

Automatic Screwdriver

For Small Part Assembly

MODELS S-250



Productivity Through Mechanization and Automation

Increase production rates and cut assembly costs with Assembly and Automation Technology's S-250 Automatic Screwdriver. Fast and dependable, the S-250 offers superior fastening performance for single work stations and automatic production systems.

Systems with single or multiple screw/nut drivers custom designed to increase productivity, reduce labor costs and improve quality. Semi and fully automated machines and production lines can incorporate other assembly functions and provide inspection systems to complete your manufacturing requirements.

APPLICATIONS

Automotive
Mechanical

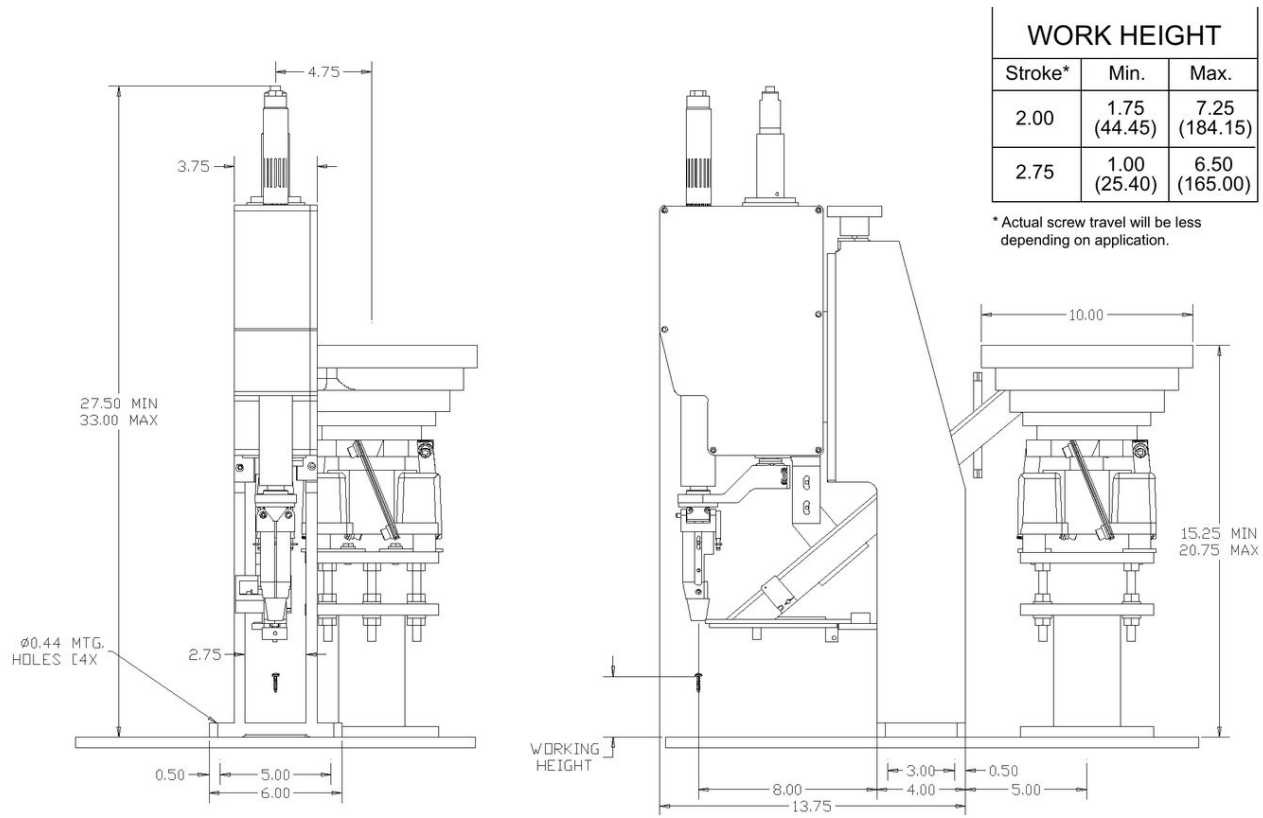
Appliance
Electro-Mechanical

Toys/Games
Medical

Plastics
Electronics

Lighting

SPECIFICATIONS



S-250 SPECIFICATIONS

Power	Pneumatic: 90 PSI (6.327 kg/cm ²) 2-5 cfm (0.944 - 2.360 liters/sec)
Controls	Electric with programmable controller equipped with dual palm switches or foot switch. Controls for automatic operation available. 115 VAC, 60 Hz.
Torque	6 adjustable torque ranges from 5-86 in-lbs (0.6 - 9.7 N-m)
Motor Speed	Choices of 6 motor speeds from 650-3000 RPM
Assembly Rate	Up to 60 cycles per minute. Rate depends on screw type and length.
Screw Size	Headed screws, #3 to 1/4 in. (2mm - 6mm). Lengths to 1 in. (25.4mm) standard. Longer length possible with additional tooling.
Feeder Bowl	10 in. (25.4 cm) dia. standard; other sizes and styles available. Power 115 VAC, 60 Hz.
Weight	Approximately 150 lbs. (68 kg) including mounting plate and feeder bowl.

