# imall

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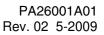
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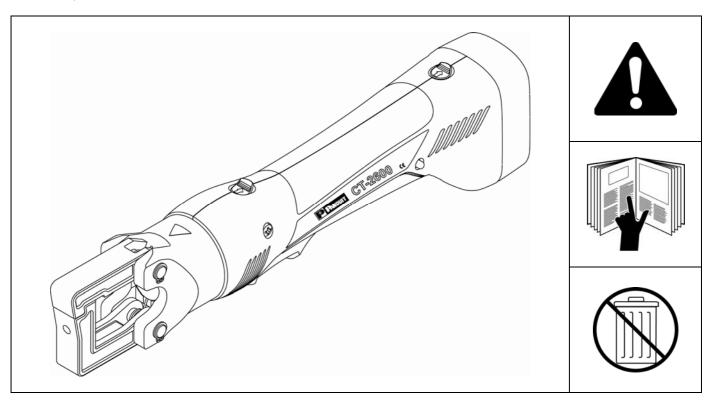


# CT-2600 and CT-2600/E



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**Purpose of this Manual** 

- This manual is intended to familiarize the user with the safe operation and maintenance procedures for this tool.
- Use this tool exclusively for its determined use.
- This instruction manual should be available during the entire life span of the tool.
- The operator has to ensure the availability of this instruction manual to the end user; and to make sure, that the user has read and understood this instruction manual.
- Mounting and assembly of connecting material with the help of this tool must only be performed by specially trained personnel.

#### Replacement manuals are available upon request.

The information contained in this literature is based on our experience to date and is believed to be reliable. It is intended as a guide for use by persons having technical skill at their own discretion and risk. We do not guarantee favorable results or assume any liability in connection with its use. Dimensions contained herein are for reference purposes only. For specific dimensional requirements consult the factory. This publication is not to be taken as a license to operate under, or a recommendation to infringe any existing patents. This supersedes and voids all previous literature, etc.

#### Safety

Safety is essential in the use and maintenance of *PANDUIT* tools and equipment. This manual and any markings on the tool provide information for avoiding hazards and unsafe practices related to the use or service of this tool. Observe all of the safety information provided.

### **PRECAUTIONS AND GENERAL GUIDELINES**

#### Important Safety Information



#### SAFETY ALERT SYMBOL

This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.



Hazards which, if not avoided, COULD result in severe injury or death.



Hazards or unsafe practices which, if not avoided, MAY result in injury or property damage.



# WARNING

Read and understand all of the instructions and safety information in this manual before operating or servicing this tool. The operator has to ensure the availability of this instruction manual to the end user; and to make sure, that the user has read and understood this instruction manual.

Failure to observe this warning could result in severe injury or death.



#### CT-2600 and CT-2600/E

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	WARNING
	Electric Shock Hazard:
× EE	This tool is not insulated. When using this unit on or near energized electrical lines, use proper personal protective equipment.
	Failure to observe this warning could result in severe injury or death.
	WARNING
	Wear eye protection when operating or servicing this tool.
	Failure to wear eye protection could result in serious eye injury from flying debris or hydraulic oil.
	WARNING
Jun-1	Skin Injection Hazard:
	Do not use hands to check for oil leaks. High pressure oil easily punctures skin causing serious injury, gangrene, or death. If injured, seek medical attention immediately to remove oil.
	WARNING
	Do not use solvents or flammable liquids to clean the crimping tool. Solvents or flammable liquids could ignite and cause serious injury or property damage.
	WARNING
	Pinch points: Keep hands away from the crimping head when crimping.
	Failure to observe this warning could result in severe injury or death.

# WARNING

An incomplete crimp can cause a fire.

- Use proper terminal and cable combinations. Improper combinations can result in an incomplete crimp.
- The relief valve will sound to indicate a completed crimp. If you do not hear the sound of the relief valve, the crimp is not complete.
- Inspect tool before use. A worn or damaged tool may result in breakage striking the operator or nearby personnel.



Do not dispose of batteries in a fire. They will vent fumes and may explode.

