



# Premium Auto Feed System

Products and Solutions for Assembly



## About ASG

**We are personally committed** to understanding and exceeding our customers' requirements. We are committed to continuously improving our products and processes.

**We are dedicated** to delivering products, services, and solutions on time and at a competitive value.

ASG, Division of Jergens, Inc. is an ISO 9001:2008 certified manufacturer, provider and service center for products and solutions focused around assembly. Since the 1970s, we have developed a first-class reputation unrivaled in the industry offering a wide range of world class products through our various world wide locations.

We offer a wide selection of products including: electric, pneumatic and manual torque control screwdrivers; torque and angle control precision fastening systems; automatic screw feeders and screw presenters; torque testers and calibration services; custom designed automation equipment as well as a full line of accessories.

ASG also offers a selection of value-added products and solutions including engineering and consulting services, financing, and extended protection and maintenance plans.



## Industry Commitment

ASG is committed to the highest quality standards, ensuring that all processes and procedures are followed to produce the best products for our customers. We maintain ISO 9001:2008 certification for the manufacture, distribution, and service of assembly tools. Maintaining membership in key industry organizations in order to stay abreast of the most current industry trends and information is vital to serving our customers.



# Automation Product Group

## Engineered Performance



The ASG Automation group provides custom solutions to meet both the imminent and inevitable expectations of our clients. Underpinned by world class knowledge of threaded fastening, our systems are distinctive in their operation; providing market leading precision. With robust elements of flexibility and expansion built in, the systems are designed to persevere life cycle changes to provide our customers with the ultimate automated solution.



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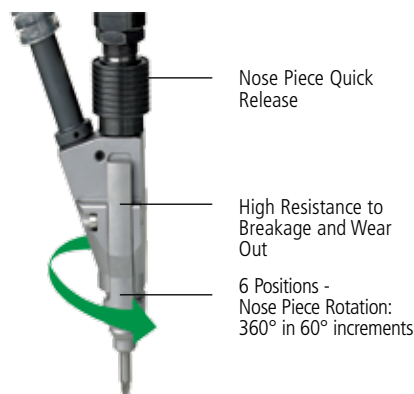


# Section 1: Auto Feed System



# Auto Feed System

## Nose Piece



The nose piece holds the screw blown from the bowl feeder and guides it toward the work piece, enabling the bit to engage the screw and fasten the components.

- Allows excellent axial compensation
- Accurate screw guide to fastening location
- Capable of attaining various depths
- Customizable for almost any kind of space constraint
- Compact in size and provides screw tip visibility
- Quick and easy to assemble and disassemble
- Bit engages the fastener, eliminating the fastener pushing back into the jaw set

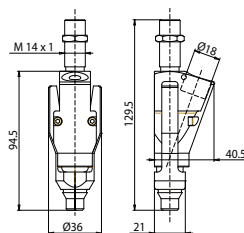
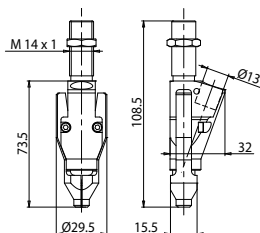
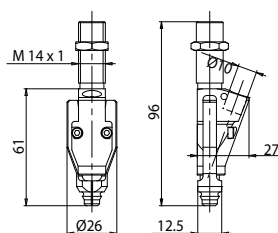
## For All Types of Screws

Below are three different sizes suitable for most screws available in the market. All nose pieces are customized according to the application requirements.

Head Diameter	Total Length
mm	mm
4.5 - 7.0	Max. 25

Head Diameter	Total Length
mm	mm
7.1 - 10.0	Max. 35

Head Diameter	Total Length
mm	mm
10.1 - 13.5	Max. 35



## Special Applications Available

ASG offers uniquely tailored solutions for various applications. Contact ASG for additional information.



Anti-overturning device for screws with screw length/head diameter ratio lower than 1.5.



