

CP Industrial Business Unit – USA, Canada & Mexico
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Introduction

Chicago Pneumatic offers a range of modular components and systems for increased productivity and finished assembly quality. Products range from a basic hand held screw feed solution, to systems and components for integration into a fully automatic assembly station.

At the heart of a screw feed solution is the vibratory bowl that sorts and meters the screws. Screws can be blow fed to jaws at the front of a hand held screwdriver or to a fixtured slide. Options are also available for sending multiple screws simultaneously to a number of slides from a single bowl through diverters.



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Individual slides are also available for driving only applications and can also be used with x-y robots as a compound Z axis.



The companies of Chicago Pneumatic, Desoutter and Georges Renault are working together to provide you with solutions to all your manufacturing needs. Whether your application requires just a basic assembled fastener or very accurate torque and quality control we can offer a wide range of standard driving options.

Fastening tool solutions include:

air stall torque
non shut off air screwdrivers
shut off air and electric screwdrivers
current control torque and angle electric tools
transducer control torque and angle electric tools



How to Order

Every application receives the benefit of our wide experience and attention to detail in order to satisfy the customer needs. For quotation sample components and screws are taken to ensure the quality of the solution. To aid this a quotation request form is given on page 6. Final testing of the product includes running sample screws through the vibratory bowl and on the application to assure the system integrity.

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The Vibratory Bowl:

- D-SE-PLC** Single escapement PLC controlled vibratory bowl feeder for one screw¹ on demand from the bowl
- D-DE-PLC** Dual escapement PLC controlled vibratory bowl feeder for two screws¹ simultaneously from a single bowl.

Additional Multiple Feed Options¹

- D2** – 1 to 2 diverter when selectable feed of two screws is required
- D3** – 1 to 3 diverter for 3 screws simultaneously from a single bowl
- D4** – 2 to 4 diverter for 4 screws simultaneously from a single bowl

Vibratory Bowl Options and Specifications

		Electrical	Feedable Fasteners	Approx. Weight	Approx ² Dimensions(ins) (WxDxH)
Standard – A10	10" bowl	110VAC	#0-#10 sizes and up to 1.5" long	75lbs	12.5x25x12.5
Optional - A18	18" bowl	110VAC	#0-5/8" sizes and up to 2.5" long	200lbs	24x26x19

Other bowl sizes available for custom applications
-HP - Hopper available for A18 18" bowl systems

Common Features

- Hard anodised aluminum bowl³ for long bowl life
- Hardened steel bowl tooling, track tooling and escapement for long life.
- All tooling fixed allowing quick and easy set up with no on site adjustment.
- Optical sensor on track tooling stops bowl vibration when track is full Lengthens bowl life and reduces possibility of jamming
- Full PLC Control with valve actuated sequencing for optimized performance
- Sound enclosure for quiet operation



Fixtured System Bowl Feature Options

- **BI** – Basic interface with ready signal and screwdrive fail signal.
- **EI** – Enhanced interface ready signal and screwdrive fail signal, manual screwfeed and low bowl level signal.
- **CC** – Custom controls quoted on application.

¹Only for use with fixtured slide systems

²Cad drawings available

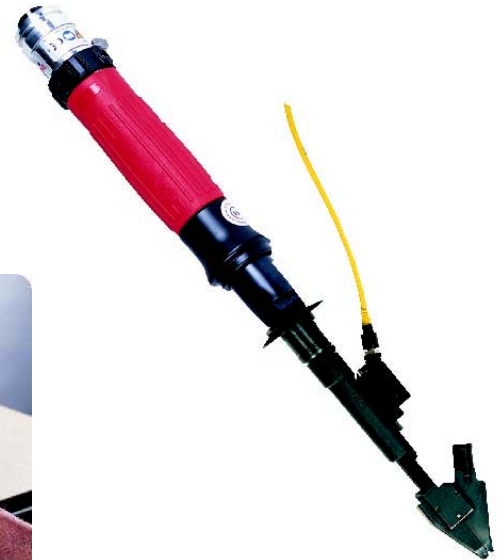
³Stainless steel option

Hand Held Systems

Entry Level Hand Held System -D10

The traditional “D10” telescoping handpiece offers a cost effective entry level solution. The screw is fed automatically “on demand” to the operator based on a microswitch or proximity switch signal. An optional metal latch (ML) is available to prevent the fastener from being pushed back up into the jaws. The screw can be driven to torque or depth using a push to start or trigger start screw driver

e.g. Furniture Assembly



Advanced Hand Held System -D11

The D11 system is a hand held automatic driving system. The “suredrive” auto feed handpiece self advances based on a proximity switch signal and requiring only 2lbs of operator effort. Once torque is reached the driver shuts off and the operator lifts up signalling the next screw to be blown. Automatically the bit is retracted the screw blown and held by the jaws. The bit is then advanced to just behind the screw head locking it in place ready for the next driving cycle. Uses standard 1/4” hex drive bits.

e.g. Appliance Assembly



Additional D11 Quality Control Option – FAS Enhanced fastener assurance
Pass/Fail and Cycle Count Options

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Common Hand Held Options and Accessories

- **CJ** Custom jaws for restricted access or larger headed fastener applications
- **FJ** Finder tube on jaws when screw is located in a recess
- **SH** Stand off heel to prevent marking of component surface
- **RJ** Rotary joint, allows jaws to be rotated relative to the screwdriver, for use when tool is mounted in balance arm and jaw orientation is important in the assembly
- **D53-STD** Balance arm, takes weight and torque reaction of the screwdriver and fixes the tool vertically for better ergonomic solution

