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**PRECISION
PERFORMANCE
PRODUCTIVITY**



■ SCREW FEEDERS ■ ASSEMBLY TOOLS ■ TORQUE TESTERS ■ TOOL SUPPORTS ■ SCREW FEEDERS ■ ASSEMBLY TOOLS ■ TORQUE TESTERS

Delta Regis products are warranted for one year from the date of purchase against defects in material and workmanship. In addition, the brushless motor in the ESL600 Series screwdrivers is warranted for three years from the date of purchase against defects in material and workmanship. This warranty does not cover damage due to transportation, abuse, misuse, alteration, or improper service. Items subject to wear during normal use (such as tool cables, carbon brushes, driver bits, etc) are considered maintenance items and are not normally covered by this warranty, unless deemed to be defective upon our further evaluation.


Our sole remedy is to repair or replace (at our discretion) any unit found to be defective due to defects in material or workmanship. It is the responsibility of the user to return any product thought to be defective, freight prepaid, to our warehouse for inspection and evaluation.

There is no warranty of merchantability or fitness of purpose. In no event will Delta Regis Tools, Inc. be liable for business interruptions, loss of profits, harm, injury, damage, personal injury, cost of delay, or any other special, indirect, incidental, or consequential losses, costs, or damages.


Efforts have been made to ensure the accuracy of the information and specifications in this catalog. Delta Regis Tools reserves the right to correct or change any specifications found herein without further notification.

Please contact us if you have any questions, concerns, or would like to discuss the details of an application. We are available to assist in any way that we can.


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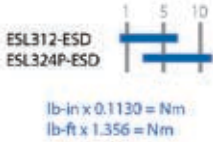
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Our drivers are designed with operator ergonomics in mind. Most models feature a cushioned grip for operator comfort. Our 12VDC and 32VDC tools are available with ESD-Safe housings for assembling sensitive components. Other features include:



Suspension bail allows for hanging tool from tool balancer for improved ergonomics and tool life.



Stepless external torque adjustment includes scale (0-8) for reference purposes (scale does not indicate actual torque value).



Quick change bit holder accepts industrial screwdriver bits:
 ESL210-211, 610-612: 4mm round bits
 All other models: 1/4" hex power bits



Torque Repeatability - Delta Regis electric drivers utilize precise clutches for repeatable performance. The factory target values are:
 32VDC / 120VAC Shut-off Clutch: +/- 3%
 12VDC / 40VDC / 120VAC Slip Clutch: +/- 5%

Please note that actual repeatability is joint dependent. It will vary based on factors such as joint type and consistency, lubrication, speed, operator input, and test equipment.



All models have a forward/reverse switch located conveniently for thumb operation. Tools with brush type motors have externally replaceable carbon brushes accessible via removal of a slotted brush cap.



A torque lock sleeve can be installed in place of the standard front housing nut to cover the torque adjustment and prevent accidental changes. 12VDC and 32VDC brushless models include a torque lock sleeve.

Selection Guide

Model No.	RPM	Torque Range - Nm (in-lb)								
		0 (0)	1 (8.8)	2 (16.7)	3 (26.5)	4 (35.4)	5 (44.2)	7.5 (66.4)	10 (88.5)	15 (132)
12VDC Shut-off Premium Brushless										
ESL210	1000 / 700									
ESL210S	280 / 200									
ESL211	1000 / 700									
ESL211S	280 / 200									
32VDC Shut-off (Brush type)										
(C) ESL310	1000 / 600									
(C) ESL311	1000 / 600									
(C) ESL312	670 / 400									
(C) ESL323 / 323P	1000 / 600									
(C) ESL324 / 324P	1000 / 600									
CESL324F / 324PF	2000									
(C) ESL327 / 327P	750 / 450									
(C) ESL328 / 328P	530 / 300									
CESL328F / 328PF	2000									
ESL329 / 329P	530 / 300									
CESL339 / 339P	530 / 300									
32VDC Shut-off Premium Brushless										
CESL610	1000 / 700									
CESL611	1000 / 700									
CESL612	1000 / 700									
CESL623 / 623P	1000 / 650									
CESL623F / 623PF	2000									
CESL624 / 624P	1000 / 650									
40VDC Shut-off Premium Brushless										
ESL628 / 628P	1000									
ESL628F / 628PF	2000									
ESL629 / 629P	1000									
40VDC Shut-off Fixtured / Pistol Grip										
ESL629(P)M / ESP620	1000									
ESL630(P)M / ESP630	800									
ESL640(P)M / ESP640	550									
ESL650(P)M / ESP650	350									
120VAC Shut-off Direct Plug-in										
ESL300 / 300P	1000									
ESL301 / 301P	1000									
ESL302 / 302P	500									
120VAC Slip Clutch										
ESL500	1000									
ESL501	1000									
ESL502	700									
ESL503	500									

SCREWDRIVER SELECTION GUIDELINES

Know your assembly requirements

With the endless range of applications for installing threaded fasteners, proper selection of a screwdriver begins with knowing the details of the job that needs to be performed by the driver.

Torque - What is the required torque to properly install the fastener? This torque value is determined through the engineering and testing of the product being assembled and not something that we can provide for you. How critical is the final torque value?

Prevailing Torque - Is the fastener running down freely into a threaded hole, or is it self-tapping? Does the fastener have thread-locking compound or a locknut? Any prevailing torque must be lower than final torque.

Joint Type - Once the fastener initially seats, is there extended rotation of the screwdriver due to soft gaskets, spring washers, or other compression in the assembled joint?

Speed and Direction - Is the fastener installation speed restricted by materials (eg plastics) or other design criteria? Will the screwdriver run primarily in the forward (CW) direction, or does the application require frequent switching between forward and reverse?

Duty Cycle - What is the estimated time to run-down a fastener? How many fasteners are installed per minute? How many hours will the tool be running per day? Is there prevailing torque during run-down?

Determine the appropriate series and model number

Based on the application's torque (and speed) requirements, the quick reference chart on the previous page indicates possible choices in the Delta Regis product line. In many cases, you will find that several models of screwdriver offer the required torque output. Try to select models where the required torque falls into the middle portion of the screwdriver's range. The chart is sub-divided by series of screwdriver. Final selection can be determined by consideration of the series attributes outlined below - feel free to contact us for assistance.

DC Premium Brushless (12/32/40V) - The DC brushless models offer the best performance for production applications. Clean running, maintenance-free brushless DC motors allow for higher duty cycles than brush motor tools. Premium low voltage DC drivers are available with ESD-safe housings and various control options. Standard controllers have Hi/Lo speed selection, optional controllers available for slow start, I/O and counting with rundown verification. All brushless tools come with precise shut-off clutch for excellent repeatability.

DC Brush (32V) - The 32VDC brush-type screwdriver is the predecessor to our premium brushless models. The series offers similar controller options and precise shut-off clutch in a tool with a brush-type DC motor. It has a lower duty cycle than the brushless (recommended max is 25%) and requires brush replacement as part of regular maintenance.

AC Direct Plug-In, Shut-off Clutch (120V) - The convenience of direct AC plug-in with a precise shut-off clutch. These single speed screwdrivers are powered by higher voltage DC brush motors. No control options or I/O are available. ESD-safe housings are not available on the direct plug-in series. AC tools are generally slightly larger than their DC counterparts.

AC Direct Plug-In, Ratchet Clutch (120V) - Economical tool with brush motor and ratcheting clutch for general industrial box-build and self-tapping screw applications.

ESL2 SERIES MINI BRUSHLESS, SHUT-OFF CLUTCH 12V DC Electric Screwdrivers

The Delta Regis ESL2 Series Miniature Shut-Off Screwdriver provides excellent low torque repeatability in a small package for precision assembly of small screws. The screwdriver's brushless 12VDC motor ensures durability and low maintenance. Each tool includes a 2m cable to connect to the required BECT200 Controller.

- Compact size designed for installing miniature fasteners. Ideal for assembly of cell phones and other small electronics.
- Precise shut-off clutch provides repeatability of +/-5%
- Torque range of 0.07 - 3.04 in-lbs (0.008 - 0.34 Nm)
- Low RPM models available for slow-speed applications
- ESD safe tool housing is standard (non-ESD available)
- Lever start, top-mounted reverse button
- 12VDC brushless motor requires no maintenance
- 2M (6.4 ft) tool cable and torque lock sleeve included
- Bit holder accepts 4mm round winged bits (2 included)
- Tool is CE/RoHS compliant; Controller is CE/RoHS/ETL



ESL2 Series Screwdrivers with Controllers

Model No. with Controller ^(1,2)	Range In.Lbs	Range Nm	Speed (RPM) Hi / Lo	Length in / mm	Grip Dia. in / mm	Weight lbs / g
ESL210-ESD / BECT200	0.07 - 1.32	0.01 - 0.147	1000 / 700	6.5 / 165	0.9 / 23	0.4 / 170
ESL210S-ESD / BECT200	0.07 - 1.32	0.01 - 0.147	280 / 200	6.5 / 165	0.9 / 23	0.4 / 170
ESL211-ESD / BECT200	0.44 - 3.08	0.05 - 0.343	1000 / 700	6.5 / 165	0.9 / 23	0.4 / 170
ESL211S-ESD / BECT200	0.44 - 3.08	0.05 - 0.343	280 / 200	6.5 / 165	0.9 / 23	0.4 / 170

⁽¹⁾ Screwdriver and Controller are packaged and sold as a set. Above dimensions are for the screwdriver only.
⁽²⁾ Controller includes standard North American power cord. Add suffix 'E' for EU cord, suffix 'UK' for UK cord.

