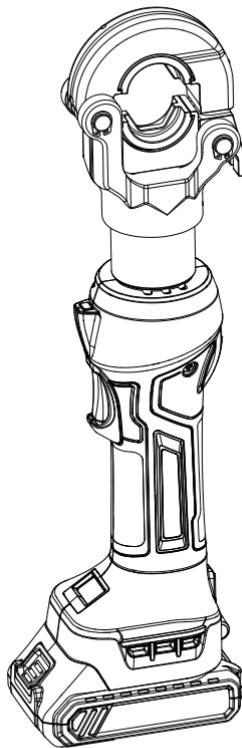




power to innovate



Instruction manual

Electro-hydraulic crimping tool 60kN for cable lugs 16-300mm²

100-65-031

CE IEC 62841-1
IEC 61238-1

SAVE THIS MANUAL

Read and keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Failure to do so can result in serious injury. Write the month and year of purchase. Keep this manual and the receipt in a safe and dry place for future reference.

IMPORTANT SAFETY INFORMATION

In this manual, on the labeling, and all other information provided with this product:



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



This is the CAUTION symbol. To operate carefully, beware of injury.

SAFETY INSTRUCTIONS

To ensure safe operation of this tool, it is essential to carefully read the user manual and follow all the instructions provided. **Failure to comply with the guidelines in this manual will void the warranty.**

1. Work area safety

1. Keep the work area clean and well-lit. Cluttered or dark areas can lead to accidents.
2. This tool is not insulated. Do not use it on live electrical conductors.
3. Do not use or store the tool in high temperatures or in environments containing corrosive substances. Be aware of possible deterioration of sealing components.
4. Keep bystanders away while operating the electro-hydraulic crimping tool. Distractions can lead to loss of control.
5. Do not use or charge the tool in flammable or explosive environments.

2. Electrical safety

1. Ensure the plug fits properly into the outlet. Never modify the plug in any way.
2. Do not expose the tool, battery, or charger to rain or moisture. Water entering the electrical components can cause electric shock.
3. Do not carry, pull, or unplug the tool using the cord. Avoid connecting the positive and negative terminals directly. Damaged or twisted wires can cause electric shock.
4. If the charger is dropped, hit, or otherwise damaged, do not attempt to repair it yourself. Return it to the authorized service center (www.sas.com.gr) immediately. Damaged chargers pose a risk of electric shock.
5. The optimal charging temperature is between 10°C and 40°C. Ensure that ventilation holes of both battery and charger are not obstructed during charging.

6. Always disconnect the charger from the power source after use to prevent accidents, especially involving untrained individuals.
7. Do not wait until the battery is fully discharged before recharging. Deep discharge can permanently damage the battery. Remove the battery from the tool when not in use to prevent power drain.
8. Do not burn or short-circuit the battery. It may cause an explosion.
9. Do not use damaged or expired batteries, as they may cause electric shock.
10. Do not disassemble the battery or charger. In case of any issue, contact the authorized service center (www.sas.com.gr).

3. Personal safety

1. Stay alert, be aware of your surroundings, and use common sense while operating the tool. Do not use the tool when tired or under the influence of drugs, alcohol, or medication. Even a moment of inattention can lead to serious personal injury.
2. Use appropriate personal protective equipment. Always wear items such as a mask, helmet, hard hat, and insulated shoes to reduce the risk of injury.
3. Avoid loose clothing or jewelry. Keep hair, clothing, and gloves away from moving parts. Loose items may become entangled.
4. Maintain your power tools. Check for misalignment, binding parts, breakage, or any condition that could affect tool operation. Many accidents result from poorly maintained equipment. Check the tool before every use.
5. Use the tool correctly. A tool used for its intended purpose will perform more safely and efficiently.

4. Service

Have your electro-hydraulic crimping tool serviced ONLY by the authorized service center (www.sas.com.gr) using only identical replacement parts. This ensures continued safety and performance of the tool.