Failure to observe this warning could result in severe injury from harmful fumes or burns from flying debris.



Inspect tool and dies before use. Replace any worn or damaged parts. A worn or damaged tool may result in breakage, striking the operator or nearby personnel.

Failure to observe this warning could result in severe injury or death.



- Do not perform any service or maintenance other than as described in this manual. Injury or damage to the tool may result.
- This tool is not designed for continuous use.
- After 30 to 40 cycles, allow the tool to cool for 15 minutes.
- Do not place the tool in a vise. The tool is designed for hand-held operation.
- Protect the tool from rain and moisture. Water will damage the tool and battery.
- Crimping tools should not be operated in pouring rain or under water.
- Use this tool for the manufacturer's intended purpose only.

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- Do not operate the tool without dies. Damage to the ram or crimping head can result.
- <u>Do not operate</u> tool with the locking flange open. The crimp head <u>must be completely closed and locked in</u> position before cycling the tool.

# **1** CAUTION

- Do not allow anything to contact the battery terminals.
- Do not immerse the batteries in liquid. Liquid may create a short circuit and damage the battery. If batteries are immersed, contact your service center for proper handling.
- Do not place the battery into a pocket, tool pouch, or tool box with conductive objects. Conductive objects may create a short circuit and damage the battery.
- Do not place a battery on moist ground or grass. Moisture may create a short circuit and damage the battery.

# $\cancel{!}$ Caution

- Do not store the battery at more than 140°F (60°C). Damage to the battery can result.
- Do not use another manufacturer's charger. Other manufacturers' chargers may overcharge and damage the battery.
- Do not attempt to open the battery. It contains no user-serviceable parts.

# IMPORTANT INFORMATION

- Keep the tool head and tool body portion clean and free from debris. Soap and a damp cloth should be used to clean the tool body.
- Always store the tool in its clean, dry carrying case when not in use.
- Always point tool away from others.
- If the tool is kept in cold temperatures below 23°F/-5°C for any extended time, it is advisable to return the tool to room temperature for 1 hour before using.
- Always verify the proper size terminal for the conductor (wire), by checking the color code and the printing on the terminal.
- Avoid dropping the tool. Extreme shock may damage the hydraulic circuit and result in malfunction of the tool.



NOTE: In the interest of higher quality and value, *PANDUIT* products are continually being improved and updated. Consequently, pictures may vary from the enclosed product.



### **TOOL SPECIFICATIONS**

CT-2600 or CT-2600/E	Weight (including battery)	3.5 lbs. (1,6 kg)
Battery Operated Crimping Tools	Dimensions:	14" L x 2-3/8" H x 3-1/8" W – with battery [356 L x 60 H x 80 W] mm
	Crimping Time	4 seconds
	Crimping Force	4 tons (35 kN)
	Stroke	.35 (9 mm)
	Sound Level:	75 dB (A) at 39.3" (1 meter)
	Ambient Temperature	-4° F to +104° F (-20°C to +40°C)
	Vibration	< 2.5 m/s <sup>2</sup>
	Hydraulic Oil	Shell Tellus <sup>®</sup> T 15
CT-2600BC	Battery Type:	Nickel Metal-Hydride (Ni-MH)
Battery Cartridge	Output:	9.6 V
	Capacity:	2.0 Ah
	Charging time:	Approx. 45 minutes (15-20 min. with fast charger)
Makita Battery Charger Part No.: DC1804	Output:	7.2 V – 18.0 Volt DC
	Input:	120 Volt AC, 50~60Hz
Makita Battery Charger for EU	Output:	7,2 V – 18,0 Volt DC
Part No.: DC1804F	Input:	240 Volt AC, 50~60Hz
	CT-2600/E tools can also use attery cartridge and chargers	the CT-2500BC, CT-2500CHR and listed below:
CT-2500BC	Battery Type:	Nickel Cadmium (Ni-Cd)
Battery Cartridge	Output:	9.6 V
	Capacity:	1.3 Ah
	Charging time:	Approx. 40 minutes (15 min. with fast charger)
CT-2500CHR	Output:	7.2 V - 14.4 Volt DC
Battery Charger	Input:	120 Volt AC, 50~60Hz
CT-2500CHR/E Battery Charger for EU	Output:	7,2 V – 14,4 Volt DC
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# CT-2600 and CT-2600/E TOOLS