Controller Specifications	
Input 100-240VAC, 50/60hz, 1A ; Output 12/9VDC, 30W	105 x 52 x 31 mm
	0.3 / 140

CESL6 SERIES PREMIUM BRUSHLESS, SHUT-OFF CLUTCH 32V DC Electric Screwdrivers

The CESL6 Series Premium Brushless Screwdrivers provide the ultimate combination of ergonomics, precision, performance and environmental cleanliness to the installation of fasteners. The quiet, brushless DC motor does not create the carbon dust generated by the brushes in a conventional DC motor. The motor's low power consumption results in a tool that runs cooler, even under demanding applications.

- Precise Torque Control, Low Torque Reaction.
- Quiet, Brushless DC motor means no carbon dust.
- Compact body design results in exceptional manouverability and operator comfort.
- Less heat build-up and higher duty cycle capabilities than conventional brush motors. 3 year motor warranty.
- Brushless design results in low maintenance.
- 32V DC models feature ESD safe housings.
- Each screwdriver includes an accessory torque lock sleeve and a 6-pin, 2m long cable for connecting to a compatible brushless controller (controller req'd - sold separately).
- CE, RoHS Compliant.



The CESL6 Series 32V DC Brushless Screwdriver can be used with either the standard BECT620C(IC) Hi/Lo Speed Controller or with our FASTEN/COUNT/VERIFY Controller for applications requiring batch counting and input/output interface with external equipment. Please see pages 10-11 and 14-15 for further details.

CESL6 Series 32VDC Brushless Screwdrivers

Model No. ⁽¹⁾	Start Type	Range (In.Lbs)	Range (Nm)	Speed (RPM) Hi	Speed (RPM) Lo	Screwdriver Bit Type	Length (mm)	Diameter (mm)	Weight (g)
CESL610-ESD	Lever	0.2 - 3.1	0.02 - 0.35	1000	700	4mm	185	32	385
CESL610S-ESD	Lever	0.2 - 3.1	0.02 - 0.35	485	295	4mm	185	32	385
CESL611-ESD	Lever	0.4 - 6.2	0.05 - 0.69	1000	700	4mm	185	32	385
CESL612-ESD	Lever	0.9 - 8.7	0.10 - 0.98	1000	700	4mm	185	32	385
CESL623-ESD	Lever	1.3 - 10.5	0.15 - 1.18	1000	650	1/4" hex	245	36	520
CESL623F-ESD ⁽²⁾	Lever	1.3 - 10.5	0.15 - 1.18	2000	---	1/4" hex	245	36	520
CESL623P-ESD	Push	1.3 - 10.5	0.15 - 1.18	1000	650	1/4" hex	245	36	520
CESL623PF-ESD ⁽²⁾	Push	1.3 - 10.5	0.15 - 1.18	2000	---	1/4" hex	245	36	520
CESL624-ESD	Lever	2.6 - 16.5	0.29 - 1.86	1000	650	1/4" hex	245	36	520
CESL624P-ESD	Push	2.6 - 16.5	0.29 - 1.86	1000	650	1/4" hex	245	36	520

⁽¹⁾To order screwdriver without ESD safe housing, drop suffix '-ESD' from model number.

⁽²⁾For high speed 'F' models, use the BECT620IC Controller on Hi Speed setting only.

Accessories

32V DC Brushless Screwdriver Controllers

These controllers are specifically for use with CESL610-624 32V DC Brushless Tools. Select the appropriate controller for your screwdriver model. CE/RoHS/ETL Approved.

BECT620C and BECT620IC models are compact, lightweight controllers. The more powerful BECT620IC is recommended for use with fast tool models CESL623F/PF.



BECT620IC
CONTROLLER

Model Number	Outlets	Speeds	Tool Connector	Output	Input	Dimensions L x W x H (mm)	Weight (kg)	Use only with Screwdriver Models
BECT620C	1	Hi/Lo	6 pin	32/24V DC	100-240V AC	145 x 60 x 35	0.25	32VDC Brushless
BECT620IC	1	Hi/Lo	6 pin	32/24V DC	100-240V AC	195 x 76 x 56	0.45	32VDC Brushless

Power supply shipped with standard North American cordset. For EU cord, add suffix 'E'.

The ECT6-SSOA-C Control Module allows you to add "Adjustable Slow-Start" and "Output Signal" capability to your Delta Regis CESL6 Brushless Screwdriver. This external control module plugs in-line between the BECT620C/IC controller and a CESL6 Series screwdriver.



Model Number	Use with Controller Model	Slow Start Time	Slow Start Speed	Output Signals Available (Transistor-open collector)	Cable Length	Dimensions (mm)
ECT6-SSOA-C	BECT620(I)C	0.1 ~ 5 sec.	30-100% full spd	Run/Clutch/Reverse	0.3m	58 x 95 x 35

32VDC Brushless Driver Accessories

Torque Lock Sleeve	For Tool Model:	Use Part No:
 <i>Covers torque adjusting nut to deter tampering</i>	CESL610, 611, 612-ESD*	DR80-10133E
	CESL623(F/P/PF)-ESD*	DR80-10134E
	CESL624(P)-ESD*	DR80-10134E
<i>* a lock sleeve is included with the screwdriver</i>		

Tool Holster	For Tool Model:	Use Part No:
 <i>Fasten to workbench</i>	CESL610, 611, 612	DR80-20136
	CESL623(F/P/PF)	DR80-10135
	CESL624(P)	DR80-10135

Pistol Grip	For Tool Model:	Use Part No:
 <i>* add suffix 'ESD' for ESD-safe pistol grip</i>	CESL610, 611, 612	N/A
	CESL623(F), 624	DR80-PG623/4*
	CESL623P(PF), 624	DR80-PG623/4P*

Angle Head	For Tool Model:	Use Part No:
 <i>90 Degree Angle Attachment</i> <i>Not suitable for push-to-start models.</i>	CESL610, 611, 612	N/A
	CESL623(F)	DR80-10161A
	CESL624	DR80-10161A

Cable Assemblies	Cable length	Part No
 <i>6-pin cable - all CESL6 BRUSHLESS models</i>	2m / 6.5 ft (Standard)	DR96-66002
	3m / 9.8 ft	DR96-66003
	6m / 19.7 ft	DR96-66006

Tool Balancers	For further accessory information:	
<i>For CESL610-612 use: DR90-10101</i>	Tool Stands & Balancers	pg 28
	Torque Reaction Arms	pg 26-27
<i>Other models use: DR90-10103</i>	Screw Feeders	pg 24
	Torque Testers	pg 25
	Vacuum P/U Attachments	pg 30

COUNTING CONTROLLER - 32V BRUSHLESS CESL6 DRIVERS

Fasten | Count | Verify

Add functionality and error-proofing to your CESL6 Series Screwdriver with the BECT626-SSO Counting Controller. This controller offers a host of options including Slow Start, Batch Counting, and OK/NG Rundown Indication based on the screwdriving cycle occurring within a predefined time window. An externally accessible I/O connection provides the user with a signal interface. Outputs (24VDC, 10mA max) are available for rundown OK, rundown NG, and batch complete. External switches may be wired to the input for remote enable (part in position) and remote clear (reset batch count).

- Selectable **Slow Start** Speed and Time
- Large LED Display of Screw Count Values
- Externally Accessible **I/O Connections**
- **Programmable Batch Counting** with Audible Buzzer indicating batch complete
- **Programmable Time Window** for comparison with actual fastening cycle time - LED's indicate **OK/NG** rundown cycle
- Works with all CESL6 Series 32VDC Screwdrivers
- ETL / CE / RoHS Compliant



Counting Controller Models & Specifications

Model Number	Outlets	Speeds	Approvals	Output	Input	Dimensions L x W x H (mm)	Weight (kg)	Use only with Driver Models
BECT626-SSO	1	Hi/Lo	CE/RoHS/ETL	32/20V DC, 60VA	100-240V AC	150 x 130 x 48	0.9	CESL6 Series

Power supply shipped with standard North American cordset. For EU cord, add suffix 'E'; for UK cord, add suffix 'UK'.

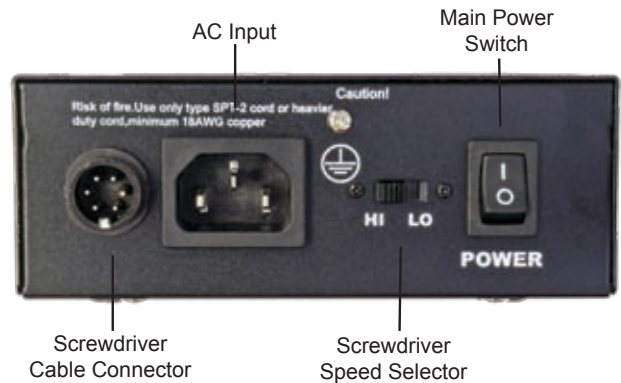
Features	
Slow Start Time Adjustment	0 - 9.9 sec
Slow Start Speed Adjustment	30 - 100%
Count (per batch)	1 - 99
Time Window Setting Range (min/max)	0 - 9.9 sec
Audible Alert (selectable)	Good/NG/Batch OK

Inputs	Sinking Outputs (24VDC, 10mA max)
1. Remote Enable	1. Rundown OK
2. Clear (Reset) Batch Count	2. Rundown NG
	3. Batch Complete

Inputs require an external switch (dry contact) only. A 32/20 VDC voltage supply is available to power the output circuit, if required.

