

PennEngineering®

Fastening Technologies

I NSTALLATION

EQUIPMENT

A Systems Approach To Assembly

STICKSCREW®



PEMSERTER®

AUTOMATED • MANUAL • ROBOTICS • ACCESSORIES

PS
603

INTRODUCTION

Fastener installation equipment pioneered by PennEngineering Fastening Technologies can deliver a competitive edge. No matter how demanding a job, our systems and expertise provide time-proven solutions.

We rolled out our first PEMSERTER® fastener-insertion press in 1967, which introduced fabricators and OEMs to an entirely new method for installing self-clinching fasteners. The benefits of installation speed, quality, and costs quickly became apparent and remain true to this day.

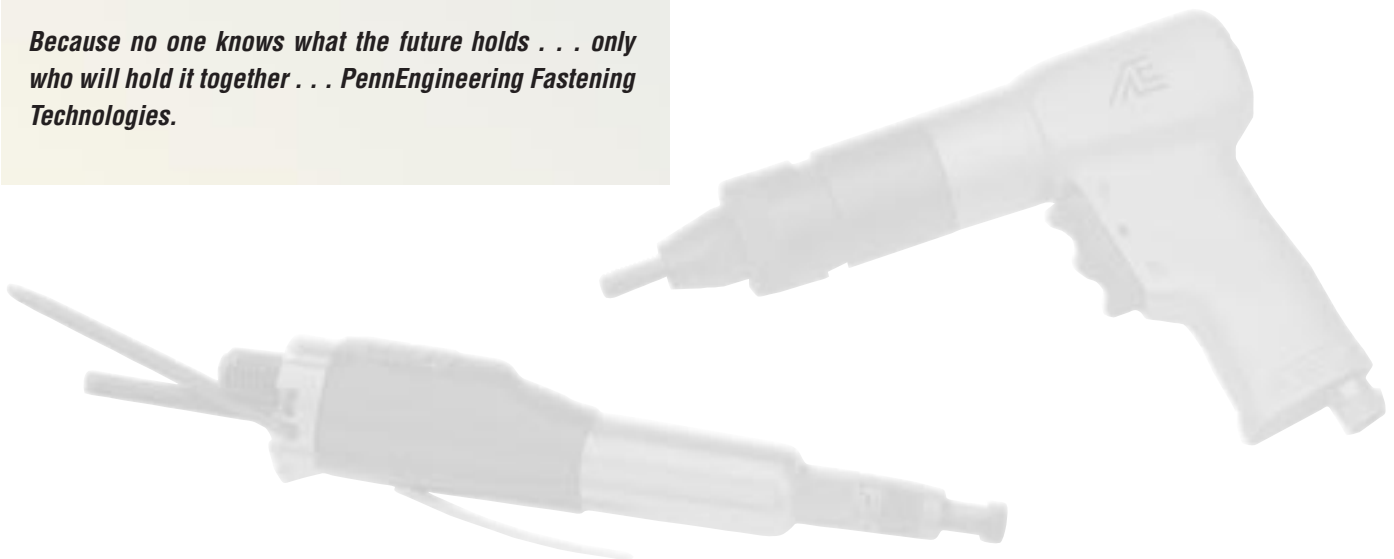
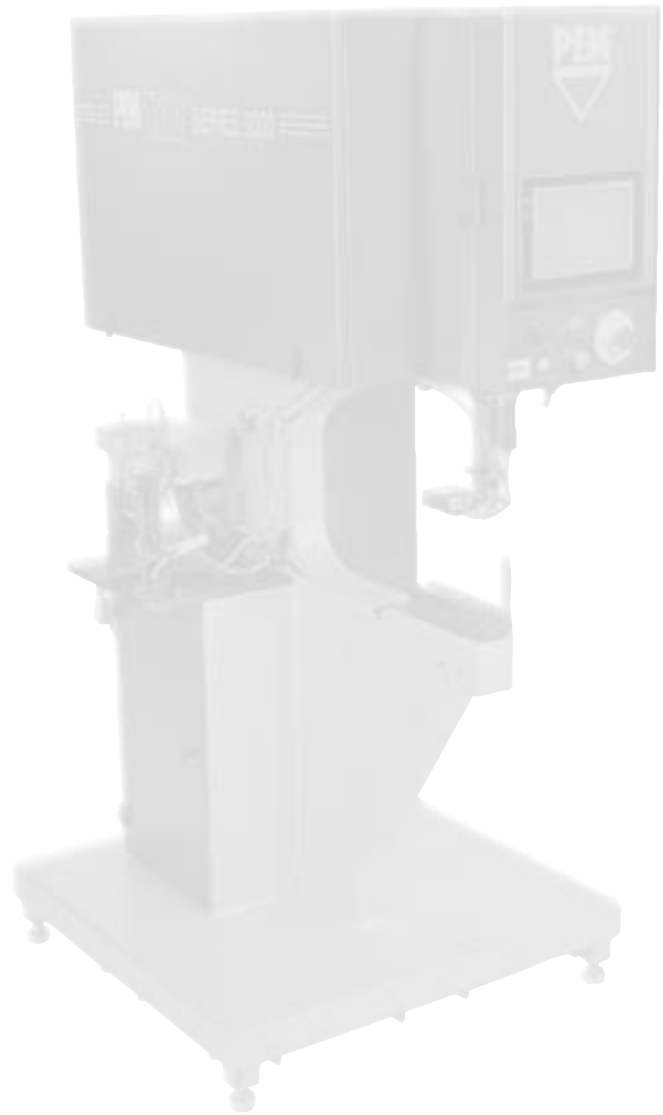
As we have grown, our PEMSERTER brand has stood to identify a diverse product line ranging from simple hand tools to the most technologically advanced press systems available in the industry.

Our response over the years to evolving customer requirements has led to expanding equipment choices and enhanced engineering expertise.

Our equipment capabilities now incorporate "smart" tooling and software, automation, robotics integration, in-die installation, and a whole new world of emerging fastener-installation technologies. Our sales and service options continue to keep pace.

At your service is an experienced tech force well-versed in hardware and systems. Every day we are prepared to handle the most challenging assembly problem or field a quick question. We invite your contact.

Because no one knows what the future holds . . . only who will hold it together . . . PennEngineering Fastening Technologies.



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PEMSERTER® brand presses are designed and built for the accurate and reliable insertion of PEM® brand fasteners. These self-clinching and broaching fasteners provide strong, permanent threads in thin materials and are installed simply by pressing them into a punched or drilled holes.

