

# ARMO AGUN

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ENG pages 32—45



АВТОВ'ЯЗЧИК АРМАТУРЫ  
АВТОВ'ЯЗЧИК АРМАТУРИ  
AUTOMATIC TYING MACHINE

CE

Инструкция по эксплуатации  
Інструкція з експлуатації  
Operation manual

**AG-210**  
**AG-400**

<http://www.armogun.com.ua>

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**⚠ WARNING ⚠**

BEFORE USING THIS TOOL, STUDY THIS MANUAL TO ENSURE SAFETY WARNING AND INSTRUCTIONS. KEEP THESE INSTRUCTIONS WITH THE TOOL FOR FUTURE REFERENCE.

## 1. Approval Statement of CE



This machine conforms to 89/336/EEC Electromagnetism Compatible, 73/23/EEC Low Voltage and 98/37/EC Machinery Requirement of ECC Instruction.

## 2. Product Inventory

1.	Automatic tying machine	1 pcs.
2.	Battery charger	1 pcs.
3.	Battery	2 pcs.
4.	Spool wire	4 pcs.
5.	Carrying case	1 pcs.
6.	Guaranty card	1 pcs.
7.	Quick start guide	1 pcs.
8.	Battery and charger manual	1 pcs.
9.	Operation manual ( <i>this document</i> )	1 pcs.
10.	Pliers	1 pcs.

## 3. Specifications & technical data

### 3.1. Trait and use

Rebar autotyping machine AG-230, AG-400 is a battery powered, light weight device uses for fast bars binding in reinforced concrete constructions.

Compact and full automatically tool. The rebar binding process with this tool becomes a really fast and safe. Armogun autotyping machine is simply in use, and don't needs some special service.

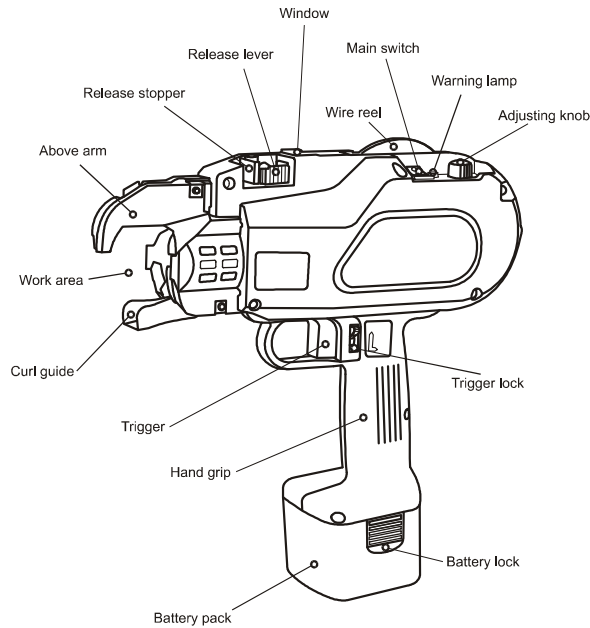
- Up to 3—6 times faster then tying without Armogun.
- Makes the binding process safe and ergonomic.
- Provides a constantly fast tying process through the all work time.
- Anybody worker can learn using of this tool in just minutes.

Applications of the autotyping machine:

- Precast Concrete Products;
- Building Foundation;
- Road and Bridge Construction;
- Floors and Walls;
- Swimming pool walls.

We hope that you will be satisfied in work with Armogun rebar tying machine. If after reading of this manual you still have any questions, you can contact us directly by e-mail [support@armogun.com.ua](mailto:support@armogun.com.ua). In you letter fill your first name, last name, contact phone, serial number of machine and point your problem. We will try to answer in the shortestest time.