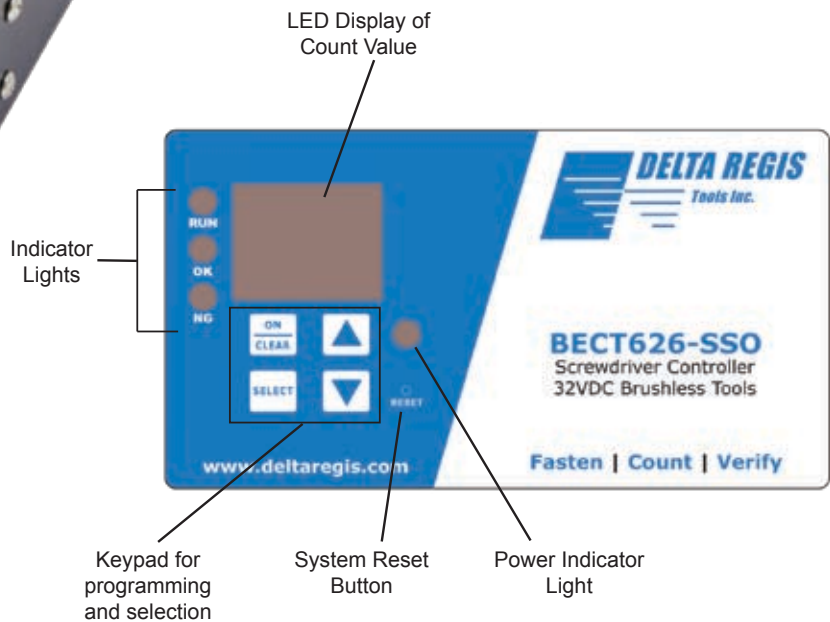
BECT626-SSO Controller Overview

Parameters are set-up on the BECT6-SSO using the four button keypad and LED display panel. A simple program loop provides access to settings for slow start speed and time, batch count quantity, and min/max allowable rundown times. During normal operation, the large two-digit display shows the current screw count value and also provides visual LED indication of whether the rundown was Good or No Good based on the time window parameters that are programmed into the controller by the user.



Input / Output Connector

DIP Switch for optional functions



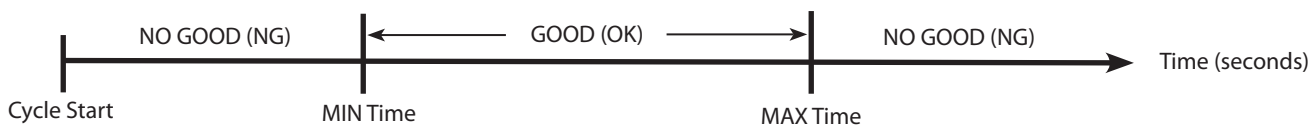
LED Display of Count Value

Indicator Lights

Keypad for programming and selection

System Reset Button

Power Indicator Light



If the fastening cycle completes (clutch trips) within the programmed time window, the rundown cycle will be accepted as GOOD (OK) and the batch count will increment.

HIGH TORQUE PREMIUM BRUSHLESS, SHUT-OFF CLUTCH 40V DC Electric Screwdrivers

Delta Regis 40VDC Premium Brushless Screwdrivers pack the performance to satisfy demanding assembly applications. With torque capabilities to 15 Nm and brushless motor technology that withstands higher duty cycles, these drivers are ready to perform on production lines typically dependent on pneumatic tools. As with all Delta Regis Shut-off Clutch Screwdrivers, excellent torque repeatability is the fundamental building block that defines these models. A host of screwdriver configurations, accessories, and control options are available to make the 40VDC Series an ideal choice for production assembly across a wide range of industries.



ALL ESL628/629 INLINE DRIVERS INCLUDE A PISTOL GRIP ATTACHMENT AND TORQUE LOCK SLEEVE.

ESL628/629 Handheld Inline Drivers have powerful brushless motors to handle demanding applications. Fast versions are available to speed-up production lines that require installation of long fasteners.

ESL6 Handheld Inline Drivers to 4.9Nm

Model Number	Start Type	Range (In.Lbs)	Range (Nm)	Speed (RPM)	Drive Type
Inline Body Style, Handheld ⁽¹⁾					
ESL628	Lever	8.9 - 26.0	0.98 - 2.94	1000	1/4" hex
ESL628F	Lever	8.9 - 26.0	0.98 - 2.94	2000	1/4" hex
ESL628P	Push	8.9 - 26.0	0.98 - 2.94	1000	1/4" hex
ESL628PF	Push	8.9 - 26.0	0.98 - 2.94	2000	1/4" hex
ESL629	Lever	17.4 - 43.4	1.96 - 4.90	1000	1/4" hex
ESL629P	Push	17.4 - 43.4	1.96 - 4.90	1000	1/4" hex
Dimensions (mm): 278(L) x 39.5(dia)			Weight: 0.8 kg		

⁽¹⁾ ESD Safe housing available - add suffix '-ESD'



ALL ESL6_M MODELS INCLUDE AN ACCESSORY SIDE HANDLE ATTACHMENT

ESL6_M Series Screwdrivers incorporate an aluminum front collar to facilitate fixture mounting and include an accessory side handle for handheld applications.

ESL6_M Handheld / Fixture Mount Drivers

Model Number	Start Type	Range (In.Lbs)	Range (Nm)	Speed (RPM)	Drive Type
Inline Body Style, Handheld or Fixture Mount					
ESL629M	Lever	17.7 - 44.3	2 - 5	1000	1/4" hex ⁽¹⁾
ESL629PM	Push	17.7 - 44.3	2 - 5	1000	1/4" hex ⁽¹⁾
ESL630M	Lever	26.6 - 66.4	3 - 7.5	800	1/4" hex ⁽¹⁾
ESL630PM	Push	26.6 - 66.4	3 - 7.5	800	1/4" hex ⁽¹⁾
ESL640M	Lever	35.4 - 88.5	4 - 10	550	1/4" hex ⁽¹⁾
ESL640PM	Push	35.4 - 88.5	4 - 10	550	1/4" hex ⁽¹⁾
ESL650M	Lever	53.1 - 132.8	6 - 15	350	1/4" hex ⁽¹⁾
ESL650PM	Push	53.1 - 132.8	6 - 15	350	1/4" hex ⁽¹⁾
Dimensions (mm): 297(L) x 46.2(dia)			Weight: 1.2 kg		

⁽¹⁾ Standard bit holder is 1/4" hex quick change type. For optional 3/8" square drive, add suffix '-SQ'

40VDC Series drivers are capable of developing high torques - side handles are included where suitable. We recommend mounting in a torque reaction arm for ultimate ergonomics and operator safety. See pages 26-27 for torque arms.



ESP6 Pistol Grip tools come standard with the cable connection at the bottom of the handle - top rear cable connection is optional. An accessory side handle is included with each tool.

ESP6 Brushless Pistol Grip Drivers

Model Number ⁽¹⁾	Start Type	Range (In.Lbs)	Range (Nm)	Speed (RPM)	Drive Type
Pistol Grip Body Style					
ESP620	Trigger	17.7 - 44.3	2 - 5	1000	1/4" hex
ESP620-SQ	Trigger	17.7 - 44.3	2 - 5	1000	3/8" square
ESP630	Trigger	26.6 - 66.4	3 - 7.5	800	1/4" hex
ESP630-SQ	Trigger	26.6 - 66.4	3 - 7.5	800	3/8" square
ESP640	Trigger	35.4 - 88.5	4 - 10	550	1/4" hex
ESP640-SQ	Trigger	35.4 - 88.5	4 - 10	550	3/8" square
ESP650	Trigger	53.1 - 132.8	6 - 15	350	1/4" hex
ESP650-SQ	Trigger	53.1 - 132.8	6 - 15	350	3/8" square
Dimensions (mm): 270(L) x 169(H) x 48(dia)				Weight: 1.25 kg	

⁽¹⁾ Pistol Grip tool has cable connection in bottom of handle as standard. For top rear connection, add suffix 'U' to model number.

Controller & Slow-Start/Output Module

Controller model BECT640HL provides the power required to run all models of high torque 40V DC Brushless Series Screwdriver. This includes tool models ESL628(F/P/PF) thru ESL650M(PM) and models ESP620-650. CE/RoHS/ETL Approved. For applications requiring Batch Counting and I/O capability, please see the BECT640-SSO Controller (pages 14-15).



Model Number	Outlets	Speeds	Tool Connector	Output	Input	Dimensions L x W x H (mm)	Weight (kg)	Use only with Screwdriver Models
BECT640HL	1	Hi/Lo	6 pin	40/30V DC	100-240V AC	210 x 118 x 85	1.8	All 40V DC Brushless

Power supply shipped with standard North American cordset. For EU cord, add suffix 'E'; for UK cord, add suffix 'UK'.


The ECT6-SSOB control module adds "Adjustable Slow-Start" and "Output Signal" capability to a 40VDC brushless tool. This control module plugs in-line between the BECT640HL controller and any model of 40VDC brushless driver.


Model Number	Use with Controller Model	Slow Start Time	Slow Start Speed	Output Signals Available (Transistor-open collector)	Cable Length	Dimensions (mm)
ECT6-SSOB	BECT640HL	0.1 ~ 5 sec.	30-100% full spd	Run/Clutch/Reverse	0.3m	58 x 95 x 35

Accessories



Include a 3/8" sq. drive Angle Head Attachment on any lever start ESL6_M screwdriver by adding suffix '/RA' to the part number (eg ESL650M/RA). For an Angle Head with Swivel Bail to support the tool from a balancer, add suffix '/RAS'.

Angle Head	For Tool Model:	Use Part No:
 90 degree angle head	ESL628(F)	DR80-10160A
	ESL629	DR80-10160A
<i>Lever start only - max torque reduced</i>		

Cable Assemblies	Cable length	Part No
 6-pin cable with metal ring	2m / 6.5 ft (Std)	DR96-10016M
	3m / 9.8 ft	DR96-10018M
	6m / 19.7 ft	DR96-10020M

COUNTING CONTROLLER - 40V / 32V BRUSHLESS DRIVERS

Fasten | Count | Verify

Add functionality and error-proofing to your Delta Regis Brushless Screwdriver with the BECT640-SSO Counting Controller. This controller offers a host of options including Slow Start, Batch Counting, and OK/NG Rundown Indication based on the screwdriving cycle occurring within a predefined time window. An externally accessible I/O connection provides the user with a signal interface. Outputs are available for rundown OK, rundown NG, and batch complete. External switches may be wired to the input for remote enable (part in position) and remote clear (reset batch count).

