

INSTRUCTION MANUAL

*ST-BET10/19 LT/HT*



Operating instructions manual

## **ST-BET 10-19 LT/HT**



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## 1. SAFETY STANDARDS



**It is necessary to read the manual herein, to correctly carry out the information it contains, to use the equipment in conformity with the manufacturer's instruction and in conformity with current accident prevention regulations to avoid accidents and serious injuries both to operators and third parties and damages to the equipment.**



It is mandatory to inform in advance all personnel operating on the equipment on the contents of the manual herein, especially the chapters related to safety provisions, use and maintenance.  
This instruction manual is addressed to all personnel concerned in the handling, operation, maintenance and cleaning of the equipment, and is part and parcel of the same, it is therefore necessary to preserve it for future reference and when ordering spare parts.  
The manufacturing company reserves the right to modify the manual herein at any time, with no obligation to update previous machinery and manuals.  
Contact you retailer for any question concerning the equipment.

### GENERAL REMARKS AND INSTRUCTIONS



#### INTENDED USE

**The equipment described in the manual herein is intended, in conformity with design specifications, solely for packing purposes using plastic straps, every other use is forbidden.**

The equipment must be used, serviced and cleaned only by adequately trained personnel, that must have read the manual herein; the non compliance of its provisions, the forbidden or incorrect use of the equipment and lack of maintenance lift the manufacturer from any liability and make guarantee terms null.

Any defect, malfunction, or wear of the equipment must be promptly notified to the manager by the operator in charge of the equipment; never use equipment that shows clear signs of damage or wear.

#### OPERATORS' SAFETY EQUIPMENT



Pay attention to those parts that may cause injuries, such as cuts, abrasions or crushing, also in relation with the product to be packaged; to this purpose it is necessary to wear protection goggles or masks to protect the eyes and/or face as well as safety gloves, when using the strapping tool under tension.

#### WORK ENVIRONMENT

The work place must be kept tidy and clean for safety purposes.

Use the equipment in a stable position, checking that the equipment itself cannot injure anyone even if it falls, we suggest to block it in position with the hook intended for this purpose.

**This equipment has been designed to be used with environmental temperatures between +5 C° +45 C°**, it is on any account advisable to avoid very damp locations, and when used outdoors avoid exposure to rain.

Do not use in places where there is danger or fire or explosion.

## SAFE USE OF THE STRAPPING TOOL



**It is forbidden to lift, hang or pull the packaging using the straps, the non compliance with this provision may result in serious risks for persons or damages to equipment.**

To unroll the strapping tool use the device intended for this purpose; always rewind any excess strap. Do not scatter pieces of unused strap in the work place.

Remember that tensioned straps may be only cut with special shears, avoid to use tools that are not adequate; keep at a safe distance from the strap to be cut, and verify that no other person is near the risk area, cut straps tend to snap backwards.

**Serious injuries and damages to equipment may result if the equipment is not correctly used, if the strap is over tensioned and/or if non adequate straps are used, in relation with the product to be packaged (sharp edges, high temperatures, etc.), due to sudden sagging or breackage of the straps.**

The operator in charge of strapping is responsible for the quality of the same, it is therefore advisable to specially train personnel in relation with the evaluation and control criteria of the **sealing** and of the adjustments to be done to optimize it, listed in the following chapters.

**Detective sealings do not guarantee safety conditions during handling of goods, and may cause serious injuries to persons and/or damages to equipment if they sag; do not handle packaged goods with doubtful or defective sealings.**

## MACHINE MAINTENANCE



Disconnect the battery before carrying out any intervention on the machine.

It is strictly forbidden to modify the machine or to remove the safety protections installed. Maintenance or repair works, as well as the normal substitution of worn parts and cleaning operations, must be carried out by personnel duly qualified by authorized distribution outlets and service centers.

## INSTRUCTION FOR THE BATTERIES



Depleted or defective batteries must be disposed of in conformity with current law provisions, they must not be discharged in the environment.

It must be remembered that the batteries must be kept with care, the poles must be protected with their cap to avoid short circuits, they must be kept in a dry place, protected from frost and humidity, and must not be exposed to temperatures exceeding 50°C.

They must not be over charged, and in the event of defects or breakages of the body, they must be immediately substituted and not re-charged. Do not try to open the batteries.

Further information is supplied in the enclosed instructions from the batteries manufacturer.

## INSTRUCTION FOR THE BATTERY CHARGER



Before using the battery charger, make sure that the plug and the cable are not damaged, if necessary substitute them. Also check that the battery housing is clean and the contacts are not damaged.

**Always protect from humidity, blows and temperatures exceeding 50°C and from frost.**

Further information is supplied in the enclosed instructions from the batteries manufacturer.

## 2. TECHNICAL DATA

### DESCRIPTION

The equipment described in the manual herein is intended to strap packaging with plastic straps using a vibration welding system. The strap must be manually positioned around the goods to be packaged with care, it must then be positioned in the machine, tensioned and sealed by welding, and at the same time cut and separated from the rest of the strap.

### DIMENSIONS AND CHARACTERISTICS WITH INSTALLED BATTERY (standard configuration without accessories)

Length :	mm 380
Width:	mm 150
Height :	mm 140
Strap quality	PP/PET
Sealing type	vibration
Welding efficiency	75-85% of breakage load of the used strap
Neck type	flat
Strap width	10-19 mm.
Strap thickness	0,5-1,05 mm.
Max. tension	LT 2000N./203 kg. - HT 3.200 N. / 325 kg.
Max. tension speed	LT 240 mm/sec. – HT 200 mm/sec.
Cycles per load	LT 140/240 – HT 100/200
Standard re-load time (optional)	80 min.
Fast re-load time	20 min.
Battery	Makita 12 VDC / 2.0 Ah – Ni-CD Makita 12 VDC / 2.6 Ah – Ni-MH (optional)
Charger	Makita 12 VDC
Weight (including battery)	LT 4,3 kg. – HT 4,6 kg.

