



THREE-PHASE CUTTING UNIT

GRT-MINIVM



USE AND MAINTENANCE INSTRUCTIONS

Please read this manual carefully before using the device and keep it safe with the product.

TRANSLATION OF ORIGINAL AND COMPLETE INSTRUCTIONS

MEANING OF WARNING AND DANGER SYMBOLS

Safety instructions, which must be followed to prevent physical harm, are identified by the following symbols:

CAUTION HAZARD



Indicates operations that can cause generic injuries or trigger malfunctions or damage to the equipment and/or materials if not carried out correctly; particular attention and adequate preparation are therefore required.

CAUTION ELECTRICAL HAZARD



Indicates operations that can cause electrical injuries or trigger malfunctions or damage to the equipment and/or materials if not carried out correctly; particular attention and adequate preparation are therefore required.

DO NOT



Indicates PROHIBITED operations.

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EC - DECLARATION OF CONFORMITY

PRODUCT MANUFACTURED BY:
RASOR ELETTROMECCANICA SRL

Via Giannetto Mattei, 41/43 - 20044 Arese- (MI) - ITALY

Model: GRT-MINIVM

Rasor Elettromeccanica S.r.l. declares, under its own responsibility, that the aforementioned products, to which this declaration refers, comply with the Directives on the approximation of the laws of EEC member states relating to:

- Machinery 2006/42/EC;
- Electromagnetic Compatibility 2014/30/EU
- RoHS Directive 2011/65/EU
- CEI EN 62841-1 standard
- IEC 62841-2-2 standard

Milan, 03/04/2025.


Mr Lorenzo Spinelli
CEO

GENERAL INFORMATION

1 GENERAL INFORMATION

1.1 Important safety information

1.1.1 General warnings

- The product user must store the following instructions carefully and follow them closely, as improper use of the device can harm people or damage the product or property, exempting **Rasor Elettromeccanica S.r.l.** from any liability.
- The following instructions must be kept with the product to which they refer and be stored in a place where users can access and view them.
- Reproduction, in whole or in part, of the illustrations or text given in these instructions is prohibited. **Rasor Elettromeccanica S.r.l.** reserves the right to amend the documentation without prior notice.



CAUTION HAZARD

The product must be started and used solely in compliance with all safety guidelines given in these instructions.

Failure to follow these instructions, or any product alteration not carried out by our authorised technicians, will void the warranty and relieve the manufacturer of any liability arising from harm to people, damage to property or to the product itself.



CAUTION HAZARD

Check that electrical and mechanical parts are in excellent working order before starting the device.

Use only original spare parts supplied by Rasor Elettromeccanica S.r.l.

Any required operation (maintenance or repair) must be carried out by qualified personnel after having cut the power supply, thus preventing accidental start-up which could cause harm to people or property. Switching the product off is not sufficient.

Users must follow the accident-prevention regulations in force in their country and must use adequate protection when using and maintaining the product.



CAUTION HAZARD

It is particularly important to keep the product out of reach of children and pets.

The product must be used indoors, away from heat, wet and humidity.

The product must be cleaned solely with a dry cloth, after having disconnected it from the power source.

During normal work operations, do not wear loose-fitting clothing or accessories that may be a source of risk.

Metal mesh safety gloves and safety goggles must be worn during the normal work cycle.



CAUTION HAZARD

The cutting unit also works without a safety guard.

This guard must NEVER be removed.

Metal parts may be hot after use.



CAUTION HAZARD

Always pay attention to the position of the electrical cable before use as it may be cut or damaged by the blade.



CAUTION HAZARD

The **GRT-MINIVM** cutting unit may be fitted to O.E.M. machinery provided its original structure is not altered in any way. Any modifications must be certified by Rasor Elettromeccanica S.r.l.

1.2 Prohibitions

DO NOT



- The product and its electrical or mechanical connections **MUST NOT** be tampered with or modified.
- It is **FORBIDDEN** to remove parts of the product.
- It is **FORBIDDEN** to use the product in areas at risk of explosion and/or fire.

1.3 Handling and storage

The product must be stored in its original packaging and in a dry, covered location away from heat sources, dirt and humidity. The product can be stored between 0° and 55°C.

1.4 Limits of use

All Rasor Elettromeccanica products are tested before being shipped to the customer to guarantee safe and long-lasting operation.