- Selectable **Slow Start** Speed and Time
- Large LED Display of Screw Count Values
- Externally Accessible **I/O Connections**
- **Programmable Batch Counting** with Audible Buzzer indicating batch complete
- **Programmable Time Window** for comparison with actual fastening cycle time - LED's indicate **OK/NG** rundown cycle
- Lock to limit access to program modifications
- Works with 40V and 32VDC Brushless Drivers (Optional adapter cable req'd for 32V tools)
- ETL / CE / RoHS Compliant



Counting Controller Model & Specifications

Model Number	Outlets	Speeds	Approvals	Output	Input	Dimensions L x W x H (mm)	Weight (kg)
BECT640-SSO	1	Hi/Lo	CE/RoHS/ETL	40/32/24V DC, 220W	100-240V AC, 6.3A	248 x 130 x 100	2.5
Use with driver models:		CESL610-612, CESL623-624(P/F/PF), ESL628-629(P/F/PF), ESL629M-650M(PM), ESP620-650					

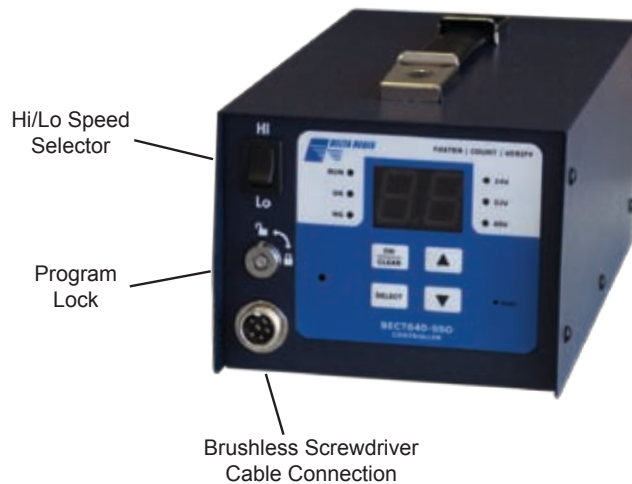
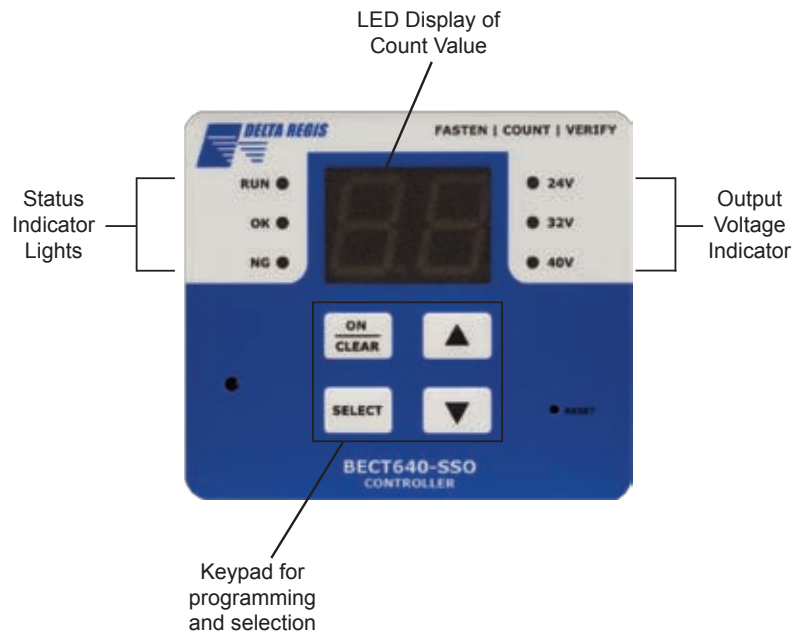
Power supply shipped with standard North American cordset. For EU cord, add suffix 'E'; for UK cord, add suffix 'UK'.

Features		Inputs	Outputs (NPN and relay)
Slow Start Time Adjustment	0 - 9.9 sec	1. Remote Enable	1. Rundown OK
Slow Start Speed Adjustment	30 - 100%	2. Clear (Reset) Batch Count	2. Rundown NG
Count (per batch)	1 - 99		3. Batch Complete
Time Window Setting Range (min/max)	0 - 9.9 sec		
Audible Alert (selectable)	Good/NG/Batch OK		

Inputs require an external switch (dry contact) only. A 12 VDC voltage supply is available to power the output circuit, if required.

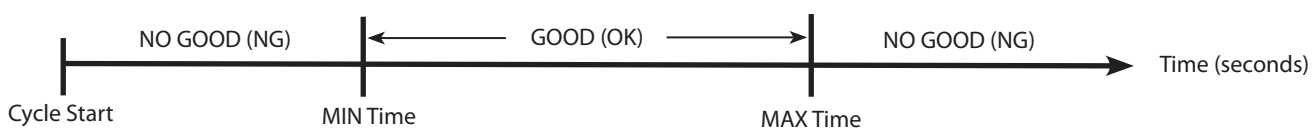
BECT640-SSO Controller Overview

Parameters are set-up on the BECT640-SSO using the four button keypad and LED display panel. A simple program loop provides access to settings for slow start speed and time, batch count quantity, and min/max allowable rundown times. During normal operation, the large two-digit display shows the current screw count value and also provides visual LED indication of whether the rundown was Good or No Good based on the time window parameters that are programmed into the controller by the user.



DIP Switch for optional functionality

Input / Output Connections:
 12VDC supply (if required to power external circuit)
 OK / NG / OK ALL (sinking outputs - 24VDC, 10mA max)
 OK / NG / OK ALL (dry contact outputs - 60V, 400mA max)
 ENABLE input (requires normally closed switch contact)
 CLEAR input (requires normally open switch contact)
 COM - 0VDC (supply, input and sinking output common)



If the fastening cycle completes (clutch trips) within the programmed time window, the rundown cycle will be accepted as GOOD (OK) and the batch count will increment.

STANDARD DUTY 32V DC SHUT-OFF CLUTCH Electric Screwdrivers

Solid construction and innovative design are apparent everywhere on these tools. Accurate torque control and superb ergonomics make them perfect for electronic assembly. All models feature ESD safe housings and externally replaceable brushes. Fan equipped motors and flow through ventilation keep these tools running cool - increasing tool life and operator comfort. Our low torque models are some of the smallest and lightest available, making them well suited for precision assembly operations.

- Accurate Torque Control.
- Lockable Torque Adjustment - optional torque locking sleeve makes it easy to set up and secure.
- Wide Torque Range - single model versatility .
- Rare Earth Magnet Motor - high torque output .
- Low Torque Reaction.
- Compact - light and easy to handle.
- Ergonomic Design - soft cushioning in grip area ensures operator comfort and reduced fatigue.
- All models feature ESD safe housings.
- CE / RoHS Compliant.



Model Number*	Start Type	Range In.Lbs	Range Nm	Speed (RPM) Hi	Speed (RPM) Lo	Length in / mm	Grip Dia. in / mm	Weight lbs / g
ESL310S-ESD	Lever	0.2 - 3.1	0.02 - 0.35	500	350	8.1 / 205	1.25 / 32	0.6 / 270
ESL310-ESD	Lever	0.2 - 3.1	0.02 - 0.35	1000	600	8.1 / 205	1.25 / 32	0.6 / 270
ESL311-ESD	Lever	0.4 - 6.2	0.05 - 0.7	1000	600	8.1 / 205	1.25 / 32	0.6 / 270
ESL312-ESD	Lever	0.9 - 8.8	0.1 - 1.0	670	400	8.1 / 205	1.25 / 32	0.6 / 270
ESL323-ESD	Lever	1.5 - 10.6	0.17 - 1.2	1000	600	9.1 / 230	1.46 / 37	1.1 / 480
ESL323P-ESD	Push	1.5 - 10.6	0.17 - 1.2	1000	600	9.1 / 230	1.46 / 37	1.1 / 480
ESL324-ESD	Lever	3 - 14	0.34 - 1.58	1000	600	9.1 / 230	1.46 / 37	1.1 / 480
ESL324P-ESD	Push	3 - 14	0.34 - 1.58	1000	600	9.1 / 230	1.46 / 37	1.1 / 480
ESL327-ESD	Lever	6 - 21	0.69 - 2.37	750	450	10.2 / 260	1.5 / 38	1.3 / 600
ESL327P-ESD	Push	6 - 21	0.69 - 2.37	750	450	10.2 / 260	1.5 / 38	1.3 / 600
ESL328-ESD	Lever	7 - 26.4	0.79 - 2.98	530	300	10.2 / 260	1.5 / 38	1.3 / 600
ESL328P-ESD	Push	7 - 26.4	0.79 - 2.98	530	300	10.2 / 260	1.5 / 38	1.3 / 600
ESL329-ESD	Lever	14 - 42	1.6 - 4.7	530	300	10.6 / 269	1.6 / 41	1.6 / 700
ESL329P-ESD	Push	14 - 42	1.6 - 4.7	530	300	10.6 / 269	1.6 / 41	1.6 / 700

*To order screwdriver without ESD safe housing, drop suffix '-ESD' from model number.

Controllers

The ECT326 power supply / controllers act as AC to DC transformers and torque controllers. The electronic control circuit cuts the power to the motor in response to the clutch signal from the electric screwdriver. These units feature Hi/Lo or Variable speed selection. CE/RoHS/ETL approved.