Fastening Solutions

non shut off air screwdrivers (straight and pistol)
 shut off air (straight and pistol)
 shut off electric screwdrivers
 current control torque and angle electric tools
 transducer control torque and angle electric tools

torque range
 3 – 133 inlbs
 0.8-283 inlbs
 0.7-20 inlbs
 0.7-88 ftlbs
 0.7-88 ftlbs



TBAR – T Handle System for Trailer Floor Screws - Ordering Code D-SE-PLC-A18-HP-TBAR

- ‘TBAR’ T handle telescoping drive unit (Approx 2.5” travel).
- Tool start lever.
- Drive to an adjustable depth.
- Fastener feeds automatically.
- Optional no charge screw feed button available.
- 18” plc controlled anodized aluminum bowl with a strong base/ backplate and hopper feed.
- Acoustic cover with top fill lexan window.



Fixtured screwfeeder and drilling solutions and also available for trailer floor assembly.

Trailer Drilling Rig



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Fixtured Slide Options

Type	Code	Number of Spindles	Max Torque	Minimum Ctre Distance	Total Stroke	Max Jaw Stroke	Approx Weight
Slimdrive	DT	1	180 inslbs	1.5"	6" (8"*)	3" (4")	6.5lbs
TwinSlim	DTS	1 to 4	420 inslbs	0.75"	8"	6"	12lbs
MidDrive	DMD	1 to 6	800 inslbs	0.75"	6"	10"	25lbs

For all slides:

Suffix

- 1 – with Screwfeeder jaws for use with blow feed or hand feed systems
- 2 – with finder style output for use with pick and place system
- 3 – with drive output for driving pre-placed screws or thread verification systems

Custom Multi-Slides available for close centre applications
 Offset Gearboxes also available – minimum centers 0.7"



Slimdrive



TwinSlim



MidDrive



Common Fixtured Options and Accessories

- **CJ** Custom jaws for restricted access or larger fastener head applications
- **FJ** Finder tube on jaws when screw is located in a recess
- **HL** Head lock for inverted operation to prevent fastener from falling back in the jaws
- **SP** Screw Presence Sensors

Fastening Solutions

air stall torque
 non shut off air screwdrivers
 shut off air screwdrivers
 shut off electric screwdrivers
 current control torque and angle electric tools
 transducer control torque and angle electric tools

torque range
 1.5-130 ftlbs
 3 – 133 inlbs
 0.8-283 inlbs
 0.7-20 inlbs
 0.7-1400 ftlbs
 0.7-1400 ftlbs



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Screwfeeder Application Request – Fax or mail with sample components

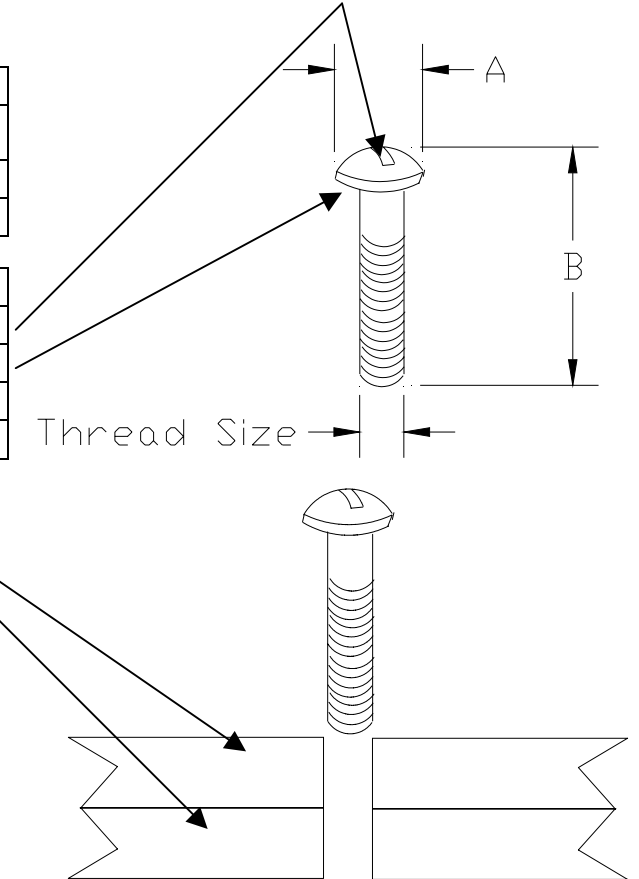
From: _____ Date: _____
 Name: _____ Company: _____
 Tel No. _____ Fax No. _____

Application Details – Please provide actual screw and component samples if possible

Screw Dimensions	
Head Diameter – A	
Overall Length – B	
Thread Size	

Screw Features	
Drive Style	
Head Style	
Captive Washer?	
Thread Type	

Assembly Details	
Fastened Item Material	
Threaded Item Material	
Torque Requirement	+/-
Cycle Time	
How is assembly held?	
Any clearance issues?	



Product Requirement			
Operator Hand Held		Machine Fixtured	
Vertical?		Vertical?	
Horizontal?		Horizontal?	
With Balance Arm?		Machine Integration?	
Other Requirements?		Stand Alone Operator Control?	
		Number of screws per cycle	
		Torque Control?	
		Depth Control?	
		Screw Presence Sensing?	