The product must be used solely for its intended purpose. Any other use is forbidden and constitutes a risk.

The product operates at a maximum temperature of 55°C.

1.5 Technical specifications

Model	GRT-MINIVM
Blade diameter	86 mm, with carbide fixed blade
Blade supplied	86THSS, 8-sided, HSS Steel
Blade speed	550 r.p.m.
Cutting capacity	25 mm
Motor	3-phase asynchronous 380/400 V, 50 Hz
Power	50 W
Input	0.3 A
Protection	IP65 – CL F
Net weight	2650 g.
Total weight (with packaging)	4750 g.
Power cable length	1,5 m (no plug) flame-retardant
Sound pressure	72 dB
Minimum brightness for use	200 LUX
Start-up vibration	<2.5 m/s ²
Usage temperature	0 - 55° C
Usage humidity	10%-95% without condensation

1.6 Noise

The maximum sound pressure level emitted is approximately 60 dB (A). Airborne noise was detected in compliance with EN ISO 15744:2008. The noise levels emitted by the device at various detection distances (with no soundwave filtration system) vary by a few db (A).

1.7 Vibrations

The **GRT-MINIVM** cutting unit complies with Leg. Dec. 187 of 19/8/2005, which implements European Directive 2002/44/EC on the risks arising from mechanical vibration.

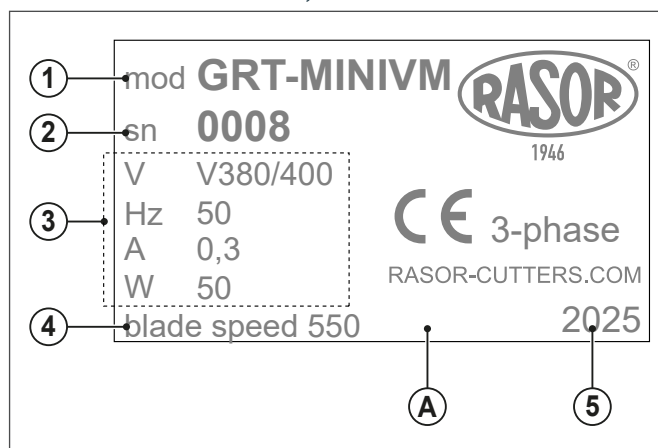
1.8 Limitation of liability

The manufacturer declines all liability for any damage and malfunctions arising from:

- failure to follow the instructions given in this manual
- repairs not carried out in a workmanlike manner (the use of non-original spare parts and accessories can adversely affect product operation)
- damage caused by arbitrary changes by the user or by unauthorised interventions
- failure to carry out maintenance as indicated
- power supply faults
- damage or defects caused by improper use
- use by untrained or unauthorised personnel
- damage or defects caused by failure to follow use and maintenance instructions.

1.9 Identification data

GRT-MINIVM. Ensure the nameplate has been applied to the product; if not, inform the manufacturer and/or retailer immediately. Devices without the laser nameplate must not be used, or the manufacturer's liability will be voided.

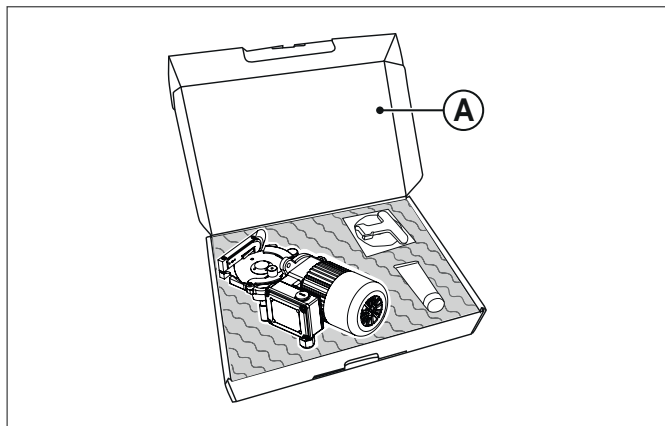


- 1 Model
- 2 Serial number
- 3 Electrical data
- 4 Blade RPM
- 5 Year of manufacture

