



1946

**FP70**

**PNEUMATIC SCISSORS**



**USE MANUAL**

Rasor® Elettromeccanica S.r.l. was established in Milan in 1946 by the two promoting partners Spinelli and Ciminaghi. For more than sixty years it has been producing automatic cutting systems, cutting units for textile applications and electric and pneumatic cutters.



Initially considered as a point of reference for cutting systems in the textile applications, the Rasor® products are nowadays widely used in other fields: chemical, automotive, nautical and sport sectors and in furniture manufacturing.

Rasor® can rely on the professional continuity of three generations, thanks to the precious support of the promoting partner, to his passion, dedication and great experience of seventy years.

The main characteristic of Rasor® is that each working phase, starting from the manufacturing of the product up to its packing and delivery is carried out in Rasor® premises by qualified operators who have professionally grown up following the spirit of the company and of its founders. This ensures the high quality which Rasor® has always considered as essential since the beginning of its activity.

Following the innovative spirit mentioned above, our company is constantly focused on the improvement of the product quality, on the study and development of new materials and technologies.

## ACKNOWLEDGMENT

Dear Customer,

thank you for choosing a Rasor® Elettromeccanica S.r.l. product.

Rasor® has been a reference point in the field of cutting systems in the textile, clothing, furniture, tailoring, sport, chemical, automotive, nautical and insulating material sectors for years. Its production has been always synonymous with reliability attested by many of satisfied customers.

Rasor® quality system supervises all the company activities in order to provide the Customer with a service that meets its needs and expectations in terms of product quality, delivery reliability and stock of finished products.

All the parts of the devices have been planned and produced to guarantee an optimum performance. In order to keep the high quality level and the long reliability of the Rasor® products, it is recommended to use only original spare parts and to contact the head office for any maintenance work.

## 1. GENERAL SAFETY RULES



This manual is an integral part of pneumatic scissors FP 70 and must be carefully read before using it since it gives important indications with regards to its safe installation, use and maintenance. Keep it with care.



Before using pneumatic scissors FP 70, read carefully the following general safety rules.

- **PACKAGING.**  
After taking off the packaging make sure that the machine is intact. In case of doubt do not use it and contact an authorized service centre. Do not leave pieces of packaging (plastic bags, foam polystyrene, boxes, etc.) within the reach of children or disabled persons since they are potential sources of danger.
- **AVOID DANGEROUS ENVIRONMENTS.**
- **KEEP CHILDREN AWAY.**  
Unauthorized persons, in particular children, must be kept away from the working area.
- **KEEP THE WORKING AREA ALWAYS IN ORDER.**  
The workplace must always be kept in order and well lightened;
- **ALWAYS USE PNEUMATIC SCISSORS FP 70 PROPERLY.**  
Use the scissors only to carry out the works they have been designed for; do not use them improperly.
- **OBSERVE THE USE OF THE TOOLS.**  
Do not cut excessively thick materials and always check blade conditions.
- **AVOID ACCIDENTAL STARTINGS.**  
Before connecting pneumatic scissors FP 70, make sure that everything is installed properly.
- **CLOTHING.**  
Do not use large clothes or accessories that might get stuck in the moving parts.
- **GOGGLES AND PROTECTIVE METAL MESH GLOVES.**  
Always use goggles, protective metal mesh gloves approved by Rasor® during use and maintenance operations (according to UNI EN 388:2004 standard).
- **SPARE PARTS.**  
During maintenance and replacement operations use only original spare parts. Blade maintenance must be only performed by Rasor® technicians.
- **INSTALLATION.**  
Any installation that is not in conformity with these specifications could jeopardize your safety and cancels the warranty.

## Informative letter

The installer and the maintenance man must know the content of this manual. Although the main features of the machine described in this manual are not subject to change, **Rasor® Elettromeccanica S.r.l.** reserves the right to modify the components, details and accessories it deems necessary to improve the machine or to meet manufacturing or commercial requirements at any time and without being obliged to update this manual immediately.

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4



**WARNING**



### **ALL RIGHTS ARE RESERVED ACCORDING TO THE INTERNATIONAL COPYRIGHT CONVENTIONS**

The reproduction of any part of this manual, in any form, is forbidden without the prior written authorization of Rasor® Elettromeccanica S.r.l.