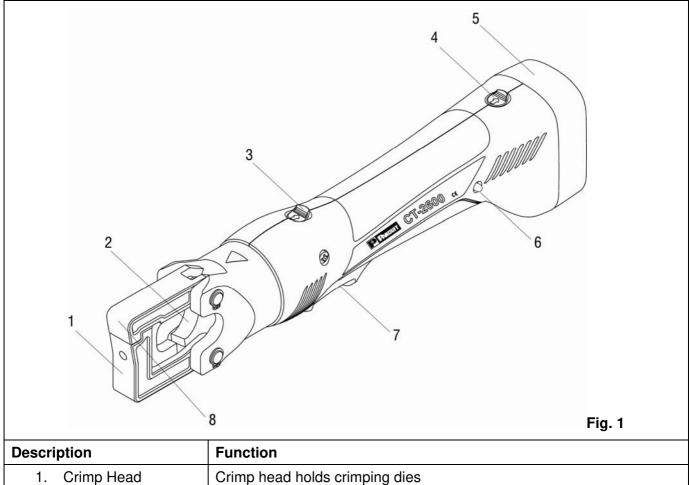
The CT-2600 and CT-2600/E Tools include:

- 1 Battery Operated Crimping Tool (with battery cartridge)
- 1 Spare Battery Cartridge
- 1 Battery Charger
- 1 Tool Case



# IMPORTANT FEATURES OF THE CT-2600 and CT-2600/E BATTERY OPERATED CRIMPING TOOLS

- The hydraulic unit incorporates an automatic retraction which returns the ram into its starting position when the maximum force is reached.
- The unit is equipped with a special brake which stops the forward motion of the ram/dies when the trigger is released. This allows the terminal to be held in position for easy wire insertion prior to crimping.
- To simplify operation and gain better access to tight corners and other constrained working areas, the crimping head may be rotated, by hand, 360° relative to the tool body.
- The tool is lightweight and provides good handling characteristics through its small frame size and ergonomic design.



1.	Crimp Head	Crimp head holds crimping dies
2.	Ram	Advances dies during crimping cycle
3.	Ram Retract Button	Button to open the crimp dies in case of an error or emergency
4.	Battery Locking Device	Switch for unlocking the battery
5.	Battery Cartridge	Rechargeable Ni-MH battery, 9.6 V
6.	Low Battery Indicator	LED flashes to indicate low battery
7.	Trigger	Actuator to start the crimping cycle
8.	Locking Flange	Opens for easy access and installation of crimp dies



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#### CRIMP DIES AND ACCESSORIES (sold separately)

CD-2600 Series Compression Dies	Consult <i>PANDUIT</i> catalog or website for part numbers and specific die application information.
CT-2600BC	Replacement Battery Cartridge
CT-2500CHR CT-2500CHR/E	Replacement Battery Charger Replacement Battery Charger for Europe

Makita 7.2 Volt – 18.0 Volt DC replacement battery chargerMakita Part No.: DC1804Makita 7.2 Volt – 18.0 Volt DC replacement battery charger for EUMakita Part No.: DC1804F

Replacement Makita Batteries and Battery Chargers are available for purchase from local Makita products distributors.

# **DIE SELECTION AND INSTALLATION**

#### Refer to product packaging label to verify terminal to die combinations.

**NOTE:** DIES ARE DESIGNED TO PROVIDE THE HIGHEST QUALITY CRIMPING WHEN USED WITH *PANDUIT* TERMINALS. CONNECTIONS UTILIZING THIS TOOL ARE LISTED PER U.L. 486A AND C.S.A. CERTIFIED ONLY WHEN *PANDUIT* TERMINALS ARE USED. USE OF ANY OTHER BRAND OF TERMINALS IS NOT RECOMMENDED WITH CD-2600 DIES.