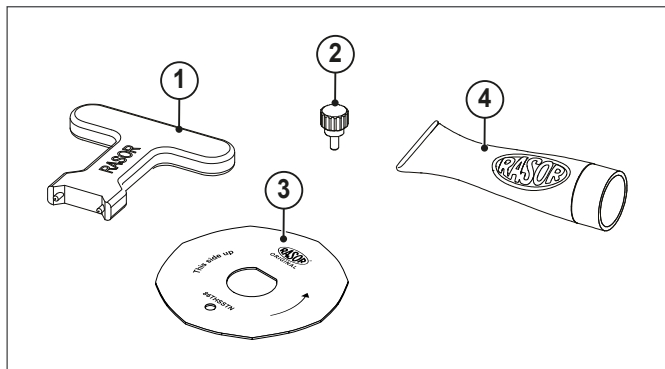
GENERAL INFORMATION

1.10 Package contents

The **GRT-MINIVM** is delivered with its accessories in a cardboard box (A) with foam packaging.
The product code and serial number are specified on the outer packaging.



The following accessories are also included:



- 1 Butterfly key for removing/fitting blade
- 2 Blade assembly/disassembly punch
- 3 8-sided HSS steel blade
- 4 Tube of lubricating grease

1.11 Description of the device

The **GRT-MINIVM** cutting unit is designed to be fitted onto automatic machinery (e.g. spreaders, computerised cutters, etc.) using dedicated mounts.

It enables continuous cutting, as well as cutting at variable heights if assembled in series.

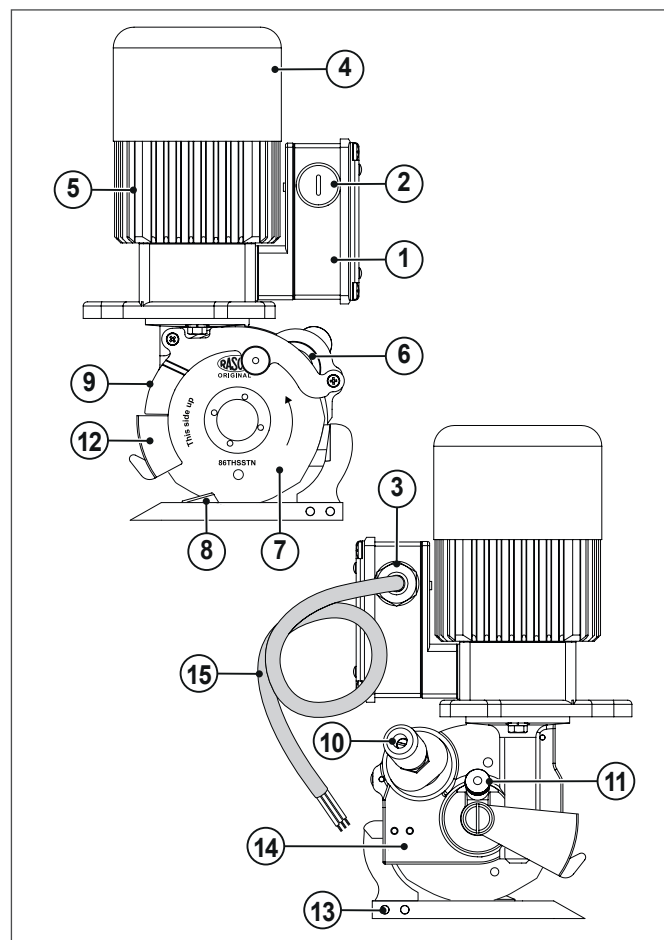
It is particularly recommended for cross-cuts.

The **GRT-MINIVM** cutting unit is designed, built and assembled to cut fabrics and all kinds of materials – **EXCEPT FOR** metals, plastic and wood – using a rotary blade.

The equipment must not be used:

- in environments with explosive atmospheres;
- in the presence of fine dust or corrosive gases;
- on wet or damp materials;
- for cutting plastic, metal or wood materials.

Any use of the GRT-MINIVM cutting unit for purposes other than those indicated above is prohibited and constitutes a hazard.



