



# DIXON AUTOMATIC TOOL, INC.

Products for Automated Assembly

## Model SD-171 Screwdriver



The Model SD-171 Screwdriver is ideally suited for Robotic applications when a fastener cannot be blow fed through a conveyor tube. The Screwdriver Head is attached to a Trav-A-Track and a parts escapement. The Track is designed to carry a large number of fasteners from a discharge release device located at the end of a docking storage track having the same length as the Trav-A-Track. This design feature provides a quick refill of fasteners to the Trav-A-Track between cycle times in the assembly process. The transfer escapement places each fastener into the placement jaws. The jaws hold the screw shank until the fastener is driven in the workpiece. The driving head can provide wide range of driving speeds and torque capacities using either pneumatic or DC electric motors. Each head can be equipped to drive fasteners to a Torque or Depth setting.

### Feed System Information

Feed System	Vibratory Feeder Bowl
Bowl Size	228.6 - 914mm (9 - 36 in.)
Track	Incline Gravity Fed Track
Escapement	Mechanically Linked Optional Air Escapement

### Piece Part Information

Shank Diameter	2.84mm - 6.35mm (.112 in. - .250 in.)
Shank Lengths	Max 38.1mm (1.5 in.)
Head Diameter	Max 14mm (0.56 in.)



Above: The Trav-A-Track joined up with the short track from the feederbowl for refilling.

Right: The Model SD-171 Screwdriver with fasteners in Trav-A-Track

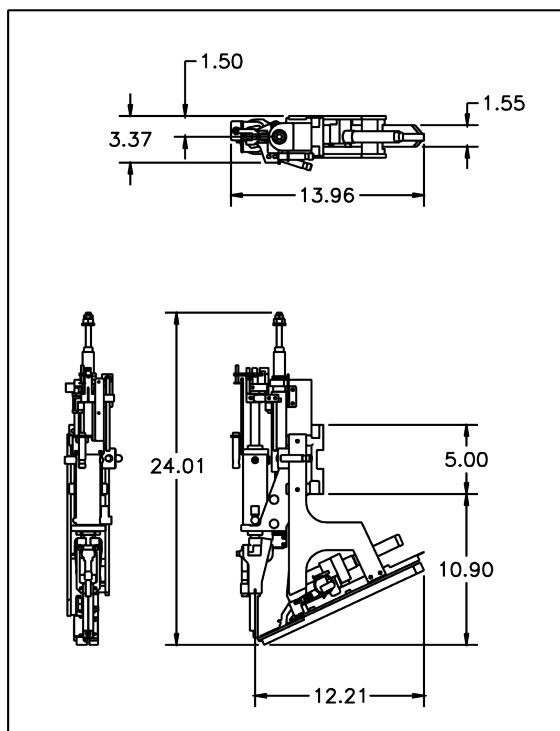


Left: Typical screws driven by a Model SD-171 Screwdriver.

# SD-171 Screw Driving Head



**SD-171 Dimensional Data**



NOTE: We reserve the right to make further technical changes without notice.  
CAD drawings are available

## Standard 100 Series Screw/Nut Driving Head Components

<b>Head Stroke</b>	50.8mm, 76.2mm, 101.6mm, 127mm (2 in., 3 in., 4 in., 5 in.)
<b>Torque</b>	Std: 0.5 - 13.5Nm (4 - 120 in.-lbs.)
<b>Proximity Switches</b>	Std: 24 VDC PNP Others Optional
<b>Valves</b>	Four-way pneumatic valve (24 VDC)
<b>Pneumatic Motor Speeds</b>	250 to 3000 RPM
<b>Air Supply</b>	6.3 Bar (90 PSI)

## 100 Series Depth Options

<b>Depth Settings</b>	Std: $\pm 2$ turns Optional: $\pm 1/2$ turn
<b>Drive to Depth</b>	Yes

## 100 Series Torque Options

<b>Clutches</b>	<ul style="list-style-type: none"> <li>0.45 - 2.8Nm (4 - 20 in.-lbs.)</li> <li>1.36 - 3.3Nm (12 - 30 in.-lbs.)</li> <li>2.8 - 5.6Nm (20 - 50 in.-lbs.)</li> </ul> Note: 4.5Nm (40 in.-lbs.) and above requires a commercial pneumatic motor with clutch.
<b>Higher Torque Option</b>	13.5 - 20.3Nm (120 - 180 in. lbs.) available with optional head stiffener

## Optional Motors

<b>DC Electric</b>	<ul style="list-style-type: none"> <li>Transducer torque control</li> <li>Torque/angle control</li> </ul> Note: All brands supported
<b>Servo Motor</b>	Current sensing torque control



**DIXON AUTOMATIC TOOL, INC.**  
2300 23rd Avenue, Rockford, IL 61104 USA  
P: 815-226-3000 | sales@dixonautomatic.com  
www.dixonautomatic.com