The In-die system allows you to install PEM Brand fasteners during the stamping process so that no secondary insertion operations are required.

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The StickScrew® system offers manufacturers an extremely fast, accurate and efficient method of small screw handling and insertion.

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Atlas' tools easily install SpinTite®, MaxTite®, and PlusTite® Blind threaded inserts. Atlas inserts are installed from one side of the panel. Access to both sides is not required. That's why these fasteners are ideally suited for tubing, extrusion and other similar types of applications.

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PEMSERTER® PRESSES

PEM® FASTENERS AND PEMSERTER® PRESSES . . . A SYSTEMS APPROACH TO ASSEMBLY

In 1967 we introduced the first line of fastener installation presses under the PEMSERTER name. These presses are designed, engineered and built with the user in mind. Simply stated, PEMSERTER presses are designed for applications where accuracy and reliability are key. From simple, hand-held press equipment, to fully automated motion-control presses, PEMSERTER presses continue to set the standard for performance and cost savings.

In 1942, K.A. Swanstrom founded PennEngineering with an innovative technology that opened the door to the self-clinching fastener industry we know today.

Broadly defined, a self-clinching fastener is any device, usually threaded, when pressed into ductile metal displaces the host material around the mounting hole. This action causes the metal to cold flow into a specially designed annular recess in the shank or pilot of the fastener. A serrated clinching ring, knurl, ribs or hex head prevents the fastener from rotating in the host material once it has been properly installed. Thus self-clinching fasteners become an integral part of any assembly into which they are installed.

We're proud of the innovations we've pioneered as an industry leader. Above all, it signals our belief that an industry resource must constantly set new standards that extend well beyond "business-as-usual."

As we develop new standards consistent with our systems approach to assembly, our customers can rest assured their needs will be met...and exceeded.



**The PEMSERTER®
Series 2000® press system
is designed to meet
today's challenges...
and tomorrow's.**

SERIES 2000® PRESS

The **PEMSERTER® Series 2000®** fastener installation press is designed to safely, reliably, accurately, and quickly install a wide variety of self-clinching fasteners.

The Series 2000 press is a fully automatic system that utilizes a programmable logic controller and a menu-driven touch screen operator interface system, in eleven available languages. Touch screens allow for quick-run-set-up, easy operator training, and precise fastener installation setups. They also allow the operator to instantly adjust installation variables such as dwell time and installation force and automatically alert and direct the operator to any safety or system faults for quick diagnosis.

The Series 2000 press has a unique **LIGHTSTREAM® Operator Safety System.*** It is a wireless, fail-safe system which utilizes a pair of infrared beams that immediately detect when the main ram contacts any object, metallic or non-metallic, that should not be in its path. The **LIGHTSTREAM** system provides a fast, precise, and reliable safety system that ensures ram force is only applied to fasteners during installation.

The Series 2000 press comes with a one-year parts warranty.

**Patented.*

Features

Process Control

- Last job, job store, and recall mode.
- Adjustable ram stroke distance control in manual and bottom feed nut mode.
- Real-time installation force feedback displayed on screen.
- Fastener and batch counters.
- Descriptive screen alerts for operating errors.
- Smart dwell and force verification.

Safety

- Self-diagnostic system lets operator work with increased speed, accuracy, and confidence.
- **LIGHTSTREAM™ Operator Safety System** provides continuous operator and workpiece protection without being compromised like other systems that rely on workpiece conductivity.

Tooling

- One stainless steel feeder bowl for most nuts, studs, and standoffs.
- Color-coded tooling for quick changeover.

Available Options

- Capable of factory network interfacing.
- Top mount reverse flange anvil holder.
- Manual, automatic, or motion controlled versions.
- Bilingual operator interface.
- Automatic tooling for PF11 and PF12 panel fasteners.
- Fastener Length Monitoring (FLM) system.
- 10-ton installation force.

NEW!



Fastener Length Monitoring hardware.

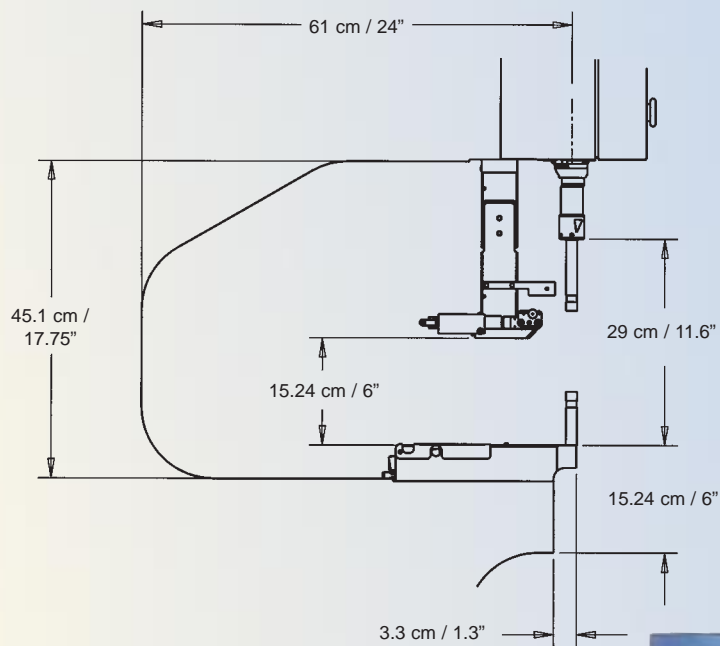


Bottom feed nut tooling.



Top mount stud tooling.

SERIES 2000® PRESS



Specifications

Ram Force	1.8 to 71.2 kN / 400 to 16,000 lbs.
Pressure System Type	Air-Over-Oil
Electric Requirements	120V 60Hz 4A or 230V 50Hz 2A single phase
Air Requirements*	6 to 7 BAR / 90 to 100 PSI 4.53 liters / 276 cu. in. per ram cycle
Throat Depth	61 cm / 24"
Height	193 cm / 76"
Width	92 cm / 36"
Depth	126 cm / 49.5"
Weight	1,135 kg / 2,500 lbs.

*1 psi = 0.07 bar. 1 bar = 14.5 psi.



SERIES 4® PRESS

The **PEMSERTER® Series 4** press has a 45.7 cm / 18" throat depth which provides clearance for a variety of chassis configurations. It is designed to install self-clinching fasteners in size M2 / #0 thru M10 / 3/8" in steel, and sizes up to M12 / 1/2" in aluminum panels or circuit boards.