### MODELS TABLE

Model	Code	Strap width
ST-BET 10-19 LT	119.990.810	10-19 mm.
ST-BET 10-19 HT	118.990.810	10-19 mm.

## 3. ACCESSORIES



**Only use original accessories listed in this manual.**

### BATTERIES

Spare batteries with the following codes are available:

Type NI-CD 12 VDC 2.0 Ah code 521002600

Type Ni-MH 12 VDC 2.6 Ah code 521002620

For information regarding the characteristics, the operating procedures and maintenance, please refer to the instructions attached to the product by the manufacturer.

### BATTERY CHARGER

The battery charger is not supplied with the machine, it must be specifically ordered referring to the following codes:

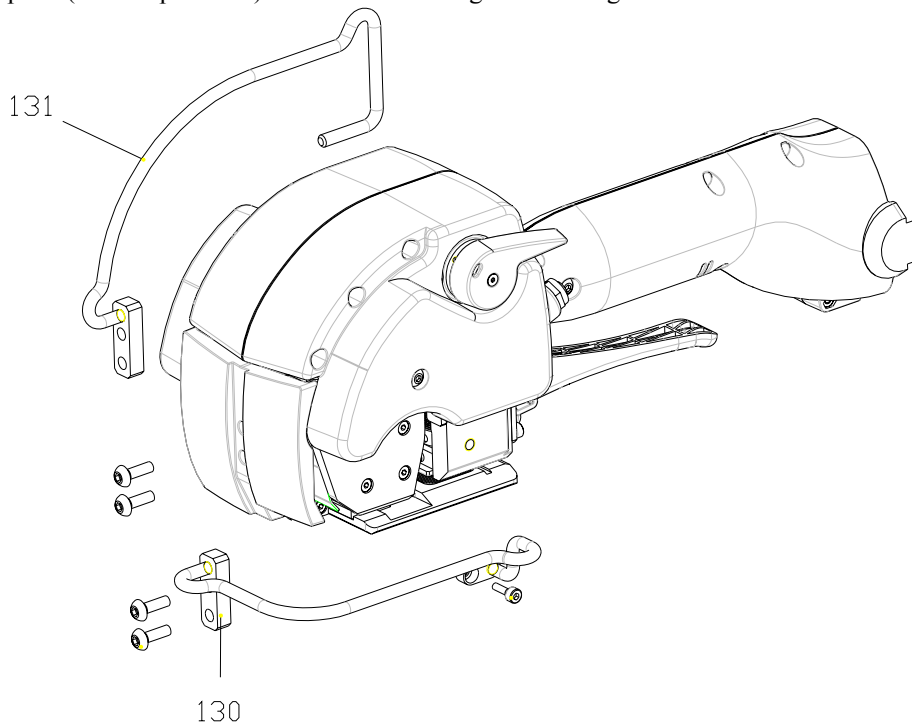
Normal battery charger code 521002610

Fast battery charger code 521002650

For information regarding the characteristics, the operating procedures and maintenance, please refer to the instructions attached to the product by the manufacturer.

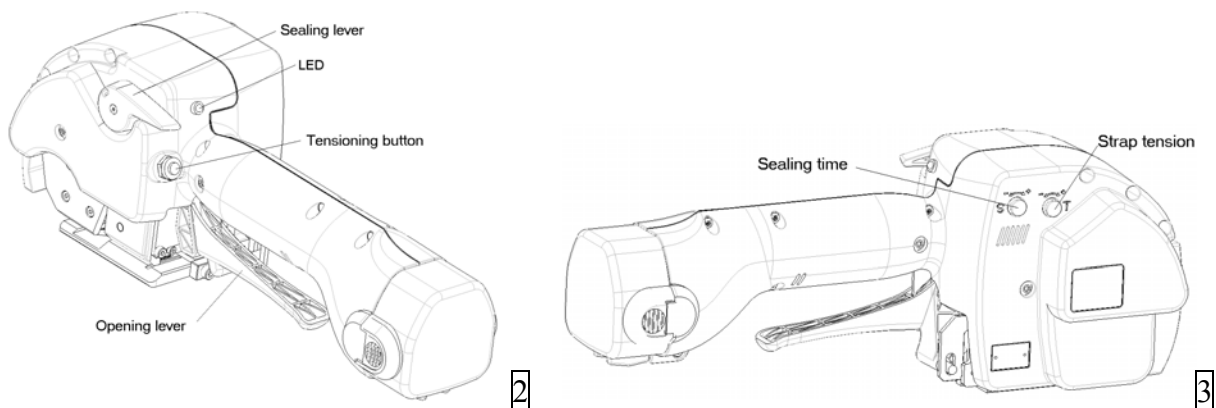
## BALANCER HOOK

An optional kit, code number 281.018.600 upper hook and code number 281.018.700 lateral hook, which includes all the necessary parts (refer to picture 1) is available to hang the machine to a balancer.



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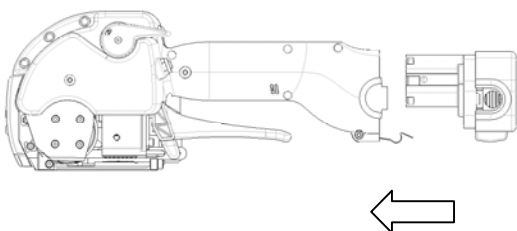
## 4. MACHINE COMPOSITION



## 5. MACHINE INSTALLATION

**The battery is supplied discharged.**

The battery must be positioned in its housing at the end of the handle until it fits perfectly in the blocks (picture 4 ).