- | | |
|--------------------------|--|
| 1 Junction box | 9 Rear blade protection case (fixed) |
| 2 Secondary cable outlet | 10 Sharpening button |
| 3 Cable gland | 11 Greaser |
| 4 Motor cover | 12 Front blade protection case (movable) |
| 5 Motor casing | 13 Base |
| 6 Sharpener | 14 Motor support |
| 7 Polygonal blade | 15 Flame-retardant power cable |
| 8 Carbide | |

2 CONNECTION

CAUTION

RASOR® s.r.l. shall not be held liable for any harm to persons or damage to property arising from incorrect installation, or failure to follow the instructions in this manual or the safety regulations in force in the country of use.

2.1 Electrical connection

CAUTION

Install a "life-saving" circuit breaker upstream of the cutting unit and check that the earth circuit is effective. The unit must be powered by a line protected against overcurrent by means of a circuit breaker (magnetothermal) or delayed fuses, suitably sized. The tripping current of the protective devices must be as low as possible taking into account the maximum input of the unit (see rating plate data).

CAUTION

Provide a power disconnect switch on the power supply line so that the unit can be switched off if necessary. The unit is not supplied with a start button/switch.

CAUTION

The earthing connection is absolutely compulsory, as is the compliance of the installation with the regulations in force in the country of installation. Check the power voltage (see rating plate); it must match that from the local power grid.

CAUTION

Connections must be made by a specialised and authorised technician, as laid down in standard CEI 11-27/1.

CAUTION

Check the unit is not powered before connecting the machinery to the power supply.

The **GRT-MINIVM** cutting unit is supplied with an electrical cable already wired to the junction box on the side of the motor and earthed (yellow-green wire). The cable can also be connected to the opposite side.

The user must connect the cutting unit to the mains power supply (the cable complies with standard CEI 20-22 II and is flame-retardant).

Check the connection by operating the unit and check the direction of rotation of the blade, changing the three-phase wiring if necessary.

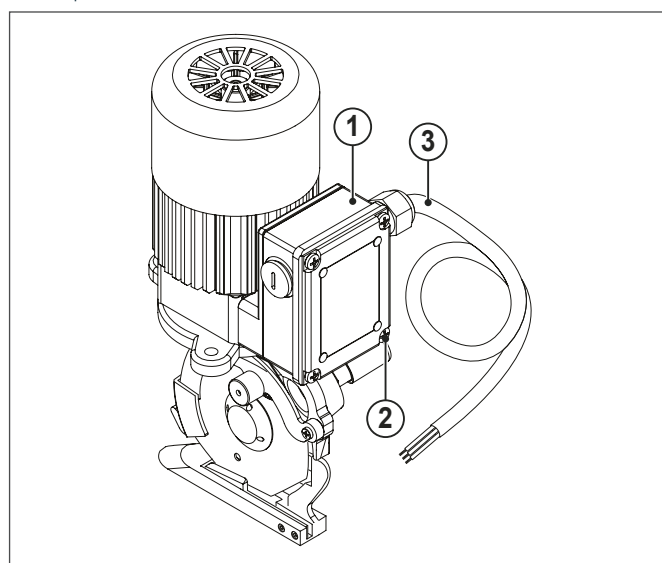
CAUTION

Do not "splice" the cable provided. If a longer cable is required, replace the one provided. Use IMQ approved cables and safety sockets. The minimum cross-section of the connecting wires must be established by the specialised and authorised technician.

2.2 Replacing the cable

Proceed as follows if the cable provided needs replacing:

- Remove the cover (1) by turning the 4 cross screws (2);
- Replace the cable provided with the new cable, adjusting the phases of the terminal board.



Terminals can be connected internally for star and delta configurations.

INSTALLATION ON OEM MACHINERY

3 INSTALLATION

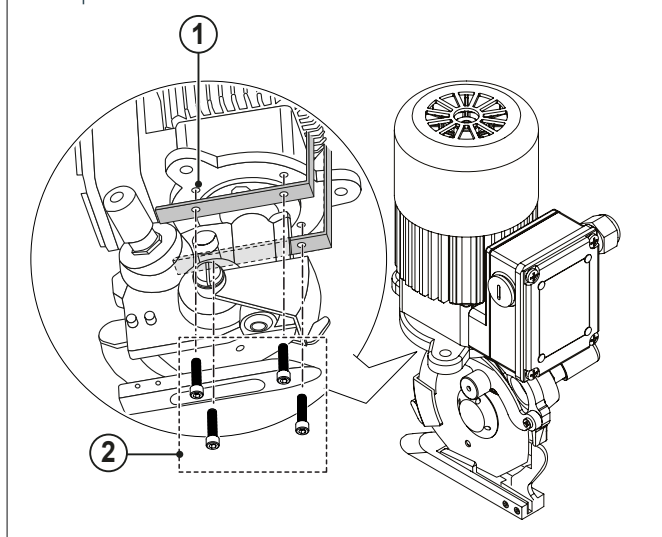
The cutting unit can be installed in any position: angled, vertical, upside down, sideways.
The aluminium base does not have to touch the work surface.

