand into a workpiece or when screws must be handled and fed one at a time into semi-automated power fastening tools, productivity rates can fall and labor costs can rise.

Traditional screw-insertion methods offer no assurances that proper seating torque for screws will be achieved consistently and accurately. (If a screw is not seated properly, it can loosen and contribute ultimately to end-product hazard or failure.)

Our solution is the StickScrew® System, which provides a fast, accurate, and efficient method of small-screw insertion.



Sticks of serially connected hex-head screws

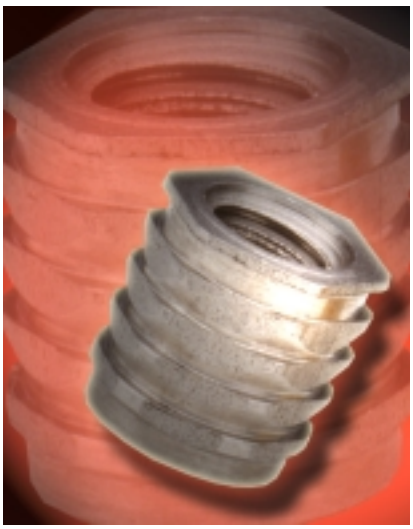
The self-contained system consists of a "stick" of up to 110 serially connected, hex-head screws that are driven by a companion lightweight air-powered StickShooter™ driver. Individual screws no longer need to be handled one at a time.

Proper seating torque is built into the screw instead of the driver. (The material diameter between each screw determines the seating torque.)

Benefits as cited by users of this system also include reduced defects and rework; reduced operator error; easy handling, storage, and inventory of screws; elimination of bowl, track or indexing feeders; and zero chance of mixing different screw types during handling and production.

PRODUCT PROFILE:

SI® Stainless Steel and Aluminum Press-In Inserts for Plastics



- Both types (NFPC and NFPA) resist corrosion
- Threads #2-56 through 5/16-18 and M3 through M8
- Hexagonal "barbed" configuration ensures high torque-out and pullout values
- Easily installed by pressing the insert into pre-molded or drilled holes
- Eliminate need for heat or ultrasonic equipment
- Provide strong, durable, and reusable metal threads in plastic material and enable attached units to be disassembled and reassembled

SOLUTIONS FILE:
'Blind' Assembly Applications

THE CHALLENGE:

How to provide permanent load-bearing threads in thin materials where there is access from only one side ("blind" applications).

THE SOLUTION:

SpinTite™ and MaxTite® blind threaded inserts from Atlas Engineering can be utilized instead of tapped holes, weld nuts, rivets, or self-drilling or tapping screws. These fasteners are called "blind" because they can be installed from one side of a panel; access to both sides is not required.

SpinTite types will satisfy most "standard" blind applications and can be installed using a spin/spin technique. A pneumatic tool is used to draw the fastener in, compressing the unthreaded portion of the fastener wall. The resulting bulge presses against the panel to create a clamping force that tightly grips the sheet.

Heavy-duty MaxTite rivet nuts for more demanding applications are installed using a spin/pull technique. A hydraulic/pneumatic tool draws the fastener in to create the necessary bulge and clamping force.

Atlas blind threaded inserts can provide strong permanent metal threads in panel sections as thin as .020"/0.50mm.

Among their other advantages:

• They eliminate any need for additional mounting hardware beyond a mating screw to complete final component assembly.

• They enable components to be taken apart for service, unlike rivets or adhesives, which make disassembly impossible.

• Unlike weld nuts or press-in type nuts, they can be installed anywhere in a shop (even after end-product finish is applied) without requiring product-dedicated assembly locations. Installation also can be accomplished anywhere and anytime in the field during end-product maintenance or repair.

Some noteworthy applications include attaching aircraft seat trays, automobile mirrors and lights, luggage-rack rails for vehicle roofs, automotive radiators, trunk "spoilers," ABS module mounting on vehicle dash panels, electronics cabinetry hardware, and appliance handles and hinges.

These fasteners are also ideally suited for metal tubing and extrusions.

Atlas blind threaded inserts and tooling

Learn more about our inserts and tooling...
www.atlas-eng.com

PEM® FASTENING SYSTEMS
a PennEngineering® company

PEM® Fastening Systems develops and manufactures PEM self-clinching and broaching fasteners and SI® inserts for plastics. The PEMSERTER® Products Division manufactures and sells automatic and manual precision fastener-installation presses and the StickScrew® System for small-screw insertion. *www.pemnet.com*

Atlas Engineering® manufactures SpinTite™ and MaxTite® blind threaded rivet nuts and installation tools. *www.atlas-eng.com*

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a PennEngineering® company