SPECIFIC SAFETY INSTRUCTIONS

1. Maintain all labels and nameplates on the tool. These contain critical safety information. If labels become unreadable or are missing, contact your supplier for replacements.
2. Ensure the tool head is securely locked before use.
3. Do not strike any part of the tool, as this may cause injury.
4. Do not operate the tool inappropriately or randomly. Doing so may damage the MCU and the electrical system.
5. The limit screw on the head is designed to prevent the head from falling or popping off.
6. Ensure the head is securely locked during operation.
7. After 30-40 crimping cycles, allow the tool to cool for at least 15 minutes.
8. Do not secure this tool in a vise. It is intended for handheld use only.
9. The built-in safety valve has undergone strict pressure testing before distribution. Do not attempt to adjust the pressure. If the tool exhibits low pressure, return it to the authorized service center. The tool may only be used again after inspection and testing by trained personnel.

PRODUCT DESCRIPTION & SPECIFICATIONS

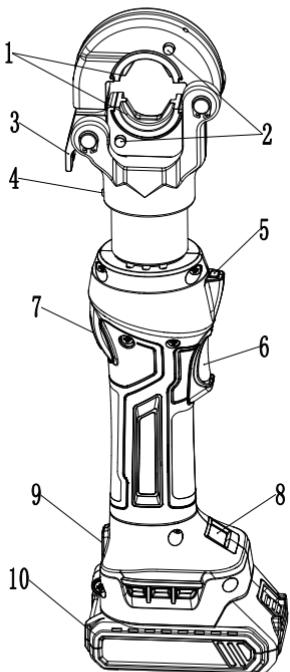
The “electro-hydraulic crimping tool” (Art. No 100-65-031) is a tool designed for crimping copper cable lugs ranging from 16 to 300mm². Powered by a Li-ion battery, operated by a motor, and controlled via an MCU, it features an OLED display and a high-pressure hydraulic system. This makes it an ideal tool for use in electrical construction sites.

This tool has been tested and verified for compatibility with our SAS copper cable lugs. We cannot guarantee proper operation or results with third party terminals.

1. Technical data

Rated pressure:	60kN
Stroke:	17mm
Crimping range:	Cu 16 - 300mm ²
Hydraulic oil:	About 35ml (suggest to add Shell Tellus S2V HV15)
Ambient temperature:	-10~40°C
Voltage of battery:	DC 18V,2.0Ah
Charging voltage:	AC 100V~240V ;50~60Hz
Charging time:	Approx.60-90mins
Weight:	3.5kgs(with battery)
Size of tool:	420x129x76mm
Accessories:	
Crimping dies:	16,25,35,50,70,95,120,150,185,240,300 mm ²
Battery:	1 pcs
Charger:	1 pc
Sealing ring of cylinder:	1 set
Sealing ring of safety valve:	1 set

2. Description of components:



Parts No.	Description	Function
1	Die	For crimping, interchangeable component
2	Pin	For securing the die in place
3	Latch	For locking the die holder
4	Limited screw	Prevents the head from popping off
5	LED indicator	Provides illumination during operation
6	Trigger	Starts tools operation
7	Retract button	Manually retracts the piston in case of an incorrect operation.
8	OLED display	Displays crimping cycles, battery power, and error information
9	LED indicator	Shows tool status and warnings
10	Battery	Rechargeable Li-ion (18V) battery for power supply

3. Function description



Microcomputer Control System – Automatically monitors pressure during operation, offering dual safety protection.



OLED display – Dot matrix screen displays crimping cycles, battery level, maintenance reminders, and fault codes.



Auto reset – Automatically releases pressure and retracts the piston to the starting position when maximum output is reached.



Manual reset – Allows the operator to retract the piston manually in case of an error or incorrect operation.



Double Piston Pump – Ensures fast advancement of the die towards the cable, followed by a slower crimping motion for precision.



Rotating Head – The tool head rotates up to 350° for improved access in confined workspaces.



Acoustic Signal – An audible alarm will sound if the system detects abnormal pressure or low battery charge.



Ergonomic Design – Compact structure with a non-slip rubber grip and optimized center of gravity for enhanced handling.



Overheat Protection – A temperature sensor automatically stops operation if the internal temperature exceeds 70°C. A warning signal will sound, and the tool will not resume work until the temperature returns to normal.