CAUTION

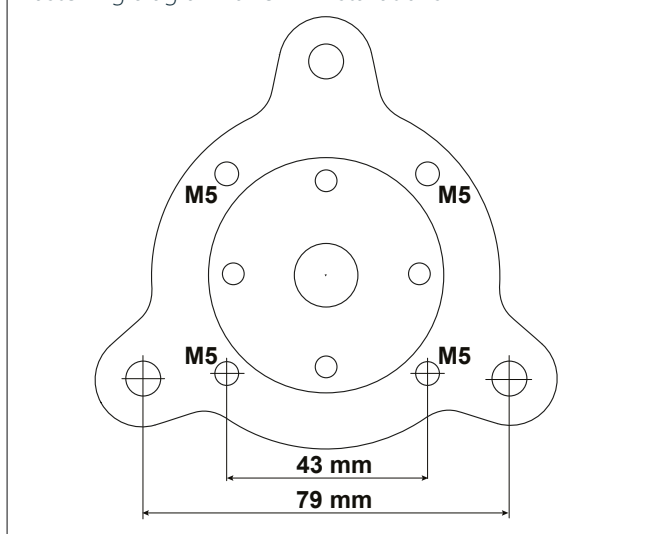
Never use the two bolts joining the motor to the cutting part to secure the **GRT-MINIVM** cutting unit.
This could break the motor shaft. In that event the warranty will not be recognised.

The **GRT-MINIVM** cutting unit must be fastened using the 4 holes on the motor flange (1) with 5MA screws (2) (not provided) or on the 3 lobes with a through hole.

Example of OEM installation



Fastening diagram for OEM installations



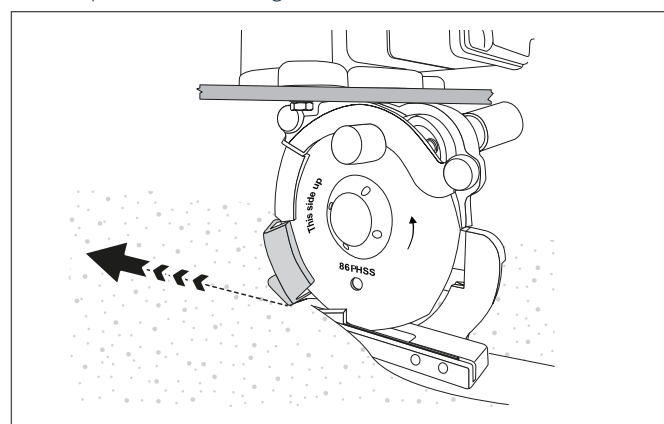
4 USE

4.1 Cutting mode

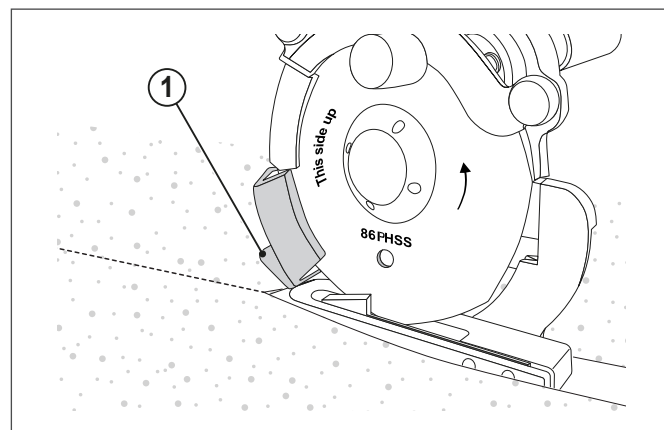
The **GRT-MINIVM** cutting unit can work either stationary (moving the material) or move while keeping the material stationary.