**When the green indicating lamp is on, the machine is ready to be used.**

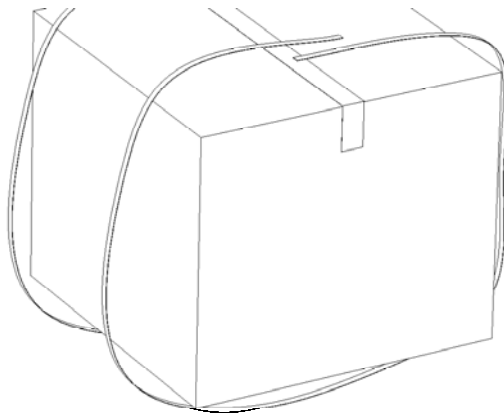


**Only use straps which are in perfect conditions.**

Indicating lamp	
Red	Battery down
Yellow	Strap cooling after welding.
Green	Machine ready to carry out strapping

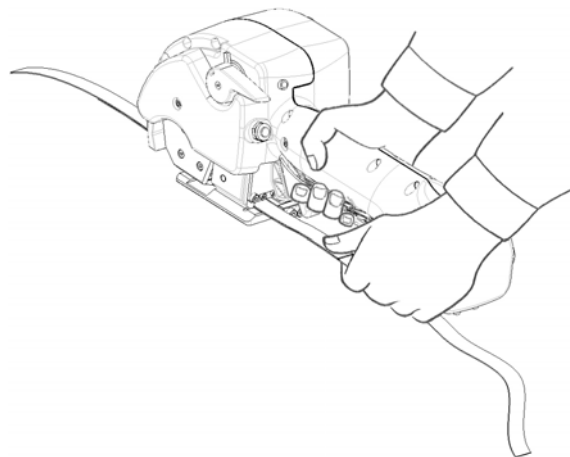
## 6. OPERATING INSTRUCTIONS

- Position the strap around the package (pict. 5 ).



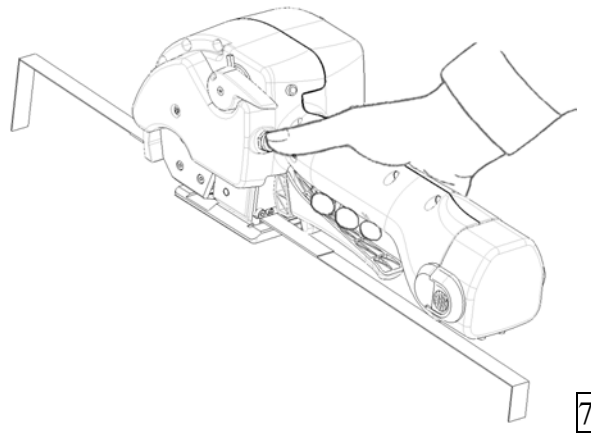
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- Press the release lever with the right hand to open the machine and position with the left hand two straps together, perfectly aligned. Release the lever. The guides will keep the straps aligned (pict . 6 ).



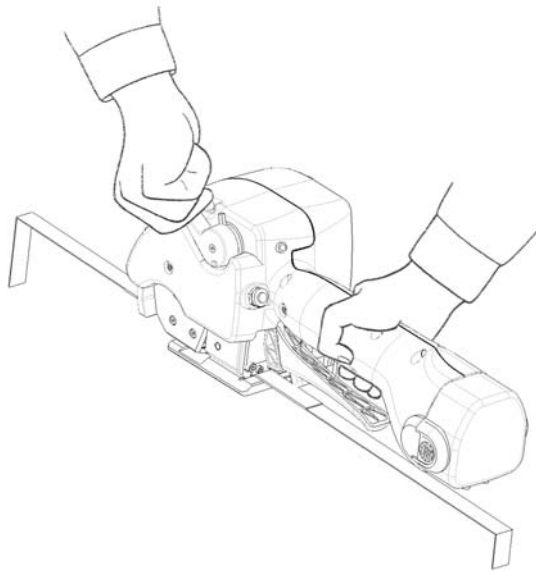
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- Verify that the signaling lamp is green or off, and press the button to tension the strap. The tensioning is completed when the preset tension is reached. When the operation is finished release the button (pict. 7).



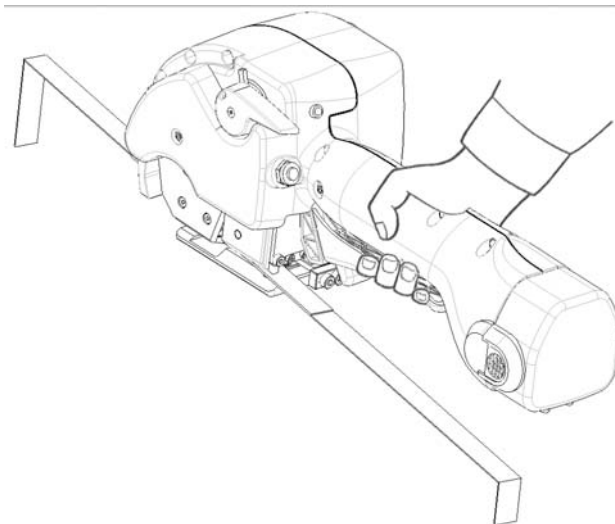
7

- Rotate the lever until it reaches the stop (pict. 8). The machine will carry out the welding, cutting and cooling cycle. When the **green** signaling lamp is on, take the lever to the initial position ( pict. 9 ).
- The orange signaling lamp indicates the welding cooling time. (The welding lever has to be kept pressed forward, until the orange lamp is off and the green one is on)



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- Press the release lever to open the machine and remove it from the strapping surface (pict. 9).



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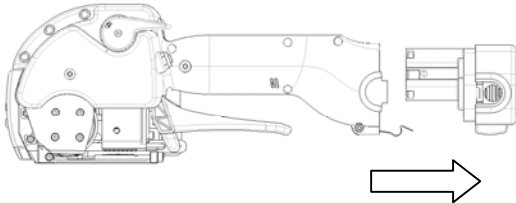




When the battery charge is not sufficient to correctly operate the machine, the red signaling lamp is on and every function is prevented.

To remove the battery, release the safety spring and press the release button; substitute the battery with a charged one.

**Any sealing not completed as a result of insufficient battery charge, is to be considered not adequate and must be repeated.**



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## 7. CHECKING THE WELDING

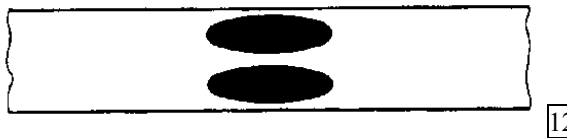
A visual inspection of the sealing area is sufficient to check the sealing quality.