ECT326 Controller

Model Number	Outlets	Speeds	CE & RoHS Approved	Output	Input	Dimensions L x W x H (mm)	Weight (g)
ECT326	1	Hi/Lo	YES	32 / 20V DC	100-240V AC	145 x 60 x 35	255
ECT326V	1	Variable	YES	20 - 32V DC	100-240V AC	145 x 60 x 35	255

Power supply shipped with std North American cordset. For EU cord, add suffix 'E'.

Slow Start / Clutch Output Signal Module

The ECT3A-SSO control module allows you to add "Slow-Start" and "Output Signal" capability to your Delta Regis 32V electric screwdrivers. This external control module plugs in-line between model ECT326/326V controllers and your electric screwdriver to provide an adjustable slow-start control and output signal capability.





ECT3A-SSO Slow-Start Module

Model Number	Slow Start Time	Slow Start Speed	Output Signal (Dry Contact - max rating)	Cable Length	Dimensions (mm)
ECT3A-SSO	0 ~ 3 seconds	30-100% full speed	30V AC/DC, 0.3A	0.3m	58 x 94 x 36


For use with ECT326/326V. For discontinued controller models ECT300 & ECT320, use module ECT3-SSO.


32V DC Accessories

Torque Lock Sleeve	For Tool Model:	Use Part No:
 <i>Covers torque adjusting nut to deter tampering</i>	ESL310, 310S, 311, 312	DR80-10133
	ESL323(P), 324(P)	DR80-10134
	ESL327(P), 328(P)	DR80-10131
	ESL329(P)	DR80-10130


Tool Holster	For Tool Model:	Use Part No:
 <i>Fasten to workbench</i>	ESL310, 310S, 311, 312	DR80-10136
	ESL323(P), 324(P)	DR80-10136*
	ESL327(P), 328(P)	DR80-10135
	ESL329(P)	DR80-10135

*use model DR80-10135 if the ESL323/324 has a torque lock sleeve installed

Pistol Grip	For Tool Model:	Use Part No:
	ESL310, 310S, 311, 312	DR80-10070
	ESL323(P), 324(P)	DR80-10080
	ESL327(P), 328(P)	DR80-10080
	ESL329(P)	DR80-10099

Angle Head	For Tool Model:	Use Part No:
 <i>90 Degree Angle Attachment</i>	ESL310, 310S, 311, 312	N/A
	ESL323, 324	DR80-10161A
	ESL327, 328, 329	DR80-10160A

Not suitable for use on push-to-start models

Cable Assemblies	Cable length	Part No
 <i>6-pin connects driver to controller - all models</i>	2m / 6.5 ft (Standard)	DR96-10016B
	3m / 9.8 ft	DR96-10018
	6m / 19.7 ft	DR96-10020

Tool Balancers	For further accessory information:	
<i>For ESL310-312 use:</i> DR90-10101	Tool Stands & Balancers	pg 28
	Torque Reaction Arms	pg 26-27
	Screw Feeders	pg 24
	Torque Testers	pg 25
	Vacuum P/U Attachments	pg 30
<i>Other models use:</i> DR90-10103		

COUNTING CONTROLLER - 32V DC BRUSH DRIVERS

Fasten | Count | Verify

We've modified our Standard 32V DC Brush Screwdriver models to create the CESL3 series drivers. These drivers function exclusively with the CECT326-SSO Controller, providing the user with a host of options including slow start, batch counting, and OK/NG rundown indication based on the screwdriving cycle occurring within a predefined time window. An externally accessible I/O connection provides the user with a signal interface. Outputs (24VDC, 10mA) are available for rundown OK, rundown NG, and batch complete. External switches may be wired to the input for remote enable (part in position) and remote clear (reset batch count).

- Accurate Torque Control, Ergonomic Design
- Same proven performance as our standard 32VDC Screwdrivers
- Precision Shut-off Clutch, Hi/Lo Tool Speed
- Selectable **Slow Start** Speed and Time
- Large LED Display of Screw Count Values
- Externally Accessible **I/O Connections**
- **Programmable Batch Counting** with Audible Buzzer indicating batch complete
- **Programmable Time Window** for comparison with actual fastening cycle time - LED's indicate **OK/NG** rundown cycle
- Screwdrivers feature standard ESD safe housings
- CE / RoHS Compliant



Counting Controller Models & Specifications

Model Number	Outlets	Speeds	Approvals	Output	Input	Dimensions L x W x H (mm)	Weight (kg)	Use only with Driver Models
CECT326-SSO	1	Hi/Lo	CE/RoHS/ETL	32/20V DC, 60VA	100-240V AC	150 x 130 x 48	0.9	CESL3 Series

Power supply shipped with standard North American cordset. For EU cord, add suffix 'E'; for UK cord, add suffix 'UK'.

Features	
Slow Start Time Adjustment	0 - 9.9 sec
Slow Start Speed Adjustment	60 - 100%
Count (per batch)	1 - 99
Time Window Setting Range (min/max)	0 - 9.9 sec
Audible Alert (selectable)	Good/NG/Batch OK

Inputs	Sinking Outputs (24VDC, 10mA max)
1. Remote Enable	1. Rundown OK
2. Clear (Reset) Batch Count	2. Rundown NG
	3. Batch Complete

Inputs require an external switch (dry contact) only. A 32/20V DC voltage supply is available to power the output circuit, if required.

CESL3 Series 32V DC Electric Screwdrivers

Program parameters for slow start time, batch counting, and time windows are set using the four button keypad of the CECT326-SSO. A potentiometer is used to adjust the slow start speed setting. The display window shows the current count value and decreases (or increases) as good run-down cycles are achieved. OK and NG led's on the display panel provide a visual indication of whether or not the rundown occurred within the user programmed time window.




The CESL3 Brush-type Screwdrivers are wired for use exclusively with the CECT326-SSO controller.

These drivers have the same features as the ESL3 series 32V DC drivers (pg 12). Tools include a 2m long, 7-pin cable.

Model Number	Start Type	Range In.Lbs	Range Nm	Speed (RPM) Hi	Speed (RPM) Lo	Length in / mm	Diameter in / mm	Weight lbs / g
CESL310S-ESD	Lever	0.2 - 3.1	0.02 - 0.35	500	350	8.1 / 205	1.25 / 32	0.6 / 270
CESL310-ESD	Lever	0.2 - 3.1	0.02 - 0.35	1000	600	8.1 / 205	1.25 / 32	0.6 / 270
CESL311-ESD	Lever	0.4 - 6.2	0.05 - 0.7	1000	600	8.1 / 205	1.25 / 32	0.6 / 270
CESL312-ESD	Lever	0.9 - 8.8	0.10 - 1.0	670	400	8.1 / 205	1.25 / 32	0.7 / 270
CESL323-ESD	Lever	1.5 - 10.6	0.17 - 1.20	1000	600	9.1 / 230	1.46 / 37	1.1 / 480
CESL323P-ESD	Push	1.5 - 10.6	0.17 - 1.20	1000	600	9.1 / 230	1.46 / 37	1.1 / 480
CESL324-ESD	Lever	3 - 14	0.34 - 1.58	1000	600	9.1 / 230	1.46 / 37	1.1 / 480
CESL324F-ESD	Lever	1 - 7	0.10 - 0.78	2000	-	9.1 / 230	1.46 / 37	1.1 / 480
CESL324P-ESD	Push	3 - 14	0.34 - 1.58	1000	600	9.1 / 230	1.46 / 37	1.1 / 480
CESL324PF-ESD	Push	1 - 7	0.10 - 0.78	2000	-	9.1 / 230	1.46 / 37	1.1 / 480
CESL327-ESD	Lever	6 - 21	0.69 - 2.37	750	450	10.2 / 260	1.5 / 38	1.3 / 600
CESL327P-ESD	Push	6 - 21	0.69 - 2.37	750	450	10.2 / 260	1.5 / 38	1.3 / 600
CESL328-ESD	Lever	7 - 26.4	0.79 - 2.98	530	300	10.2 / 260	1.5 / 38	1.3 / 600
CESL328F-ESD	Lever	2 - 8.8	0.2 - 0.98	2000	-	10.2 / 260	1.5 / 38	1.3 / 600
CESL328P-ESD	Push	7 - 26.4	0.79 - 2.98	530	300	10.2 / 260	1.5 / 38	1.3 / 600
CESL328PF-ESD	Push	2 - 8.8	0.2 - 0.98	2000	-	10.2 / 260	1.5 / 38	1.3 / 600
CESL339-ESD	Lever	14 - 42	1.6 - 4.7	530	300	10.6 / 269	1.6 / 41	1.6 / 700
CESL339P-ESD	Push	14 - 42	1.6 - 4.7	530	300	10.6 / 269	1.6 / 41	1.6 / 700

CESL3 Accessories

For all accessories other than tool cables, refer to the accessories charts for equivalent non-counting models on page 17 (ESL3 Brush-type). Cables are different for counting tools.

CESL3 Tool Cables	Cable length	Part No
 7-pin connects driver to CECT326-SSO controller	2m / 6.5 ft (Standard)	DR96-37002
	3m / 9.8 ft	DR96-37003
	6m / 19.7 ft	DR96-37006

DIRECT PLUG-IN, SHUT-OFF CLUTCH 120 / 220V Electric Screwdrivers

The direct plug-in 300 Series electric screwdrivers are specifically designed to meet the requirements of the industrial manufacturing market. Accurate torque control and a rubberized ergonomic grip make them an ideal solution for demanding production assembly applications. These units plug directly into an AC outlet, eliminating the need for an external power supply. Stepless torque adjustment in ranges starting from 0.15 to 4.4 Nm.

