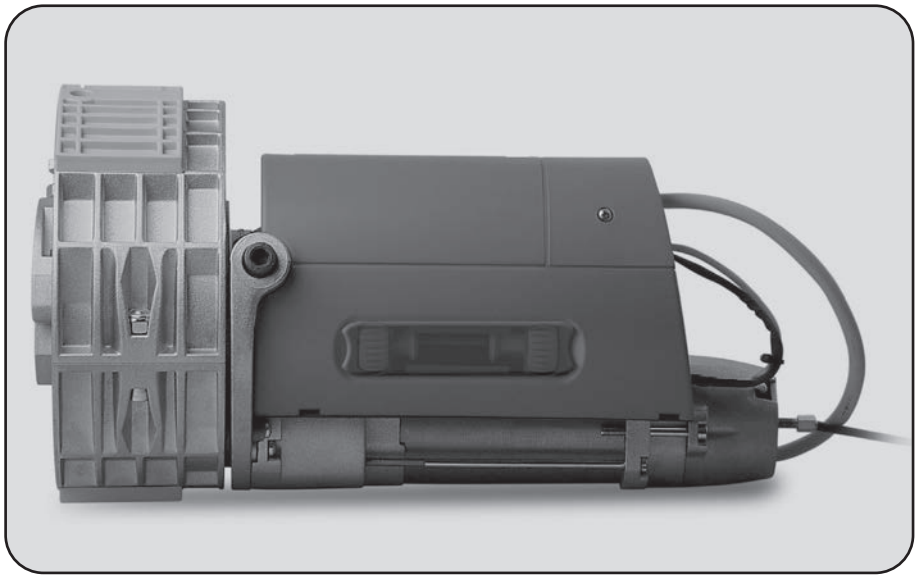
Ring

KING gates

Automation for rolling shutters



EN **MANUAL OF INSTRUCTION**

MADE IN ITALY

1 - GENERAL DESCRIPTION

1A - ADVERTENCIAS

This manual has been especially written for use by qualified installation technicians. No information given in this manual can be considered as being of interest to end users.
Read these instructions carefully before proceeding with the installation, as they provide important information regarding safety, installation, use and maintenance.
Any use or operation not explicitly provided for in these instructions is not permitted.
Improper use may cause damage and personal injury.
RING is not suitable for use in potentially explosive atmospheres.

1B - PRODUCT DESCRIPTION

RONDO is a gearmotor for spring-balanced rolling gates. It is suitable for the automation of rolling gates having a maximum height of 6m and weighing up to 180kg.
The gearmotor may be mounted on rolling gates with a spring shaft diameter of 42mm, 48mm and 60mm.
The spring boxes may have a diameter of 200mm / 220mm.
The two ring nuts are made of die-cast aluminium.
The gearmotor is equipped with a micrometric screw stop and mechanical position memory.

1C - TECHNICAL CHARACTERISTICS

RING 150 / RING 180 / RING 150 / 110= Reversible brakeless gearmotor.
RING 150 PLUS / RING 180 PLUS RING 150 / 110 PLUS= Non-reversible gearmotor with brake and release device.

		RING 150 **RING 150 PLUS**	**RING 180** **RING 180 PLUS**	**RING 150 / 110** **RING 150 / 110 PLUS**
Power supply / frequency	Vac / Hz	230 / 50		120 / 60
Absorbed current	A	2	2.6	4.8
Absorbed power	W	450	600	580
Max torque	Nm	130	180	
Max lifting force with 200mm diameter	kg	130	180	
Nominal speed	Rpm	8.5		10
Nominal torque	Nm	75	100	
Rolling gate shaft standard diameter	mm	60*		
Roller shutter flanges diameter	mm	200*		
Crown rotation speed (loadless)	Rpm	10		12
Operating ambient temperature	°C	-20 ÷ +50		
Class protection	IP	20		
Thermal protection	°C	140		
Continuous operating time	Minutes	4		
Max work cycle	Sec	50% with 30s ON and 30s OFF		
Weight	kg	9.5		10
Insulation class		F		