Optional Turret Anvils and Anvil Holders



Turret Nut Anvil #2 thru 1/4" and M2 thru M6.



Turret Stud Anvil #4 thru 1/4" and Standoffs #4 and #6.



Top Mount Reverse Flange Anvil Holder includes punch and anvil.



Bottom Mount Reverse Flange Anvil Holder.

Features

- Insertion force adjustable from 1.8 to 53.4 kN / 400 lbs. to 6 tons.
- Pneumatic power for speed, consistency, and simple operation. Requires shop air only.
- Integral point-of-operation safety.
- Large parts tray with dividers.
- Rapid tooling changeover, perfect for short production runs.
- One-year parts warranty and two-year limited warranty on pneumatic components.
- Stand.

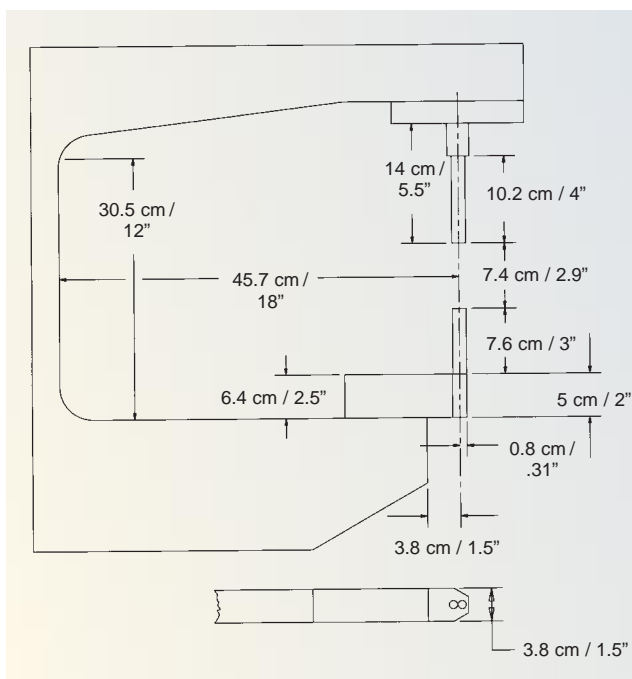
Available Options

- Anvils and anvil holders available for difficult installations.

Specifications

Ram Force	1.8 to 53.4 kN / 400 to 12,000 lbs.
Pressure System Type	Pneumatic / Lever
Air Requirements*	6 to 7 BAR / 90 to 100 PSI 2.79 liters / 170 cu. in. per cycle
Throat Depth	45.7 cm / 18"
Height (on stand)	167.6 cm / 66"
Width (of press)	43.2 cm / 17"
Weight (with stand)	308 kg / 680 lbs.

*1 psi = 0.07 bar. 1 bar = 14.5 psi.



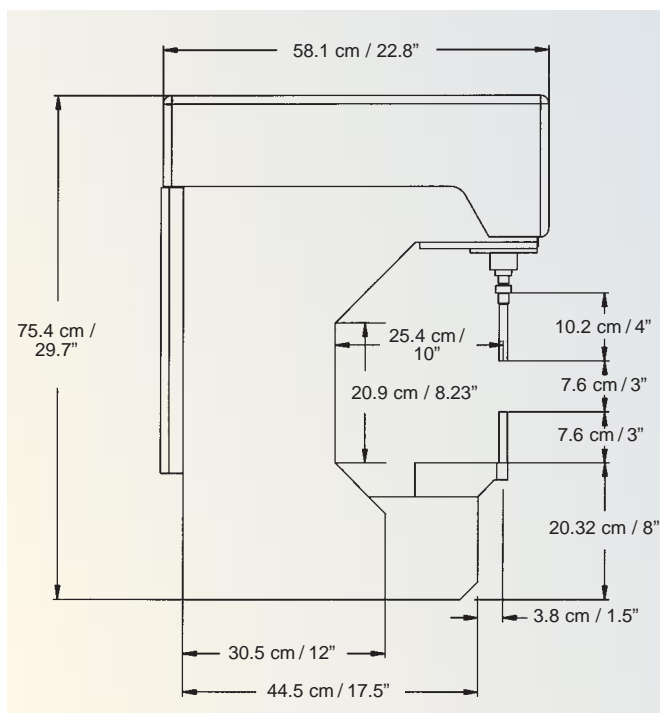
SERIES LT/4™ PRESS

The **PEMSERTER® Series LT/4** press is designed to install unified or metric self-clinching nuts, studs, and standoffs requiring three tons of insertion force or less.

Specifications

Ram Force	26.7 kN / 6,000 lbs.
Control System	Pneumatic Logic
Pressure System Type	Pneumatic / Wedge
Air Requirements*	6 to 7 BAR / 90 to 100 PSI
Throat Depth	25.4 cm / 10"
Stroke	7.6 cm / 3" .64 cm / .25" Power Stroke
Height	Press - 71.1 cm / 28" On Stand - 139.7 cm / 55"
Width	Press Base - 20.3 cm / 8"
Weight	Press - 132 kg / 291 lbs. With Stand - 155 kg / 342 lbs.

*1 psi = 0.07 bar. 1 bar = 14.5 psi.



Features

- Pneumatic power for speed, consistency and simple operation. Requires shop air only.
- Internal point-of-operation safety.
- Adjustable positive ram stop.
- Rapid tooling changeover, perfect for short production runs.
- 25.4 cm / 10" throat depth.
- Large parts tray with dividers.
- One-year parts warranty and two-year limited warranty on pneumatic components.

Available Options

- Stand.
- Anvils and anvil holders for difficult installations.



SERIES B49™ PRESS

The **PEMSERTER® Series B49** press is a convenient bench-mounted tool which can develop a squeezing force of 35.6 kN / 8,000 lbs.

With the PEMSERTER Series B49 press you can easily install unified or metric self-clinching nuts, studs, and standoffs requiring four tons of insertion force or less.

Specifications

Ram Force	35.6 kN / 8,000 lbs.
Pressure System Type	Pneumatic
Air Requirements*	6 to 7 BAR / 90 to 100 PSI 1.3 liters / 75 cu. in. per cycle
Throat Depth	24.1 cm / 9.5"
Depth (without stand)	43.2 cm / 17"
Width	5.1 cm / 2"
Weight (with stand)	74.84 kg / 165 lbs.

