BESL3 Series 120VAC Direct Plug-In Screwdrivers
Operation Manual

Applies to the following Delta Regis products:

Lever Start Screwdriver Models:	**BESL300(F), BESL301(F), BESL302(F)(LT)**
Push-to-start Screwdriver Models:	**BESL300P(F), BESL301P(F), BESL302P(F)(LT)**

CAUTION - Please read, understand, and follow all operating and safety instructions in this manual before using the Electric Screwdrivers.

Do not attempt to modify the tools. Repairs must only be performed by qualified repair personnel.

If you have any questions or concerns, please contact us at:

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Delta Regis_BESL3 Series_M_R1.0

Important — Safety and Use

Warning — Read all instructions. Failure to understand and follow proper guidelines, safety requirements, and operating instructions may result in malfunction, component damage, property damage, shock hazard, fire hazard, injury or death. The term 'power tool' refers to a mains operated (corded) or battery operated (cordless) electric screwdriver. Save this manual for future reference.

Work Area

1. Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.
2. Do not operate power tools in explosive environments, such as in the presence of flammable liquids, gases, or dust. Power tools create sparks which may ignite the dust or fumes.
3. Keep bystanders away while operating a power tool. Distractions can cause the operator to lose control.

Electrical Safety

1. Use only the correct electrical outlet for the screwdriver power cord plug. Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use an adapter plug.
2. Avoid body contact with earthed or grounded surfaces such as pipes, metal structures or other electrical products. There is an increased risk of electrical shock if your body is grounded.
3. Use these products in a suitable dry, indoor location. Do not use the tool in damp, wet or high temperature environments. Water entering a power tool will increase the risk of electrical shock.
4. Ensure that the supply outlet is overload protected and of sufficient amperage capacity.
5. Don't abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet by the cord. Keep the cord away from heat, oil, chemicals, sharp edges, and moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electrical shock.
6. When operating a power tool outdoors, use an extension cord suitable for outdoor use.

⚠ WARNING — DO NOT OPERATE THIS TOOL WITHOUT PROTECTIVE EARTH CONNECTED

Grounding Instructions — This screwdriver must be grounded while in use to protect the operator from electrical shock. This screwdriver's AC power cord is equipped with a 3-prong electrical plug with ground pin. The plug must be connected to a properly grounded AC electrical outlet. Do not attempt to use this screwdriver without a properly functioning ground connection. The green (or green/yellow) conductor in the power cord is the ground wire. Never connect a live circuit to the ground pin or internal green or green/yellow ground wire. The ground path also acts as a means to eliminate electrostatic charges that may build up in the tool during use.

Periodic Testing of Ground Path — For operator protection, it is very important to ensure that the tool's ground path is functional. Depending on the circumstances and working conditions, the ground path integrity needs to be verified at minimum every 3-6 months. A basic verification can be performed using an ohmmeter. Set the ohmmeter to a low scale (eg. 100 ohms). Touch the meter's test leads together and verify that the reading is zero. With the tool unplugged from the power source, connect the Red (+) test lead to the ground pin of the power cord and hold the Black (-) test lead against the metal screwdriver bit or the inside surface of the tool's bit holder. Make sure that you have good contact against the metal surface. The ohmmeter should show a low resistance value (close to 0 ohms).

Personal Safety

1. Stay alert, watch what you are doing, and use common sense when operating a power tool. Do not use tools when tired or under the influence of drugs, alcohol, or medication. A momentary lack of attention while operating a power tool may result in serious personal injury.
2. Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep hair, clothing, and gloves away from moving parts. Loose clothing, jewelry, or long hair can be caught in moving parts.
3. Avoid accidental starting. Make sure the trigger switch is off before plugging the tool in. Carrying tools with the trigger held on or plugging in tools with the trigger switch on invites accidents.
4. Remove adjusting keys or wrenches before turning on the tool. A wrench or key that is left attached to a rotating part of the tool may result in personal injury.
5. Do not overreach. Keep a proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.
6. Use safety equipment. Always wear eye protection. Dust mask, non-slip safety shoes, hardhat, or hearing protection must be used for appropriate conditions.

Tool Use and Care

1. Use clamps or other practical means to secure and support the workpiece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.
2. Do not force the tool. Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.
3. Do not use the tool if the switch does not turn it on or off. Any tool that cannot be controlled with the switch is dangerous and must be repaired.
4. Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool. Such preventative safety measures reduce the risk of starting the tool accidentally.
5. Store idle tools out of reach of children and untrained persons. Tools are dangerous in the hands of untrained users. Keep visitors away from the power tools and work area.
6. Maintain tools with care. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools. Inspect power cords periodically and replace if damaged.
7. Use only accessories that are recommended by the manufacturer for your model. Use the power tools and accessories in accordance with these instructions and in the manner intended for the particular type of tool, taking into account the working conditions and the work to be performed. Use of the power tool or accessories for operations different from intended could result in a hazardous situation.

