



Auto-fed Part Placers

Models AP-107, AP-110, AP-171



Model AP-107 Part Placer complete with hopper feeder, inclined feed track, two-stage transfer escapement, and column.

Model AP-107

Model AP-110 Part Placer complete with vibratory bowl feeder, inclined feed track, two-stage transfer escapement, feeder controls with full-track sensing, and column.



Model AP-110



Two Model AP-110 Part Placers on 5-inch centers tooled to feed and press different sized rivets into a clutch plate sub-assembly.



Model AP-110 Part Placer tooled to feed, place, and press a round head drive screw to retain a nameplate on a casting.



Model AP-107 Part Placer with 175 pounds (778 N) pressing force, tooled to feed, place, and press special truss headed fasteners into saw handles. The square shank section below the head is pressed into saw handles to keep the fastener from rotating.

- **Proven Reliability**
- **Retoolable**
- **Part Placement Verification**
- **Low Maintenance**

These Auto-fed Part Placers are designed to provide higher production rates than basic Pick & Place models. Placement rates up to 80 per minute are obtainable. The placing heads are available with strokes from 2-inches (50.8mm) to 5-inches (127mm). A two-stage transfer escapement ensures positive insertion of each piece part into the placement jaws. The placement jaws are mechanically opened as each piece part is properly placed into the workpiece with verification sensing.

Each model is selected based on the assembly application. The Model AP-107 Part Placer is primarily used for operator assisted workstations. Tooling will provide for piece parts up to .56-inch (14mm) in diameter, and lengths up to 1-inch (25.4mm). All of the AP-100 Series Placing Heads have a pressing force ranging from 40 pounds (178 N) to 175 pounds (778 N) at 90 PSI (6.3 Bar). An optional load cell can monitor pressing force.



Model AP-171

Model AP-171 Robotic Placer Head complete with Trav-a-track and two-stage escapement. The Head is positioned by a Cartesian Robot to place 13 pal nut inserts into an automotive panel.

Model AP-110 Part Placers are furnished with vibratory bowl feeders up to 36 inches (914mm) in diameter. Vibratory feed systems will have cast bowls or stainless steel bowls. As an option, the bowls can be coated for delicate parts or for sound reduction purposes. All vibratory bowl feeders are furnished with a "full-track feeder shutoff" sensing control. An optic sensor automatically stops and starts the feeder when a predetermined number of parts are in the feed track. This feature reduces the amount of piece part tumbling in the feeder. Standard tooling using an inclined feed track can handle parts up to .56-inch (14mm) in diameter. The maximum shaft length of a headed piece part is 2-inches (50.8mm). Control options can be selected to meet the requirements of each application.

Auto-fed Part Placers

Models AP-107, AP-110, AP-171

Placing Head Features:

(100 Series Head Shown)

Head Cover

(shown as cutaway)
Cover slides upward for access to head.

Sensing Assembly Allows confirmation of piece part placement.

Proximity Switch Initiates return strokes after proper placement of part.

Placing Cylinder Cushioned at both ends. Sensor shaft operates inside cylinder.

Opening Cam Assembly Part placing jaws are mechanically opened as the piece part engages workpiece.

Hardened Jaws Custom machined to grip and align piece part.

Junction Box Valve and terminal strip.

Return Switch Signals head in returned position.

Pretravel Assembly Controls piece part confinement within the placement jaws.

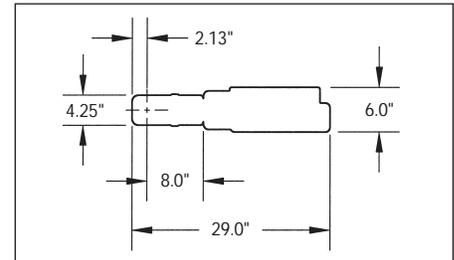
Intermediate Side Switch Provides a signal for any auxiliary function such as timers, index table, transfer systems, etc.

Optional Load Cell Allows monitoring of pressing force.

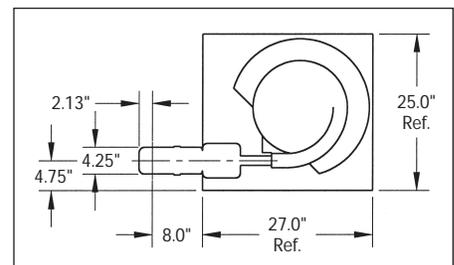


Standard AP-100 Series
Placing Head Strokes
up to 5-inches (127mm)

AP-107 Dimensional Data



AP-110 Dimensional Data



NOTE: Baseplate size varies with bowl size.
15-inch bowl shown.

We reserve the right to make further
technical changes without notice.

CAD drawings are available



Typical parts for Model AP-107



Typical parts for Models AP-110 and AP-171



DIXON AUTOMATIC TOOL, INC. Products Group

2300 Twenty-Third Ave., Rockford, IL 61104 U.S.A
Phone: 815 / 226-3000 • FAX: 815 / 226-8613

E-mail: sales@dixonautomatic.com • www.dixonautomatic.com