The content of this guide can be modified without prior notice. Great care has been taken in collecting and checking the documentation contained in this manual to make it as complete and comprehensible as possible.

Nothing contained in this manual can be considered as a warranty, either expressed or implied - including, not in a restrictive way, the suitability warranty for any special purpose. Nothing contained in this manual can be interpreted as a modification or confirmation of the terms of any purchase contract.

Rasor® Elettromeccanica S.r.l. machines have not been conceived to work in areas at risk of explosions and at high risk of fire. In case of damage or malfunction, pneumatic scissors FP 70 must not be used until the Customer Care Technical Service has repaired them.



**WARNING**



**The original configuration of the pneumatic scissors must not be changed at all.**

On receiving the machine make sure the supply corresponds to what has been ordered. In case of non-compliance immediately inform Rasor®.

Also make sure the scissors have not been damaged during transport.

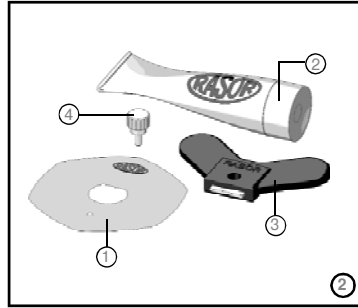


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## 2. TRANSPORT AND PACKING

The pneumatic scissors are delivered in a cardboard box, inside which there are various options. The code of the ordered product and its serial number are indicated outside the package (see picture 1). The following accessories are contained in a bag inside the package (see picture 2):

- 1) HSS steel blade (6 sides);
- 2) Grease tube;
- 3) Butterfly key for blade nut disassembly;
- 4) Drift for blade disassembly.

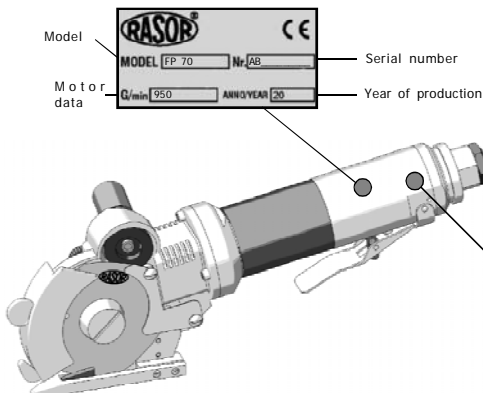


## 3. PLATE DATA

The manufacturer's identification and 2006/42/EC STANDARD conformity plate (see picture below) is located on the front part of the pneumatic scissors.

**The plate must not be removed at all, even if the machine is resold. Always refer to the serial number (written on the plate itself) when contacting the manufacturer.**

Several safety warnings are printed on a card which is applied to the scissors; such warnings must be strictly followed by everyone dealing with the machine. **The company is not to be held responsible for damage to property or accidents to people which might occur if the above-mentioned warnings are not observed. In such a case, the operator is the only person responsible.**