Table 1 **Signal Instruction and Meaning:**

Se- ries No	Instruction	LED (red)	LED	Speaker icon	OLED screen signal	What it means
1	Self-checking	¤¤ (2sec)	¤¤ (2sec) (green)		Welcome Maintain 250	Self-diagnosis to confirm everything is functioning normally
2	Power on		¤ (5min) (white)		Device usage 250 Timeout 5 minutes off	Tool is in working state; battery is full
3	Charging reminder	¤¤¤¤ ¤		◎◎◎◎ ◎	Battery empty	Low battery, needs charging
				◎ (0.1sec)	Battery empty Battery icon blinking	No response after 0.1s warning - battery is dead or ineffective
4	Motor overload	¤¤¤		◎◎◎ (2sec)	E01 Motor overload	Motor overload, try reloading battery, please contact the authorized service center if issue persists
5	Hydraulic system Malfunction	¤¤¤¤ ¤		◎◎◎◎ ◎ (5sec)	Error: 02 Malfunction	No auto-release of pressure after 2 mins, reload battery
6	High temperature warning	¤¤¤¤		◎◎◎◎ (2sec)	E03 Hot	Motor surface too hot, wait for the tool to cool down
7	Operation protection	¤ (5min)		◎◎◎◎ ◎ (2sec)	Error: 99 Danger operate	Trigger pressed repeatedly/quickly. Auto-protection activated
8	Maintenance reminder	¤ ---	¤ --- (green)		Please maintain	Red and green lights flash alternately, tool requires maintenance

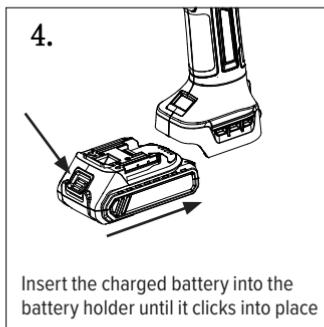
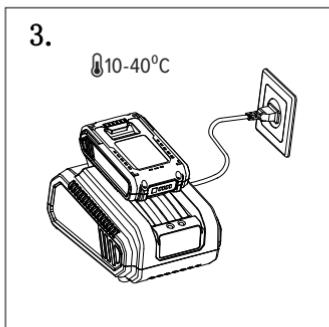
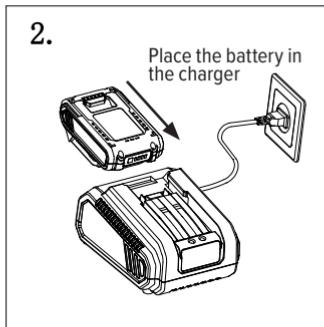
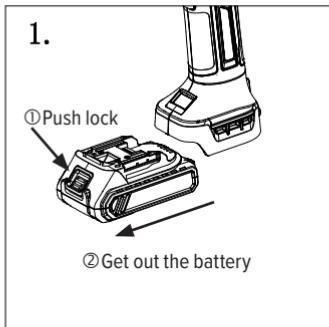
OPERATION

Read the entire SAFETY INFORMATION section at the beginning of this manual before operating the tool.

Use this tool only for its intended purpose as defined by the manufacturer. Any other use may result in injury or property damage.

1. Charging

Insert the battery into the charger and connect the charger plug to the power outlet. Ensure the ambient temperature is between 10°C and 40°C. Charging takes approximately 60-90 minutes. Please see the illustration below.

