

PEM LINE

Fastening Products, Systems, and Applications from the Industry Pioneer

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

NEW FASTENING SOLUTIONS

NEW PEM® VARIMOUNT™ FASTENING SYSTEM MOUNTS TO COMPOSITES AND OTHER RIGID MATERIALS USING AN ARRAY OF ATTACHMENT METHODS

The new PEM® VariMount™ fastening system (Type VM) from PennEngineering® utilizes proven self-clinching technology paired with a round steel or stainless steel base plate to offer a clean and ready-made assembly for mounting into any rigid material or panel, including composites, plastics, and metals. Multiple radial holes in the base plate and a generous footprint combine to promote effective mounting of the assembly, whether the method is mold-in or laminate with layers, adhesives, standard fasteners, or spot welding. Mounting can be performed either on the front or through the back of a panel.

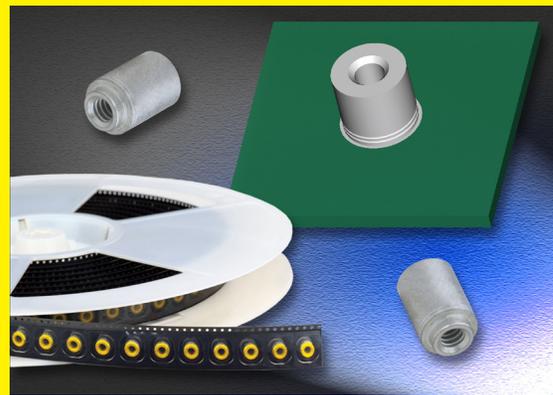
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NEW PEM® REELFAST® BRASS SURFACE MOUNT FASTENERS FOR PC BOARDS PROVIDE SUPERIOR ELECTRICAL AND MECHANICAL ATTACHMENT POINTS

New PEM® ReelFast® brass surface mount fasteners from PennEngineering® introduce ideal hardware solutions for printed circuit board applications requiring superior electrical and mechanical attachment points. These tin-plated Type SMTSOB™ brass nuts and spacers/standoffs install permanently on printed circuit boards in the same manner and at the same time as other surface mount components prior to the automated reflow solder process. They can serve reliably to space or stack boards, mount boards, and/or attach components.

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NEW . . . NEW . . . NEW

VariMount™ Fastening System

Promoting both reliability and cosmetics, the VariMount assembly's pre-installed PEM fastener – permanently clinched into the base plate – holds securely in place without the use of unsightly welds. In addition, the radial holes in the base plate for mounting the assembly are specifically sized to accept universally standard diameters of rivets, self-clinching fasteners, and loose hardware such as nuts, bolts, and screws.

A variety of PEM self-clinching fastener types for accepting mating hardware in the application can be specified for VariMount assemblies. Standard offerings available in a range of metric and unified thread sizes and lengths include

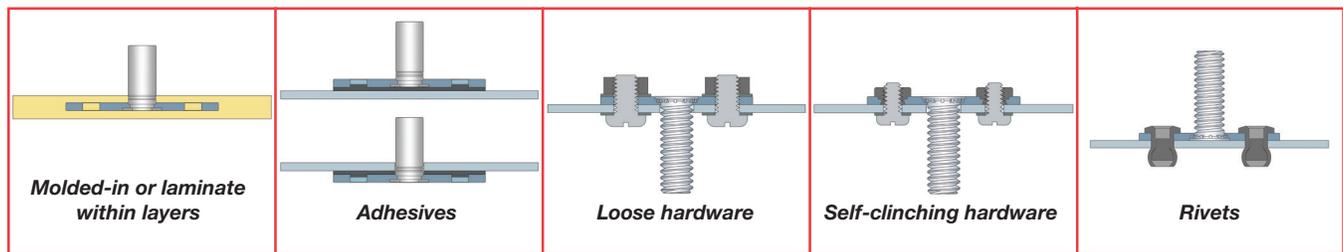
steel and stainless steel nuts, steel blind nuts, steel standoffs, and steel and stainless steel threaded studs. Beyond these standard offerings, other PEM fastener types and sizes can also be supplied pre-installed into base plates to suit particular application requirements. Users also can purchase base plates separately.

[Click here.](#)

Other fasteners, base plate configurations and assemblies are available on special order.