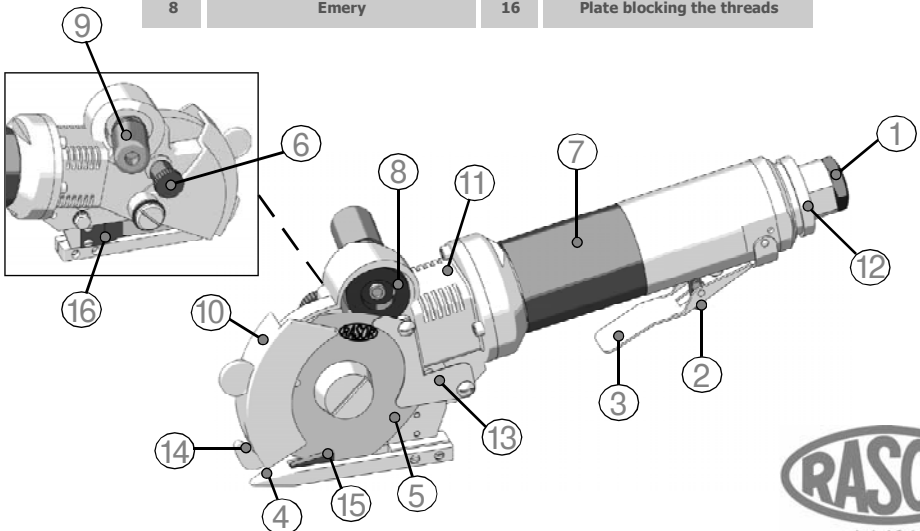
## 4. PRODUCT DESCRIPTION

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The fixture described in this manual is a pneumatic scissor model FP 70 which is used in order to quickly cut fabrics in the textile industry and other materials. It is extremely versatile, light and precise in the cutting operation. Thanks to the use of a supporting front foot and of an effective cutting system with a hexagonal blade it is possible to use the pneumatic scissors to cut different materials. In particular the scissors have been planned to cut difficult materials such as moquettes, polymeric materials, fiber glass, insulations and leather (even hide). One special feature of pneumatic scissors FP 70 is their ability to sharpen the blade in each moment without disassembling it by means of a sharpener mounted on the scissors head. After carrying out this operation, it is possible to start cutting again. The pneumatic scissors are provided with a threaded connection for many air pipeline. The turbine, perfectly balanced, with a high number of revolutions and totally free of maintenance, reduces the vibrations and the noise to the minimum. The pneumatic scissors can be used also outdoor and to cut damp or wet materials and therefore particularly recommended in tannery, dyeworks, etc. The pneumatic scissors FP 70 are extremely light (they weight only 920 g) and handy and allow carrying out quick and precise cuts, even with curve profiles. The use of compressed air as source of energy allows working continuously without problems of heating or motor overload. The mechanical parts are made up of steel and high resistant bronze and require a lubrication after many working hours.

**Device components**

1	1/4" gas connection for the air connector	9	Sharpening button
2	Safety device to enable the control lever	10	Front protection guard
3	Control lever	11	Motor support
4	Steel foot	12	Silencer
5	Hexagonal blade	13	Rear protection guard
6	Greaser	14	Reference point
7	Pneumatic motor	15	Hard metal counterblade
8	Emery	16	Plate blocking the threads



## 5. TECHNICAL FEATURES

### Pneumatic scissors FP 70 features

Blade diameter	70 mm with counterblade - hard metal
Blade speed	950 rev/min
Cutting working depth	≈ 20 mm
Power	350 W with max. pressure
Working pressure	6 bar (max)
Weight	920 g
Weight with package	1400 g
Air consumption	9 litres/sec
Minimum light for working operations	LUX 200
Vibrations at the start up	< 2,5 m/s <sup>2</sup>
Temperature	0 ~55 °
Humidity	10 ~ 95% without condensate

### Features of the available blades

70EHSS	HSS steel hexagonal blade 70 mm
70SHSS	HSS steel quadrangular blade 70 mm
70CEXT	EXTRA steel circular blade 70 mm
70EHSSTF	HSS steel hexagonal blade 70 mm covered with Teflon®
70SHSSTF	HSS steel quadrangular blade 70 mm covered with Teflon®
70EMD	Integral hard metal hexagonal blade 70 mm (Widia®)

The technical data are only indicative and they can be changed without notice.

## 6. NOISE LEVEL

The maximum acoustic pressure level emitted by pneumatic scissors FP 70 is about 60 dB (A).

Noise tests have been carried out in compliance with Standard UNI EN ISO 11202. The device noise levels, measured at different distances (without any sound wave filtering system), vary in the extent of few db (A).

The noise level has been detected with the silencer supplied with the fixture assembled on the exhaust. The silencer must never be removed.

### NOTE

It is advisable for pneumatic scissors FP 70 owners to verify the compliance with the standard concerning safety of workers: refer to the Local Law. The use of ear protecting devices is compulsory.

## 7. FIELD OF APPLICATION

Pneumatic scissors FP 70 have been designed, manufactured and assembled to cut every kind of ordinary or technical fabrics, with the exception of metal, plastic or wood, by means of rotary blades.

This equipment must not work:

- in areas prone to explosions;
- in presence of fine dust or corrosive gases;
- to cut plastic, metal and wooden materials.

**It is forbidden to use pneumatic scissors FP 70 for purposes different from the above-mentioned ones.**



dal 1946

## 8. USE WARNINGS

We recommend following the indications below in order to always work in safety conditions.