#### NOTE: Remove battery from tool before removing or installing dies in the crimp head.

1. Remove any current dies from the tool ram by opening locking flange in crimp head and pulling die out of tool.



**CAUTION:** Do Not let the ram contact the crimp head.

- 2. Select the appropriate dies to match the terminal to be crimped.
- 1. Slide one of the die halves into the crimp head until it snaps into place.
- 2. Properly position the remaining die half into the crimp head until it snaps into place, and close the locking flange.
- 3. Replace the battery and slowly activate the tool to ensure that the die halves are properly aligned without binding or interference in the crimp head.

#### NOTE: DO NOT operate tool if dies are not properly aligned and snapped (locked) in place.



### **TOOL OPERATION**

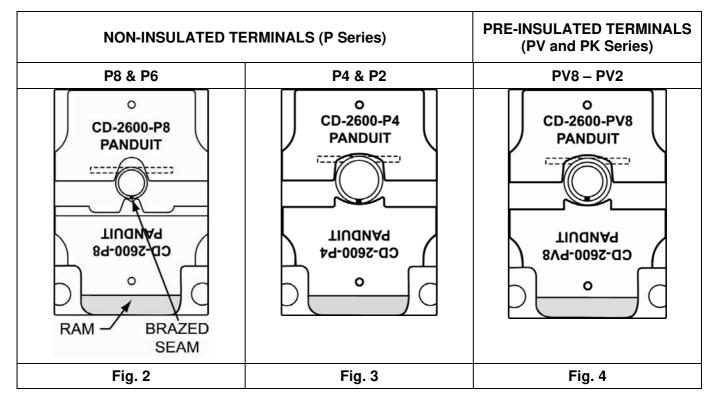
#### **LED Display**

This tool is equipped with a special circuit board incorporating several important features to inform the user about the current status of the unit. The LED signals in the following cases:

SIGNAL	DURATION	WHEN IT OCCURS	WHAT IT MEANS
••	A few seconds of flashing	Battery insertion	Self check – O.K.
	Glowing for 20 seconds	After crimp	Battery discharged
•••	Flashing for 20 seconds (2Hz)	After crimp	Time for inspection and preventive maintenance
	20 sec. glowing and flashing intermittently	After crimp	Battery discharged – Time for inspection and preventive maintenance

#### **Preparing Wire and Positioning Terminals**

Follow the instructions for appropriate wire strip length and crimp die as marked on the terminal packaging. Position terminal centrally under crimp die as shown in Figures 2-4 on Page 7.



#### **Crimping Terminals**

ATTENTION: The crimping process can be interrupted at any time by releasing the trigger. After having terminated the crimping process, remove battery to avoid unintended starts.

# PANDUIT

- 1. To simplify operation, the crimp head may be rotated by hand 360° relative to the tool body.
- 2. Depress ram retract button 2-3 times to ensure that ram is fully retracted.
- 3. Carefully place terminal centrally between dies as shown above. Activate trigger until terminal is <u>held</u> by dies.



- 4. Check to ensure conductor (wire) size and dies properly match the terminal size being used. Insert the stripped conductor into the terminal.
- 5. Depress the trigger until the crimp is completed. The relief valve will sound when the crimp is completed, and the crimp dies will automatically open as the ram returns to its initial position.
- 6. Remove the crimped terminal/conductor wire and repeat the operation for a new terminal.



N: **Do Not** press trigger and release button simultaneously. Damage to trigger linkage may result.

#### NOTE:

- By sliding the ram retract button in the direction of the battery, the dies can be retracted in case of an error or emergency.
- The terminal can first be pre-clamped. This allows the operator to adjust the position of the terminal during the crimping cycle. To use this feature, push the trigger until the die contacts the terminal and then release the trigger. The terminal can now be re-positioned or even the wire can still be inserted into the terminal.
- The crimping cycle is terminated when the dies are completely closed and the maximum crimping force is reached, which is indicated by the auto retraction of the ram.