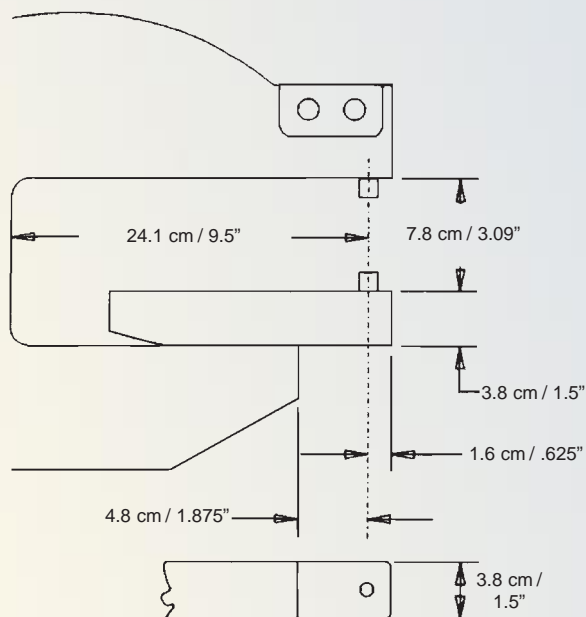
*1 psi = 0.07 bar. 1 bar = 14.5 psi.

Features

- Pneumatic power for consistency and simple operation. Requires shop air only.
- 24.1 cm / 9.5" throat depth.
- Stroke length control.
- Snap-in tooling.
- 35.6 kN / 4-ton squeezing force.
- Ascent/decent of ram controlled by operator for safety.
- One-year parts warranty.
- Utilizes same tooling as P3 press.

Available Options

- Unified or metric tooling.
- Stand with filter regulator.
- Tooling kit.
- Parts tray.



SERIES P3™ PRESS

The **PEMSERTER® Series P3** fastener installation press is a portable power hand tool weighing only 4.6 kg. / 10 lbs. that can develop a squeezing force of 26.4 kN / 6,000 lbs.

With the PEMSERTER Series P3 press, you can easily install self-clinching nuts and studs in metric or unified sizes. The metric press kit contains punches and anvils to install nuts (S, CLS, and CLA) ranging from M2 thru M5 thread sizes and studs (FH, FHS, and FHA up to 12mm in length) ranging from M2.5 thru M5 thread sizes. The unified press kit contains punches and anvils to install nuts and studs up to 0.5" in length ranging from #2-56 thru #10-32 thread sizes.

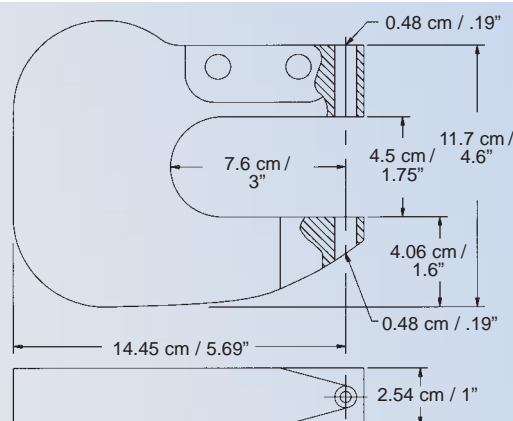
Specifications

Ram Force	Up to 26.7 kN (6,000 lbs.)
Pressure System Type	Pneumatic
Air Requirements*	6 to 7 BAR / 90 to 100 PSI .25 liters / 15 cu. in. per cycle
Throat Depth	7.6 cm / 3"
Length	40.6 cm / 16"
Yoke Depth	15.8 cm / 6.2"
Weight	4.6 kg / 10 lbs.

*1 psi = 0.07 bar. 1 bar = 14.5 psi.

Features

- Pneumatic power for consistency and simple operation. Requires shop air only.
- Trigger controlled safety.
- Snap-in tooling changeover.
- Press includes metric or unified tooling.
- Can be bench-mounted. Back side of yoke has two predrilled and tapped holes for bench mounting. Mounting bracket hardware included.
- One-year parts warranty.



Work Area

MICRO-MATE® PRESS

The **PEMSERTER® MICRO-MATE®** press is a versatile hand tool weighing only 1.25 kg / 2 3/4 lbs. that can develop a squeezing force of 1,134 kg / 2,500 lbs.

The press kit contains one hand tool, one flat punch, seven punches and dies, one punch adapter bushing, one edge-depth guide, five fastener anvils and a storage case. The metric kit installs nut sizes M2 to M5, while the unified kit installs nut sizes #2-56 to #10-32.

Features

- Equipped with punches and dies to punch fastener mounting holes in metal sheets.
- Changes to a flat punch and recessed anvil to easily install metric or unified self-clinching nuts.
- Ideal for prototype shops or short production runs.
- One-year parts warranty.



TRU-MOTION® PRESS SYSTEMS

PEMSERTER® TRU-MOTION® presses are custom integrated systems that combine PEMSERTER automatic fastener installation presses with automated workpiece handling. Available integrated systems include X/Y positioning tables, rotary indexers, and multi-axis robotics. These systems can also be directly integrated into your production line, working as a station and providing feedback to your master control system.

X-Y positioning tables are ideal for multiple flat installations and/or multiple workpieces. Rotary indexers can accommodate multiple operations, including simultaneous unload/load operations during installations.

For the most advanced applications integration with a multi-axis robot allows access to all sides of a workpiece. Combined with the workpiece protection of the Series 2000 press and installation feedback systems, this package offers unprecedented quality assurance for every installation.

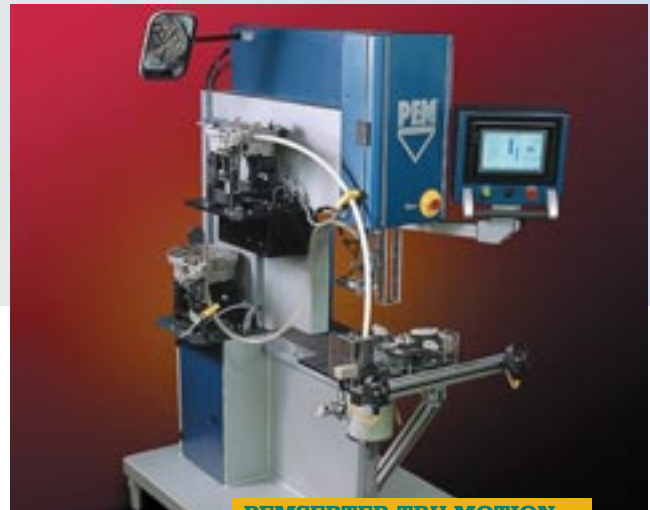
PEMSERTER TRU-MOTION

X/Y POSITIONING PRESS



PEMSERTER TRU-MOTION

ROBOTIC SYSTEM



PEMSERTER TRU-MOTION

ROTARY PRESS

IN-DIE FASTENER FEEDING SYSTEM

The **PEMSERTER® In-die Fastener Feeding System** brings new dimensions to stamping capabilities. It incorporates the latest technologies to deliver the performance that is needed to win in the highly competitive stamping industry. The In-die system allows you to install PEM Brand fasteners during the stamping process so that no secondary insertion operations are required, thus reducing overall labor costs, improving part quality and dramatically improving product through-put.