**3.2. Name of parts**



**3.3. Tool specification**

Armogun Model:	AG-230	AG-400
Exterior sizes with battery:	270x100x277 mm	290x100x277 mm
Weight with battery:	2,1 kg	2,1 kg
Applicable bar sizes:	<b>up to 21 mm</b>	<b>up to 40 mm</b>
Time for one tie:	less than 1 second	less than 1 second
Wraps per tie:	3	4
Ties per coil:	≈ 180—210	≈ 120
Ties per charge:	≈ 360	≈ 360
Motor voltage:	9,6 V	9,6 V
Battery type:	NiCd 2000mAh	NiCd 2000mAh
Recharge time:	≈ 25 minutes	≈ 25 minutes

**3.4. Wire specification**

Wire model:	AGW-R
Diameter:	Ø 0,8 mm
Material:	regular steel wire
Length:	95 m.

**BATTERY CHARGER:** Use only an authorized battery charger.  
Use only original tie-wire, spare parts and accessories.

**3.5. Applications of the product**

- Precast Concrete Products;
- Building Foundation;
- Road and Bridge Construction;
- Floors and Walls;
- Swimming pool walls.

**3.6. Applicable bar sizes chart**

AG-230		Second re-bar				
		Ø6	Ø8	Ø10	Ø12	Ø14
First re-bar	Ø6	●	●	●	●	●
	Ø8	●	●	●	●	○
	Ø10	●	●	●	○	○
	Ø12	●	●	○	○	○
	Ø14	●	○	○	○	○

AG-400		Second re-bar												
		Ø6	Ø8	Ø10	Ø12	Ø14	Ø16	Ø18	Ø20	Ø22	Ø25	Ø28	Ø32	
First re-bar	Ø6	●	●	●	●	●	●	●	●	●	●	●	●	●
	Ø8	●	●	●	●	●	●	●	●	●	●	●	●	●
	Ø10	●	●	●	●	●	●	●	●	●	●	●	●	○
	Ø12	●	●	●	●	●	●	●	●	●	●	●	●	○
	Ø14	●	●	●	●	●	●	●	●	●	●	●	○	○
	Ø16	●	●	●	●	●	●	●	●	●	○	○	○	○
	Ø18	●	●	●	●	●	●	●	●	●	○	○	○	○
	Ø20	●	●	●	●	●	●	●	●	○	○	○	○	○
	Ø22	●	●	●	●	●	●	●	○	○	○	○	○	○
	Ø25	●	●	●	●	●	○	○	○	○	○	○	○	○
	Ø28	●	●	●	●	○	○	○	○	○	○	○	○	○
	Ø32	●	●	○	○	○	○	○	○	○	○	○	○	○

## 4. Safety Instructions & Matters needing attention

### PRECAUTIONS ON USING THE TOOL

This equipment is a tool for use in tying re-bars. Using this equipment for other applications or in ways not specified in the manual may lead to serious accident. Be sure to strictly observe the items written in this manual. Persons not concerned with the work, particularly children, should be kept away from the work site and should not be allowed to touch this equipment.



#### WEAR SAFETY GLASSES OR GOGGLES

The employer and the user must make sure that proper eye protection is worn when the tool is being used. Eye protection equipment must conform to the requirements of the American National Standards Institute, ANSI Z87.1 (Council Directive 89/686/EEC of 21 DEC. 1989) and it must provide frontal and side protection.

**NOTE:** Non side-shielded spectacles and face shields alone do not provide adequate protection.



#### DON'T ALLOW CHILDREN NEAR THE TOOL

Allow no bystanders, especially children, near the tool during its operation.



#### BE SURE TO SET THE MAIN SWITCH TO OFF WHEN NOT IN USE.



#### DON'T USE THE TOOL IN THE RAIN, WHERE WATER IS SPLASHING, IN A WET PLACE, OR IN A DAMP PLACE

Using the tool in these or similar conditions will increase the risk of electric shock.



#### DON'T REFIT THE TOOL

Not allowed refitting may lead injury in function and safety, it will also influence your normal after selling service.



#### KEEP FINGERS AND BODY PARTS CLEAR OF THE FEEDER ARM AND CURL GUIDE AT ALL TIMES

Failure to do so may result in serious injury downs or damage.



#### KEEP FINGERS AND BODY PARTS AWAY FROM THE TIE-WIRE REEL WHEN TOOL IS IN OPERATION

Failure to do so may result in serious injury.



