

MODEL 3120

DIXON STANDARD SCREWDRIVING CELL

[OPTIONAL PART PLACING HEADS]

ROTARY INDEXING FIXTURE

- HANDS FREE ASSEMBLY
- INCREASED PRODUCTION
- EASILY RETOOLING
- COST EFFECTIVE
- QUALITY ASSURANCE
- PANEL PROGRAMMABLE

Dixon's Standard Screwdriving Cell is complete with an Auto-fed Screwdriving Head with Feed System, a Rotary Indexing Fixture, Machine Base, Guarding, and Controls. The Screwdriving Cell can be tooled to drive multiple fasteners into a workpiece. The rotary fixture can be programmed to drive fasteners at random spacings around a 360° bolt circle up to 305mm in diameter. Our basic cell design enables easy retooling, and reprogramming for future product changes. The Cell can be used for a part placement assembly by replacing the Screwdriver Head with a Part Placement Head (see chart below).

SCREWDRIVING/PLACING HEAD OPTIONS

Both Blow-Fed or Track-fed Heads are standard and listed in the following tables.

Driving/Placing Head Types



SD-2000
Series



AP-1000
Series



SD/AP-100
Series

Driving Heads are selected based on the fastener size and torque requirements. For part placement applications, the placement head is selected based on the pressing force requirements.

Driving Head Options

Head Model	Torque Range	Max. Head Diameter	Max. Screw Length	Bit Thrust @90 psi / 6 Bar	Feed Type
SD-100	.50 - 13.5 Nm	14.2 mm	50.8 mm	378 N	Track
SD-2010	.03 - 1.4 Nm	7 mm	30 mm	106 N	Blow
SD-2020	.20 - 4.0 Nm	11 mm	50 mm	164 N	Blow
SD-2030	.80 - 11 Nm	15 mm	70 mm	258 N	Blow
SD-2040	1.5 - 42 Nm	24 mm	100 mm	422 N	Blow

Placing Head Options

Head Model	Max. Diameter	Max. Length	Pressing Force	Feed Type
AP-100	14.2 mm	50.8 mm	178-778 N	Track
AP-1000	15 mm	70 mm	178-889 N	Blow

Certified To ISO 9001:2000



CONTROLS

An easy to use operator interface provides the following functionality:

- Servo System With Servo Controller
- Touch Screen Panel
- Easy Programmability
- Standard Error Messaging
- Nema 12 Electrical Enclosure

GUARDING

A complete standard guard package that includes the following:

- Aluminum Extrusion Structure
- Light Curtains
- Mesh Guard Panels
- One Opto-Touch Hand Tie Down

60th Anniversary



Celebrating over 60 years in providing our customers with innovative solutions to their automated assembly needs.

DIXON AUTOMATIC TOOL, INC.

PRODUCTS GROUP

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Phone: (815) 226-3000 Fax: (815) 226-8613
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Sample Application



Typical Configuration



Options And Accessories

Screwdriver Heads:

Pneumatic Motors*:

- Adjustable Mechanical Clutch
- Stall Torque Sensing

DC Electric Motors:

- Transducer Torque Control
- Transducer Torque / Angle Control
- Current Sensing Torque Control

Servo Motors:

- Velocity Control
- Torque/Angle Control

Depth Control Features:

- Standard Proximity Switches Sense Forward And Return Positions*
- Analog Output Of Precision Depth Setting

Driving Precision:

- Torque Control
- Depth Control $\pm 1/2$ Turn
- Depth Control ± 2 Turn*

Optional Placer Heads:

Strokes:

- 50.8 mm - 200 mm

Pressing Force:

- 178 N - 889 N

Pressing Depth Precision:

- ± 0.063 mm (Fastener Dependent)

Specifications:

- Voltage Standard (120V 60Hz)
- Air Supply (80-100 psi)

Controls*:

- On Screen Coordinate Programming
- Built In Error / Troubleshooting Functions
- Andon Stack Light
- Ready Light To Enter Light Curtain
- Diagnostics Including Password And I/O Diagram
- PLC Controlled
- Modem Access (Optional)

Feeder Bowls:

- Drum Fed
- Vibratory Feeder

Feeders are selected based on the customers part requirements. Feeder bowls up to 533 mm.

Nesting / Fixturing:

- Up to 305 mm Bolt Circle
- Total Fixture and Part Weight Up To 4.5 kg For Typical Motion Profiles

Base With Adjustable Feet*:

- Leveling Feet
- Welded Construction
- Ground Mounting Surface

Base sizes up to 1219 mm x 1676 mm. Size is determined by bowl size in conjunction with the size of the Customer's Target part.

* Indicates standard equipment

Contact Us for other Dixon Products

- | | |
|-------------------------|---|
| -Automatic Screwdrivers | - Automatic Part Placers |
| -Automatic Nut Runners | - Assembly Work Cells |
| -Automatic Presses | - Handheld Screwdrivers |
| -Vibratory Feed Systems | - Access Modem for Remote PLC Programming |

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