Benefits of using the in-die fastener feeding system are; increased productivity, increased quality, cost effective, reduced inventory/WIP, and reduced manufacturing lead times.

The In-die Fastener Feeding System comes with a 90-day parts warranty.

Flexible and Expandable



The system has the unique ability to be expanded for future applications. Select the expansion port option at time of order.



Add an In-die PLUS module to the master system for increased fastener feeding capabilities. (Example, add a stud to a multiple nut system, or add a nut to a multiple stud system.) Simply connect the fastener delivery tubing to the die and the communication connector to the master system and enter the new configuration into the touch screen control.



Can be equipped with multiple bowls or multiple configurations at time of order.

REBUILD PROGRAM

Give your old press new life with the PEMSERTER rebuild program. Press upgrades includes:

- Improved cycling speed to current standards.
- All new internal components with current longer life, lower maintenance requirements.
- Hoses, tubing, and fittings replaced.
- New, more advanced main cylinder.
- New high volume pneumatic pilot valve.
- New controlled retract function for reduced wear.
- One-year warranty.



Before



After

NOTE: Typical Series 4 press after rebuild. Actual results may vary.

THE STICKSCREW® SYSTEM

The STICKSCREW® system offers manufacturers an extremely fast, accurate and efficient method of small screw insertion.

This simple low-cost system combines a lightweight driver and "sticks" of up to 110 serially connected hex head screws. Simply insert the stick in the driver, index the first screw, squeeze the trigger, and place the tip of the protruding screw in the hole and the screw is driven home, twisting off cleanly when precise torque is reached.

Our StickShooter™ air tools are lightweight, ergonomic, and quiet. These tools provide years of reliable operation. If needed, service and parts are available from the factory.

- Trigger activates pneumatic motor.
- Non-marring tip.
- Interchangeable and adjustable nose assemblies.
- IL-2000 operates on 90 P.S.I. using 1/4" air line.

For information on the StickScrew fasteners, consult Bulletin SS.



StickScrew Robotic System

- Simultaneous control of X, Y, and Z axes.
- Easily programmable with teaching pendant.



StickScrew FlexArm

- Allows a higher level of consistent quality to be maintained.
- Operator can position the driver to the part more accurately.



In-Line StickShooter™ Model EL-2000

- Operates on 115/230V 60/50 Hz.



Pistol Grip StickShooter™ Model PG-2000

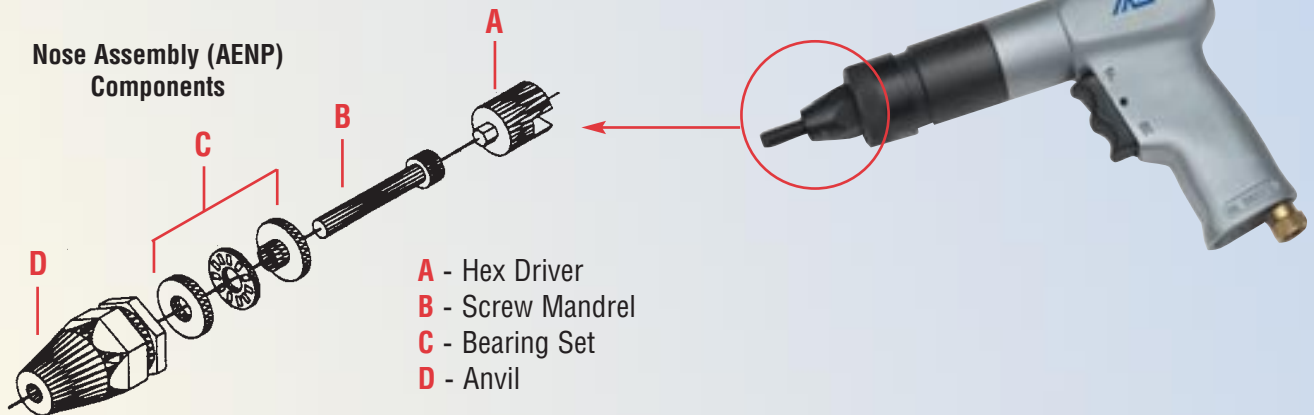
- Operates on 90 P.S.I. using 1/4" air line.



In-Line StickShooter™ Model IL-2000

ATLAS SERIES 800 SPIN/SPIN TOOLS

- Totally pneumatic.
- Installs Atlas SpinTite® and pre-bulbed PlusTite® fasteners into various material thickness.
- Lightweight, easy to handle.



