

CT-2940/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, CD-930 and CD-940 style dies to crimp applicable product. This tool meant for intermittent use. The tool shall include Blue Tooth connectivity to a phone application that monitors tool performance.

II. TOOL FUNCTION & FEATURES:

A. Mechanical Function:

1. Tool output to be 15 tons (135 kN).
2. Minimum crimp jaw opening to be 2.05" (52 mm).
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 to have built in locking feature to secure battery in place.
7. 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.
5. Tool will signal with flashing LED and audible signal if full crimp pressure has not been achieved.
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 is provided with an assist handle which can be threaded into head for right- or left-hand use.
11. Tool shall have digital screen on lower back edge of tool. Tool is connected by Blue Tooth to a cellular phone app. The app will 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. Tool will give a warning light if full output force has not been reached. 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 removes the compression connector from the tool.

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IV. TECHNICAL / PERFORMANCE SPECIFICATIONS:

1. #8 AWG – 1000 MCM (kcmil) and 630mm² Copper lugs and splices
2. #6 AWG – 1000 MCM (kcmil) Aluminum lugs and splices
3. #14 AWG – 1000 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 – 777.7 Kcmil Copper lugs and splices for flex wire
7. 10 mm² – 620 mm² copper lugs and splices for metric Class 2 wire
8. 10 AWG – 3/0 AWG Copper CTAPF taps
9. 10 mm² – 300 mm² copper lugs and splices Class 5 & 6 metric flex wire.

V. LIFETIME PERFORMANCE:

Lifetime Performance to be 20,000 cycles minimum of the tool. Performance is based on standard usage and making sure all preventative maintenance requirements have been met on time.

VI. PHYSICAL CHARACTERISTICS:

A. Approximate Overall Dimensions (with battery):

1. Length: 19.5" (496 mm)
2. Width: 3.1" (78 mm)
3. Height: 13" (331 mm)

B. Weight: 17.6 lbs. (8.0 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 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. Tool is to be CE tool compliant. Tool to be UL/CSA listed under UL 60745-1. Tool shall meet IEC/EN62841-1, ENV61000 and ISO 12100. Tool to be registered with Bluetooth SIG.
- B. **Charger:** UL/CSA power compliance. CE compliant charger.
- C. **Battery:** CE compliance required.

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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
- G. Die Adapter for CD-940 dies
- H. Assist Handle

XII. ACCESSORIES (SOLD SEPARATELY):

- A. Li-Ion 18.0 VDC rechargeable batteries (4.0Ah).
- B. Crimp Dies.
- C. Charger to be available in 115 VAC (US).
- D. Die adapter for CD-920 and CD-930 dies.