"Friction Jaws": the screw is not held by the shank whereas by the head diameter: thanks to the reduced extension of jaws, the nose piece can easily access recesses with "in depth" fastening spots



Protective spacer/special material to ease approach to the part avoiding damages of components during assembly



Front centering tube that allows reaching in depth and tight fastening places



Large screws

## Section 2: Auto Feed System with Forward Bit Stroke







- Patented Forward Bit Stroke
- Tip of the screw is visible in order to assist the operator
- Forward stroke automatically retracts the bit, therefore minimizing surface damage
- Increased fastening process: screw tip is visible to the operator, which eases centering on the screw hole, streamlining process time and safety
- Long bit stroke: allows reaching tightening points with difficult access (such as close to sidewalls) or narrow recesses
- Nose Piece Rotation: 360° in 60° increments
- Nose Piece Quick Release System: quick and safe bit replacement







With screw at sight and external bit

## Pneumatic Tool Specifications

Model Number	ASG Number	Torque		Free Speed		Starting System	Reversibility	Weight		Air Consumption	Sound Pressure Level	Vibrations
				RPM								
		N.m	lbf.in	HI	LO			Kg	Lb.			
CA...A-A		0.5 - 10.0	8.8 - 88.5	2000	650			1.8	3.96	5 - 9	<80	<2.5
CA...A-P-A		0.5 - 10.0	8.8 - 88.5	2000	650			1.8	3.96	5 - 9	<80	<2.5

Air Inlet: 1/4" NPT | Hose Bore: ø 8mm

## SD2500 Electric Screwdriver Tool Specifications

Model Number	Driver Type	Torque Range		Length		Weight		Max. RPM	Drive Size
		lbf.in	N.m	in.	mm	lb.	kg		
ASG-SD2500-10FX		1 - 10	0.1 - 1.1	9.5	240	1.00	0.46	1700	1/4 Hex
ASG-SD2500-20FX		2 - 20	0.2 - 2.3	9.5	240	1.00	0.46	1100	1/4 Hex
ASG-SD2500-35FX		3.5 - 35	0.4 - 3.9	9.5	240	1.00	0.45	800	1/4 Hex
ASG-SD2500-50FX		5 - 50	0.6 - 5.6	9.7	246	1.10	0.49	500	1/4 Hex

### Legend

 Inline Lever Start	 Pistol Grip Trigger Start	 Inline Fixture Mount	 Clockwise Only
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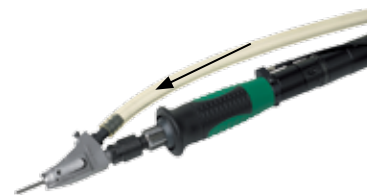
## Section 3: Auto Feed System with Telescopic Device



- Equipped with telescopic device to work with high speed and optimum grip at different depths or inside the holes
- Screw shooting sensor: Aside from offering reliable tightenings and continuous working cycles with minimal screw jams, the version with 2 sensors controls the final screw height
- All models are equipped with a nozzle allowing practical rotation of the head in 6 positions at 360°. Thus, the position of the head can be adjusted based on the encumbrances of assembled workpiece



Telescope extended waiting for screw to be fed to jaw set



Telescope compressed driving screw into the work piece

## Pneumatic Tool Specifications

Model Number	ASG Number	Torque		Free Speed		Starting System	Reversibility	Weight		Air Consumption	Sound Pressure Level	Vibrations
				RPM								
		N.m	lbf.in	HI	LO			Kg	Lb.			
CA...A-T/T2		0.5 - 10.0	8.8 - 88.5	2000	650	⬇	↻	1.1	2.42	5 - 9	<80	<2.5
CA...P-T/T2		0.5 - 10.0	8.8 - 88.5	2000	650	⬇	↻	1.1	2.42	5 - 9	<80	<2.5