* 48 and 42mm with supplied adapter
* 220mm with supplied adapter

2 - INSTALLATION

2A - PRELIMINARY CHECKS

Please keep in mind that automatic rolling gate systems may only be installed by qualified personnel in compliance with the legislation in force. Make sure that:
- The packing is undamaged and contains all the parts shown in Fig. 1.
- The rolling gate opens and closes without presenting points of greater friction.
- The rolling gate is well balanced, i.e., if it is stopped in any position it must not display a tendency to start moving again.
- The rolling gate moves silently and smoothly.
- Refer to Fig. 2 to make sure that the mounting area is compatible with the overall dimensions of the gearmotor.

2B - TYPICAL SYSTEM (FIG. 3)

1 RING gearmotor
2 connector block
3 release knob (only on versions with brake)
4 reverser switch or electronic control unit
5 Power supply line
6 Spring box

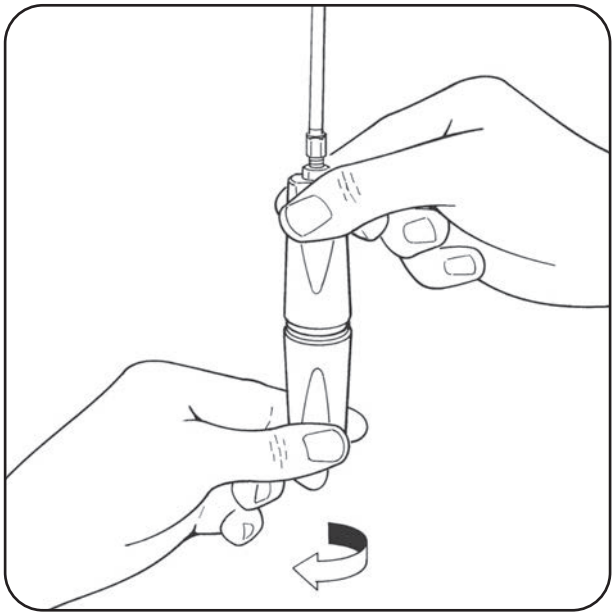
2C - MOUNTING

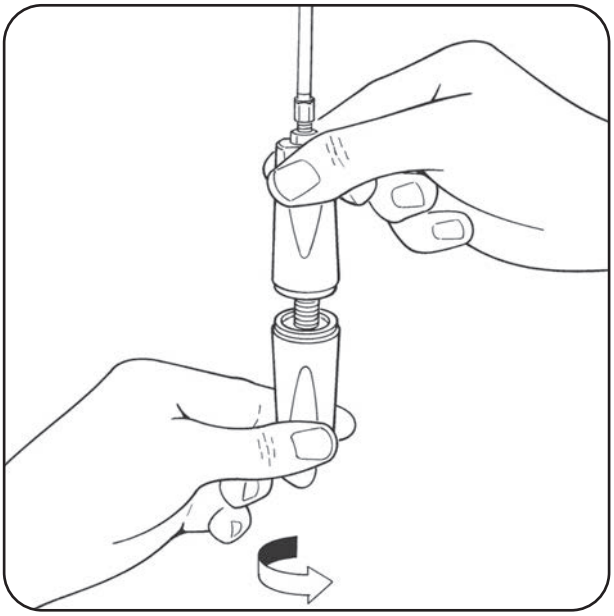
1. Close the rolling gate all the way in order to make the spring shaft accessible and drill an 11mm diameter horizontal hole 90mm from the middle of the spring shaft; Fig. 4
2. Remove the two half ring nuts after loosening the two M8 screws; Fig. 6
3. Remove the slide ring; Fig. 7
4. Slide out the plate in the direction indicated by the arrow; Fig. 8
5. Measure the diameter of the spring shaft. If the diameter of the latter is 60mm, proceed with the installation. If the shaft has a diameter of 48mm or 42mm, install the adapters provided; Fig. 9
6. Reinstall the plate removed at point 5, paying attention to the direction of assembly, and screw on the four screws provided; Fig. 10
7. Mount the adapter ring removed at point 4 and grease its outer surface slightly; Fig. 11
8. Insert and tighten the M10 screw; make sure you thread it through the hole drilled in the spring shaft according to the instructions under point 1; if necessary, use the adapter. Fig. 12
9. Tighten the two M10 screws so as to secure the gearmotor to the spring shaft.
Secure the two screws with lock nuts; Fig. 13
10. Drill a hole in the spring shaft for the power and release wire (only on versions with brake); Fig. 14
11. Assemble the release knob, with all the adjusters tightened (A), insert the wire and, holding it tight, secure it with the terminal (B). (only on versions with brake); Fig. 15
12. Execute the release manoeuvre by turning the bottom knob clockwise to loosen it. Check manually to make sure that the gearmotor is released. If necessary, operate the adjusters to eliminate any slack; Fig. 16
13. Slightly grease the teeth on the ring gears removed at point 3, then assemble them, tightening
the two M8 screws well; Fig. 17
14. Measure the diameter of the spring boxes. If their diameter is 200mm, proceed with the installation.
15. Otherwise, if the diameter is 220mm, use the appropriate adapter (B); Fig. 18
16. Remove the cover that protects the terminals. Loosen the cable gland. Make the connections Fig. 19. Tighten the cable gland screws. Close the cover that protects the terminals.
17. Using a screwdriver, remove the glass for the adjustment of the limit switches; Fig. 20