#### DON'T POINT THE TOOL AT ANYONE

Personal injury may result if the tool catches an operator or anyone working near him. While working with the tool, be extremely careful not to bring hands, legs, and other body parts near the arm of the tool.



#### NEVER OPERATE THE TOOL UNDER ANY ABNORMAL CONDITION.

If the tool is not in good working order, or if any abnormal condition is noticed, switch it off immediately (set the Main switch at OFF), lock the Trigger and have it examined and repaired.



THE SPANNER HUNG ON THE ROTATING PART MAY INJURY STAFF, SO REMOVE SPANNER BEFORE YOU TURN ON THE REBAR TYING MACHINE.



KEEP YOUR BALANCE ALL THE TIME. SO DON'T EXTEND ARM WITH REBAR TYING MACHINE TOO LONG.



BE SURE TO SET THE MAIN SWITCH TO OFF, TO LOCK THE TRIGGER, AND DETACH THE BATTERY PACK WHEN CHANGING THE BATTERY PACK, WHEN REPLACING OR ADJUSTING THE TIE-WIRE, WHEN ABNORMALITIES OCCUR, AND WHEN THE EQUIPMENT IS NOT BEING USED.



#### DON'T USE THIS TOOL IN POOR ENVIRONMENT.

Article such as inflammable liquids, gas or powders may burn because of the spark generating by the motor tool, so never use ARTM in the environment filled with inflammable or explosive articles.



USE ONLY THE AUTHORIZED BATTERY PACK. NEVER USE OTHER POWER SOURCES.



#### Use only authorized battery charger.

Failure to do so may cause the Battery to overheat or catch fire leading to serious injury.



DAMAGED WIRE CAN LEAD TO FIRE EASILY. SO KEEP THE WIRE AWAY FROM HEAT, OIL CONTAMINATION OR MOBILE OBJECTS. REPLACE THE WIRE IMMEDIATELY IF DAMAGED.



Don't let the terminal (metal component) of the battery pack short-circuit.

A short circuit in the terminal will generate a large current, causing to overheat the Battery pack and become damaged.



#### Avoid continual use of the Battery charger.

Rest the Charger for 15 minutes between charges to avoid functional trouble with the unit.



Charge the Battery pack in a temperature range of 0°C (32°F) to 40°C (104°F)



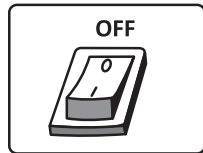
#### Charge the Battery only to an AC 230V wall socket.

Failure to do so may result in overheating, or inadequate charging possibly causing serious injury.

## 5. Safety features

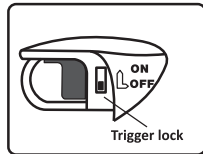
In order to ensure your and other's personal safety features may function properly. If they don't, please examine it carefully then use it.

**PRIOR TO USING THE TOOL, MAKE SURE THAT THE SAFETY FEATURES FUNCTION PROPERLY.**



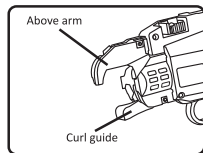
### MAIN SWITCH

Main switch is used to cut off the power. Set it to OFF when tool is not in use. Set it to ON when need to use the tool.



### TRIGGER LOCK

The Trigger can be locked preventing the tool from operating for safety. Always keep the Trigger locked when not in use. Unless you are at tying work, set the trigger lock to the position of LOCK and remove a battery pack. When you start tying work, set it to the position of UNLOCK. Pull to the left slightly and upward to UNLOCK.



### CURL GUIDE

When the Curl Guide is opened, it will emit a beeping sound and the tool does not operate.

## 6. Battery installing method

- A Pack cap that is used to prevent short circuits must be removed from the terminal of the Battery pack.
- When charging the Battery pack, remove it by pushing on its latches from both sides while firmly holding the grip of the tool.
- Plug the uncharged battery pack into the charger.

**NOTE:** BEFORE INSTALLING THE BATTERY PACK, SET THE MAIN SWITCH AT OFF.

## 7. The operation and appliance of the tool

### 7.1. How to set the tie-wire



Take out the wire tape, peel of the tape fixing, stretch out the tip of the wound tie-wire.