Air Inlet: 1/4" gas | Hose Bore: ø 8mm

## SD2500 Electric Screwdriver Tool Specifications

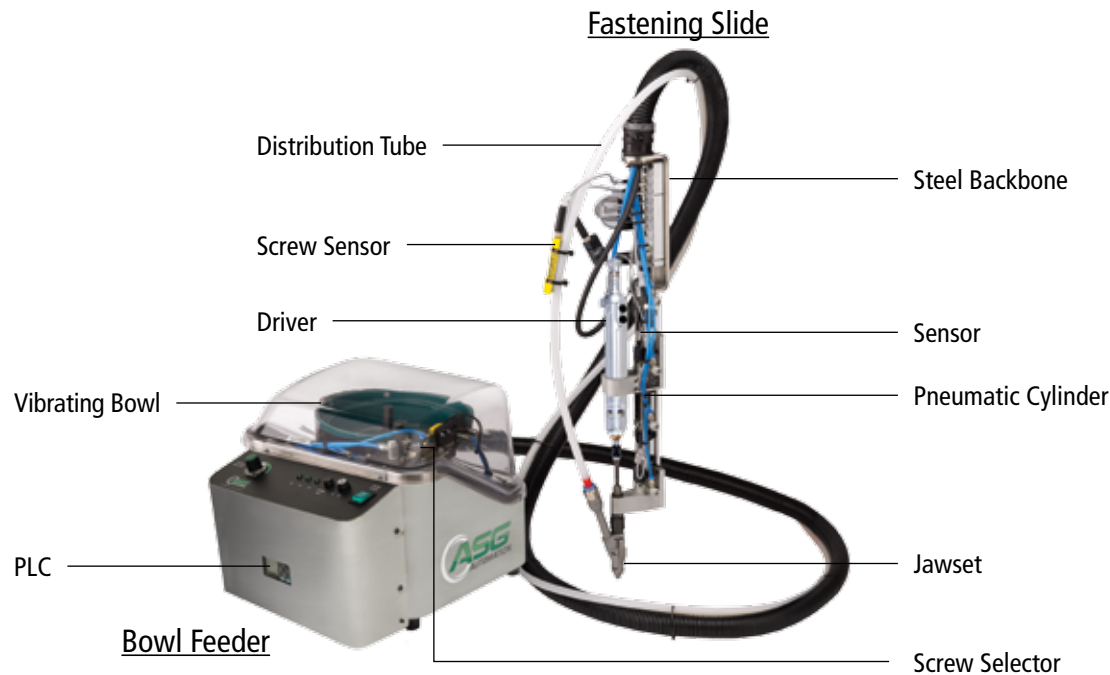
Model Number	Driver Type	Torque Range		Length		Weight		Max. RPM	Drive Size
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ASG-SD2500-10FX	⬇	1 - 10	0.1 - 1.1	9.5	240	1.00	0.46	1700	1/4 Hex
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ASG-SD2500-35FX	⬇	3.5 - 35	0.4 - 3.9	9.5	240	1.00	0.45	800	1/4 Hex
ASG-SD2500-50FX	⬇	5 - 50	0.6 - 5.6	9.7	246	1.10	0.49	500	1/4 Hex

### Legend

⬇ Inline Lever Start	⬇ Pistol Grip Trigger Start	⬇ Inline Fixture Mount (Push to Start)	↺ Clockwise Only
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## Section 4: Integrated Auto Feed System

The Integrated Auto Feed System consists of two main components: the bowl feeder and the fastening slide.



### Bowl Feeder

- Features a vibrating bowl, high frequency screw selector, and onboard PLC.
- The vibrating bowl precisely aligns the screws and presents them to the screw selector. Wherein, they are rapidly dispensed into the distribution tube. Finally, a blast of air propels the screw past the screw sensor into the jaw set
- The PLC, signaled by the screw sensor, initiates the driving sequence
- Dependable screw feeding is faithfully managed by the PLC to optimize all machine parameters

### Fastening Slide

- Includes a support structure, pneumatic cylinders, and driver.
- The steel backbone structure allows for the unit to be mounted to robotic arms, or manipulators; while the pneumatic cylinder(s) provide the force to accurately drive the fastener into the part.
- The driver can be pneumatic or electric. The X-PAQ™ SD2500 (DC Electric) tool is recommended to maintain precision within the system.



# Integrated Auto Feed System

- Manages the working cycle and guarantees high flexibility, by allowing changes to be made to the tightening cycle based on the specific application
- **Pneumatic or Electric SD2500 Nutrunner Motor:** Specifically designed and manufactured for industrial automation and applications where high cycle times are required. Pneumatic motors and the ASG X-PAQ™ SD2500 (for electric applications) ensure constant performance for each unique application. These torque control products are sized dependent on application, type of joint, and fastener
- **Fastening Slide:** Engineered for proper movement, the fastening slide ensures a perfect approach stroke of the motor/screw head to the component to be tightened. This provides high quality fastening of the assembled product, since all screws are tightened correctly. Manufactured with aluminum alloy, the fastening slide is light and compact (as narrow as 40mm in width) and can be used on solutions with manipulators, electrical axis, robot; it supports important axial thrusts (for example with self-drilling screws)