- **Correct sealing:** the sealing must be welded for the entire width of the strap and for a length of approximately 25 mm. Small quantities of plastic material may escape from the welding area (pict. 11 ).



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- **Short welding time:** the plastic straps are not welded for their entire width. The sealing is not sufficient and the sealing operation must be repeated increasing the welding time (pict. 12 ).



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- **Long welding time:** the material is overheated and escapes from the sides of the welding area. The sealing is not sufficient and the sealing operation must be repeated reducing the welding time (pict. 13 ).



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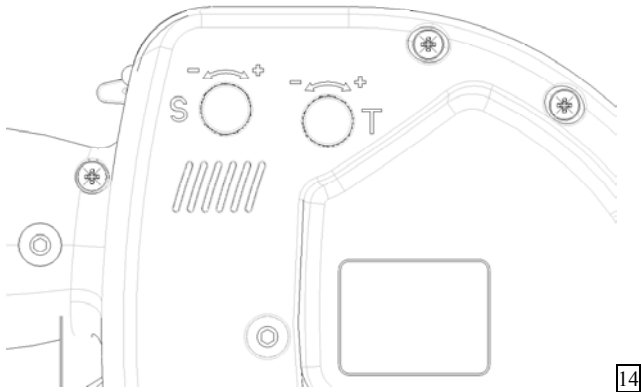
### ADJUSTMENT OF TENSION

To increase the tension strength use the small handle marked with a **T** until it catches the potentiometer and rotate it clockwise.

To reduce the tension rotate it anticlockwise (pict. 14 )

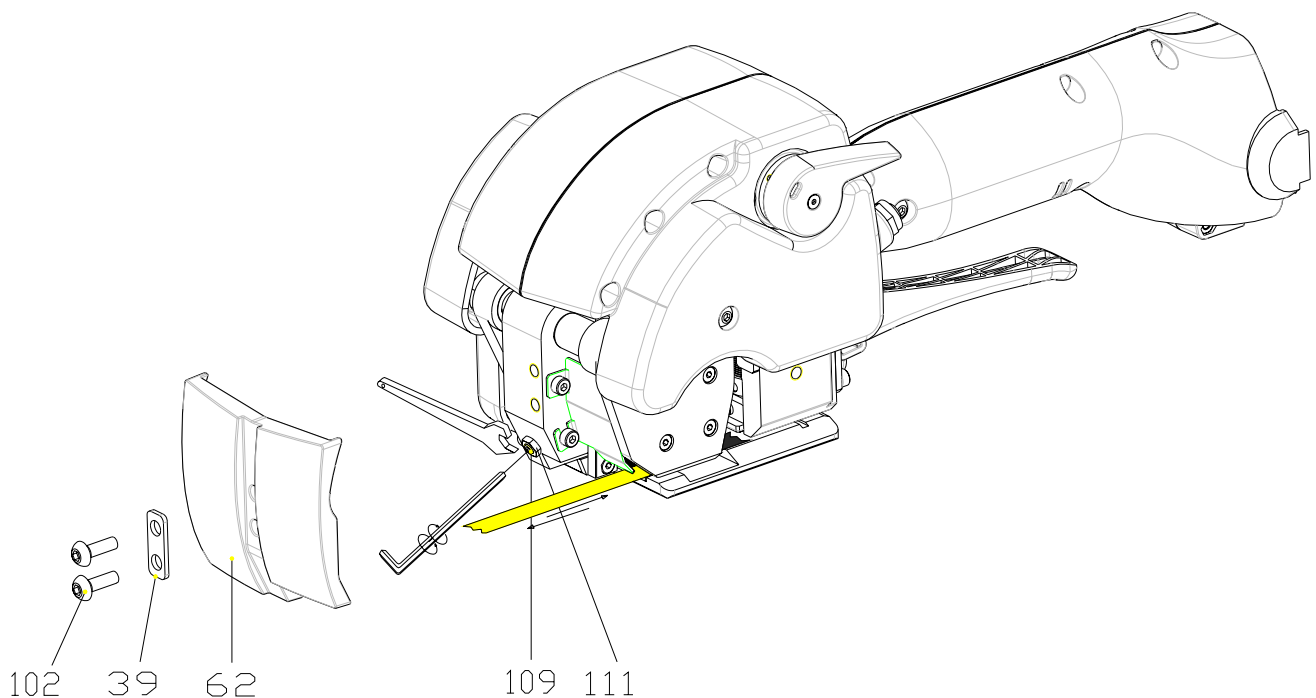
### ADJUSTMENT OF WELDING TIME

To increase the welding time rotate the small handle marked with an **S** clockwise. To reduce the welding time rotate it anticlockwise (pict. 14 ).



### ADJUSTMENT FEED-WHEEL HEIGHT

- 1) Take out the screw pos. 102, the plate pos. 39 and the protection pos. 62
- 2) Release the nut pos. 111
- 3a) If you turn the screw without head pos. 109 anticlockwise, keeping the nut pos. 111 blocked, the feed-wheel will let down, so you will have a major pressure on the strap.
- 3b) If you turn the screw without head pos. 109 clockwise, keeping the nut pos. 111 blocked, the feed-wheel will lift up, so you will reduce pressure on the strap.
- 4) When you will have reached the satisfactory height, you have to squeeze the nut pos. 111, keeping blocked the screw without head pos. 1109.
- 5) Re-assembly the parts 62-39-102



## 8. MAINTENANCE AND REPAIR



Maintenance and repairs must be carried out only by trained personnel. If necessary send the strapping tool, using original packaging, to the nearest service center.

### CLEANING



**NOTE: all cleaning operations must be carried out with the battery disconnected from the machine.**

Use compressed air to eliminate possible residuals of strap from the roller and from the welding group. It is not necessary to open the machine.