- Convenient Direct Plug-In Design - internal power and control circuitry allows driver to plug directly into 120V or 220VAC
- Once the preset torque is reached, the screwdriver shuts off - the start mechanism must be reset to run again
- External Torque Adjustment Nut - easy to set up and secure with optional torque lock sleeve.
- Ergonomic Design - soft cushioning in grip area ensures operator comfort and reduced fatigue.
- Externally replaceable brushes for ease of maintenance
- 3m power cord with standard 3 prong grounded plug
- 1/4 inch hex quick change chuck allows rapid bit change
- Available in lever or push start models



120V AC Electric Screwdrivers

Specifications	
Input Voltage	110-120V AC, 50/60Hz
AC Plug Type	3 prong grounded
AC Current (no load)	0.4A
Bit holder	1/4" hex quick change

Model Number	Start Type	Range In.Lbs	Range Nm	Speed (RPM)	Length in / mm	Diameter in / mm	Weight lbs / g
ESL300	Lever	1.3 - 10.5	0.15 - 1.18	1000	9.5 / 242	1.5 / 38	1.2 / 550
ESL300P	Push	1.3 - 10.5	0.15 - 1.18	1000	9.5 / 242	1.5 / 38	1.2 / 550
ESL301	Lever	2.6 - 16.7	0.29 - 1.86	1000	9.5 / 242	1.5 / 38	1.2 / 550
ESL301P	Push	2.6 - 16.7	0.29 - 1.86	1000	9.5 / 242	1.5 / 38	1.2 / 550
ESL302	Lever	13 - 39	1.47 - 4.41	500	10.6 / 269	1.6 / 41	1.6 / 700
ESL302P	Push	13 - 39	1.47 - 4.41	500	10.6 / 269	1.6 / 41	1.6 / 700

Standard tool supplied as 120VAC with North American plug - for 220VAC w/ NA plug add suffix '-220V-A'
 - for 220VAC w/ EU plug add suffix '-220V-E'
 - for 220VAC w/ UK plug add suffix '-220V-UK'

220V AC Electric Screwdrivers (conform to CE standards)


The 220V AC direct plug-in 380 Series Electric Screwdrivers are designed to meet the needs of the European industrial market. These tools have the same basic features and benefits as the 120V models with the addition of CE/ RoHS Compliance and a 3m cord with standard Euro plug.


Specifications	
Input Voltage	220-240V AC, 50/60Hz
AC Plug Type	Euro Plug
AC Current (no load)	0.3A
Bit holder	1/4" hex quick change


Model Number	Start Type	Range In.Lbs	Range Nm	Speed (RPM)	Length in / mm	Diameter in / mm	Weight lbs / g
ESL383E	Lever	4.4 - 19	0.50 - 2.16	1000	10.6 / 269	1.6 / 41	1.6 / 700
ESL383PE	Push	4.4 - 19	0.50 - 2.16	1000	10.6 / 269	1.6 / 41	1.6 / 700
ESL383FE	Lever	3.5 - 15	0.39 - 1.67	1900	10.6 / 269	1.6 / 41	1.6 / 700
ESL383PFE	Push	3.5 - 15	0.39 - 1.67	1900	10.6 / 269	1.6 / 41	1.6 / 700
ESL384E	Lever	8.8 - 26	0.98 - 2.94	700	10.6 / 269	1.6 / 41	1.6 / 700
ESL384PE	Push	8.8 - 26	0.98 - 2.94	700	10.6 / 269	1.6 / 41	1.6 / 700
ESL384FE	Lever	8.8 - 26	0.98 - 2.94	1000	10.6 / 269	1.6 / 41	1.6 / 700
ESL384PFE	Push	8.8 - 26	0.98 - 2.94	1000	10.6 / 269	1.6 / 41	1.6 / 700
ESL385E	Lever	13 - 39	1.47 - 4.41	500	10.6 / 269	1.6 / 41	1.6 / 700
ESL385PE	Push	13 - 39	1.47 - 4.41	500	10.6 / 269	1.6 / 41	1.6 / 700


Standard tool supplied with EU plug on power cord - for UK plug, add suffix '-UK'

120/220V AC Accessories

Torque Lock Sleeve	For Tool Model:	Use Part No:
 <i>Covers torque adjusting nut to deter tampering</i>	ESL300 / 300P	DR80-10134C
	ESL301 / 301P	DR80-10134C
	ESL302 / 302P	DR80-10130
	ESL383(P,F)E - 385(P,F)E	DR80-10130

Tool Holster	For Tool Model:	Use Part No:
 <i>Fasten to workbench</i>	ESL300 / 300P	DR80-10136
	ESL301 / 301P	DR80-10136
	ESL302 / 302P	DR80-10135
	ESL383(P,F)E - 385(P,F)E	DR80-10135

Pistol Grip	For Tool Model:	Use Part No:
	ESL300 / 300P	DR80-10080
	ESL301 / 301P	DR80-10080
	ESL302 / 302P	DR80-10099
	ESL383(P,F)E - 385(P,F)E	DR80-10099

Angle Head	For Tool Model:	Use Part No:
 <i>90 Degree Angle Attachment</i> <i>Not suitable for use on push-to-start models</i>	ESL300 / ESL301	DR80-10161A
	ESL302	DR80-10160A
	ESL383E - 385E	DR80-10160A

Tool Balancers	For further accessory information:
<i>All models use: DR90-10103</i>	Tool Stands & Balancers pg 28
	Torque Reaction Arms pg 26-27
	Screw Feeders pg 24
	Torque Testers pg 25
	Vacuum P/U Attachments pg 30

DIRECT PLUG-IN, SLIP (RATCHET) CLUTCH 120V Electric Screwdrivers


Our Slip Clutch series of 120V AC direct-plug in electric screwdrivers are an economical solution for general assembly. Perfect for box build and self tapping applications, these units plug directly into a 120V AC outlet eliminating the need for an external power supply. Stepless torque adjustment in ranges starting from 0.44 to 39 in.lbs and speeds from 500 to 1000 RPM.


- Convenient Direct Plug-In Screwdrivers - built-in AC to DC rectifier allows screwdrivers to plug in directly to a 120V AC outlet (220V AC available).
- Clutch slips once the pre-set torque is reached.
- Well suited for tapping screw applications.
- Ergonomic Design - slim ergonomic grip for operator comfort.
- Externally replaceable brushes.
- 1/4 inch hex quick change chuck allows rapid bit change.




Model Number	Start Type	Range In.Lbs	Range Nm	Speed (RPM)	Length in / mm	Diameter in / mm	Weight Lbs / g
ESL500LT	Lever Start	0.44 - 6.1	0.05 - 0.69	1000	9.1 / 230	1.4 / 36	1.1 / 480
ESL500	Lever Start	1.7 - 13.2	0.20 - 1.47	1000	9.1 / 230	1.4 / 36	1.1 / 480
ESL501	Lever Start	4.4 - 21.7	0.49 - 2.45	1000	10.4 / 264	1.5 / 38	1.3 / 590
ESL502	Lever Start	8.8 - 30	0.98 - 3.40	700	10.4 / 264	1.5 / 38	1.3 / 590
ESL503	Lever Start	13.2 - 39	1.49 - 4.40	500	10.4 / 264	1.5 / 38	1.3 / 590

Slip Clutch Accessories

Torque Lock Sleeve	For Tool Model:	Use Part No:
 <i>Covers torque adjusting nut to deter tampering</i>	ESL500(LT)	DR80-10132
	ESL501	DR80-10131
	ESL502	DR80-10131
	ESL503	DR80-10131

Tool Holster	For Tool Model:	Use Part No:
 <i>Fasten to workbench</i>	ESL500(LT)	DR80-10136
	ESL501	DR80-10135
	ESL502	DR80-10135
	ESL503	DR80-10135

Pistol Grip	For Tool Model:	Use Part No:
	ESL500(LT)	DR80-10070
	ESL501	DR80-10090
	ESL502	DR80-10090
	ESL503	DR80-10090

Tool Balancers	For further accessory information:
<i>All models use: DR90-10104</i>	Tool Stands & Balancers pg 28
	Torque Reaction Arms pg 26-27
	Screw Feeders pg 24
	Torque Testers pg 25

Manual Torque Screwdrivers

SERIES 7400 TORQUE SCREWDRIVERS

More and more screw connections in service and industry have to be tightened to a prescribed torque. Only the exact torque guarantees a secure fastening as well as a fast and easy loosening.

Our adjustable models can be adjusted in fine increments allowing for controlled tightening. Preset models come preset to their lowest setting and can be changed within their available torque range.

- Ergonomic handle provides better turning power with less effort resulting in more power and speed with less operator fatigue.
- Quick change bit holder accommodates insert and power bits.
- Accuracy is +/- 6% (complies with EN ISO 6789).
- Calibration certificate provided with each tool.
- 1/4" Hex Drive.

Model Number	Type	Style	Range	Graduations
DR95-A7440M	Adjustable	Straight	0.3-1.2 Nm	0.05 Nm
DR95-A7441M	Adjustable	Straight	1.2-3.0 Nm	0.10 Nm
DR95-A7442PM	Adjustable	Pistol	3.0-6.0 Nm	0.25 Nm
DR95-A7445	Adjustable	Straight	2.5-11.5 in.lbs	0.5 in.lbs
DR95-A7446	Adjustable	Straight	11-29 in.lbs	1.0 in.lbs
DR95-A7447P	Adjustable	Pistol	25-50 in.lbs	2.5 in.lbs
DR95-P7465	Preset	Straight	2.5-11.5 in.lbs	-
DR95-P7466	Preset	Straight	11-29 in.lbs	-
DR95-P7467P	Preset	Pistol	25-50 in.lbs	-



Adjustable Straight and Pistol Styles with Quick Release Bitholder

SERIES 1000 TORQUE SCREWDRIVERS

Whether the need is for preset torque screwdrivers for the assembly line or adjustable ones for field maintenance, the compact precision and versatility of our screwdrivers provides the ability to assure quality on an ongoing basis.

- Clutch releases automatically when preset torque is attained - no over torquing.