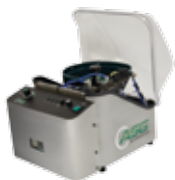
Air Connection	3/8" NPT
Power Requirements	220V/50Hz and 110V/60Hz - Standard 220V/50Hz - Optional
Maximum Feed Rate	120 screws/minute
Air Consumption	13 L/s
Sound Pressure Level	<80 dB(A)
Diameter of Bowl	8.7 in (220mm)
Capacity of Bowl	1 liter
Weight	79 lb (36kg)
Connecting Hose to the Screwdriver*	13 ft. (4 mt)
Dimensions	17.7in x 13.4in x 15.7in (450mm x 340mm x 400mm)

NOTE: Specifications are subject to application

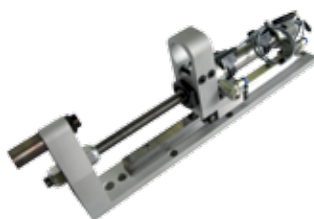
\* Longer hoses available, contact ASG for additional information

# Integrated Auto Feed System

Premium Auto Feed System



Single Stroke Fastening Slide



- Fastening slide with ball bearing slides, pneumatic cylinder with limit switch position sensors, pneumatic decelerators, air flow governors
- Ideal for manipulators, robots and anthropomorphic arms
- For air nutrunner motors:  $\varnothing$  max 36 mm
- For electric nutrunner motors:  $\varnothing$  max 42.5 mm

Air Nutrunner Motor



- 0.4 to 40 N.m
- Models with air shut-off and built-in torque transducer for monitoring the tightening cycle

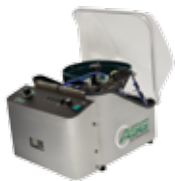
OR

X-PAQ™ SD2500



- 0.1 to 5.6 N.m (for higher torque, please contact ASG)
- Controls and monitors the entire assembly cycle and it stores and collects statistical data
- Precise torque and angle control

Premium Auto Feed System



Dual-Stroke Fastening Slide



- 2 stroke fastening slide with ball bearing slides, pneumatic cylinders with limit switch position sensors, pneumatic decelerators, air flow governors
- Ideal for manipulators, robots and anthropomorphic arms
- For air nutrunner motors:  $\varnothing$  max 36 mm
- For electric nutrunner motors:  $\varnothing$  max 42.5 mm

Air Nutrunner Motor



- 0.4 to 40 N.m
- Models with air shut-off and built-in torque transducer for monitoring the tightening cycle

OR

X-PAQ™ SD2500



- 0.1 to 5.6 N.m (for higher torque, please contact ASG)
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# | Integrated Auto Feed System

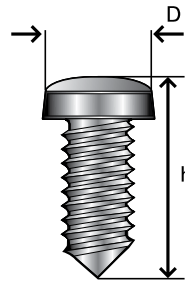
## How to Choose an Auto Feed System

To choose an tightening system, one must consider the following:

- Material to tighten (plastic, wood, steel, etc.)
- Dimensions and encumbrance of component to assemble
- Tightening torque, speed, and screw size
- The auto feed tightening screw system
- MCA is capable of feeding, fastening, and following:
  - Any screws (metric, self-threading, self-tapping, self-drilling, three-lobe, etc.)
  - Any type of head (countersunk, flat, cylindrical, oval, etc.)
  - Any type of imprint (slotted, cross-slotted, torx, hex socket screw, hex head)
  - With following parameters:

<b>Dimensions of the Head (D)</b>	ø 4.5- 10.5* mm
<b>Total Length of the Screw (h)</b>	8 - 35 mm
<b>Screws with Hexagonal Head</b>	Hexagon Max 7mm