# **MAINTENANCE / INSPECTION**

#### **Daily Maintenance**

Before Use:

- 1. Inspect dies for wear or damage such as cracks, gouges, or chips.
- 2. Inspect the tool for damage or leaks. If damage is detected, contact *PANDUIT* Tool Division.

#### After Use:

- 1. Wipe all tool surfaces clean with a damp cloth and mild detergent.
- 2. Place the tool in the carrying case. Store in a cool, dry place.
- 3. Charge the battery.

#### Monthly Maintenance

- 1. Thoroughly clean all surfaces.
- 2. Oil the locating pins.

#### Annually or After 10,000 Crimps

Return tool to PANDUIT Tool Division



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#### DIE CLOSURE INSPECTION: CT-2600 AND CT-2600/E

Die Closure inspection is made by using the GO/NO-GO gaging dimensions listed in Fig. 6.

#### TO PERFORM DIE CLOSURE INSPECTION

- A. Clean die and plug gage surfaces.
- B. With crimp dies properly installed in crimp head, slowly activate tool until dies bottom under light pressure.
- C. Using the proper gage member, insert the GO side into the die it must pass completely through the closure.
- D. Reverse the gage and try to insert the NO-GO side into the die closure (Do Not use excessive force). The NO-GO side may partially enter the die closure but must not pass completely through.
- E. If both the GO and NO-GO conditions are met; the tool is dimensionally correct.
- F. If the above procedure fails to satisfy all GO and NO-GO conditions, contact your local *PANDUIT* Sales Office.

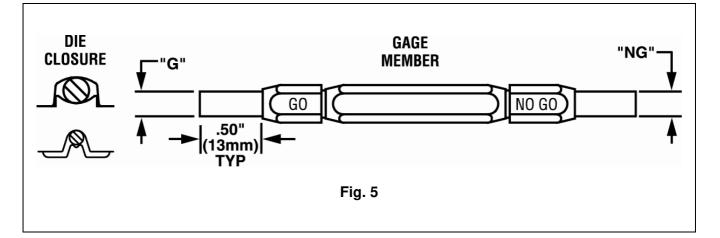


Fig.	6
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CRIMP JAW CLOSURE DIMENSIONS		GAGE ELEMENT DIAMETERS in. (mm)	
DIE	PIN GAGE DIA. in. (mm)	GO "G"	NO-GO "NG"
CD-2600-P8	.148154 (3.759 – 3.911)	.14801483 (3.7592 - 3.7668)	.15371540 (3.9039 – 3.9116)
CD-2600-P6	.194200 (4.927 – 5.080)	.19401943 (4.9276 – 4.9352)	.19972000 (5.0723 – 5.0800)
CD-2600-P4	.220226 (5.588 – 5.740)	.22002203 (5.5880 - 5.5956)	.22572260 (5.7327 - 5.7404)
CD-2600-P2	.315321 (8.001 – 8.153)	.31503153 (8.0010 - 8.0086)	.32073210 (8.1457 - 8.1534)
CD-2600-PV8	.188194 (4.775 – 4.927)	.18801883 (4.7752 - 4.7828)	.19371940 (4.9199 – 4.9276)
CD-2600-PV6	.228234 (5.791 – 5.943)	.22802283 (5.7912 - 5.7988)	.23372340 (5.9359 – 5.9436)
CD-2600-PV4	.315321 (8.001 – 8.153)	.31503153 (8.0010 - 8.0086)	.32073210 (8.1457 - 8.1534)
CD-2600-PV2	.355 – .361 (9.017 – 9.169)	.35503553 (9.0170 – 9.0246)	.36073610 (9.1617 - 9.1694)

CT-2600 & CT-2600/E

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#### STORAGE AND TRANSPORT

Always store the tool in its clean, dry carrying case when not in use, and during transport. The battery cartridge and the battery charging unit should be protected against humidity and dust.

### TROUBLESHOOTING

Before You Begin:

- 1. Make sure that the battery is charged. Recheck the battery after several minutes to make sure the battery is holding its charge.
- 2. Use a **nonflammable** contact cleaner or pencil eraser to clean the electrical contacts on the battery and crimping tool.