Proceed as follows to use the cutting unit:

- Power the cutting unit;
- Set out the material on the OEM;
- Position the material above the cutting base;
- Start the cutting unit;
- Start the mechanism in the direction of the required cut, while keeping the material taut to avoid it curling up in the front part of the cutting unit.



To cut neatly along a pre-marked line, we recommend using the tip (1) as a guide.



WARNINGS

Apply pressure uniformly to the cutting unit.

5 MAINTENANCE

5.1 Blade sharpening

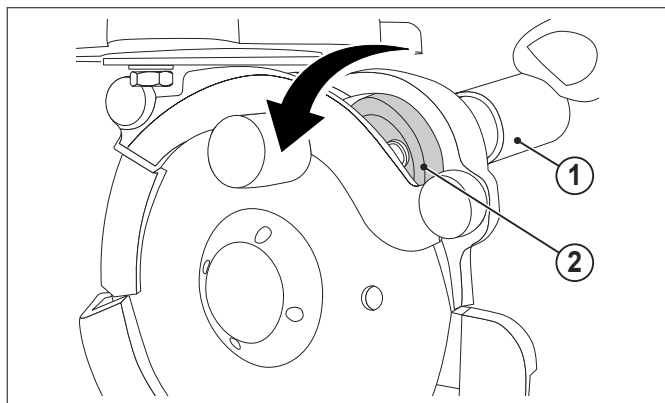
After several hours of continuous use, or if the cutting unit is no longer cutting as it should, sharpen the blade.

To sharpen the blade, start the cutter then press and hold the sharpening button (1) for 3-4 seconds.

Repeat 2-3 times.

If sharpening the blade is not effective, check the emery wheel (2) for wear.

If the emery wheel (2) is excessively worn or dirty, replace the wheel. To do this, first remove the blade using the appropriate tool.

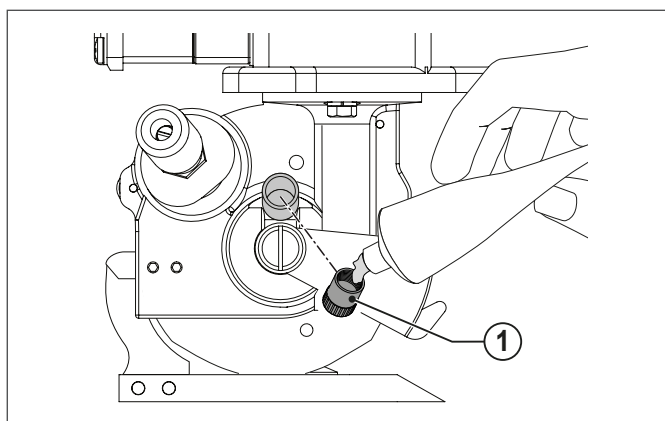


5.2 Lubrication

Lubricate the pair of gears every 2-3 days of use to keep them in good condition and reduce wear.

To do this, remove the protective cap (1) on the cutting unit motor support and fill with the grease provided.

Screw the cap (1) back into place.



CAUTION

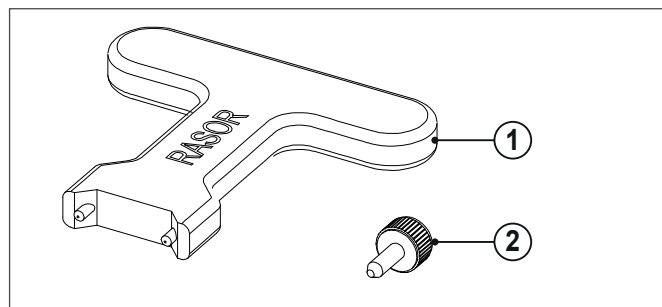


The blade must never be dirty with grease or oil, as this may damage the material being cut.