\*For certain circumstances the maximum diameter is 13.5mm

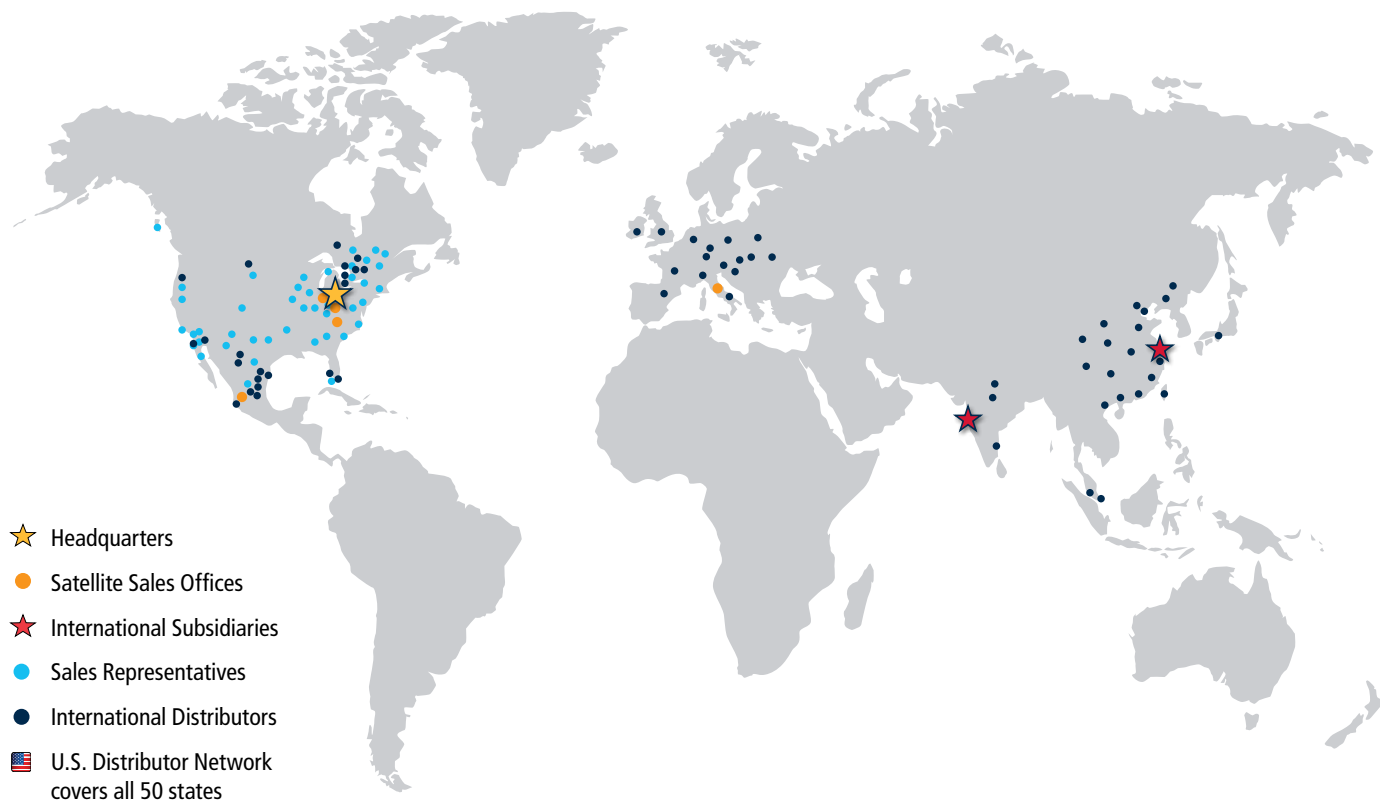


- Total length of screw must be a minimum of 1.5x of the head diameter
- Contact ASG for applications with screws outside this range.

**Example:** Head screw = 8mm

Min h (high) = 12mm (12:8 = 1.5)

**NOTE:** Screw samples are REQUIRED to formalize the order. For customized solutions both screws and workpiece samples are required.



**Our footprint covers the globe!**

## Global Support

ASG employs a team of technical experts to provide support, repair, calibration and preventative maintenance services. We welcome the opportunity to provide assistance by telephone or online chat Monday through Friday, 8 a.m. to 5 p.m. (U.S. Eastern Time) excluding holidays.

ASG maintains subsidiaries in Shanghai, China and Mumbai, India, and sales offices in Mexico and Europe to provide direct support to our international customers. We work together with our global Field Sales Representative and Distributor Network to help customers standardize their assembly equipment and processes around the world.

Distributor:



## Products and Solutions for Assembly

October 2016

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