- Anti-backlash design for repeatability.
- Can be used in both right and left hand directions.
- Accuracy of +/- 6% Indicated Value meets or exceeds ANSI B107.14M and ISO 6789.
- Comes with free NIST traceable certification.
- 1/4" Hex Drive.

Model Number	Type	Style	Range	Graduations
DR95-10002	Adjustable	Straight	15 - 74 cNm	1 cNm
DR95-10003	Adjustable	Straight	20 - 100 in.oz	1 in.oz
DR95-10006	Adjustable	Straight	2 - 36 in.lbs (0.2 - 4.0 Nm)	2 in.lbs (0.2 Nm)
DR95-10004	Preset	Straight	20 - 100 in.oz (15 - 74 cNm)	-
DR95-10005	Preset	Straight	3 - 15 in.lbs (0.34 - 1.7 Nm)	-
DR95-10007	Preset	Straight	7 - 36 in.lbs (0.8 - 4.0 Nm)	-



Preset Model



Adjustable Models
DR95-10002 & DR95-10003



Adjustable Model
DR95-10006

DRFF PRECISION SCREW FEEDER for 1.0-5.2mm dia. screws

The Fast Feed 520 utilizes a precision feed system suitable for almost any type of screw. The Fast Feed 520 also features three adjustments giving the user superb control over feed speed and time. Thanks to the superior design of the rail, it can be easily adjusted to feed screw sizes from 1.0 to 5.2 mm.

- One rail to accommodate many screw sizes
- Multiple adjustments = Optimized feed rate
- Less moving parts increases the durability
- Low maintenance / Easy to service
- Quiet operation



Specifications	
Model Number	DRFF-520
Screw Thread Diameter	1.0-5.2mm (#0-#10)
Max. Screw Length	19mm (0.75 in)
Dimensions L x W x H	183 x 125 x 142 mm
Weight	2.5 kg
Accessories (included)	
AC Adapter, Rail Adjustment Kit, Manual	



Because the hopper supplies a large quantity of screws to the rail and the rail feeds the screws smoothly, the screw replenishment rate is fast enough to keep up with the quickest operators.

Each DRFF-520 Screw Feeder includes a step-by-step quick start guide with illustrations to simplify the set-up process.



Rail adjustment kit

The DRFF-520 is compact and lightweight. The feeder costs only a fraction of the price of a conventional bowl feeder. It features multiple adjustments to dial in the optimal feed rate including: Vibration Timer, Vibration Intensity, and Drum Timer.

These adjustments allow you to fine tune the unit to your specific application and screw type.



BENCH MOUNT TORQUE TESTER for calibration and verification

Set and verify the torque output of your electric screwdriver with the DRBT Series torque tester. It's bench mount design and wide torque measuring range make it well-suited for use in the production area, repair shop, or quality control lab. Two rundown joints and a battery charger are included with each DRBT tester. The entire package is housed in a protective carrying case and includes a certificate of calibration.



Important Features of the DRBT Series

- Wide torque measuring range
- Accuracy of +/- 0.5% from 20-100% of full scale
- Selectable measuring units - Kgf.cm, Nm, Lbf.in
- Track, Peak, and Initial Peak measuring modes
- Store up to 800 torque readings, output data via on-board USB connection (cable not included)
- Selectable auto-zero function to clear display automatically after a preset time of between 0.5-3.0 seconds
- User entry of hi/lo torque limits - in peak mode, the tester will compare the rundown torque to the set limits and indicate either Good (green led) or NG (red led)
- Display Statistics - Min, Max, and Average torque for the last group of rundowns (up to 30 data points)
- Internal rechargeable battery pack. Charge time less than 8 hrs, Run time approx 30 hrs at full charge
- Not for use with impact tools



Specifications		
Model Number	DRBT-10	DRBT-100
Torque Range	0.15-10 Kgf.cm	1.5-100 Kgf.cm
	0.015-1.000 Nm	0.15-10 Nm
	0.15-9.00 Lbf.in	1.5-90 Lbf.in
Accuracy (20-100% FS)	+/- 0.5% I.V.	
Dimensions L x W x H (mm)	230 x 123 x 65	
Weight (kg)	2.0	
Accessories (included)		
AC Adapter ⁽¹⁾	120 VAC Input	
	7.2VDC, 120mA Output	
Rundown Joints Included ⁽²⁾		
	DRBT-10	JS-03 (0.3Nm) and JS-1A (1Nm)
	DRBT-100	JS-1B (1Nm) and JS-5 (5Nm)

⁽¹⁾ Add suffix 'E' for 220VAC EU Adapter

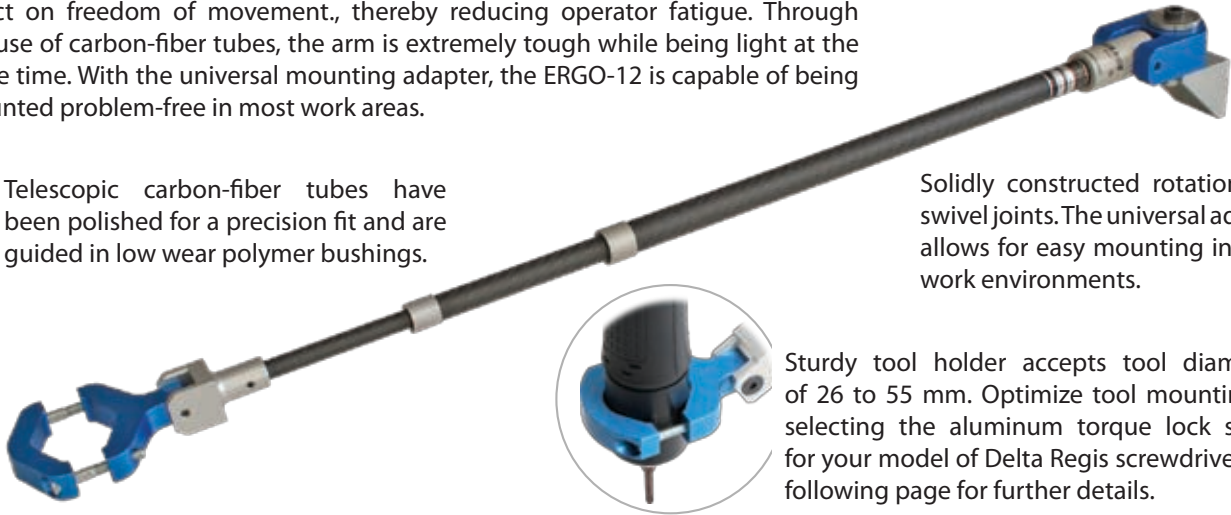
⁽²⁾ An optional 10 Nm capacity joint (JS-10) is available

ERGO-12 TELESCOPIC TORQUE REACTION ARM

The ERGO-12 Telescopic Reaction Arm is used to absorb and transfer the reaction force generated at the screwdriver during fastening, without having a significant effect on freedom of movement., thereby reducing operator fatigue. Through the use of carbon-fiber tubes, the arm is extremely tough while being light at the same time. With the universal mounting adapter, the ERGO-12 is capable of being mounted problem-free in most work areas.

Telescopic carbon-fiber tubes have been polished for a precision fit and are guided in low wear polymer bushings.

Solidly constructed rotation and swivel joints. The universal adapter allows for easy mounting in most work environments.



Sturdy tool holder accepts tool diameters of 26 to 55 mm. Optimize tool mounting by selecting the aluminum torque lock sleeve for your model of Delta Regis screwdriver. See following page for further details.

Telescopic Arm Model Number	Max. Torque in-lb / Nm	Max. Work Radius in / mm	Min. Work Radius in / mm	Fits Tool Diameter in / mm	Weight lbs / kg
ERGO-12-L-HZ	106 / 12	37.8 / 962	20.3 / 515	1.0 - 2.1 / 26 - 55	1.3 / 0.57
ERGO-30-L-HZ	265 / 30	37.8 / 962	20.3 / 515	1.0 - 2.1 / 26 - 55	1.5 / 0.68

DR90-20004 ECONOMY TORQUE REACTION ARM

Reduce employee injury by absorbing torque transmission, eliminating repetitive strain on hands, wrists and arms. These arms are capable of supporting tools up to 5 lbs (2.27 kg) while withstanding torque reaction up to 20 ft-lbs (27 Nm).

Two versions are available to suit either pneumatic tool or electric tool mounting. The DR90-20004P has a 1/4" npt threaded female port for mounting an in-line air tool vertically using a pipe nipple. The DR90-20004E includes an electric tool adaptor to provide for clamping around the body of an electric screwdriver.

- Adjustable height. Parallel arm design maintains tool perpendicular to work surface.
- Tool weight is supported by a spring loaded arm assembly. Spring tension is adjustable.



Part Number	Description
DR90-20004E	Torque Arm for Electric Screwdriver
DR90-20004P	Torque Arm for Pneumatic Driver
DR90-20002	Bench Clamp

ERGO-25 PRECISION PARALLEL TORQUE ARM

The ERGO-25 Parallel Torque Arm is designed to maintain a power tool in a vertical attitude. The pneumatic lift cylinder removes the weight of the tool from the operator's hand. Reaction torque is isolated from the operator and transferred through the base of the arm to the mounting surface. All pivot points combine tight machining tolerances with ball and needle bearings for precision and ease of motion.

- Precision arm designed to hold screwdrivers and tappers
- Perfect for higher torque Brushless Series screwdrivers
- Consistency of arm improves driver torque repeatability
- No torque reaction from the tool to the operator

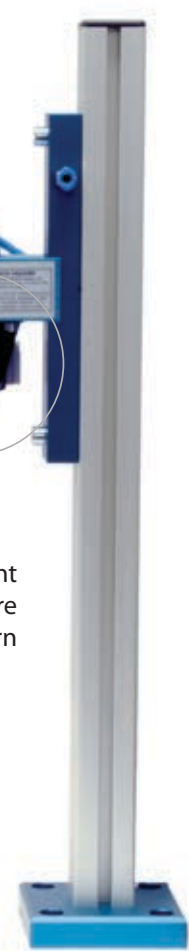
Solid construction provides smooth arm movement. All moving axes equipped with ball and/or needle bearings.