Installs Types AEK, AEL, AEH, AEO, and AET

Thread Size	Complete Tool Part No.	Tool RPM	Air Settings			Nose Assembly Component Part Numbers				
			Fastener Material							
			Steel and Brass	Aluminum	Monel					
			Dynamic Air Pressure Settings (PSI - Bars)	Dynamic Air Pressure Settings (PSI - Bars)	Dynamic Air Pressure Settings (PSI - Bars)	Part No. For Complete Nose Assembly	A Hex Driver	B Mandrel Socket Head Cap Screw (10 Per Bag)	C Bearing Set	D Anvil
4-40	AE801-440	3000	35 - 45	30 - 40	35 - 45	AENP-440	AEHD-4	AE440-150SH	AEPB-4	ANSS-4
6-32	AE801-632	3000	70 - 80	60 - 80	70 - 80	AENP-632	AEHD-6	AE632-150SH	AEPB-6	ANSS-6
8-32	AE801-832	3000	70 - 90	50 - 70	70 - 90	AENP-832	AEHD-8	AE832-150SH	AEPB-8	ANSS-8
10-24	AE802-1024	1500	60 - 90	40 - 70	60 - 90	AENP-1024	AEHD-10	AE1024-175SH	AEPB-10	ANSS-10
10-32	AE802-1032	1500	60 - 90	40 - 70	60 - 90	AENP-1032	AEHD-10	AE1032-175SH	AEPB-10	ANSS-10
1/4-20	AE803-2520	600	70 - 90	60 - 80	70 - 95	AENP-2520	AEHD-25	AE420-150SH	AEPB-25	ANSS-25
1/4-28	AE803-2528	600	70 - 90	60 - 80	70 - 95	AENP-2528	AEHD-25	AE428-150SH	AEPB-25	ANSS-25
5/16-18	AE804-3118	400	70 - 110	60 - 90	70 - 110	AENP-3118	AEHD-31	AE518-200SH	AEPB-31	ANSS-31
5/16-24	AE804-3124	400	70 - 110	60 - 90	70 - 110	AENP-3124	AEHD-31	AE524-200SH	AEPB-31	ANSS-31
3/8-16	AE804-3716	400	70 - 110	60 - 90	70 - 110	AENP-3716	AEHD-37	AE616-200SH	AEPB-37	ANSS-37
3/8-24	AE804-3724	400	70 - 110	60 - 90	70 - 110	AENP-3724	AEHD-37	AE624-200SH	AEPB-37	ANSS-37
1/2-13	AE808-5013	275	75 - 120	60 - 90	75 - 110	AENP-5013	AEHD-50	AE813-250SH	AEPB-50	ANSS-50
1/2-20	AE808-5020	275	75 - 120	60 - 90	75 - 110	AENP-5020	AEHD-50	AE820-250SH	AEPB-50	ANSS-50
M3	AE801-M3	3000	2.4 - 3.1	2.1 - 2.7	2.4 - 3.1	AENP-M3	AEHD-M3	AEM3-40SH	AEPB-M3	ANSS-M3
M4	AE801-M4	3000	2.4 - 3.1	3.4 - 4.8	4.8 - 6.2	AENP-M4	AEHD-M4	AEM4-40SH	AEPB-M4	ANSS-M4
M5	AE802-M5	1500	4.8 - 5.5	2.7 - 4.8	4.1 - 6.2	AENP-M5	AEHD-M5	AEM5-45SH	AEPB-M5	ANSS-M5
M6	AE803-M6	600	4.1 - 5.5	4.1 - 5.5	4.8 - 6.5	AENP-M6	AEHD-M6	AEM6-40SH	AEPB-M6	ANSS-M6
M8	AE804-M8	400	4.8 - 6.2	4.1 - 6.2	4.8 - 7.5	AENP-M8	AEHD-M8	AEM8-50SH	AEPB-M8	ANSS-M8
M10	AE804-M10	400	4.1 - 7.5	4.1 - 6.2	4.8 - 7.5	AENP-M10	AEHD-M10	AEM10-50SH	AEPB-M10	ANSS-M10
M12	AE808-M12	275	4.1 - 7.5	4.1 - 6.2	5.1 - 7.5	AENP-M12	AEHD-M12	AEM12-60SH	AEPB-M12	ANSS-M12

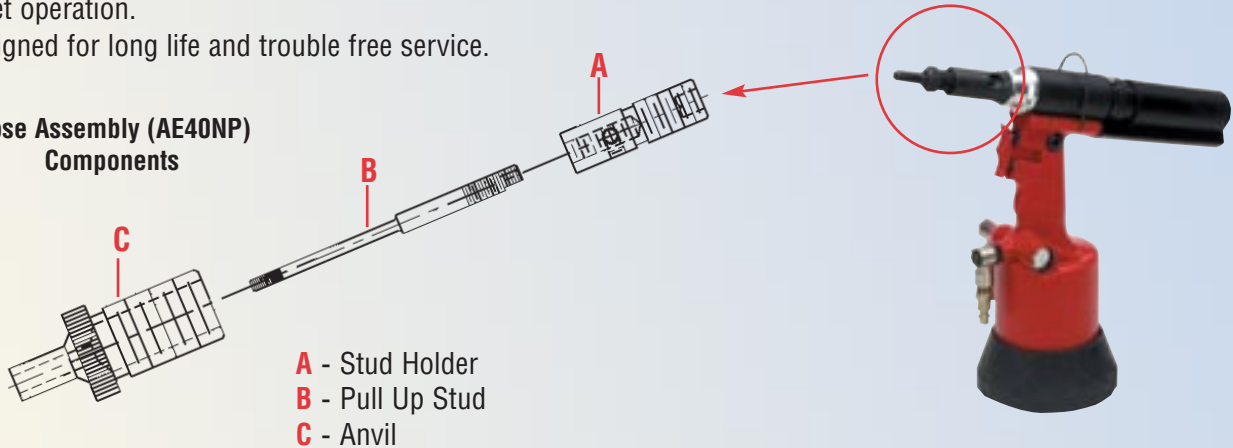
NOTE: The air supplied to the 800 series tools should be dry and free of contamination to prevent premature wear and tear of the internal components. We suggest use of a filter, pressure regulator, and oiler system, which are available through Atlas, to be located in close proximity to the tool. All available thread sizes may not be listed. Contact Atlas Engineering for availability. Optional mandrel lengths are also available for all product families.

PREVENTIVE MAINTENANCE REQUIREMENTS: The bearing set must be kept in a well lubricated condition to assure proper tool operation. We suggest the use of a high temperature bearing grease such as SUPER BLUE 442. The tool mandrel should be periodically inspected for thread wear and damage. When the fastener will no longer thread onto the mandrel freely from the shank end, the mandrel is worn and needs to be replaced. We recommend using UNBRAKO®, BLUE DEVIL®, or HOLO-KROME® brand socket head cap screws. Last dash number in part number denotes length, example: -150 is 1.5" in length.

ATLAS AE 40 SPIN/PULL TOOL

- Provides powerful spin/pull action to easily install Atlas MaxTite® fasteners.
- Quiet operation.
- Designed for long life and trouble free service.