5.3 Replacing the blade

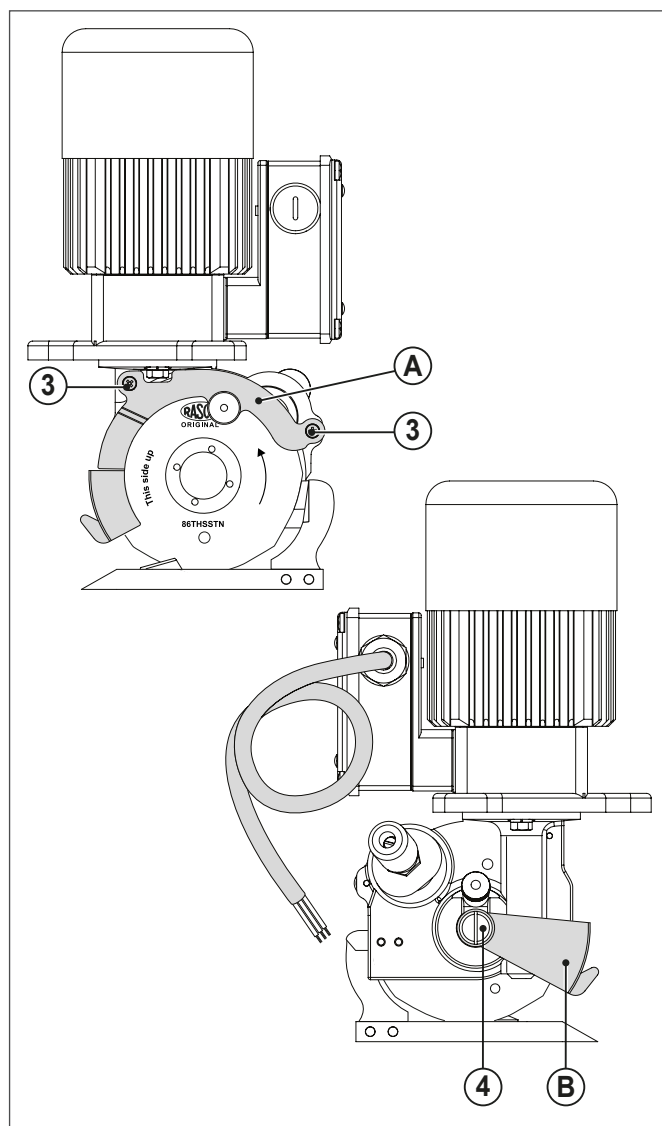
If the blade no longer cuts the material (even after repeated sharpening), replace it.

To do this you need the butterfly key (1) and blade-locking punch (2).



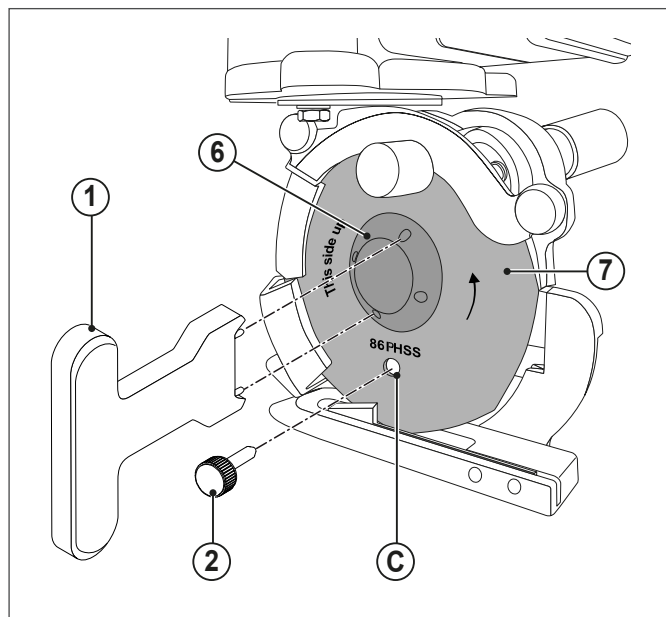
To replace the blade:

- 1** Disconnect the machine from the power supply;
- 2** Wear protective gloves in accordance with Italian Legislative Decree 81/08;
- 3** Unscrew the screws (3) and remove the rear protection (A);
- 4** Unscrew the screw (4) and remove the blade protection case (B);

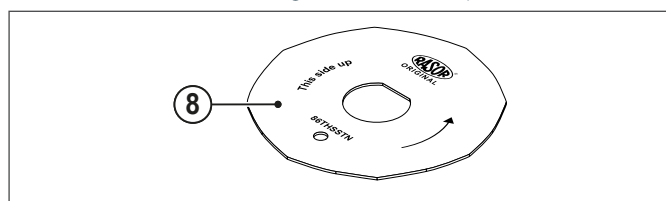


MAINTENANCE

- 5 Insert the punch (2) in the hole (C) to lock the blade, turning it until the holes line up;
- 6 Position the butterfly key (1) on the blade fixed ring nut (6), unscrew the ring nut and remove the blade (7);



- 7 Replace the worn blade with a new one (8) of the same size and with the same specifications. Make sure the blade is centred on the gear in the correct position. Install the blade with the wording visible to the operator;



- 8 Refit all parts and test both cutting and sharpening.