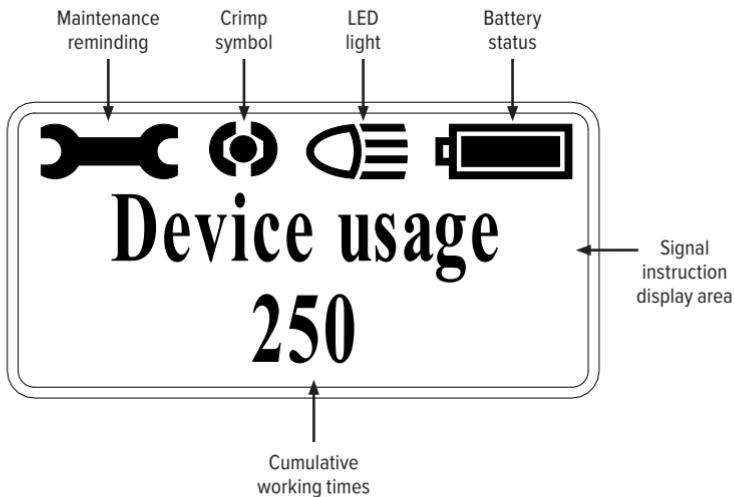




- 1) Use only the original charger provided by the manufacturer when charging the original factory battery.
For 4.0Ah/5.0Ah batteries, the charging current must not exceed 5A.
For 2.0Ah batteries, the charging current must not exceed 3.0A.
- 2) Using a non-compliant charger may result in smoking, fire, or explosion.
- 3) The battery is rechargeable and can be used hundreds of times. Once performance significantly deteriorates, please replace it with a new battery.
- 4) Charge the battery in time to avoid complete discharge, which may render it permanently unusable.
If the battery is not used for a long time, it will self-discharge. To prevent damage, charge it once every 3 months.
- 5) Do not use or charge damaged batteries, as they may increase the risk of electric shock.
- 6) When charging, do not cover the charger. It must dissipate heat properly to avoid fire hazards.
- 7) Disconnect the charger when not in use to reduce the risk of injury to untrained individuals.
- 8) Do not use the charger in wet or humid environments, and do not expose it to rain or snow, to avoid electric shock.
- 9) Do not disassemble the battery or charger. If any issues arise, contact the authorized service center (www.sas.com.gr).
- 10) For the spare rechargeable battery 2.0Ah, 18V, the Art No. is 100-86-070

2. Usage of the tool

2.1 OLED display interface description:



Tool LED Illuminator instructions:

Activation:

Once the battery is installed, press the start button (trigger).

Then the LED illuminator will turn on.

Deactivation:

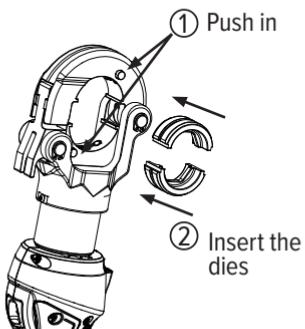
During the installation of battery, start pressing the trigger for few seconds.

Once the battery is installed, release the trigger and the LED light should turn off.

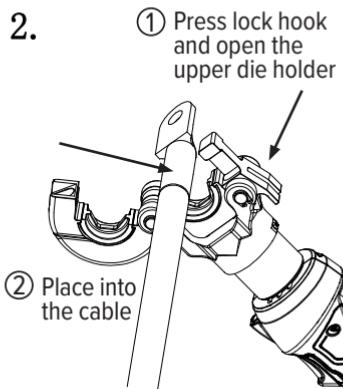
If the light stays on, remove and reinstall the battery.

2.2 Operation

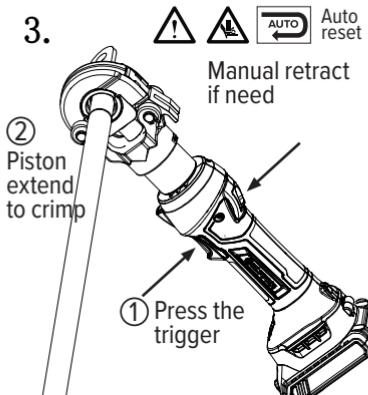
1.



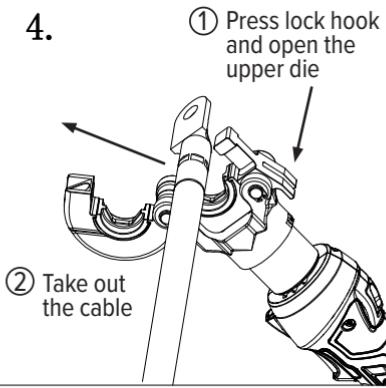
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3.

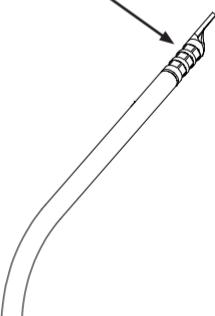


4.



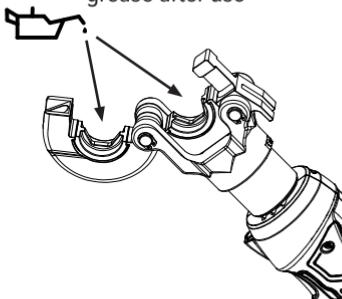
5.

Multi-stage crimping

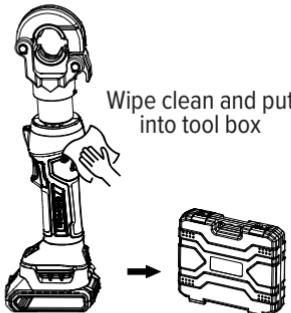


6.

Add anti-rust
grease after use



7.