Nose Assembly (AE40NP) Components



Thread Size	Complete Tool Part No.	Dynamic Air Pressure (PSI - Bars)	Part No. For Complete Nose Assembly	Nose Assembly Component Part Numbers		
				A Stud Holder	B Pull Up Stud	C Anvil
4-40	AE40-440	60 - 90	AE40NP-440	SH-1	L-70-440	AN-1-4
6-32	AE40-632	60 - 90	AE40NP-632	SH-1	L-70-632	AN-1-6
8-32	AE40-832	60 - 90	AE40NP-832	SH-1	L-70-832	AN-1-8
10-24	AE40-1024	60 - 90	AE40NP-1024	SH-1	L-70-1024	AN-1-10
10-32	AE40-1032	60 - 90	AE40NP-1032	SH-1	L-70-1032	AN-1-10
1/4-20	AE40-2520	60 - 90	AE40NP-2520	SH-2	L-99-2520	AN-1-25
1/4-28	AE40-2528	60 - 90	AE40NP-2528	SH-2	L-99-2528	AN-1-25
M3	AE40-M3	4.1 - 6.2	AE40NP-M3	SH-1	L-142-M3	AN-1-M3
M4	AE40-M4	4.1 - 6.2	AE40NP-M4	SH-1	L-142-M4	AN-1-M4
M5	AE40-M5	4.1 - 6.2	AE40NP-M5	SH-2	L-143-M5	AN-1-M5
M6	AE40-M6	4.1 - 6.2	AE40NP-M6	SH-2	L-143-M6	AN-1-M6

NOTE: The air supplied to the AE 40 tool should be dry and free of contamination to prevent premature wear and tear of the internal components. We suggest use of a filter, pressure regulator, and oiler system, which are available through Atlas, to be located in close proximity to the tool.

AE 40 Series Tool Specifications							
Model No.	Thread Sizes	Weight* (lbs./kg)	Air (PSI - Bars)	Air Use (cu in./ liters)	Minimum Hose Size	Max. Axial Pulling Load	Minimum CFM
AE 40	#4 to 1/4" and M3 to M6 ⁽¹⁾	6.5 / 7.95	80-100 - 6.1 to 6.8	530 / 8.7	3/8 / 9.5m	5200 lbs / 23.4 kN	3/8 / 9.5mm

* With nose piece.

(1) Will install aluminum fasteners up to 3/8" / M10.

ATLAS HEX WRENCH INSTALLATION TOOL

- Designed for installing Atlas MaxTite® fasteners.
- Great for field installations or repair work.
- Ideal for prototype applications.

Model L-845 - Installs MaxTite Rivet nuts 440 to 1/4" and M3 to M6

Model L-722 - Installs MaxTite Rivet nuts 5/16" to 1/2" and M8 to M12



ATLAS L6000 INSTALLATION TOOL

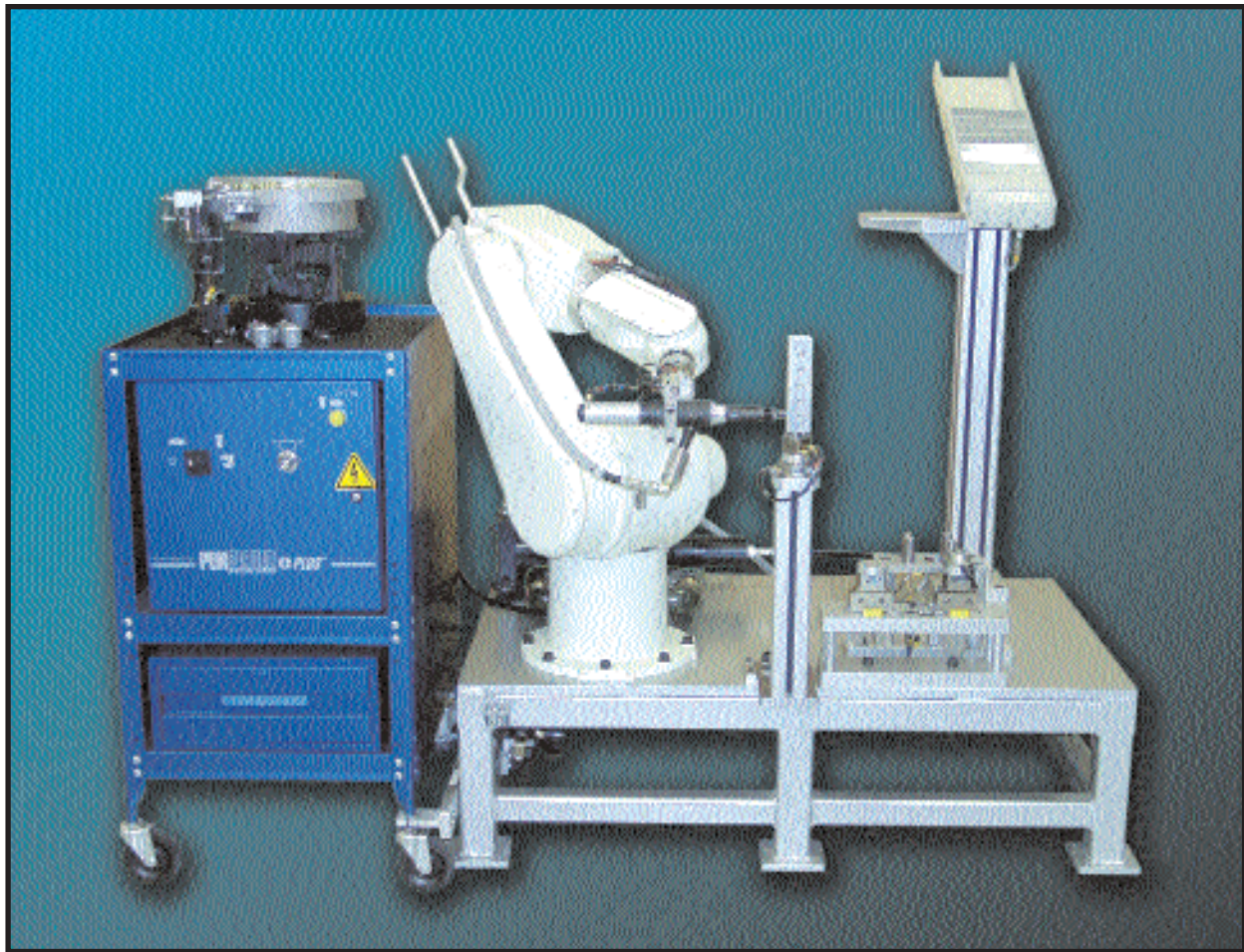
- Ideal for light production requirements.
- Installs most Atlas SpinTite® fastener types and sizes.



ATLAS ROBOTIC SYSTEM CAPABILITIES

- Operates for long periods without worker involvement.
- Reduced “total cost of installation”.
- Consistent, quality installations.
- Requires minimal work area.
- Production flexibility.

The Atlas Robotic technology offers a completely automated and intelligent system for worker-free part handling and fastener installation. The robotic assembly system can reduce installed fastener costs, increase quality installations, improve job productivity, and reduce floor-space requirements. We can provide the components or the entire system based on your needs.