18. Position the last segment of the rolling gate on the half ring nut and drill an 11-mm diameter hole through it to match the hole in the half ring nut;
19. Tightly fasten the rolling-shutter frame to the gearmotor using screw and washer M10. Fig. 21
20. Release the gearmotor (only on versions with brake) and open and close the rolling gate manually, making sure that it slides smoothly. Lock the gearmotor again by tightening the release knob; Fig. 22
21. DOWN LIMIT SWITCH ADJUSTMENT (closing)
Using the reverser switch, command the gearmotor to perform a down manoeuvre until the limit switch is triggered.
In the installation illustration, the closing manoeuvre limit switch is the one shown in Fig. 23
22. ADJUSTING THE ASCENT LIMIT SWITCH (opening)
Pull the clip outwards while rotating the wheel indicated by the arrow.
Bear in mind the fact that approximately 1 cm of its travel corresponds to 1 m of upward movement. Release the clip.
Power the gearmotor so it starts rising, and check that the rolling-shutter stops in the position required. Fig. 24.
Continue to make adjustments until you reach the position required;
23. Reinsert the limit switch glass, paying attention to the mounting direction; Fig. 25
24. In case the installation is contrary to the one described, proceed in the reverse order so that the second limit switch will regulate the down movement, while the first one will regulate the up movement.

3 - Manual manoeuvre (only on versions with brake)

Release only when the rolling gate is stopped.

To release the gearmotor proceed as follows:
1 Turn the bottom of the knob clockwise to loosen it until you feel a certain resistance;
2 Open or close the rolling gate manually;
3 Lock the gearmotor again by performing the contrary operation to the one described at point 1.





4 - TESTING

Testing is the most important aspect of the installation procedure. Each single component, such as the gearmotor, emergency stop, photocells, etc., may require a specific testing procedure.
We recommend that you follow the directions provided in the relevant instructions manuals. Testing of the entire automation system must be conducted by experienced and qualified personnel, who must establish what tests are necessary depending on the risks involved.
To test RING proceed as follows:
- Make sure that the fusible elements are in good condition, i.e. that there are no breakages;
- Make sure that the gearmotor is securely fastened to the spring shaft;
- Make sure that the screw connections have been well tightened;
- Make sure that the electrical contacts are in good condition;
- Make sure that the axial slack of the ring nut is not excessive;
- Check the adjustment of the limit switches by carrying out a complete manoeuvre (up-down);
- Make sure that when the gearmotor is locked at any point, it displays no tendency to move;
- Make sure that the release device easily disengages the rolling gate's gearmotor (only on versions with brake)

5 - MAINTENANCE

RING does not require any special maintenance. Scheduled checks every six months will ensure the long life of the gearmotor and the safe operation of the system.