S-250 AUTOMATIC SCREWDRIVER OPERATION

The operator loads screws into a vibratory feeder bowl. The screws orient automatically and feed into a decline track. At the base of the track one screw is escaped and is loaded into the chuck jaws by the inserting shuttle. The drive bit advances, contacts the screw, turns, and falls into the screw slot shutting off the drive motor. The driving unit and chuck descend toward the work piece. When the screw contacts the work piece, the resulting pressure of the screw against the bit starts the drive motor. As the screw is driven, the driving unit cams open the chuck jaws to clear the screw head. The drive motor automatically shuts off when the desired screw torque or depth is reached. The S-250 then resets to the start position and is ready for the next cycle.

FEATURES



Model S-250 Automatic Screwdriver

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Assembly Precision

- Positive screw placement
- Consistent torque or depth control
- Regulated speed of the drive head
- Full track sensing shuts off the feeder bowl

Cost Effective

- Minimal set up time; easy to adjust
- Choice of clutch or direct drive
- Jaw inserts reduce expensive chuck replacements.
- Uses standard driver bits
- Drive motor only operates while screw is being driven
- Easily retooled for product changes

Reliable Performance

- Automatic screw feed and escapement system eliminates jamming of screws
- Automatic operation features instant stop control if part is missing or improperly driven
- Ejection of defective parts is available for automatic systems
- Low maintenance; all mechanisms are easily accessible
- Cast aluminum frame and hardened steel tooling

Built-in Versatility

- Choice of 6 RPM speeds with 6 torque ranges.
- Simple adjustment to change from torque control to depth control
- Mechanisms to delay closing of chuck during the return stroke

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Plastics	Lighting	Mechanical
Electro-Mechanical	Medical	Electronics

Technical Support

Assembly & Automation Technology will utilize its decades of experience to provide sample part evaluation, application engineering assistance, and custom tooling design.

Please call or send your sample parts today for a free quotation.

OTHER STANDARD PRODUCTS



Staker S-5000 /
S-8000



Press-Staker PS-3000
/ PS-5000

Standard Pneumatic Stakers & Press-Stakers

- Pneumatic models from a light tap to 8000 lbs. of impact force.
- Repeatability within .001 inch.
- Rates up to 60 cycles per minute (staker).
- Non-rotating ram optional (staker).
- Low force (1 oz.) dual palm safety actuators with non-tie down, non-repeat control (staker).
- Foot or hand switch with ram position safety interlock (press-staker).
- Filter-regulator-lubricator with pressure gauge.
- Cast iron base with bench-top mounting.



Press P-70



Press P-200

Standard Pneumatic Presses

- 200, 700, 1400, 2100 lb. capacity at 100 PSI.
- Cast iron base and head bracket.
- Adjustable, repeatable stroke.
- Non-rotating ram.
- Double acting cylinder.
- Flow control for stroke speed adjustment.
- Low force (1 oz.) dual palm safety actuators with non-tie down, non repeat control.
- Filter / regulator / lubricator with pressure gauge.



Inserter PI-700 /
PI-1400



Manual Inserter PI-M

Standard Pin Inserters

- Pneumatic and manual press models with automatic pin feed.
- Pneumatic press forces up to 700 lbs. or 1400 lbs.
- Pin sizes up to 1/4 inch diameter.
- Pin lengths from 1/4 to 1 1/4 inches.
- Low force (1 oz.) dual palm safety actuators with non-tie down, non-repeat control (pneumatic press models).
- Adjustable shut height up to 7 inches (standard).
- Adjustable stroke from 2 to 3 inches.
- Insertion height sensed to within .001 inches.

Custom Automated Systems



Custom equipment designed and built by A&AT to meet customer specifications. We serve a variety of industries and specialize in hard-to-automate applications where off-the-shelf solutions fall short. For 40 years our team has delivered custom assembly machines, machine vision inspection, vision-guided robotics and precision testing equipment.