The demonstration robot shown here positions a workpiece into a holding fixture utilizing an interchangeable end-of-arm (EOA) tooling hand. The system automatically switches to the installation tool and then installs the fasteners in a pick-and-place format.

The workpiece can remain stationary while the six-axis articulated robot performs installations. This enables multiple fastener insertions at different surface angles without a need for workpiece repositioning.

System components and capabilities can be configured to meet your specific assembly needs.

USED EQUIPMENT

Check our web site for an up-to-date list of used equipment available for purchase.



Visit us at our PEMNETSM web site
www.pemnet.com

CUSTOMER ASSISTANCE PROGRAM (CAP)

PennEngineering Fastening Technologies has provided quality fasteners, installation equipment and technical support to customers for the past many decades. Even today we are the only manufacturer that provides a “total systems” solution to self-clinching fastener technology. Now we're taking this approach to the next level.

CAP provides manufacturing, fastener insertion, design and assembly services to customers that may require anything from small quantity prototype production to full runs. We can supplement you're existing capacity or supply all of your installation needs. The program is customized to fit your needs.

Services can include:

- Fastener installation
- Component Assembly
- Design Assistance
- Packaging
- Quality inspection and documentation
- Performance testing

The Benefits of CAP include:

- No investment in capital equipment
- No investment in additional labor
- Expert, precise installation
- Installation of genuine PEM products (no substitutions)
- Fast turnaround
- Flexibility

30 DAY FREE TRIAL

Try a PEMserter press free for 30 days in your facility. Call our PEMserter customer service department at 215-766-3801 or 1-800-523-5321 and ask for details.

ACCESSORIES

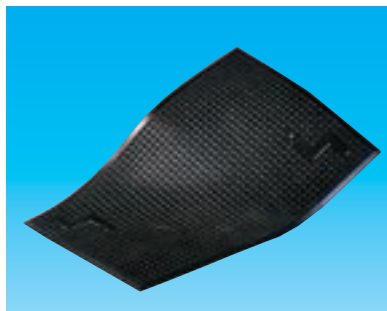


Industrial Work Light

- ✓ Flexible, efficient coverage of work area.
- ✓ Bright 20W halogen bulb.
- ✓ Magnetic base mounts to frame.
- ✓ 120V/220V models available.

Coalescing Air Filter

- ✓ Higher level of filtration - removes 93% of 0.01 micron particles.
- ✓ Automatic drain with sight-glass for monitoring fluid levels.
- ✓ Built-in differential pressure indicators.
- ✓ 1/4 turn quick release bowl for easy maintenance.
- ✓ Lifetime warranty (20-year) with select 1/4" to 2" line filters.



Anti-fatigue Mat

- ✓ Solid polyurethane nodule design increases blood circulation and reduces cumulative trauma disorders associated with prolonged standing.
- ✓ Chemical resistant.
- ✓ Durable and easy to clean.
- ✓ Shock absorbent with tapered edges.
- ✓ 24" x 36".
- ✓ Two-year wear warranty.

Industrial Work Seat

- ✓ Ergonomic design improves comfort and increases worker productivity.
- ✓ Four easy-to-use height (16" to 32") and tilt adjustments.
- ✓ Durable polyurethane seat.
- ✓ Foot rest step rail.
- ✓ Built tough for industrial environment.
- ✓ Swivel stop feature makes getting on and off the chair easy and safe.
- ✓ Five-year warranty.



220V Surge Suppressor

- ✓ Added over-voltage protection for electronics.
- ✓ Continuously monitored by built-in temperature fuse.
- ✓ Light and audio defect signal.
- ✓ Convenient in-line connection.

LEASING OPTIONS

Why Consider Leasing?

Under the terms of a true lease, rental payments are ordinary and necessary business expenses. These expenses are also deductible, provided that the lease payments are rent incurred or paid during the taxable year, required for the continued use of the property, for property used in a trade or business of the taxpayer, and for property that the taxpayer has neither title to nor equity in with respect to the payments. Lease contracts can be written to provide the lessee with great flexibility, in terms of the amount and timing of the lease payments.

Below are a dozen typical reasons for leasing.

1. Leasing conserves working capital; leasing normally provides 100% financing.
2. Leasing avoids use of short-term bank lines and conserves borrowing capacity for financing inventory, accounts receivable, and other short term needs.
3. Acquisition may be made through monthly budgetary monies, since operating funds are usually easier to obtain.
4. Companies (and people) are budget driven.
5. The approval cycle for leasing can be shorter.
6. Leasing can provide off balance sheet financing. The equipment will not be listed as a capital item on the company's balance sheet.
7. Leasing protects against an investment in equipment that has declining value. Capital funds may then be used for opportunities that create profit.
8. Leasing can provide a way to acquire equipment that was not forecasted.
9. Cash flow objectives can be satisfied with leasing.
10. Leasing can provide a means of increasing your company's short-term production capacity.
11. Budget justifications become easier with leasing.
12. Leasing can be used to ensure survival of your company when your industry is making rapid technological advances.

Visit www.pemnet.com/presses/leasing1.html for a Leasing Payment Calculator.

EQUIPMENT SERVICE

Our Service Department provides telephone and on-site support to keep presses running safely, smoothly, and productively. A factory technician completes repair and service work either at our factory or at the customer site as required. Main cylinder and booster repair / build can be completed at our factory or during an on-site visit. In addition, all phases of StickScrew® driver repair and rebuilding is done at our factory.

Contact us at **1-800-523-5321** and ask for service to keep your presses running smoothly and safely.

WORLDWIDE REPRESENTATIVES

For representatives and distributors, call 1-800-523-5321 or visit www.pemnet.com

**If you have an assembly problem or just a question,
please give us a call at:**

800-523-5321

in USA only

We will provide you with whatever assistance you need.

For more information ...



Visit us at our PEMNETSM web site
www.pemnet.com or call
1-800-523-5321 (USA Only)

Specifications subject to change without notice.

PennEngineering®

Fastening Technologies

World Headquarters:

5190 Old Easton Road
Danboro, PA 18916 USA
E-mail: pem@pemnet.com



Tel: 215-766-8853 • Fax: 215-766-3633

U.K. And Europe:

Kirk Sandall Industrial Estate
Doncaster, South Yorkshire • DN3 1QR, England
E-mail: pem-uk@pemnet.com
Tel: 01302 893100 • Fax: 01302 885341

Asia/Pacific:

Citipoint Industrial Complex
152 Paya Lebar Road #03-06 • Singapore 409020
E-mail: arconix-sing@arconix.com
Tel: 6 745 0660 • Fax: 6 745 2400

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