Operating Cautions

1. When changing a screwdriver bit or changing accessories, make certain that the forward/reverse switch is in the 'OFF' position and the tool is unplugged.
2. Do not allow chemicals such as acetone, benzene, thinner, trichloroethylene ketone, or other similar chemicals to come in contact with the screwdriver housing as damage will result.
3. Do not drop or abuse the screwdriver.
4. Do not adjust the torque setting higher than 8 on the torque scale.
5. This tool is intended for a duty cycle of 1.0 sec ON and 3.0 sec OFF.
6. Do not tighten more than 800 tapping screws per hour (M3 x 5mm).
7. Do not use this screwdriver for installing screws into wood.
8. Do not operate the forward/reverse switch while the screwdriver is running.
9. Whenever a tool is not being used, move the forward/reverse switch to the OFF position and unplug the power cord.

Getting Started

Unpack the screwdriver from its box and confirm that all items have been received in good condition. The screwdriver is shipped with the appropriate grounded power cord for connection to the AC supply receptacle.
Select a suitable location for plugging in the screwdriver. Ensure that the location allows for the required range of motion of the screwdriver without stressing the power cable. The cable should bend naturally and always have some play in it. Undue stress put on the cable will result in premature cable failure.

Installing Driver Bits

Retract the sleeve on the bit holder and insert the desired 1/4" hex power bit. Release the sleeve and ensure that the bit is properly locked in place by pulling back and forth on the bit.
Make sure that the tool's start mechanism (lever or push-start) is not engaged and the fwd/off/rev switch is in the 'off' position to prevent the tool from accidentally starting when plugging in the tool.

Recommended Grip

Depending on the model of screwdriver selected, the screwdriver will have either a start lever or a push-to-start mechanism (models with 'P' suffix). All models also have a forward/off/reverse switch. Please note that the center position of this switch is 'off'. The screwdriver switch should be left in the off position when the tool is not being used for any extended length of time.
Hold the tool grip securely in your hand so that the index finger is over the trigger mechanism (on a lever start model) and the thumb can be used to cycle the fwd/rev switch if necessary. For higher torque models, we recommend the use of a torque reaction arm to improve operator ergonomics.
Familiarize yourself with the operation of the tool by free running the tool before use at higher torque values.

Note — Do not switch from forward to reverse (or reverse to forward) while the motor is running.

Driving the Fastener

Put the fwd/rev switch in the forward position. For lever start models, squeeze the trigger and hold until the clutch reacts. If using a push-to-start model, apply adequate downward force to start the tool and hold until the clutch reacts and the tool shuts off. The preset torque will not be reached if the trigger mechanism is released before the clutch activates. Ensure that enough downward force is applied to prevent the screwdriver bit from camming out of the fastener during the rundown process.

Setting the Torque

An external torque adjustment nut located at the nose of the screwdriver is used to set the output torque of the screwdriver. A reference scale (0–8) is available as a guide — **this scale is for reference only and does not indicate actual torque values**. Rotate the torque nut clockwise (covering higher numbers on the scale) to increase torque output, ccw to decrease torque output.
Always make adjustments starting below the desired torque and working upward in gradual increases.
We recommend the use of an appropriate torque tester and static joint testing after installation to verify proper torque settings.
A torque lock sleeve is included with the tool. This sleeve replaces the tool's housing nut and covers the torque adjustment nut to deter tampering.