- All the operations must be carried out complying strictly with the safety rules of the country where the machine is to be installed.
- It is **STRICTLY FORBIDDEN** to smoke during the installation or adjustment operations of the pneumatic scissors.
- The Customer undertakes to comply with and make his staff observe all the rules and regulations in force concerning safety, prevention of accidents and health in the work place. Therefore, the Customer assumes the responsibility to strictly follow all the rules and regulations in force, as well as the special provisions in force in sport and public installations the Customer declares to know after receiving all the relevant necessary information.
- The pneumatic scissors work even without their safety protective device. **This protective device must NEVER be removed.**
- Always check the resistance of the material to be cut and the kind of blade which is being used.
- The Customer shall equip his own personnel with all the individual safety protections for the execution of the works, as well as with the ones which might be prescribed by the Manufacturer due to specific danger conditions of the plant or of the area where the personnel must work.
- Only one operator must use the pneumatic scissors always standing behind the guide handle. Do not make any adjustment while the blade is working.
- Always pay attention to the position of the air pipe to prevent it from being cut or damaged by the blade.
- It is allowed to assemble pneumatic scissors FP 70 on machines O.E.M. on condition that their original structure is not modified. Otherwise, the intervention must be certified by Razor®.
- The pneumatic scissors FP 70 are equipped with double safety push button with a lever and a ratchet on the handle: the ratchet prevents the start push button from being enabled accidentally, the lever operates the scissors. Never remove the ratchet.



## 9. RESIDUAL RISKS

Even though the pneumatic scissors are safe, operators must pay attention to preserve their and other people's safety.

- ⊗ The cutting blade can work even when the protective device is disassembled.

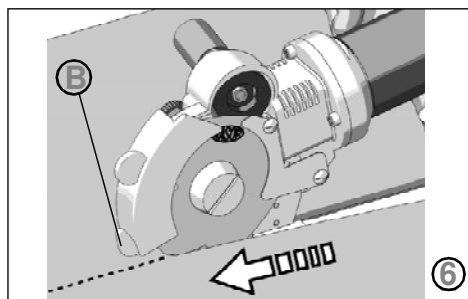
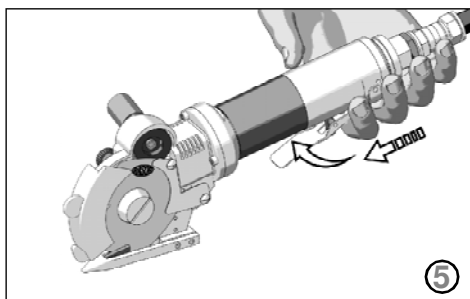
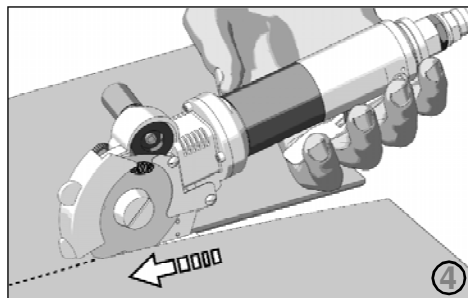
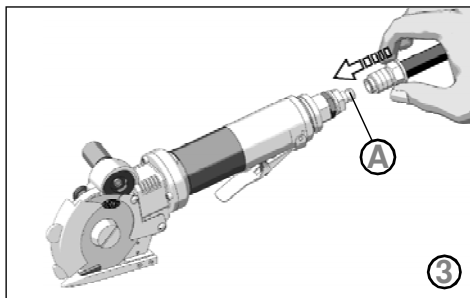
## 10. USE

To use the pneumatic scissors manually, proceed as follows:

- 1) Lay the material to be cut on the table;
- 2) Connect the air hose to the quick connection "A" (not supplied) (see picture 3);
- 3) Set the pressure gauge (option) to 6 bar;
- 4) Put the material on the cutting foot (see picture 4);
- 5) Adjust the front mobile protection according to the thickness of the material to be cut;
- 6) Push the starting lever after moving the safety device (see picture 5);
- 7) Push the pneumatic scissors in the desired direction, being careful to keep the material in front of them as stretched as possible and preventing it from curling in the front part of the scissors.

