

SPECIFICATIONS

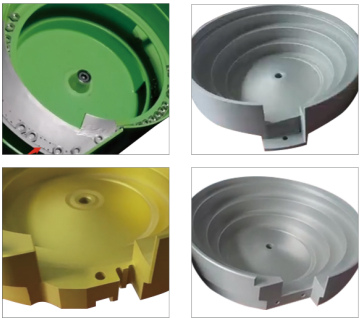
Force Range	450 LBF(2 kN) to 21,807 LBF(97 kN)
Repeatability	±1% of Force Setting
Max Riveting Capacity	M10 Nut M8 Stud M6 Standoff Carbon Steel
Throat Depth	25 inches(650 mm)
Throat Height	18 inches(450 mm)
Stroke	8 inches(200 mm)
Fastener Sizes	2-56 to 1/2-13 (M2 to M12)
Pump	Dual
Touch Screen	5 inches(127 mm)
Control Panel	Manual
Main Power	3 kW
Current	8A
Hydraulic Oil	46/32
Oil Tank Reservoir	18.5 Gallons(70 Liters)
Air Pressure	87 psi(0.6 Mpa)
Power Supply	380V 3 Phase 50-60Hz
Size (D*W*H)	61.5in x 42in x 87.4in (1,560mm x 1,070mm x 2,220mm)
Weight	2,425 LBS(1,100 kg)



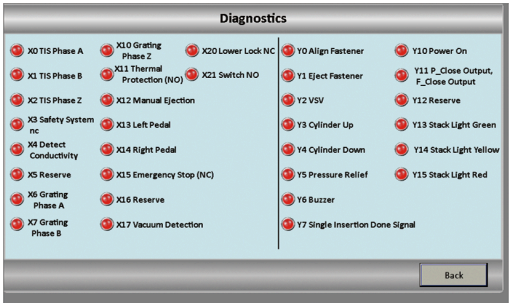
FASTENER  
INSERTION  
TECHNOLOGIES



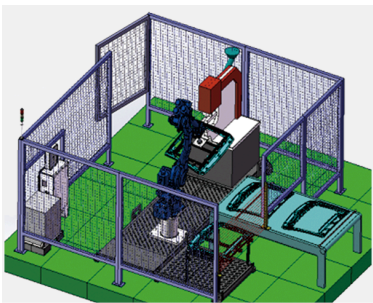
Power Options:  
220V, 240V, 400V  
415V, 480V  
50-60Hz



Modular Automatic-Feed System (MAS)



Robot Riveting Cell



Robot Riveting Workstation



TTF-21™



For inquiries please contact: [sales@pencomsf.com](mailto:sales@pencomsf.com)  
[www.pencomsf.com](http://www.pencomsf.com)



A: Positive Stop System

This type of adjustable control energizes a solenoid valve to extend or retract the cylinder at the appropriate time. When the extend valve is energized, the cylinder begins to extend and it moves until it hits a stop at the end of its travel. When the solenoid for retraction is energized, the shaft will begin to retract until it hits the stop at the end of its travel. This is an advantage in softer materials such as PCB, plastic, and aluminum.

B: Batch Counter/Stroke Adjustment

Workpiece Counter: This counts the individual number of completed workpieces.

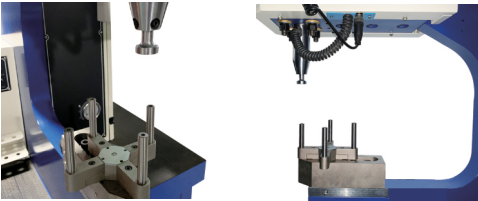
Batch Counter: The batch counter will automatically count the number of installed fasteners in a single application, and features a buzzer to indicate when the total installations are complete.

Dwell Time: The length time that force is applied between the upper and lower tools when inserting a fastener. Time range 0 to 2 seconds.

Up Travel: This is the position that the upper tool returns to after insertion is completed. Time range 0 to 2 seconds.

C: Turret Insertion System (TIS)

Manually insert up to 4 parts at a time for quicker installations.



D: Safety System

This feature reduces risk and harm to operators. As the press is in motion, it will stop when encountering a foreign object.

