

New...New...New...New...Products!

NEW FASTENING SOLUTION

PEM[®] HEAT SINK MOUNTING SYSTEM PROVIDES SECURE ATTACHMENT AND OPTIMUM HEAT DISSIPATION

The new PEM[®] heat sink mounting system (patent pending) introduces an ideally engineered solution to securely attach heat sinks to circuit boards while providing firm and constant contact to the chip component for optimum heat dissipation. The system additionally integrates a unique audible “click” feature to prevent over tightening during installation, accommodates slight expansion and contraction of joint components without causing stress or damage to delicate and expensive circuitry, and allows for removal of the heat sink if necessary.

This unique three-piece fastening system (individual parts supplied separately) consists of Type HSCB[™] captivating screw and Type HSL[™] spring mated to Type HSR[™] broaching receptacle nut or standoff. The screw and spring mount together permanently into the heat sink and the receptacle nut/standoff mounts permanently to the PC board.

After the screw and spring are captivated during the installation process, the heat sink can be attached easily to the board by simply tightening the screw into the receptacle nut/standoff. The audible “click” serves to prevent over tightening by signaling when

the screw is fully engaged and installation is complete. (The screw will continue to rotate but will no longer be engaged in the threads or continue to actively tighten.) The reliable and repeatable clamp force generated by the spring ultimately helps determine consistent and predictable clamp load on circuit board components.

Type HSCB screws and Type HSR broaching nuts or standoffs can be specified in thread sizes #4-40 to #6-32 / M3 and in various lengths. Screws can be installed into aluminum or steel sheets as thin as .040”/ 1mm and nuts/standoffs can be broached into boards as thin as .060” / 1.53mm.



COMPANY NEWS

Free PennEngineering® Webinars coming soon

Webinar, May 14, 2013

GlobalSpec Presents - Reduce Assembly Costs in Compact Electronic Devices.

Attendees will discover a new micro fastening technology that can significantly reduce assembly costs by replacing screws, welds, loose fasteners, rivets, and adhesives. Additional micro fastener types including threaded standoffs, pins, inserts for plastics and surface mount will also be examined. [Click here.](#)

Webinar, June 19, 2013 @ 1:00pm CST

The Fabricator Magazine Presents - ATLAS® Blind Threaded Rivet Fasteners / A Tutorial.

Blind threaded rivets provide a permanently mounted, load bearing threaded attachment point in thin sections or panels.

This presentation will provide the audience an introduction and a better understanding of how blind threaded fasteners work, when and where they should be used, and what considerations need to be made for optimal use and performance. To address these factors, areas to be explored include blind threaded fastener basics, fastener types, fastener materials, platings, performance and installation (including tools). Common problems and solutions will also be examined. During the presentation we hope to address any misconceptions, questions or concerns the audience may have and also provide a technical help information resource for any future inquiries. [Click here.](#)

NEW Article Published In The Fabricator

January 7, 2013 - The Lowdown on Lean Fastening
Proper equipment, shop layout, and hardware help free the fastening bottleneck.

Selecting the proper equipment, locating that equipment in the right spot on the shop floor, and using the right hardware can help to introduce new efficiencies and reduce costs in a fabricator's joining and assembly operations. [Click here.](#)

PennEngineering® Wins “2012 Golden Mousetrap Award” For microPEM® Tackpin™ Fastener

PennEngineering® has won the Design News “2012 Golden Mousetrap Award” in the category of “Materials & Assembly: Fastening, Joining and Assembly Components.” The Company took top honors for the microPEM® TackPin™



Fastener, which was introduced last year as part of a growing family of PEM brand micro fastener products. Winners were chosen by the magazine's editors from a record number of entries for the annual competition.

The “Golden Mousetrap Awards” recognize engineering innovation and creativity in product design. Awards were presented in four major technology-driven categories (Electronics & Test, Automation & Control, Design Tools: Hardware & Software, and Materials & Assembly, which included the sub-category for Fastening, Joining, and Assembly components won by PennEngineering).