### NOTE

The thrust on the pneumatic scissors must be as uniform as possible. To carry out linear cuts with precision (and to follow predetermined paths), we also recommend using the arrow point (see point "B" in picture 6).



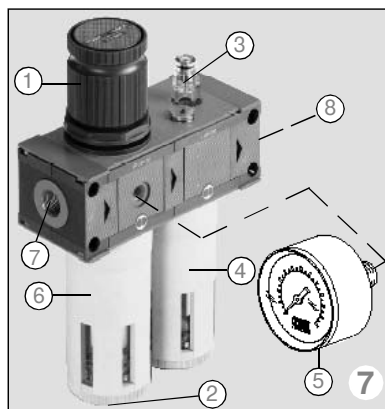
## 11. AIR PRESSURE GAUGE (OPTION)

The pneumatic scissors must be necessarily fed with lubricated air with a pressure of 4-6 bar.

Rasor® offers, as option, a reduction unit filter with a pressure gauge already calibrated with the quantity of oil to be delivered.

The unit shown in picture 7 is made up of:

- 1 - pressure reducer;
- 2 - valve to drain the condensate;
- 3 - drip-feed oiler unit;
- 4 - oil tank;
- 5 - pressure gauge;
- 6 - condensate tank;
- 7 - pipe fitting to connect the quick connection to the network;
- 8 - pipe fitting to connect the quick connection to the scissor.

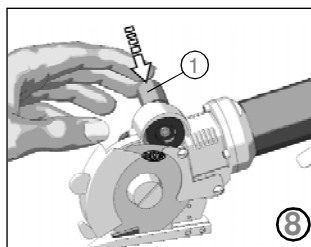


For the use and maintenance read the instruction sheet supplied with the filter.

## 12. SHARPENER ADJUSTMENT

After using the machine for some hours without interruption, or if the machine cutting capacity is reduced, it is necessary to sharpen the blade.

To carry out this operation, start the blade and press sharpening push button "1" (as shown in picture 8), for 3-4 seconds. Repeat this operation 2-3 times.



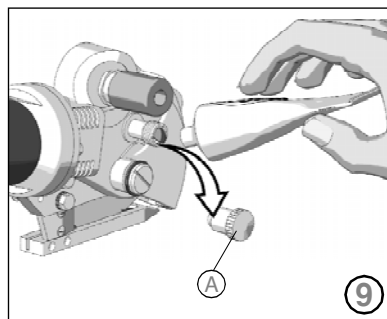
### WARNING



The sharpening push button can be only pressed if the front mobile protection is completely lowered.

## 13. LUBRICATION

Every 3-4 working days, it is necessary to lubricate the gear pair. In order to carry out this operation, remove protective plug "A" located on the head of the pneumatic scissors and fill it with the grease supplied. Screw plug "A" again a few turns. Screw plug "A" a few turns every 2-3 working days (see picture 9) when the machine is used without interruption. Fill the plug again, once it has been tightened.



### WARNING



The blade must never be dirty with grease or oil.



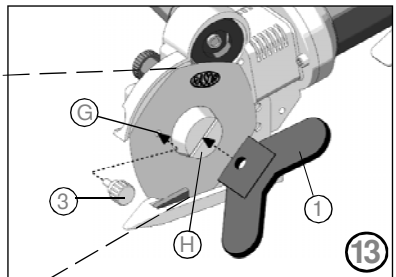
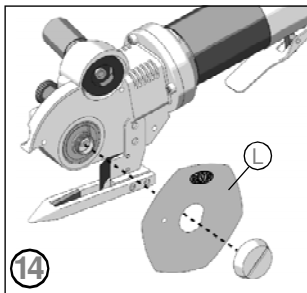
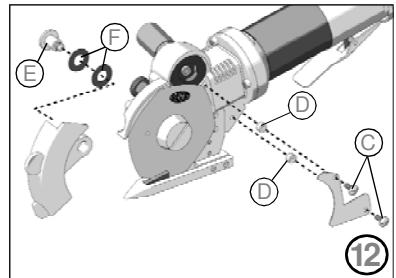
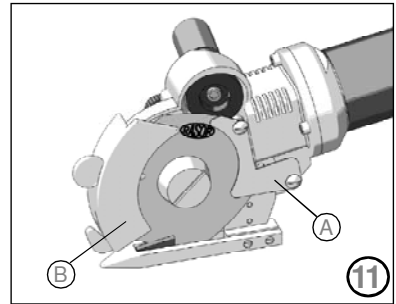
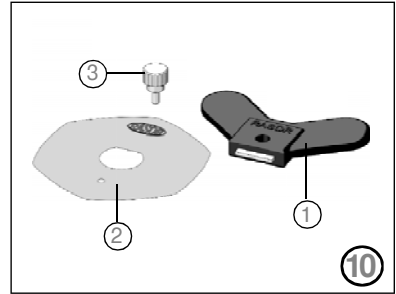
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## 14. BLADE REPLACEMENT