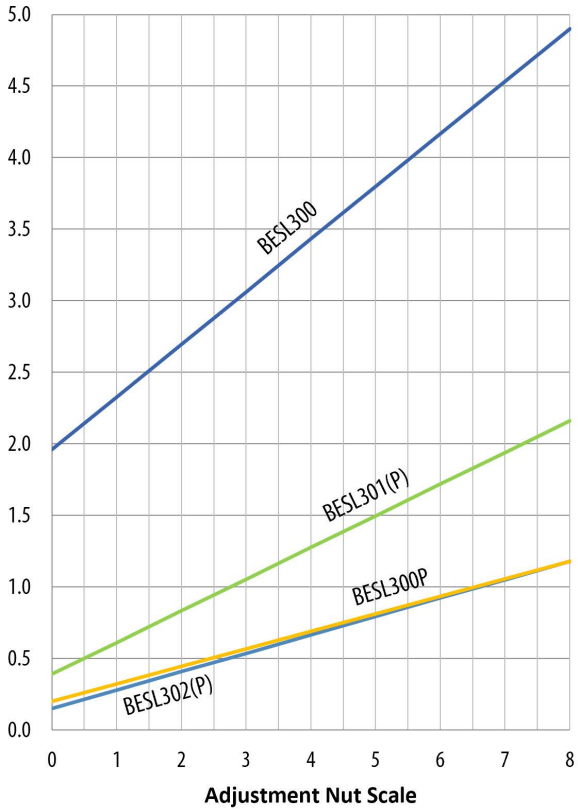
Please note that, on a new tool, the torque output may decline during the initial break-in period. The decline will become minor and stabilized afterwards. To ensure required torque output, the user should check torque output periodically with a torque meter and adjust as required.

Model Number	Start Type	Range In.Lbs	Range Nm	Speed (RPM)	Length in / mm	Diameter in / mm	Weight lbs / g
BESL300	Lever	1.33–10.44	0.15–1.18	1200	9.6 / 245	1.4 / 36	1.0 / 470
BESL300P	Push	1.77–10.44	0.2–1.18	1200	9.6 / 245	1.4 / 36	1.0 / 470
BESL301	Lever	3.47–19.12	0.39–2.16	1200	9.6 / 245	1.4 / 36	1.0 / 470
BESL301P	Push	3.47–19.12	0.39–2.16	1200	9.6 / 245	1.4 / 36	1.0 / 470
BESL302	Lever	17.4–43.4	1.96–4.9	1000	11.0 / 280	1.5 / 38	1.6 / 740
BESL302P	Push	17.4–43.4	1.96–4.9	1000	11.0 / 280	1.5 / 38	1.6 / 740

Torque Reference Charts

Important Note

The charts below are provided to assist in setting your screwdriver to an approximate torque value. Actual results may vary from tool to tool. In order to ensure the best accuracy it is recommended to set/verify the torque output on a torque tester (with appropriate rundown joint installed).



Specifications:
Input Voltage: 110-120VAC, 50/60Hz, 48W
AC Plug Type: 3 prong, grounded
Bit Holder: 1/4" hex quick change

Suspension Ring
Use to suspend the tool.

Forward/Reverse Switch
Three position switch with center position being OFF. The OFF position is recommended when changing bits.

Start Lever
Press to run tool. (Only on lever start models).
For push start models, apply continuous downward force to run the screwdriver; release to stop the screwdriver.

Housing Nut
Remove housing nut to install torque locking sleeve.

Torque Adjusting Nut
Turn to adjust torque. Higher values on scale indicate higher torque. Numbers on the scale are for reference only and are not a torque indication.

Bit Holder
Retract sleeve to insert/remove bits.

Parts and Accessories

If you require parts or accessories for your Delta Regis product, please refer to our website or contact us for further information.

Service

1. Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.
2. When servicing a tool, use only identical replacement parts. Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury, and may invalidate all warranties.
3. Check for damaged parts. Before further use, any part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage, and other conditions that may affect the tools' operation. A part that is damaged should be properly repaired or replaced by an authorized service center. Do not use the tool if the switch does not turn it ON or OFF.
4. Screwdrivers should be maintained in top running condition and used no more than 8 hours per day. To avoid motor overheating, do not drive more than 10-15 screws per minute.
5. Inspect cables for signs of wear and have them replaced if suspect. Using an ohmmeter, verify ground continuity from the tip of the screwdriver bit holder to the ground pin connection on the power cable.
6. It is recommended that the screwdriver be serviced annually. If the screwdriver is used more than 8 hours per day, service should be performed more frequently.
7. Do not remove any labels. Replace labels which have been damaged.

Repairs to Delta Regis AC Direct Plug-In Series Screwdrivers must be performed by trained personnel, knowledgeable and qualified in the repair of electric screwdrivers. Consult your nearest Delta Regis authorized service center.
Use only genuine Delta Regis parts when servicing these products. Do not attempt to modify the tools.

It is the responsibility of the employer to inform all operators of the information in this manual.

Warranty

Delta Regis AC Direct Plug-In Brushless Screwdrivers are warranted for one year from the date of purchase against defects in material and workmanship. The brushless motor contained in our screwdriver is warranted for 3 years. This warranty does not cover damage due to transportation, abuse, misuse, or improper service. 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.