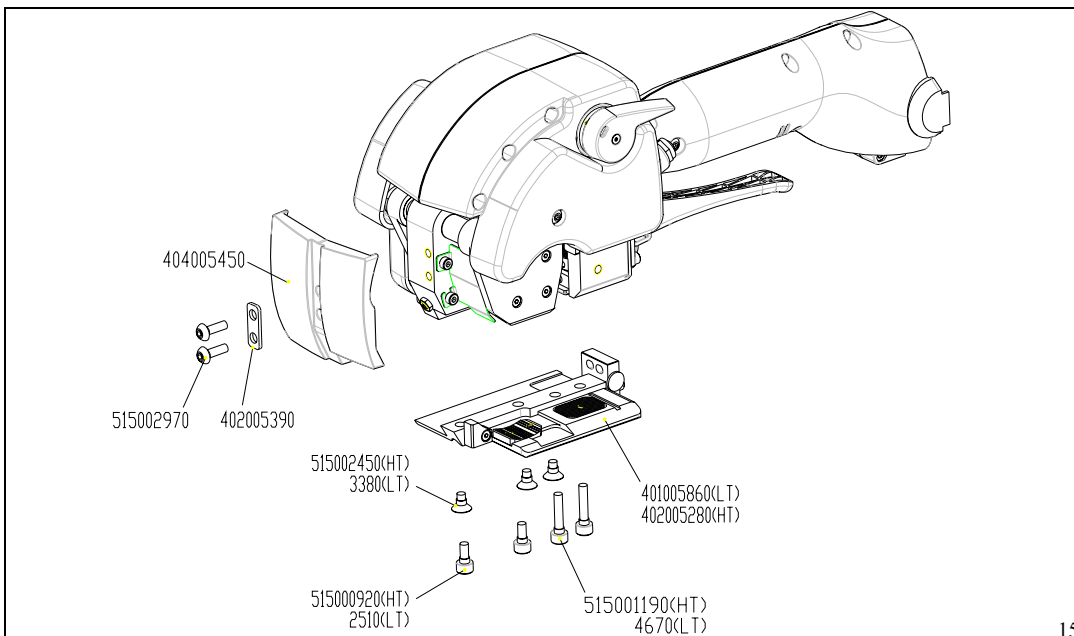
### SUBSTITUTION OF WORN PARTS



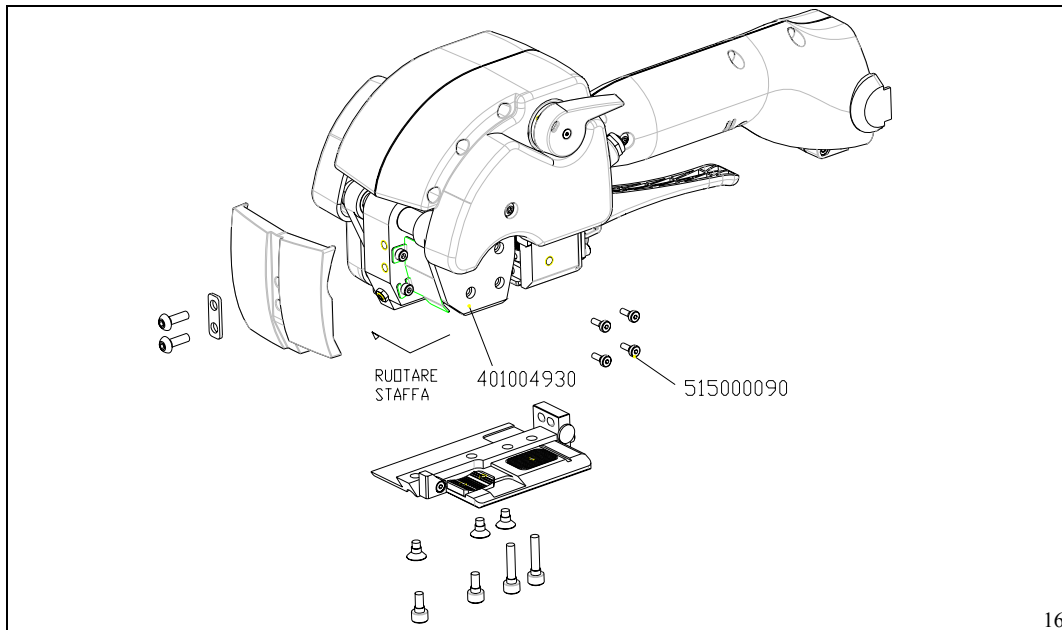
**NOTE: all substitutions must be carried out with the battery disconnected from the machine**