Maintenance simply consists in repeating the testing procedure.

6 - DISPOSAL

The automation system can be dismantled and scrapped without any risks, since there are no dangerous components. Perform the operations described in the "Mounting" chapter in the reverse order RING is made out of various types of materials which must be disposed of in compliance with the regulations in force. The materials must be separated according to their type (electrical, aluminium, plastic parts, etc.).

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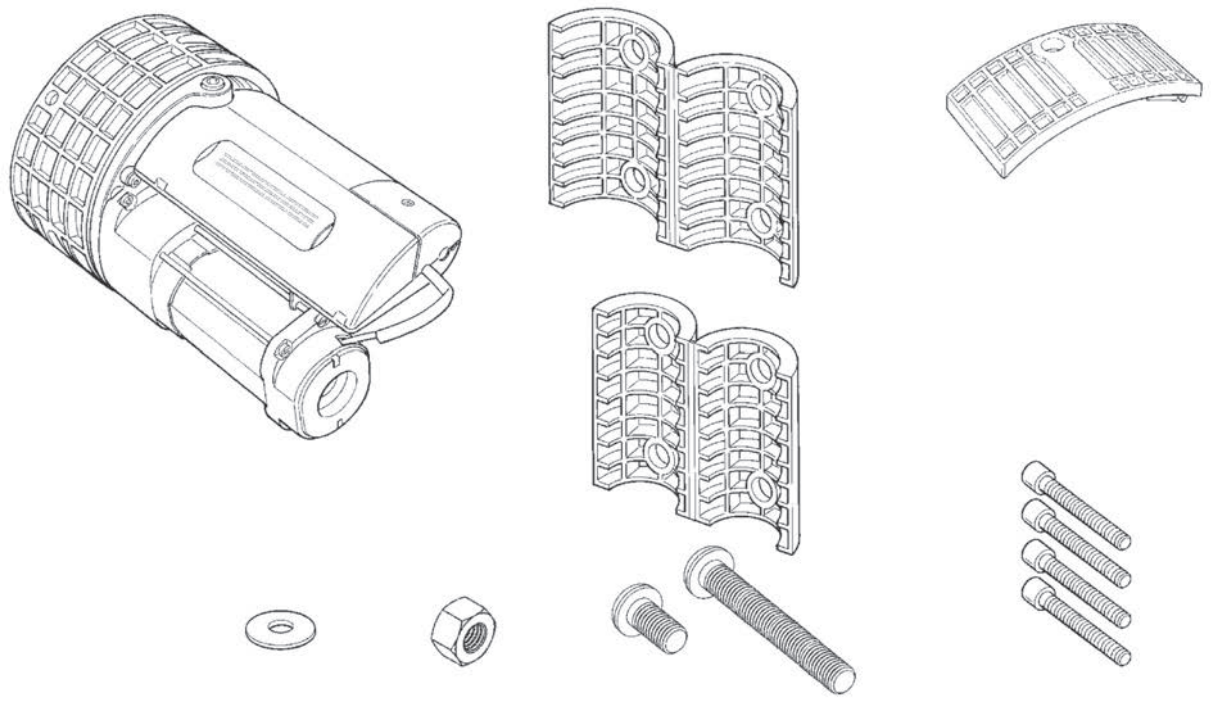