Pneumatic cylinder supports the weight of the tool. Adjustable air pressure regulator varies lifting force. Non-return valve protects from sudden dropping. Requires compressed air supply.



Sturdy tool holder accepts tool diameters of 26 to 55 mm. Optimize tool mounting by selecting the aluminum torque lock sleeve that corresponds to your model of Delta Regis Electric Screwdriver.

For Tool Model:	Use Lock Sleeve:
(C)ESL310/311/312/610/611/612	DR80-10133M
(C)ESL323/324/623/624/300/301	DR80-10134M
(C)ESL327/328	DR80-10131M
(C)ESL329/628/629/302	DR80-10130M



Model	Height	Stroke vertical	Work radius	Torque max.	Tool Weight max.	Accepts Tool Diameter	Torque Arm Weight
	in / mm	in / mm	in / mm	ft-lb / Nm	lb / kg	in / mm	lb / kg
ERGO-25	23 / 584	17.9 / 456	31.5 / 800	18.5 / 25	4.4 / 2.0	1.0-2.2 / 26-55	16 / 7.2
ERGO-25-4	23 / 584	21.6 / 550	31.5 / 800	18.5 / 25	8.8 / 4.0	1.0-2.2 / 26-55	21 / 9.5



DR90-30001
Tool Stand



DR90-3CLAMP



DR90-3ARMKIT
Extra Arm Kit (includes slider and hanger)

DR90-30001 TOOL STAND

Using a tool balancer in conjunction with a tool stand will keep your screwdriver at the ready, leaving your work area clear when not in use. The DR90-30001 tool stand fastens directly to your workbench (screws req'd). An optional extra arm kit can be used to suspend two tools from the same stand.

Part Number	Description
DR90-30001	Tool Stand - 110 cm high, 60 cm reach, 4 kg maximum load
DR90-3ARMKIT	Extra Arm Kit - 60 cm reach, includes slider and hanging clip
DR90-3CLAMP	Bench Clamp - Fastens stand to edge of workbench, no drilling req'd



DR90-10103
Balancer



DR90-10104
Balancer

TOOL BALANCERS

Using a tool balancer in conjunction with a tool stand will keep your screwdriver at the ready, leaving your work area clear when not in use. Our tool balancer has a tension adjustment to accommodate different sizes of tools.

Part Number	Description
DR90-10101	Tool Balancer - 0.23 - 0.68 kg (0.5 - 1.5 lbs), 1.8m (6') travel
DR90-10103	Tool Balancer - 0.68 - 1.36 kg (1.5 - 3.0 lbs), 1.8m (6') travel
DR90-10105	Tool Balancer - 1.36 - 2.27 kg (3.0 - 5.0 lbs), 1.8m (6') travel
DR90-10104	Economy Balancer - 0.6 - 1.5 kg (1.3 - 3.3 lbs), 1.8m (6') travel

ERGO-SYS TOOL SUPPORT SYSTEM



For excellent tool support combined with tool torque reaction capability, choose the Delta Regis ERGO-SYS Tool Support System. Each system includes the following:

- (1) DR90-30001 Tool Stand
- (1) ERGO-12-L-HZ Torque Reaction Arm
- (1) DR90-1010_ Tool Balancer*



Sturdy tool holder accepts tool diameters of 26 to 55 mm. Optimize tool mounting by purchasing the optional aluminum torque lock sleeve that suits your screwdriver model.

For Tool Model:	Use Lock Sleeve:
(C)ESL310/311/312/610/611/612	DR80-10133M
(C)ESL323/324/623/624/300/301	DR80-10134M
(C)ESL327/328	DR80-10131M
(C)ESL329/628/629/302	DR80-10130M

*Select the system with the balancer that best suits the weight of the tool being supported. Optional metal lock sleeve and tool stand bench clamp can be purchased as separate accessories if required. (Screwdriver not included).

System Part No	Includes Balancer	Supports Tool Weight
ERGO-SYS-1	DR90-10101	0.5 - 1.0 lbs
ERGO-SYS-3	DR90-10103	1.0 - 2.5 lbs
ERGO-SYS-5	DR90-10105	2.5 - 4.5 lbs

DR80-VAC Screwdriver Vacuum Attachment

Need to hold a non-ferrous fastener with the bit of your electric screwdriver? Try the DR80-VAC Vacuum Pickup Attachment. This mini unit, mounted on the appropriate driver bit for the application, snaps directly into the bit holder of your driver, without having to alter the nose assembly of the screwdriver. Combine the DR80-VAC with a DRFF Screw Feeder for maximum efficiency.

Our accessory vacuum pump assembly operates on a compressed air supply and includes a pressure regulator to adjust vacuum flow and a slide type shut-off valve.



Please contact our sales department with your specific application information for further system details, part numbers, and a quotation.



DR91 Series Screwdriver Bits and Bit Holders

Delta Regis offers a comprehensive selection of Screwdriver Bits, Nutsetters, and Bit Holders. Due to the extensive range of product, we have chosen to maintain an updated PDF list of available accessory bits on our website at www.deltaregis.com.

We offer bits in standard 1/4" hex drive for screws with Phillips, Slot, Torx, Square and Socket heads. A limited selection of bits with 4mm and 5mm round shank (winged) drive are also available. Magnetic and non-magnetic Nutsetters and Bit Holders of various lengths and configurations are available to suit specific application requirements. Minimum purchase quantities may apply, depending on the item.

Please give us a call or send us an e-mail if you require an accessory item that you don't see listed on our website or in our catalog. We'll be glad to try and assist you in getting the proper accessory to use with your Delta Regis screwdriver.



Suggested Torque Values for Fasteners of Different Materials (in-lbs)*

Fastener Size	Low Carbon Steel	18-8 Stnls Steel	Brass	Silicon Brass	Aluminum 2024-T4	316 Stnls Steel	Monel	Nylon
2-56	2.2	2.5	2.0	2.3	1.4	2.6	2.5	0.44
2-64	2.7	3.0	2.5	2.8	1.7	3.2	3.1	--
3-48	3.5	3.9	3.2	3.6	2.1	4.0	4.0	--
3-56	4.0	4.4	3.6	4.1	2.4	4.6	4.5	--
4-40	4.7	5.2	4.3	4.8	2.9	5.5	5.3	1.19
4-48	5.9	6.6	5.4	6.1	3.6	6.9	6.7	--
5-40	6.9	7.7	6.3	7.1	4.2	8.1	7.8	--
5-44	8.5	9.4	7.7	8.7	5.1	9.8	9.6	--
6-32	8.7	9.6	7.9	8.9	5.3	10.1	9.8	2.14
6-40	10.9	12.1	9.9	11.2	6.6	12.7	12.3	--
8-32	17.8	19.8	16.2	18.4	10.8	20.7	20.2	4.30
8-36	19.8	22.0	18.0	20.4	12.0	23.0	22.4	--
10-24	20.8	22.8	18.6	21.2	13.8	23.8	25.9	6.61
10-32	29.7	31.7	25.9	29.3	19.2	33.1	34.9	8.20
¼-20	65.0	75.2	61.5	68.8	45.6	78.8	85.3	16.00
¼-28	90.0	94.0	77.0	87.0	57.0	99.0	106.0	20.80

Suggested Torque Values for Metric Fasteners (in-lbs)*

Metric Screw Size	Pan Head (in. lbs.)	Truss Head (in. lbs.)	Binding Head (in. lbs.)	Flat or Oval Head (in. lbs.)
M2.0	1.2	1.3	1.3	1.6
M2.3	2.0	2.2	2.2	3.4
M2.6	2.9	3.1	3.1	3.6
M3.0	4.3	4.6	4.4	5.3
M3.5	7.1	7.9	7.6	9.0
M4.0	10.4	11.3	11.3	13.0
M4.5	14.8	16.5	15.6	20.0
M5.0	20.8	22.6	21.7	26.0
M6.0	36.5	40.8	39.1	46.0
M8.0	90.3	98.1	95.5	114.6

* These tables are intended as a guide only. Threaded joints can vary significantly in characteristics and a suitable fastening torque can only be determined through proper engineering/analysis of the specific application.

Torque Conversion Factors

oz-in	lb-in	lb-ft	Kg-cm	Nm
oz-in x 0.0071 = Nm	lb-in x 0.1130 = Nm	lb-ft x 1.356 = Nm	kg-cm x 0.01 = kg-m	Nm x 0.1020 = kg-m
oz-in x 0.0007 = kg-m	lb-in x 0.0115 = kg-m	lb-ft x 0.1383 = kg-m	kg-cm x 13.89 = in-oz	Nm x 10.197 = kg-cm
oz-in x 0.0720 = kg-cm	lb-in x 1.152 = kg-cm	lb-ft x 13.826 = kg-cm	kg-cm x 0.868 = in-lb	Nm x 141.60 = oz-in
oz-in x 0.0625 = lb-in	lb-in x 16.0 = oz-in	lb-ft x 192 = oz-in	kg-cm x 0.0723 = lb-ft	Nm x 8.851 = lb-in
oz-in x 0.0052 = lb-ft	lb-in x 0.08333 = lb-ft	lb-ft x 12 = lb-in	kg-cm x 0.098 = Nm	Nm x 0.7376 = lb-ft



SCREW FEEDERS ■ ASSEMBLY TOOLS ■ TORQUE TESTERS ■ TOOL SUPPORTS ■ SCREW FEEDERS ■ ASSEMBLY TOOLS ■ TORQUE TESTERS

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