Press the release lever, and confirm that the release lever is caught in release stopper.



Push the reel stopper to release the reel holder.



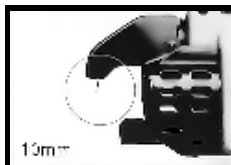
Set the end with white center inside, than push the reel holder.



The tip of the tie-wire should be straightened out to allow it to pass through the wire guide. The wire shouldn't be bent or curved.



The tie-wire should be passing through the center slot of the left and right drive gear after the wire stretched out from the wire guide to the above arm.



Keep inserting the tie-wire into the pipe until the tip of the wire comes out from the above arm within 10 mm.



Release the stopper, and confirm that the release lever has returned to its original position and the feeding gears are clamping the tie-wire.



Make sure that the trigger is locked; mount the battery pack on the tool. Insert charged battery pack into the grip until a click is heard, then the battery latches are clamping to the correct position.



Turn the main switch ON, hand the tool's grip and turn the trigger lock into the top position. This completes all the tie-wire installing operation.

#### NOTE:

- When installing the battery, please turn OFF the main switch and lock the trigger. Don't bring your fingers or other parts of body close to the binding part and rotating parts of the tip.
- Don't try to switch the main switch ON and OFF in rapid.
- Don't bring your fingers or other parts of body close to the tie-wire during operation.
- Lock the trigger when tool is not in use.

### 7.2. How to remove the tie-wire

**NOTE:** FIRST, TURN THE MAIN SWITCH OFF, LOCK THE TRIGGER AND DETACH THE BATTERY PACK.



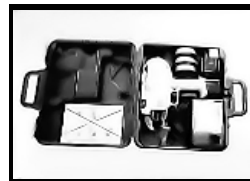
Press the release lever and confirm that the release lever is caught in the release stopper.



Remove the tie-wire at the back.



Push the reel stopper to release holder and remove tie-wire.



Mount the new tie-wire or reset the reel holder, put the tool into the case when the work is complete.

### 7.3. Tool adjustment




Be sure to turn the main switch OFF, to lock the trigger and detach the battery pack.

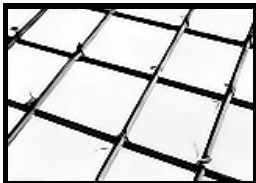


Dial is used to adjust the tension (AG-400) / wire length (AG-230).

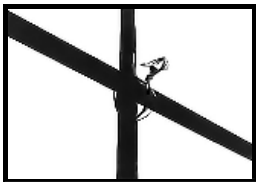
Use dial to adjustment.



Insert full charged battery pack, then turn the main switch ON and unlock the trigger.




Test tying to check the tie tension proper.




If tie tension isn't appropriate, repeat the foregoing procedures to adjust again.


**7.4. Proper tightness procedures**




Press the tool's arm on the rebar. Tilt the tool 45° angle to crossed rebar.



Apply the tool perpendicularly to the surface of crossed rebar.



Press trigger to complete tying procedure.



Detach the arm from the rebar after tying completed.

**NOTE:** When you need extra tying tension you need to place re-bars at the top of arm.

**8. Troubleshooting / Repairs**

This tool alerts you to the troubleshooting by means of a warning sound and warning lamp. Take measures according to the following table. Please contact our company if trouble is not solved.

**NOTE:** Before solving the problem, turn the main switch OFF, lock the trigger. When installing the battery, the main switch and trigger lock are not both locked; don't bring your finger and other parts of the body close to the tying part or rotating part of the tool.