Wipe clean and put into tool box



- 1) Do not hammer or strike any part of the tool. Before each use, carefully inspect the tool for damage, wear, missing parts, misalignment, jamming, or any other issues that may affect safe and proper operation. If any abnormal condition is found, stop using the tool immediately and contact the authorized service center (www.sas.com.gr).
- 2) Check that the tool operates properly before every use.
- 3) The limit screw is designed to prevent the head from popping off. Do not remove or adjust it yourself.
- 4) During operation, ensure that the locking hook securely locks the die holder in place. Prevent the hook from slipping out.
- 5) Remove any grease, dust, especially on the handle and control components, to prevent the tool from slipping during use.
- 6) The built-in safety valve undergoes strict pressure detection before leaving the factory, and the user must not adjust it without authorization! If you are experiencing under-pressure, please take the tool to the authorized service center (www.sas.com.gr).



Do not place any part of your body (e.g., fingers) into the crimping head while the piston is extending. This can lead to serious injury.

MAINTENANCE AND SERVICE



Damaged tools can cause serious personal injury. Do not use damaged equipment. If the tool produces abnormal noise or vibration, stop use immediately and have the issue corrected before further use.

- 1) Routine maintenance and inspection are essential to extend the life of the tool.
Before each use: Inspect for loose screws, misalignment, binding of moving parts, cracks, or other issues.
After use: Clean external surfaces with a clean, damp cloth. Apply rust-preventive oil to metal parts and crimping dies. Store the tool in a dry environment.
- 2) Only qualified service technicians of (www.sas.com.gr) should perform repairs or internal maintenance.
- 3) Keep the tool and all parts dry. If the tool gets wet, remove the battery and wait until the tool is completely dry before reassembling or recharging.
- 4) Do not store the tool in excessively hot or cold environments. Extreme temperatures can damage internal components and reduce tool life.
- 5) Do not use aggressive chemical cleaners or harsh detergents to clean the tool. Use only a damp cloth with mild detergent if necessary.
- 6) Tool warranty is valid for 1 year. For optimal performance and longevity, schedule “basic service” at 5.000 cycles, and “full service” at 20.000 cycles.
- 7) If the tool will not be used for an extended period:
Ensure the piston is fully retracted to its starting position.
Clean the tool thoroughly and apply rustproof oil on all metal parts and accessories.
Remove the battery and store it in the original case.
Keep the tool in a dry, dust-free environment.
- 8) Sealing kits may wear out after prolonged use. If any oil leakage is detected, contact authorized distributor (www.sas.com.gr) for replacement of sealing components.

1 YEAR WARRANTY

We strive to ensure our products meet the highest quality and durability standards. This commercial warranty is provided by www.sas.com.gr , T:+30 2104256749 / service@sas.com.gr and applies to the original purchaser of this product.

We warrant that this product is free from defects in materials and workmanship under normal use for a period of (1) year from the date of delivery to the original purchaser.

This warranty is valid for (1) year. To ensure that the tool is operating safely for a long as possible, the tool requires service after 5.000cycles or after 1 year at the latest, performed exclusively by www.sas.com.gr, using genuine or manufacturer-approved spare parts.

If the service schedule is not followed, the warranty will be voided.

Failure to provide documented evidence of maintenance may void this warranty.

Warranty Coverage:

If a defect covered by this warranty is found and reported within the warranty period, we will, at our discretion:

- Repair the product
- Replace it with a new or refurbished unit

Repairs or replacements under this warranty do not extend or renew the original warranty period.

This warranty does not cover:

Misuse, abuse, or negligence

Damage from accidents or force majeure (e.g. fire, flood)

Unauthorized repairs or modifications

Normal wear and tear (e.g brushes, batteries, blades)

Lack of regular cleaning of the tool

Use with accessories or spare parts not approved by the manufacturer

How to claim warranty service

To request service under this warranty:

1. Contact our service department at service@sas.com.gr with a detailed description of the issue.
2. Provide proof of purchase showing the delivery date.
3. Upon authorization, return the product or part to the authorized service center.

We are not liable for injury, property damage, or any incidental, special, or consequential damages arising from the use of this product.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS.

Upon inspection, if a defect is verified:

We will either repair, replace, or at our discretion, refund the purchase price if a replacement is not readily available.

If no defect is found or if the issue falls outside the warranty scope, the cost of return shipping will be the customer's responsibility.