

FASTENER SYSTEMS

# SOLUTIONEERING

NEWSLETTER

Product and Application News from PennEngineering® Fastener Divisions



## BUNDLED WIRES GET THE 'HOOK'

New PEM® Hardware Enables  
Their Easy Removal for Service

PEM® self-clinching cable-tie hooks (Type TDO™) allow tie-bundled wires to be easily attached, slipped off, and then returned in enclosures when components must be accessed for service or when wires must be replaced.

Cable ties need not be cut to perform these operations and wires can remain wrapped.

As with the family of PEM self-clinching cable-tie mount hardware, Type TDO cable-tie hooks install permanently without screws to save production time and money; utilize no adhesives that can fail over time and temperature cycling; promote EMI/RFI shielding; and reduce possible contamination by eliminating the need for any openings in an enclosure or chassis.

PEM Type TDO self-clinching cable-tie hooks are available in several sizes and can be installed in sheets as thin as .040"/1.02mm or as thick as .125"/3.18mm.

### ***IN THIS ISSUE:***

- **StickScrew® Robotics**
- **Skee-Ball Wins with Atlas**

## ***Welcome to Our World of Solutions...***



*This first issue of our quarterly "Solutioneering" newsletter reflects how far our Company has advanced as your single source to meet fastening and assembly challenges.*

*In every issue, you'll learn how our innovative solutions can enhance productivity, promote overall economies, and add value to end-products in the marketplace.*

*For us, problem-solving is an exciting and rewarding part of our business.*

*We invite you to discover how our "solutioneering" capabilities can benefit you.*

Kenneth A. Swanstrom,  
Chairman and CEO  
PennEngineering

## ***NATIONAL DESIGN ENGINEERING SHOW***

**PEM® Fastening Systems  
Booth #7526**

**Atlas Engineering  
Booth #7628**

# PEMSERTER® PRODUCTS:

## *Our Newest Equipment Solutions*



### **StickScrew® System Robotics**

Our StickScrew® System for small-screw insertion has been newly enhanced with optional robotics, which can fully automate the process of installing small screws in metal or plastic components.

The X/Y positioning table of the compact robotics system can accommodate multiple applications. It works in tandem with an In-Line StickShooter™ driver, which attaches easily and securely to the robot's Z-axis carriage.

After the robot is programmed for a job, a workpiece can be placed into a nesting fixture secured to table and the screw-insertion process will begin when the robot is activated.

When the job is completed, the robot automatically returns to the home position for workpiece unload and reload.

The StickScrew System eliminates loose screws by utilizing “sticks” of up to 110 serially connected hex-head screws in sizes ranging from #0-80 to #8-32 and M2 to M3. These sticks are placed in the StickShooter driver and screws will install and twist off cleanly when precise seating torque is reached.

Screw types include machine, thread-forming, and thread-cutting in various materials, thread sizes, hex sizes, screw lengths, head heights, and finishes.

### **Die-Feed System**

Our PEMSERTER® Die-Feeding System enables users to install self-clinching nuts, studs, and standoffs in workpieces during the stamping process for increased productivity and savings.

Working in tandem with a stamping press (and properly tooled die) to feed and install fasteners, this portable system eliminates secondary operations typically required for fastener insertions.

The system is virtually “plug and play” and can be configured for multiple or single insertions.

Operators are guided by a touch-screen (for set-up and operation) and an online library of fault/help screens. Standard, removable tooling can accommodate complex workpieces.

In addition, customers are fully supported from die design through installation and in-house training.



# ATLAS ENGINEERING: 'In the Game' with Skee-Ball

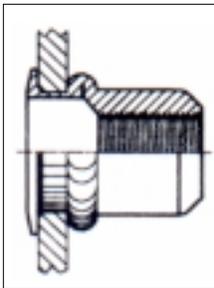


Amusement games created by industry pioneer Skee-Ball Inc. (Chalfont, PA, and Phoenix, AZ) have long been renowned for the challenges they offer to players at arcades, carnivals, and resorts worldwide.

Many of the skill games are built with a tubular steel frame, where accessibility to install fastening hardware is limited to only one side. Our SpinTite™ blind threaded inserts have offered a practical solution.



**SpinTite™  
Type AEL Inserts**



One example (*shown above*) is the popular and durable "Super Shot" basketball model (9 feet tall and almost 3 feet wide), which features a moving backboard to create four different game options, linkability for up to six player competitions, and state-of-the-art sound system (with game music, announcers, and crowd cheers).

Attached to the sturdy 1-3/4" steel framework are the game's wooden side panels (from front to back), wooden basketball flooring, front display, and other components. These sections utilize SpinTite blind threaded inserts (Type AEL) in thread sizes #10-24 and 1/4-20 (depending on location in the frame). Since the inserts in the Super Shot application are designed with low-profile heads, near-flush installation is achieved.

"These inserts speed our production and make the most efficient use of our workers," reports Bill Bing, Vice President and General Manager of Skee-Ball in Phoenix. "Only one mating screw is required at each attachment point and one pair of hands does the job."

## **Atlas Engineering** a PennEngineering® company

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# PRODUCT LINE PROFILE:

## *Fasteners for Stainless Steel*



Several types of PEM® self-clinching nuts, studs, and standoffs are designed specifically for stainless steel assemblies, such as medical and foodservice equipment and components.

They promote thinner, lighter stainless designs, since they can install permanently in sheets as thin as .030"/0.8mm. Once installed, they provide reliable and reusable threads in stainless assemblies with only a mating screw required to complete final component attachment.

All PEM self-clinching fasteners for stainless applications are machined from a specialty stainless steel, resist corrosion, and heat-treated for a Rockwell



hardness greater than most 300 Series stainless steels. They are easily installed in thin stainless sheets utilizing a PEMSERTER® or other standard press.

The PEM fastener product line for stainless applications includes:

- **Type SP™ self-clinching nuts** (thread sizes #4-40 through 1/4-20 and M3 through M6);
- **Type FH4™ self-clinching studs** (thread sizes #4-40 through #10-32 and M3 through M5 and in a variety of lengths);
- **Types SO4™ thru-hole threaded standoffs and BSO4™ blind threaded standoffs** (thread sizes #4-40 through #10-32 and M3 through M5).

## **WEB UPDATE...[www.pemnet.com](http://www.pemnet.com)**

Our online "**PEMSelect Dynamic Product Locator**" at the PEMNET web site ([www.pemnet.com](http://www.pemnet.com)) enables users to search the entire database of PEM® fasteners and then download a particular type's specifications, drawings, and literature.

The "Product Locator" provides users with a choice of four search methods (Part Number Search, Part Description Search, Interactive Search, and Photo Index Search).

To utilize the **Part Number Search**, a complete or partial part number can be entered; the **Part Description Search** is based on a complete or partial part description; the **Interactive Search** allows users to "drill down" to a specific product by selecting a series of attributes that subsequently narrows a list of part matches; and the **Photo Index Search** finds matches based on two product attributes and product picture.

Once a search identifies one or more parts based on the input, users are provided with the capability to view specs, visuals, descriptive information, performance data, and other relevant information to match fastener type with application requirements.

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