Problem	Warning sound	What to check	Cause	Solution
Machine can't operate after installing battery and tie-wire, turning on main switch.	No sound emitted	Confirm residual quality of battery pack	Dead battery (completely empty)	Replace the battery and charge battery
		Detach the battery, see if electrode is luminous	Electrode plate oxidized or has impurity on it	Polish the surface of electrode with abrasive paper.
	■ ■ ■ ■ ■ ■	Confirm residual quality of battery pack	Dead battery (with only a small charge left)	Replace the battery and charge battery
	—————	Open/Close curl guide	Curl guide is open	Close curl guide
No sending of wire takes place	■ ■ ■ ■ ■ ■	Confirm if binding wire has been tangled	Binding wire has been tangled around twist section	Turn off main switch, detach battery and remove tie-wire inside curl guide.
	—————	Open/Close curl guide	Curl guide is open	Close curl guide
	■ ■ ■ ■ ■ ■	Check if wire inside reel has been loosened or caught	Wire caught inside wire reel	Remove fray on reel
		Confirm functioning of cutter	Cutter section is blocked with foreign substance	Wipe cutter section

	■ ■ ■ ■ ■ ■ ■ ■	Warning sound does not go continuously, it occurs only when trigger is pulled	Motor has worked too long, and heated	Halt machine and cool it down slightly
Sending of wire stopped halfway	■ ■ ■ ■ ■ ■ ■ ■	Confirm reel side face	Not using designated types of tie-wire	Use proper tie-wire
	■ ■ ■ ■ ■ ■ ■ ■	Confirm reel winding	Wire caught inside wire reel	Remove fray on reel
Curl is disordered and steps out of curl guide	No sound emitted	Check if wire hits reinforced concrete at binding	Wire hitting reinforced concrete may cause this phenomenon	Pay attention so that the wire doesn't hit concrete during operation
No wire cutting takes place	No sound emitted	Confirm functioning of cutter	Cutter section is blocked with foreign substance	Wipe cutter section
Wire tangles rule less	No sound emitted	Check if wire hits reinforced concrete at binding	Wire hitting reinforced concrete may cause this phenomenon	Pay attention so that the wire doesn't hit concrete during operation
Binding is not tight enough	No sound emitted	Confirm diameter of rebars to be tied	The diameter of rebars is not of designated size	Use proper model of rebar tying machine
	No sound emitted	Confirm the curl holder has been reset	The curl holder hasn't been reset, which lead to switch abnormally working	Make the curl holder reset fully
	No sound emitted	Confirm to understand the operating manual	Improper use of machine	Be familiar with operating manual
Tying twisting takes place	No sound emitted	Confirm diameter of rebars to be tied	The diameter of rebars is not of designated size	Use proper model of rebar tying machine
	No sound emitted	Confirm to understand the operating manual	Improper use of machine	Be familiar with operating manual

## 9. Maintenance

Customer must make an everyday examination before and after using the tool.

### 9.1. Everyday examination

- Check if the shell or grip is damage.
- Confirm if the power plug is intact.
- Check if the main switch is normal, flexible and have no damage.
- Confirm if the guard devices is in good condition.
- Confirm if the running section of tool is flexible, brisk and no blocking phenomenon.

### 9.2. Examination in authorized service centre

The tool must be periodically examined by specific stuff:

- Examine at last once a month.
- Shorten the examination period when it is used in the area of wet and hot or diverse temperature environment.

### 9.3. Maintenance of ARTM

Maintain promptly after using, wipe the plastic crust with soap-suds soft cloth. (Don't use solvent to wipe because the solvents such as gasoline, alcohol may mangle plastic parts)

### 9.4. When tool is not in use

When not used, the tool should be stored in a dry, clean or no corrosion gas environment.

Please send to designated maintenance place if the tool is damaged. Any damage performed by not specific stuff is not of three guarantees scope.

## 10. Storage

The tool should be stored in normal weather environment not exceed 50° C and not cooler than 10° C.

Never store it in damp environment.

If you have any questions or some troubles with tying machine:

- Look for answers our website: <http://www.armogun.com.ua>
- Contact our service centre (full list is on our website)
- Send your question to the following e-mail: [support@armogun.com.ua](mailto:support@armogun.com.ua)



**Сервисные центры по ремонту и обслуживанию автовязчиков ArmoGun:****Украина:**

ООО «Пеленг»  
ул. Шмидта, 53  
тел./факс: (0562) 32-30-06  
г. Днепропетровск

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тел./факс: (0562) 32-30-06  
м. Дніпропетровськ

**Service centre list for ArmoGun tiers:****Ukraine:**

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Dnipropetrovsk