

PEM[®]LINE

Fastening Products, Systems, and Applications from the Industry Pioneer

NEW FASTENER SOLUTIONS



PEM[®] TYPE SFK[™] SPOTFAST[®] FASTENER

- *Permanently joins metal sheets to PC boards or plastic panels*
- *Creates a flush-attachment connection without protrusions*
- *Can be used as a single flush-mounted pivot point*

PEM[®] HIGH TENSILE STRENGTH STUDS

- *For applications demanding high strength and reliable performance*
- *Large diameter head reduces compressive stress on panel*
- *Studs meet a minimum of 150 ksi/1040 MPa*



SEE PAGE 3 FOR MORE INFORMATION

PEMSERTER® PRESS SOLUTIONS

PEMSERTER® SERIES 3000 PRESS WITH MULTI-BOWL SET-UP


The multi-bowl insertion option consists of a single PEMSERTER® Series 3000 automatic fastener-installation press equipped with the QX™ Turret Tool system and up to three expansion bowls. With this set-up, a single operator can install up to four different types and/or sizes of nuts, studs, and standoffs in automatic feed mode with no tooling changes.

This four bowl system is more cost-effective, more reliable, easier to operate, and provides more manufacturing flexibility than a single machine with four fixed bowls. For more information on productivity savings and increased production throughput using the Series 3000 multi-bowl set-up, please contact your local PEMSERTER dealer.



APPLICATION NOTES

FASTENERS FOR USE IN STAINLESS ASSEMBLIES

 PEMSERTER® self-clinching fasteners for use in stainless steel sheets provide ideal solutions to satisfy stainless assembly applications and promote lighter and stronger designs. These specially hardened stainless fasteners in various types and styles install permanently in thin stainless sheets and some provide the added benefit of excellent corrosion resistance to protect against corrosive conditions often encountered with medical devices and chemical and food processing equipment, among others.

The PEM stainless self-clinching product line includes panel fasteners integrating captive screws for “tool only” access to stainless assemblies; thru-hole threaded and blind threaded standoffs for stacking or spacing components to or from stainless steel panels; non-locking and self-locking floating nuts to accommodate mating hole misalignment; fasteners for flush-mount attachment applications enabling permanent joining of two sheets without protrusions; flush-head studs; pins; and nuts.

Depending on type, the fasteners are produced from precipitation hardening grade stainless, 300 Series stainless, 400 Series stainless, or A286 stainless steels.



NEW FASTENER SOLUTIONS

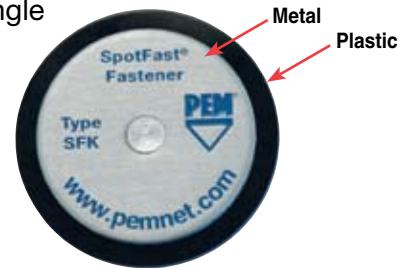
PEM® SPOTFAST® FASTENER FOR MOUNTING METAL TO PLASTIC (continued from front page)

The newest PEM® SpotFast® fastener (Type SFK) permanently joins metal sheets to PC boards or plastic panels and creates a flush-attachment connection without protrusions on either side. These fasteners offer practical alternatives to riveting or adhesives and their rotational capability extends application potential with the fastener serving as a single flush-mounted pivot point.

The fasteners install smooth with the top metal sheet and flush or sub-flush with the bottom panel. When used as a pivot point, the top metal sheet is captivated between the head of the fastener and the lower (non-rotating) panel, which allows the metal sheet to rotate freely.

The fastener's unique design featuring two separate clinch and knurl joining profiles holds the key. Squeezing the fastener into place using punch and anvil causes a cold-flow of the metal sheet material into the fastener's clinch profile and a broaching fit of the knurled end into the PC board or plastic panel. The result is permanent and flush attachment of sheet to board or panel.

Standard parts can install with minimal space requirements into metal sheets as thin as .031"/0.8mm with hardness of 80 or less on the Rockwell "B" scale. Various head sizes and diameters are available to suit application needs.



PEM® HIGH TENSILE STUDS (continued from front page)

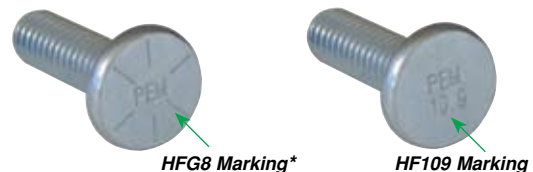


The new PEM® high tensile strength self-clinching studs introduce ideal solutions for applications demanding high strength and reliable performance. These clinch studs are manufactured for the most demanding applications from medium carbon alloy steel, then heat-treated to high strength and hardness qualities. Large diameter head reduces compressive stress on panel. Grade 8 (unified thread) and property class 10.9 (metric thread) studs meet a minimum of 150 ksi/1040 MPa.

These studs typically will be specified for applications with especially high fastener torque out requirements. Their large-diameter and strong heads help reduce compressive stress on panels and develop full thread strength in service.

To be sure that you are getting genuine PEM products, look for the PEM stamp. Studs within the size range of the SAE and ISO specs are also identified with the Grade 8 and 10.9 head markings respectively.

** Thread size #10-32 does not have SAE head marking since it is technically not within the size range of the specification.*



ATLAS® CAPABILITIES

ATLAS® ELASTITE™ NUT WITH WASHER

The ATLAS® Type AEENW ELASTITE™ noise and vibration isolating nut is a threaded metal insert and washer encased in a synthetic rubber bushing. When fastened, it can provide a vibration dampening attachment point in a variety of applications. The Elastite nut is ideal for mounting small electric motors and electronic components. Ease of use also makes it ideal for consumer assembly and kit packaging. For more information, go to:

http://www.pemnet.com/fastening_products/pdf/endata.pdf



ATLAS® TYPE AEK MONEL® INSERTS

ATLAS® Type AEK monel® inserts feature a large diameter, low-profile head and knurled shank. Since the insert is machined from monel®, it has superior corrosion resistance and is excellent for use in food and medical industries and marine and chemical processing environments. These inserts are installed with a spin/spin tool. For more information, go to:

http://www.pemnet.com/fastening_products/pdf/aekmdata.pdf



Monel® is a registered trademark of Specialty Metals Corporation.

TECH TIP

Minimum distance hole-centerline-to-edge

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 go to:

http://www.pemnet.com/design_info/articles/CLtoEdge.pdf

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

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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