If the blade is no more able to cut (even after repeating the sharpening operation several times) it is necessary to replace it. In order to carry out this operation, use butterfly key "1" and drift "3" locking the blade (shown in picture 10).

In order to replace the blade, proceed as follows:

- 1) Use some protective gloves in compliance with the Local Law of the Country where the machine is to be used (use of personal protection devices);
- 2) Remove the fixed rear safety protection "A" (see picture 11) by unscrewing the two slotted screws "C" by means of a screwdriver (not supplied by the manufacturer) and by removing the spacers "D" as shown in picture 12.  
Remove the mobile rear safety protection "B" (see picture 11) by unscrewing the pin "E" and by removing the two washers "F" as shown in picture 12.
- 3) Insert the drift "3" (see picture 13) in hole "G", in order to lock the blade (the hole in the blade must correspond to the hole in the structure).
- 4) Use a butterfly key "1" in order to unscrew the nut "H" (see picture 13) and remove the blade "L" (see picture 14).
- 5) Replace the worn blade with the new one "2", being careful to center the blade on the gear, in the correct position, and remember to assemble it in order that the writing *Rasor* can be seen by the operator.
- 6) Assemble all the components again and carry out some cutting and sharpening tests.



## 15. TROUBLESHOOTING

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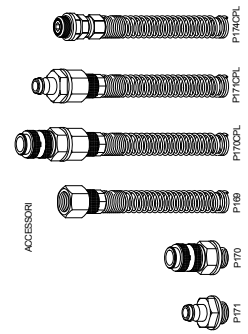
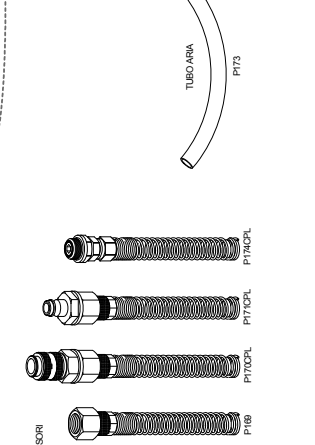
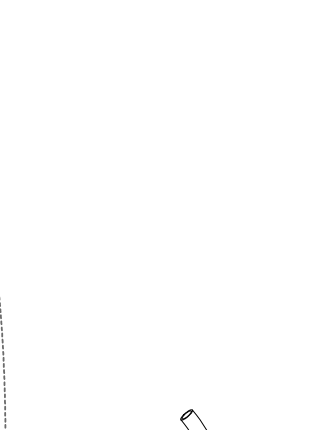
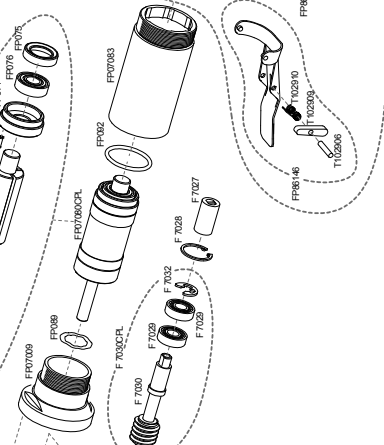
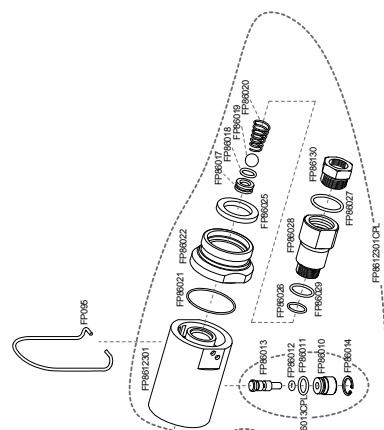
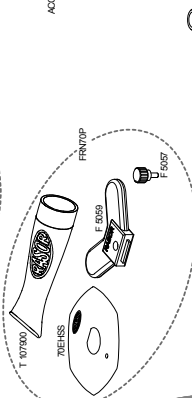
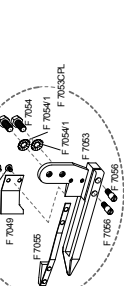
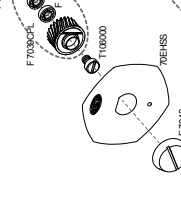
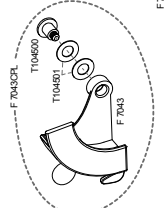
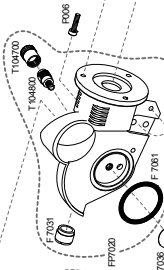
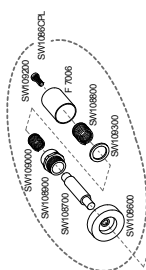
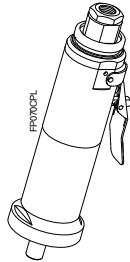
PROBLEM	SOLUTION
The fabric is not cut or it gets stuck between the blade and the counterblade	Check the counterblade integrity
	Check the kind of fabric
	Sharpen the blade
	Check the fabric thickness
	Check the compatibility between blade and fabric
The pneumatic scissors are noisy	Make sure that the turbine turns correctly
	Reduce the feeding speed
	Carry out the lubrication
The scissors start slowly or work intermittently	Disassemble the blade and remove the material residues
	Check the silencer
	Check the wear of the gear pair
	Check the air circuit integrity
	Set working pressure at 6 bar