Problem	Probable Cause	Probable Remedy
	Dirt, contaminants, etc., in ram area of tool.	Clean tool.
Tool is inoperative.	Crimping tool battery contacts damaged.	Reform contacts.
	Tool components worn or damaged.	Return tool to PANDUIT Tool Division.
	Oil level is low.	Return tool to PANDUIT Tool Division.
Dies stop during operation.	Air in hydraulic system.	Pull trigger and hold retract button simultaneously. Hold for approximately 10 seconds.
LED glows for 20 seconds	Battery charge low.	Charge or replace battery.
Tool loses oil.	Damaged internal seal.	Return tool to PANDUIT Tool Division.

3. Reinstall the battery and check the tool again.

#### **DISCONTINUATION OF USE / DISPOSAL**

- The battery cartridge must be specially disposed of according environmental Battery Guidelines.
- For the disposal of the remaining parts, please reference environmental guidelines.
- Because of possible environmental damage, we recommend disposal of the tool by professional companies.





Do not dispose of the unit in your residential or commercial waste, as it would be hazardous to the environment.

#### USE OF THE BATTERY CARTRIDGE (CT-2600BC) and CHARGING UNIT (CT-2600CHR or CT-2600CHR/E

The charging unit is run with a nominal voltage of 120 V (CT-2600CHR), or (230 V for CT-2600CHR/E) and a frequency of 50-60 Hz. New batteries must be charged prior to use. To remove the battery, actuate the battery lock and pull it out of the tool. To charge the battery, connect the power plug of the charging unit with the power supply and slide the battery into the charging unit. The charging time is 40 minutes. The charging level of the battery cartridge can be checked by the right LED (multi-color) of the charging unit.

CT-2600 & CT-2600/E

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Indicator Color	Left LED (Red)	Right LED (Multi-color)
Red	Charging unit ready to operate.	Battery defective
Red Flashing	Charging unit out of order. New or unused batteries whose nominal capacity is not sufficient.	Battery too hot or too cold. Remove battery. Safety components possibly defective.
Green	-	Charging cycle starts
Green Flashing	_	Battery fully charged. Charging unit switches automatically into a maintaining mode. Battery can stay in charger for indefinite time w/o being damaged.
	_	Battery at least 90% charged. Charging cycle can be terminated.
Yellow	_	If the right LED does not light up, the circuit of the battery is disconnected or the battery is incorrectly polarized.

- If the nominal capacity of the battery is not achieved, e.g. at first charge, the battery is not necessarily faulty. Full capacity can be achieved after (3) charging/discharging cycles.
- When the speed of the tool decreases noticeably, the battery must be recharged.



# ATTENTION:

**Do Not** recharge a partially discharged battery as a precaution.

- Charge the battery at room temperature between 50°F and 104°F (10°C and 40°C).
- If charging a battery which has recently been used, or which has been exposed to sun for a long period of time (T>149°F / T>65°C), the right LED may flash red. In this case, remove battery out of charger. The charging procedure can be re-started after the battery has cooled down.
- Charging batteries at low temperatures under 41°F (5°C) is not recommended. Increase battery temperature before starting the charging cycle.
- Do Not expose the charging unit to rain or snow.
- Do Not charge a battery in the vicinity of explosive materials and gases.
- No other batteries (e.g. dry batteries or car batteries, etc.) are to be used in the tool or in the charging unit.
- Do Not use the cord to transport the charging unit, or to pull the plug out of a wall socket with force.
- Do Not insert foreign objects into the ducts of the charging unit. Pull the plug of the charging unit after charging. Do Not disassemble the charging unit or battery.



#### ATTENTION:

<u>Do Not</u> place the battery in your pocket or in your toolbox if there are any conductive materials in it such as coins, keys, tools or other metallic parts.

#### **TERMINATIONS PER BATTERY CHARGE**

The estimated number of terminations before the battery will need to be recharged is dependent on variables such as the terminal size and type being terminated, ambient temperature, and time lapsed between termination cycles as well as other variables.