#### Tensioning roller

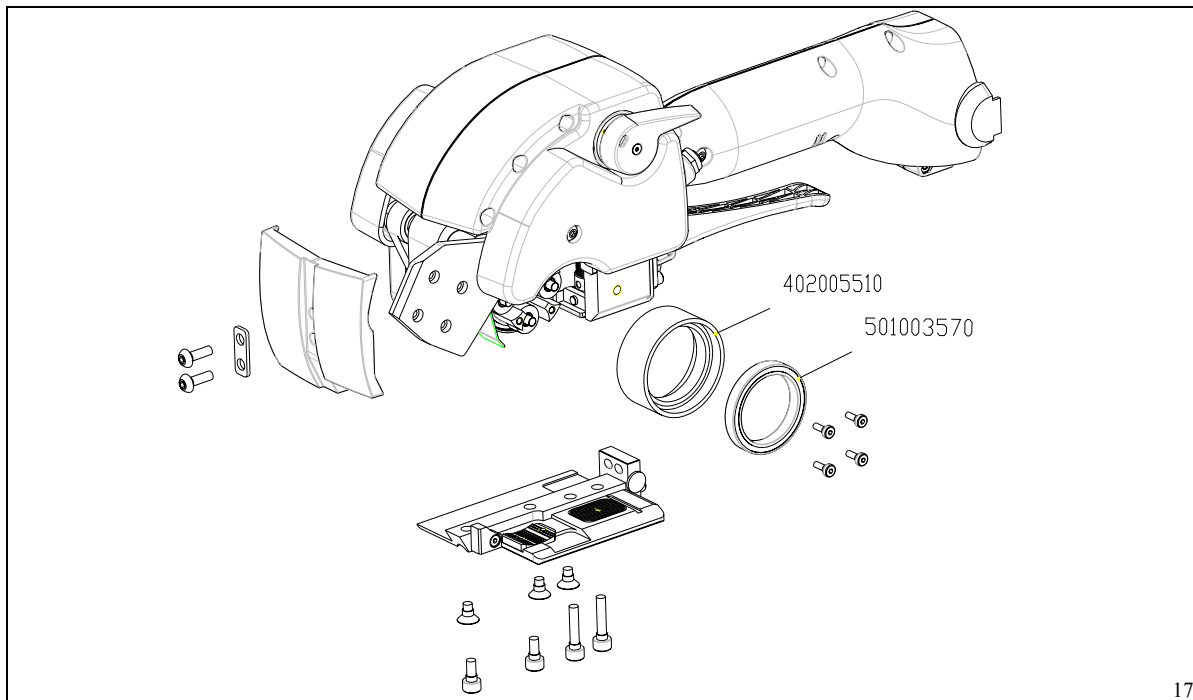
- Unfasten the screws from the foot of the machine and remove the foot (401005860LT-402005280HT)
- Unfasten the screws from the bumper and remove the plate 402005390 and the bumper 404005450.



- Unfasten the 4 screws and rotate the bracket (401004930) clockwise until the frontal section of the roller is completely free.



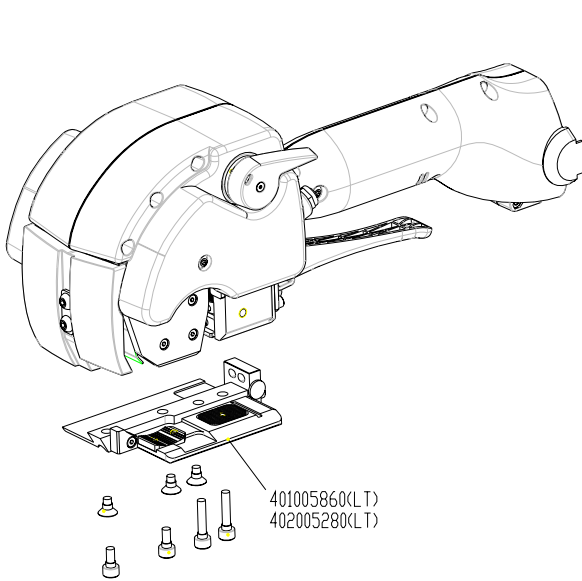
- Remove bearing 501003570 and roller 402005510. It is necessary to grease the geared part before substituting the roller.



To reassemble the machine repeat the operations described in reverse order.

### Substitution of cutting blade

- Unfasten screws, and remove the foot of the machine.
- Rotate the welding lever to lower the vibrating sliding block and the blade.



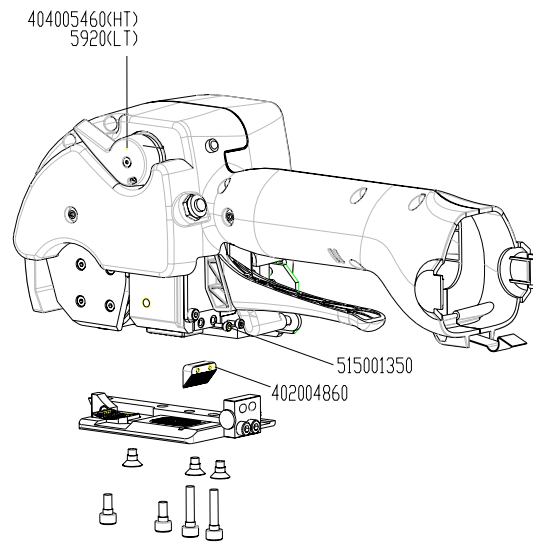
18

- Unfasten screws 515001350 and substitute blade 40200860 with a new one.

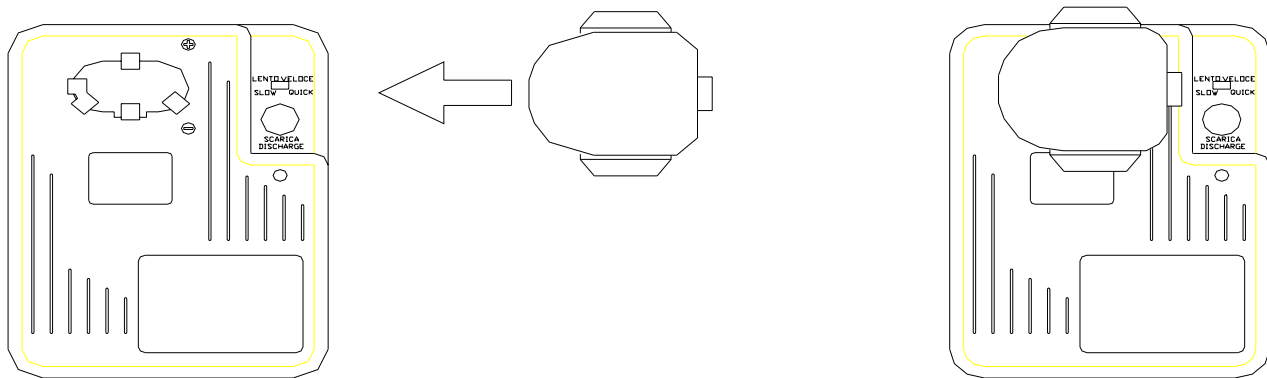
To reassemble the machine repeat the operations described in reverse order.

### TO CHARGE THE BATTERY

To charge the battery, you must pay attention to insert it in the right position in the battery charger housing. You have to check the polarity inserting the battery in the right way.