## 16. SPARE PARTS / EXPLODED VIEW

CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	DESCRIPTION
70EHS5	HEXAGONAL BLADE Ø 70 mm, H.S.S. STEEL	F 7045CPL	REAR PROTECTION SET	FP081	FRONT FLANGE BEARING	FP8612301	CONTROL HEAD
F 5057	BLADE LOCKING DRIFT	F 7046	REAR PROTECTION SPACER	FP082	FRONT FLANGE	FP8612301CPL	COMPLETE CONTROL HEAD
F 5059	BLADE ASSEMBLING/DISASSEMBLING WRENCH	F 7049	PLATE BLOCKING THE THREADS	FP089	ADJUSTING RING	FP86130	CONNECTOR 1/4" WITH FILTER
F 7006	EMERY CAP	F 7050	PLATE BLOCKING THE THREADS FIXING SCREW	FP092	GASKET O'RING	FP86146	COMPLETE CONTROL LEVER
F 7020	COMPLETE MOTOR SUPPORT	F 7053	WELD FOOT	FP095	HANDLE FOR HOOK	FRN70P	FP70 ACCESSORY COMPLETE SET
F 7027	JOINT	F 7053CPL	COMPLETE FOOT	FP86010	PISTON GUIDE	P006	MOTOR SUPPORT FIXING SCREW 4MA
F 7028	CLOSING RING	F 7054	FOOT FIXING SCREW	FP86011	PISTON GUIDE O' RING	SW108600	EMERY GRINDING WHEEL: MEDIUM GRAIN
F 7029	WORM SCREW BEARING mm 10x22x6	F 7054/1	TOOTHED WASHER	FP86012	PISTON GUIDE O' RING	SW1086CPL	COMPLETE EMERY UNIT
F 7030	WORM SCREW - MOD. 1	F 7055	WIDIA COUNTERBLADE WITH SPRING	FP86013	PISTON	SW108700	EMERY PIN
F 7030CPL	COMPLETE WORM SCREW - MOD. 1	F 7056	SCREW TO FIX COUNTERBLADE	FP86013CPL	COMPLETE PISTON WITH GUIDE	SW108800	EMERY SPRING Ø 11 mm
F 7031	ANTIFRICTION BUSH	F 7061	SUB-BLADE RING	FP86014	STOP RING	SW108900	THREADED BUSH
F 7032	SEGER RING	FP07009	COUPLING FLANGE	FP86017	VALVE	SW109000	EMERY SPRING Ø 6 mm
F 7033	CORRUGATED SHIM WASHER	FP07080	ROTOR	FP86018	VALVE O' RING	SW109200	EMERY CAP FIXING SCREW
F 7036	SHIM WASHER	FP07080CPL	COMPLETE TURBINE	FP86019	STEEL BALL	SW109300	STEEL WASHER
F 7037	GEAR CROWN RING NUT	FP07083	MOTOR CASE	FP86020	CONICAL SPRING	T102906	LEVER AND RATCHET FIXING PIN
F 7038	GEAR CROWN BEARING	FP070CPL	COMPLETE MOTOR	FP86021	SILENCER SEAT O'RING	T102909	RATCHET FOR LEVER
F 7039CPL	COMPLETE GEAR CROWN	FP074	REAR FLANGE	FP86022	SILENCER SEAT	T102910	RATCHET SPRING
F 7042	RING NUT FIXING THE BLADE	FP075	REAR FLANGE PLUG	FP86025	BRONZE SILENCER-FILTER	T104500	FRONT GUARD FIXING SCREW
F 7043	FRONT PROTECTION GUARD	FP076	REAR FLANGE BEARING	FP86026	SMALL REDUCTION UNIT O'RING	T104501	COUPLE OF CONVEXED WASHERS
F 7043CPL	FRONT PROTECTION SET	FP077	POSITION PIN	FP86027	CONNECTOR O' RING	T104700	GREASER CAP
F 7044	REAR PROTECTION GUARD FIXING SCREW	FP078	BUCKETS	FP86028	REDUCTION UNIT	T104800	GREASER
F 7045	REAR PROTECTION GUARD	FP079	CYLINDER	FP86029	BIG REDUCTION UNIT O'RING	T106000	GEAR CROWN FIXING LEFT SCREW
						T107900	LUBRICATING GREASER