The microPEM TackPin (Type T™) fasteners for compact electronic assemblies enable sheet-to-sheet attachment, replacing costly screw installation in applications where disassembly is not required, serving as ideal alternatives to welds or

adhesives, and offering cosmetic benefits associated with a low-profile head design. Among notable applications, these aluminum fasteners can be specified to attach super-thin membranes to very thin cosmetic substrates, such as keyboards. Their use eliminates typical screw-related issues (including tapping, cross-threading, torque control, and vibration backout) and ultimately promotes quick and easy installation using minimal hardware.

UPDATES, NEWS AND TIPS

New ATLAS® Hexcutter Tool - Converts round holes to hexagonal for reliable installation of hex-bodied blind threaded inserts

The new ATLAS® RIV 990 hexcutter tool is uniquely engineered to convert pre-drilled round holes to hexagonal holes and promote reliable installation of full or half-hex bodied blind threaded inserts. The tool ideally suits the ATLAS FM™ product line of full metric blind threaded inserts offering solutions for attachment applications where only one side of a panel is accessible for hardware installation, such as tubing and extrusions. The tool operates efficiently and cost-effectively on 90 PSI air pressure and accommodates interchangeable noses to correspond with hole-size requirements. Upon proper hole conversion, a variety of full metric blind threaded inserts can be installed quickly and permanently in aluminum, steel, or stainless steel panels of any hardness and as thin as .020" / 0.5mm. Inserts can be specified in a wide range of available thread sizes (from #8-32 to 5/16-18 and M4 to M8) and head styles (flat, thin, or countersunk).

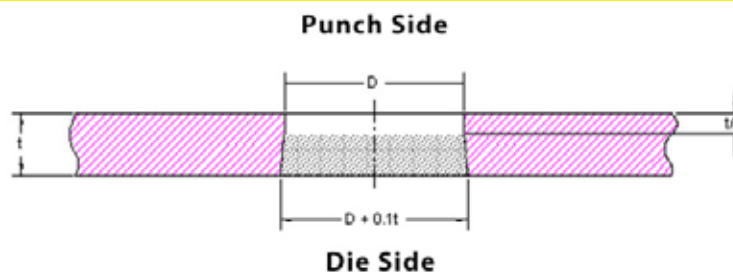


Blind threaded inserts introduce practical assembly alternatives to tapped holes, weld nuts, rivets, and self-drilling or tapping screws, and can resolve close-to-edge mounting challenges. They can be installed anywhere and at any stage in the shop or field with a single mating screw completing final component attachment. [Click here.](#)

TECH TIP

Installing self-clinching fasteners into punched holes

- The Fastener should be installed on the punch side of the sheet metal.
- Die Side of hole has a blow-out effect. This increases the diameter and the size is less predictable.
- When installed on the wrong side, the same failures are seen as with Oversized Holes.



UPDATES, NEWS AND TIPS

PEMNET.com Updates

NEW Teardown Section

The PennEngineering® teardown process involves the carefully documented disassembly of a current consumer product. All products chosen for teardown are purchased through publically accessible channels. Teardowns are performed by PennEngineering technical personnel for the purpose of understanding current assembly trends and to identify possible improvements using PennEngineering fastener types or other methods. Observations, comments and recommendations are based on the opinion of the technical expert conducting the teardown. [Click here.](#)

NEW TechSheet

PEM® - REF/Testing Clinch Performance
Subject: Testing Clinch Performance of Self-Clinching Fasteners. [Click here.](#)

NEW autoPEM® Capabilities Page

The webpage outlines the unique manufacturing capabilities of PennEngineering Automotive Fasteners and its autoPEM® brand of fasteners. [Click here.](#)

PEMspec™ APP Gets New Features

New photo identification features are now available with the PEMspec APP for iPhone® and iPad®. A complete photo index along with a “view” photo selection now provides visual identification of all PEM® fasteners. Using the APP, selections can be made by navigating quickly through the family type categories, photos or by direct part number search. The data returned includes mounting hole size, minimum sheet thickness, head height above sheet and much more.



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PennEngineering® develops and manufactures PEM® brand fasteners, 3V® brand precision aerospace fasteners, SI® inserts for plastics, ATLAS® blind threaded inserts and QRP® brand quick release pins.

Fastener installation systems include PEMSERTER® automatic and manual precision presses, In-Die and robotics capabilities, and the StickScrew® System for small-screw insertion.

PennEngineering®



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