5.3.1 Available blades

CODE	DESCRIPTION
86CHSS	Ø 86 mm HSS circular steel blade
86PHSS	5-sided Ø 86 mm HSS Steel blade
86THSS	8-sided Ø 86 mm HSS Steel blade
86PHSSTF	5-sided Ø 86 mm Teflon coated HSS Steel blade*
86THSSTF	8-sided Ø 86 mm Teflon coated HSS Steel blade*
86THSSTN	8-sided Ø 86 mm Titanium-coated HSS Steel blade
86TMD	8-sided Ø 86 mm solid carbide blade (Widia*)

Technical data are indicative and subject to change without notice.

5.4 Problems and possible causes/solutions

ANOMALY	SOLUTION
The textile is not cut or gets stuck between the blade and the fixed blade	Check that the blade and fixed blade are touching and that there is no residual material on the fixed blade
	Check that the fixed blade is integral
	Check the type of textile
	Sharpen the blade
	Check the textile thickness
	Check compatibility between the blade and the fabric
	Check the motor turns correctly
The cutting unit is noisy	Reduce the speed
	Dismantle the blade and remove residual material
	Check the gear pair for wear
The cutting unit is slow to start, works on and off, or does not start	Check the electrical connections on the O.E.M.
	Check the electrical connections
	Check the power cable



WARNINGS

Contact the retailer for problems not included in this table

6 SPARE PARTS

WARNINGS



Use only original spare parts to replace faulty components. The warranty will be voided with immediate effect if non-original spare parts are installed.

When requesting spare parts, always state the exact model name and the device's serial number.

DO NOT



Using non-original spare parts can cause anomalous operation and harm people or property.

The warranty will be voided if non-original spare parts are installed.

WARNINGS



For an exploded diagram of spare parts with item codes, visit www.rasor-cutters.com

7 DISPOSAL

7.1 Disposal at end of life



CAUTION

Some parts of the product may contain polluting or hazardous substances that, if leaked, could harm the environment and human health.

Separate collection enables the decommissioned equipment to be properly recycled, treated and disposed of whilst preventing harm to the environment and to health and facilitating the reuse and/or recycling of the device's component materials.



CAUTION

Existing local regulations may impose heavy penalties for improper disposal of this product.

WARRANTY

8 WARRANTY

The Rasor® Elettromeccanica S.r.l. GRT-MINIVM cutting unit is covered by a 12-month warranty from the manufacture date, barring other written agreement.

The warranty covers all material and manufacturing defects and envisages the replacement of spare parts or the repair of defective parts solely by us at our workshop.

If returning the product for repair, the customer must always send the complete cutting unit to Rasor®. Individual defective parts will not be accepted for repair under warranty.

Material for repair must be sent CARRIAGE PAID.

Once repaired, the device will be returned to the customer CARRIAGE FORWARD.

The warranty does not cover our technicians working on the customer's premises or dismantling the cutting unit.

If one of our technicians has to be sent out for practical reasons, labour will be charged at current rates plus travel expenses.

THE WARRANTY DOES NOT COVER:

- faults caused by incorrect use or assembly;
- faults caused by external agents;
- faults caused by neglect or poor maintenance;
- normal wear and tear on the blades and products.

THE WARRANTY IS VOIDED:

- in the event of delinquency or other breach of contract;
- if repairs or changes are made to our cutting unit without our consent;
- if the serial number is tampered with or erased;
- if damage is caused by improper use or poor treatment, e.g. knocks, falls or other causes not attributable to normal operating conditions;
- if the device is dismantled, tampered with or repaired by personnel not authorised by Rasor® Elettromeccanica S.r.l.;
- if the cutting unit is used for purposes other than those stated in this manual;
- if parts other than Rasor® original spare parts are used.

Repairs made under warranty do not interrupt its duration.

The competent court for all disputes is the court of Milan.

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