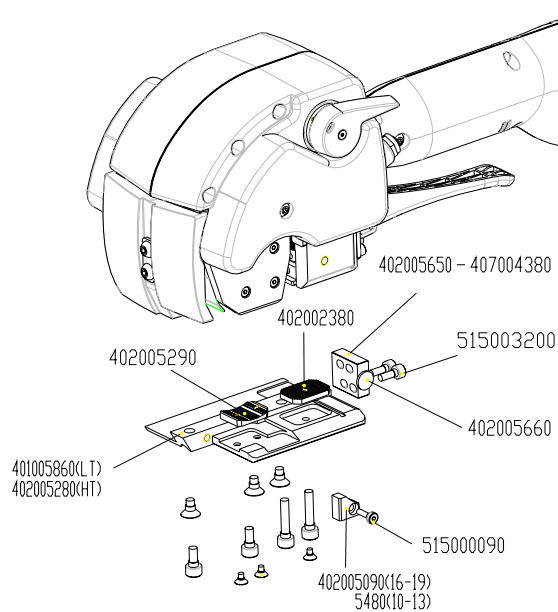
19



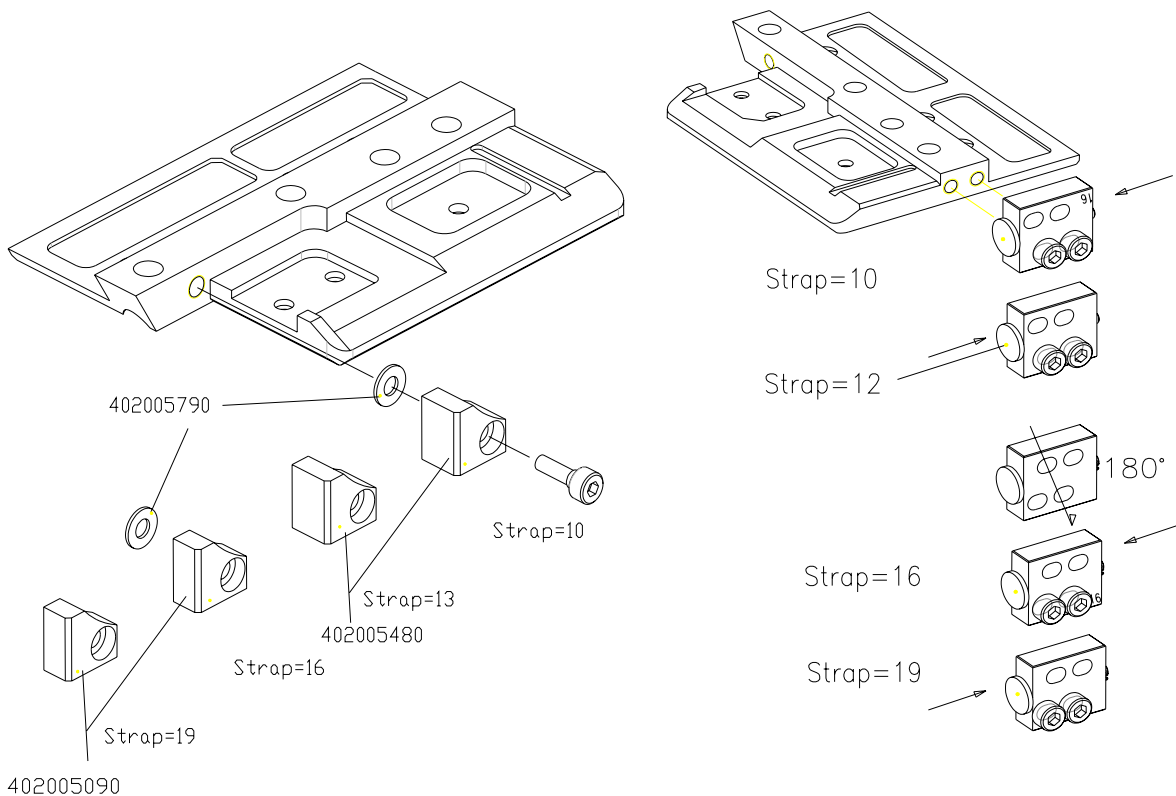
**ATTENTION: Don't invert the polarity (inserting the battery in the wrong way you must apply a certain force, pay attention and don't do it).**

## Substitution of small plates and strap guide blocks

- Remove the foot from the machine body as previously described in the “Substitution of cutting blade” section.
  - To substitute the roller small plate, unfasten the two screws and fit in a new plate (402005290).
  - To substitute the vibrating sliding block small plate, unfasten screw and fit in a new plate (402002380).
  - To substitute the front strap guide unfasten screw and fit in a new strap guide (402005090; 40205480).
  - For size 10/16 add the washer.
  - To fit the back guide-strap, unscrew the screws and rotate or move the guide-strap 180° (402005650).
- See pict. 21



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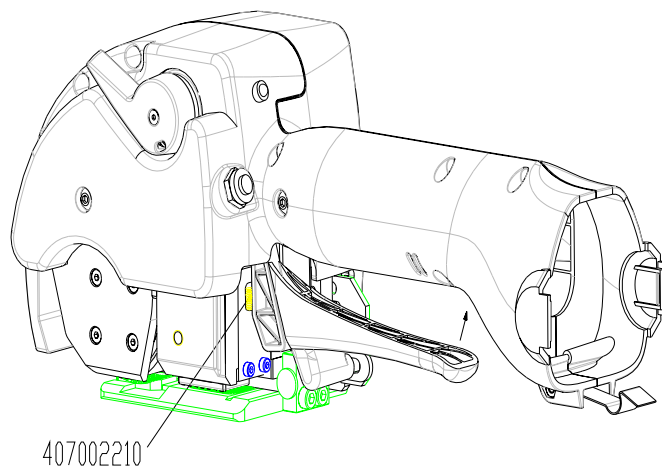
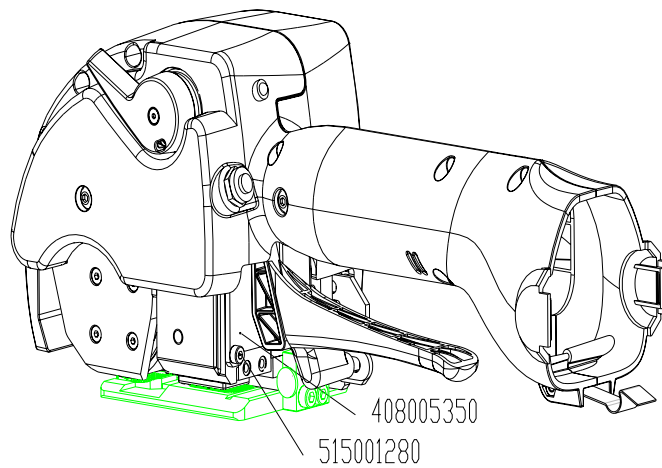