Typical Mounting Methods



ReelFast® Brass Surface Mount Fasteners

These fasteners ultimately exhibit greater corrosion resistance and higher conductivity than steel counterparts and their pick-and-place installation delivers key efficiencies and economies. Among the benefits, the fasteners can reduce the risk of damage to boards (and resulting scrap) typically resulting when conventional fasteners are improperly installed with off-line equipment, minimize the number of loose parts and related handling issues, and promote quicker assembly by eliminating secondary operations during the installation process.

Threaded versions are available in sizes #2-56 through #8-32 and M2 through M4 and thru-hole

(non-threaded) types can be specified in sizes .116", .143", 3.6mm, and 4.2mm. Lengths range from .065" to .375" and 2mm to 10mm. All are designed for use with boards of any hardness and as thin as .060" / 1.53mm.

The fasteners are supplied on tape and reel conforming to industry standards and compatible with existing SMT automated installation equipment. A polyimide patch affixed to the end of the fastener allows for vacuum pickup.

[Click here.](#)



IN THE NEWS

Design World - May 5th, 2015

Turning to Captive Panel Screws

Panel fastener assemblies, like captive panel screws, allow for repeated access to equipment while minimizing loose hardware.

Panel fastener assemblies, which integrate captivated screws and mount permanently to an assembly, can securely attach equipment panels, covers, drawers, racks and similar components, while allowing for subsequent and repeated access to equipment. In addition, these fastener technologies can minimize the amount of loose hardware in a system. [Read more.](#)

Medical Device and Diagnostic Industry - March 19th, 2015

Why Medical Device Designers Should Care about Fasteners

Fasteners come in a variety of shapes, sizes, and styles, but for medtech applications, they must all offer corrosion resistance, strength, and holding power. [Read more.](#)

Design News - August 24th, 2015

Although many fasteners simply don't work in plastics, especially composites, a new fastener from PennEngineering is bucking that trend. [Read more.](#)

PennEngineering® Automotive Fastener Co. Ltd. Receives Pinnacle Award from Delphi

PennEngineering® Automotive Fastener Co. Ltd. (Kunshan, China) received the 2014 Pinnacle Award from Delphi Automotive PLC – its most prestigious supplier honor – during its Global Supplier Conference & Pinnacle Awards event in Shanghai, China.

The award recognized PEAFF for its contribution to Delphi's Excellence culture and commitment to quality, value, and cost performance.

Qiang Sun, President of PEAFF, accepted the award during a gala dinner at Hilton Hongqiao. "We are extremely pleased to be recognized as a premier supplier to such a quality-focused organization like Delphi," said Sun.

"Suppliers play an important role in Delphi's success," said Sidney Johnson, senior vice president, Delphi global supply management. "Suppliers like PennEngineering Automotive Fastener Co. help Delphi provide our customers with the highest quality products and best value solutions. We appreciate their outstanding performance."

Delphi recognized 33 suppliers from 16 countries with its 2014 Pinnacle Award.

PEAFF is an operating unit of PennEngineering® and its plant in Kunshan, China, manufactures fastening hardware and make-to-print solutions and offers a wide range of expertise tailored for the automotive industry, including comprehensive design engineering capabilities, a portfolio of licensed technologies, and established quality assurance processes meeting all relevant industry certifications.



Tech Tips & Solutions

The term "minimum distance hole-centerline-to-edge" is defined as the minimum distance the mounting hole centerline may be to one edge of a panel to still allow the proper clinching of a fastener into the sheet. When a fastener is close to more than one edge, the published performance data for the fastener will no longer be applicable. For more information on this topic consult our Tech Sheet [here.](#)

IN THE NEWS

PennEngineering is Awarded U.S. Patent for Heat Sink Fastening Device

PennEngineering® has been awarded U.S. Patent No. 9,113,567 for a unique three-piece heat sink mounting system designed to securely attach heat sinks to printed circuit boards while providing firm and constant contact to the chip component for optimized heat dissipation. The inventor of this dynamic mounting system is Robert F. Stotz, Jr.

The patented mounting system consists of PEM® Type HSCB™ captivating screw and PEM Type HSL™ spring mated to a PEM Type HSR™ broaching receptacle nut or standoff. The screw and spring mount together permanently into a heat sink and the receptacle nut/standoff mounts permanently to a printed circuit 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. An 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 printed 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.



PEMspec™ App

The PEMspec app includes all of the newest PEM specifications and photos.

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PennEngineering® is an expert in the development and manufacture of precision fasteners, components and systems, specializing in thin sheet attachment solutions.

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