## ACCESSORIES

CODE	DESCRIPTION	CODE	DESCRIPTION
P171	MALE QUICK COUPLING - 1/4" GAS	P171CPL	MALE QUICK COUPLING - 1/4" GAS (COMPLETE)
P170	FEMALE QUICK COUPLING - 1/4" GAS	P170CPL	FEMALE QUICK COUPLING - 1/4" GAS (COMPLETE)
P169	FLEXIBLE PIPE FITTING Ø 8 mm - 1/4" GAS FEMALE	P174CPL	COMPLETE COUPLING WITH THREAD - 1/4" GAS
		P173	AIR PIPE Ø 8x6 mm



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# WARRANTY

Rasor® Elettromeccanica S.r.l. electric scissors have a 12 month warranty from the date indicated on the last page of this manual, except in case of different written agreements. The warranty covers all manufacturing and material defects. Replacement and repair operations are covered only if carried out by our company and at our workshop.

In case of returned goods for repair under warranty, the Customer must send to Rasor® always the complete machine. Repairs under warranty of single faulty components are not accepted. The material to be repaired must be sent CARRIAGE FREE.

Once the machine has been repaired, it will be sent CARRIAGE FORWARD to the customer. The warranty covers neither technicians' intervention on site nor the machine disassembly from the installation place.

If for practical reasons, one of our technicians is sent to the premises, the customer will be charged the costs plus the travelling expenses.

The warranty does not include:

- ✎ failure caused by wrong use or assembly,
- ✎ failure caused by external agents,
- ✎ failure caused by lack of maintenance or negligence,
- ✎ blades and parts subject to wear.

## WARRANTY FORFEITURE:

- ✎ In case of arrearage or other breaches of contract,
- ✎ Whenever changes or repairs are carried out on our electric scissors without our prior authorization,
- ✎ Whenever the serial number is tampered with or cancelled,
- ✎ Whenever the damage is caused by improper use, bad treatment, bumps, falls and other causes not due to normal working conditions,
- ✎ Whenever the unit seems tampered with, dismantled or previously repaired by unauthorized staff,
- ✎ In case the pneumatic scissors are used for purposes that are different from the ones described in this manual.

All repair operations carried out under warranty do not interrupt its duration.

**All disputes will be settled in the court of justice of Milan (Italy).**

We thank you in advance for the attention you will pay to this manual and we invite you to inform us of any change you deem necessary to improve it and make it more complete.

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