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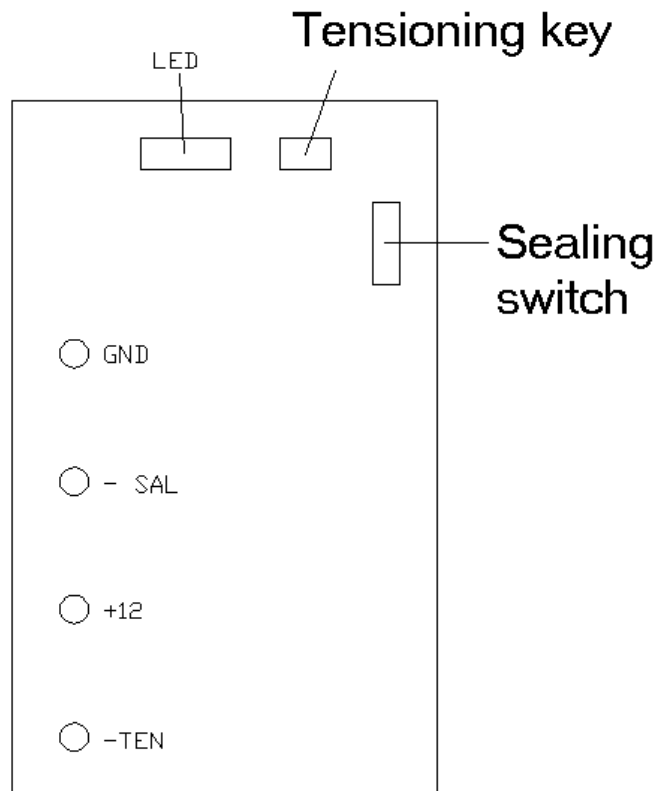
## REPLACEMENT CUTTER SPRING

- 1) Unscrew the screw and take out the plate 408005350 to access to the spring placed in the cutter rack.
- 2) Move up the opening lever in the opening position.
- 3) With a nipper, take out the spring 407002210 and change it with a new one (please grease the new spring).
- 4) Replace in their position the plate 408005350 and the screws 515001280.

- The spring code. 407002210 is standard
- The spring code. 407004380 (soft ) is indicate for Polypropene strap or for PET strap thickness 0.5 mm.



## CONTROL CARD



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## 9. GUARANTEE

Every machine supplied by our company is guaranteed for a period of 12 months starting from the date of dispatch stated on the accompanying note.

During the whole guarantee period, our company will replace free of charge, all the parts proved to be defective by reason of faulty workmanship or materials, and which may compromise the normal machine usage. The decision of our service technicians on all the matters relating to complaints shall be final. Any control of defects and their origin will be carried out in our workshop at the following address:

Via della Repubblica, 44 – 20020 SOLARO (Mi) Italia

Parts to be repaired or replaced have to be forwarded to our address at the care, charge and risk of the customer; the return forwarding will take place at the same conditions. We suggest to use the original packaging for dispatch.

The guarantee does not cover the equipment whenever our technicians should find that the defects are due to lack of maintenance and/or misuse non in compliance with our instructions.

**Our guarantee shall not apply to all parts subject to normal usage wear (refer to basic list).**

NOTE: Columbia will not undertake any intervention on machines whose serial number, engraved during manufacture and quoted on the sales document provided, has been intentionally modified or removed.



**CE DI DICHIARAZIONE CONFORMITA'  
CE CONFORMITY CERTIFICATE  
CERTIFICATION DE CONFORMITÉ**

LA DITTA  
THE COMPANY  
LA SOCIÉTÉ

**COLUMBIA srl**

AI SENSI DELLE DIRETTIVE **CEE 98/37** e **CEE 89/336**, dichiara sotto la propria responsabilità che la macchina:  
ACCORDING TO DIRECTIVES **CEE 98/37** and **CEE 89/336**, declares under its responsibility that appliance :  
AUX TERMES DE LES DIRECTIVES **CEE 98/37** et **CEE 89/336**, déclare, sous sa propre responsabilité, que la:

**REGGIATRICE ELETTRICA A BATTERIA  
BATTERY STRAPPING TOOL  
OUTIL A BATERIE**

MODELLO - MODEL - MODELE:.....

NUMERO MATRICOLA - SERIAL NUMBER - NO. DE SERIE: .....

ANNO DI COSTRUZIONE - YEAR OF PRODUCTION - ANNEE DE CONSTRUCTION:.....

e' conforme ai requisiti essenziali di sicurezza e di tutela della salute richiesti dalle direttive **CEE 98/37** e **CEE 89/336** e loro successive modificazioni, nonché ai requisiti di cui alle seguenti direttive:  
conforms to the essential safety requirements and accident prevention, as requested by **CEE 98/37** and **CEE 89/336** Directives and further modifications, as well as to standards given by the following directives :  
est conforme aux dispositions essentielles de sécurité et de prévention des accidents prévues par les directives **CEE 98/37** et **CEE 89/336** et successives modifications, autant que aux conditions dont les directives suivantes:

**EN 292-1, EN 292-2, EN 349, EN 1050, EN 50081-2, EN 50082-2, EN 55022, EN 50081-1**

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