

CT-2931/STBT Tool Specification

- I. SCOPE:** This specification defines the requirements for a battery operated hydraulic tool and related components for terminating compression connectors. The tool will use currently available CD-920 and CD-930 style dies to crimp applicable product. This tool meant for intermittent use. This tool includes Blue Tooth connectivity to a cellular phone app that monitors performance.

II. TOOL FUNCTION & FEATURES:

A. Mechanical Function:

1. Tool output to be 12 tons (108 kN).
2. Minimum crimp jaw opening to be 1.65" (41.9mm).
3. Approximate cycle time to be 13 seconds without product.
4. Tool ram to retract when the tool has reached its maximum output load.
5. Tool head to have featured that locks dies in place. Dies are removed by activating release buttons located on the tool head and ram.
6. Tool should not be used on live circuits.
7. Tool to have built in locking feature to secure battery in place.
8. Tool to operate on 18.0 VDC.

B. Operational Features:

1. Tool does not require any operator adjustments.
2. Tool or battery to have a "low Battery" indicator light.
3. Tool ram activated by depressing trigger. Tool ram while advancing holds position when trigger is released. Tool ram may have feature to "teach" the tool to a user set position.
4. Tool to have manual retract/release button. Tool ram while retracting holds position when button is activated.
5. Tool ram automatically retracts when full crimp force is attained. If full crimp force is not attained, the tool signals with flashing LED and audible signal.
6. Tool to have shoulder strap rings.
7. Crimp head to rotate at least 350 degrees fully.
8. No additional pinch points.
9. MAKITA Battery voltage to be 18.0 VDC 4 Ah Lithium-Ion. Battery will recharge in about one hour or less.
10. Tool to have digital screen on lower back edge of tool. The tool is connected by Bluetooth to a cellular phone app. The app is to be available in Android, iOS and Windows PC platforms.

III. DESCRIPTION OF USE:

1. The operator installs the appropriate dies into the tool head.
2. The operator properly positions the tool over the compression connector and activates the crimp cycle multiple times to position and hold the connector by pressing the ram advance trigger.
3. Assemble wire into connector.
4. Press trigger to operate the tool ram. The tool ram continues to close as long as the operator holds the trigger, and stops as soon as maximum output force is reached
5. The tool crimps the compression connector until the maximum output force is reached. The operator may retract the tool ram by releasing the trigger and/or pushing retract button. After maximum output force is reached the tool ram returns automatically.
6. When the maximum output force is reached, the tool ram starts to retract to indicate the crimp cycle is complete.
7. The operator presses the ram retract trigger to open the dies. After maximum output force is reached the tool ram returns automatically.
8. The operator removes the compression connector from the tool.

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IV. TECHNICAL / PERFORMANCE SPECIFICATIONS:

1. #8 AWG – 750 MCM (kcmil) Copper lugs and splices
2. #6 AWG – 600 MCM (kcmil) Aluminum lugs and splices
3. #14 AWG – 250 MCM Copper HTCT Taps
4. #6 AWG – 4/0 AWG Copper CTAPS
5. 8 AWG – 500 MCM Copper GCE and GCC Grounding connectors
6. 8 AWG – 535 Kcmil Copper lugs and splices for flex wire
7. 10 mm² – 400 mm² copper lugs and splices for metric Class 2 wire
8. 10 mm² – 300 mm² copper lugs and splices for Class 5F and 6F metric flex wire.
9. 10 AWG – 3/0 AWG Copper CTAPF taps

V. LIFETIME PERFORMANCE:

Lifetime Performance to be 50,000 cycles minimum of the tool assuming recommended maintenance is performed. Performance is based on standard usage and making sure all preventative maintenance requirements have been performed on time.

VI. PHYSICAL CHARACTERISTICS:

A. Approximate Overall Dimensions (with battery)

1. Length: 16.8" (428 mm)
2. Width: 3" (76 mm)
3. Height: 12.8" (324 mm)

B. Weight: 15.9 lbs. (7.2 kg)

C. Color and Texture:

1. Tool housing to be black.

D. Environmental Requirements:

1. 50° to 104°F (Battery Charging Temp.)
2. -4° to 104°F (Tool Operating Temp, w/o battery warmer)
3. 10% to 95% Relative Humidity
4. Must work in an indoor and outdoor environment.

E. Minimum Rate of Operation

1. Minimum of 4 crimps per minute with 3 trigger pulls per crimp.

VII. PACKAGING

- A. Tool to be packaged in a hard plastic case.
- B. Tool case must hold tool, dies, two batteries and charger.
- C. Batteries are to conform to regulatory specification for packaging.

VIII. REGULATORY COMPLIANCE

- A. **Tool:** UL/CSA power connector/terminal compliance. CE tool compliance. Tool to be UL/CSA listed under UL 60745-1. Tool shall conform to IEC/EN 62841-1, ENV61000 and ISO 12100. Tools to be registered with Bluetooth SIG.
- B. **Charger:** UL/CSA power compliance.

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C. **Battery:** CE compliance required.

IX. OPERATION INSTRUCTIONS

- A. Existing operating instructions with modifications are to be used.
- B. Alternate source Manufacturer's Battery and Charger manual to be used.

X. WARRANTY

Tool warranty is 5 years. Battery is 1 year and Charger warranty is 2 years.

XI. ACCESSORIES (PROVIDED WITH TOOL):

- A. 2- Li-Ion 18.0 VDC rechargeable batteries.
- B. Manufacturer's battery charger and manual.
- C. Tool Case with storage for batteries, charger, crimp dies and tool.
- D. Operating Instructions (see section IX).
- E. Tool Safety Booklet
- F. Shoulder Strap

XII. ACCESSORIES (SOLD SEPARATELY):

- A. Li-Ion 18.0 VDC rechargeable batteries (4.0 Ah).
- B. Crimp Dies.
- C. Charger to be available in 115 VAC (US).