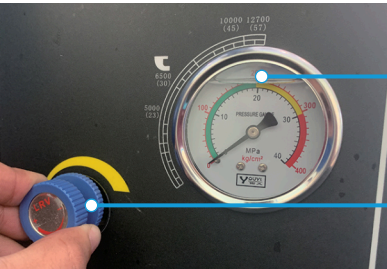
Optional

E: Laser Locating

This system allows the operator to see where each fastener will be installed with precision.

F: Quick Force Setting

Allowing the operator to find the correct force in 10 seconds, press the up or down pedal to increase or decrease pressure.

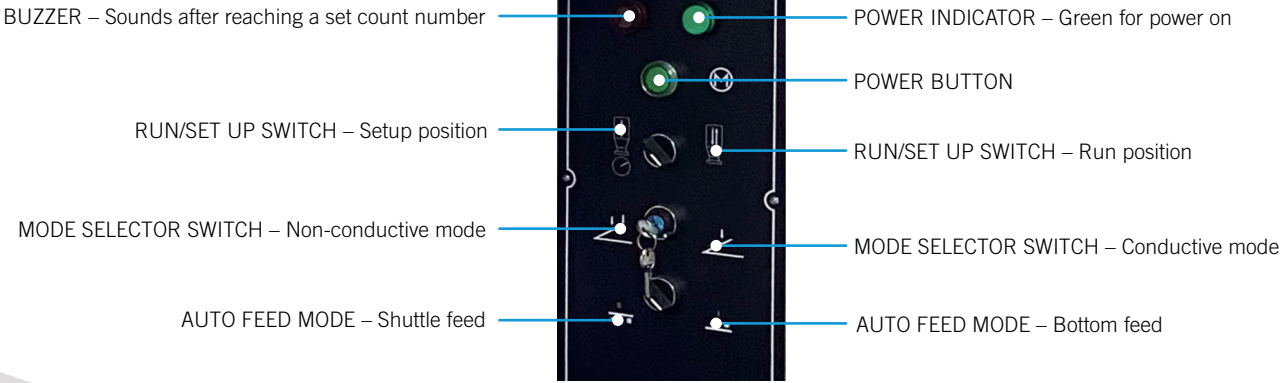


Pressure Gauge / Force Indicator

Pressure / Force Adjustment Control  
Turn clockwise to increase pressure,  
counter-clockwise to decrease.



G: Control Panel



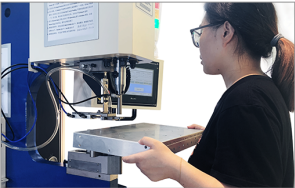
H: Energy Saving Dual Pump

Offers lower noise and prevents increasing oil temperatures. The system also features high ram force repeatability and accuracy, and a faster approach and insertion stroke than single pump models. When inactive, the pump will shut down automatically after 10 minutes.

Optional

I: Modular Automatic-Feed System (MAS)

MAS handles nuts, studs, and standoffs ranging from M2 to M6 (2-56 to ¼-20) and a maximum length of 25mm (1inch). This system features a high-quality vibration bowl for the movement of parts, and a variable frequency vibration controller.



Manual Tooling Package

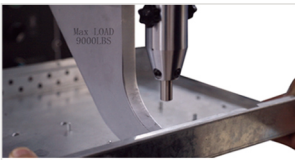
Including 31, 33, or 49 piece manual tool kits, J-frame, and fixing base.



MSTP-33(Metric)



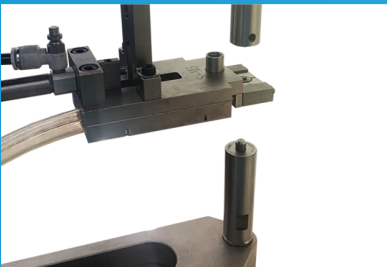
ISTP-35/49(Imperial)



J-frame and fixing base is perfect for boxes, flanges, and other hard to reach or maneuver locations.

Automatic Tooling System (Optional)

1. Shuttle Nut Tooling System



2. Automatic Bottom Feed Tooling



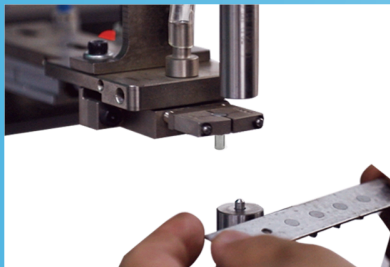
3. ABFT With Part Clearance



4. Shuttle Stud Tooling System



5. Shuttle Standoff Tooling System



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[www.pencomsf.com](http://www.pencomsf.com)