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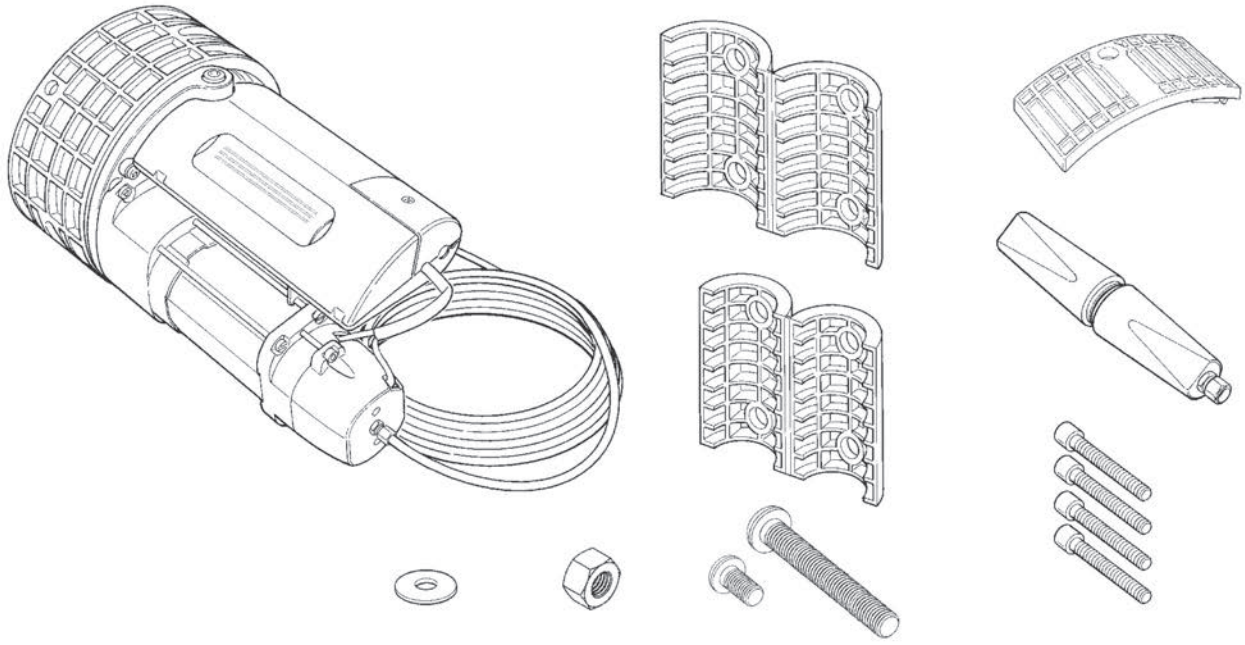

RING 150 PLUS - RING 180 PLUS - RING 150 / 110 PLUS

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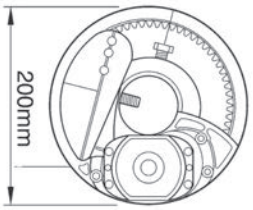

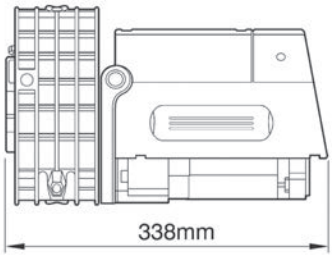

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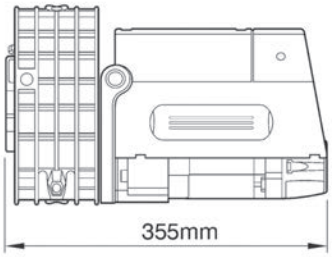

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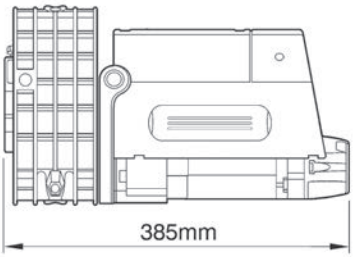

RING 180 PLUS

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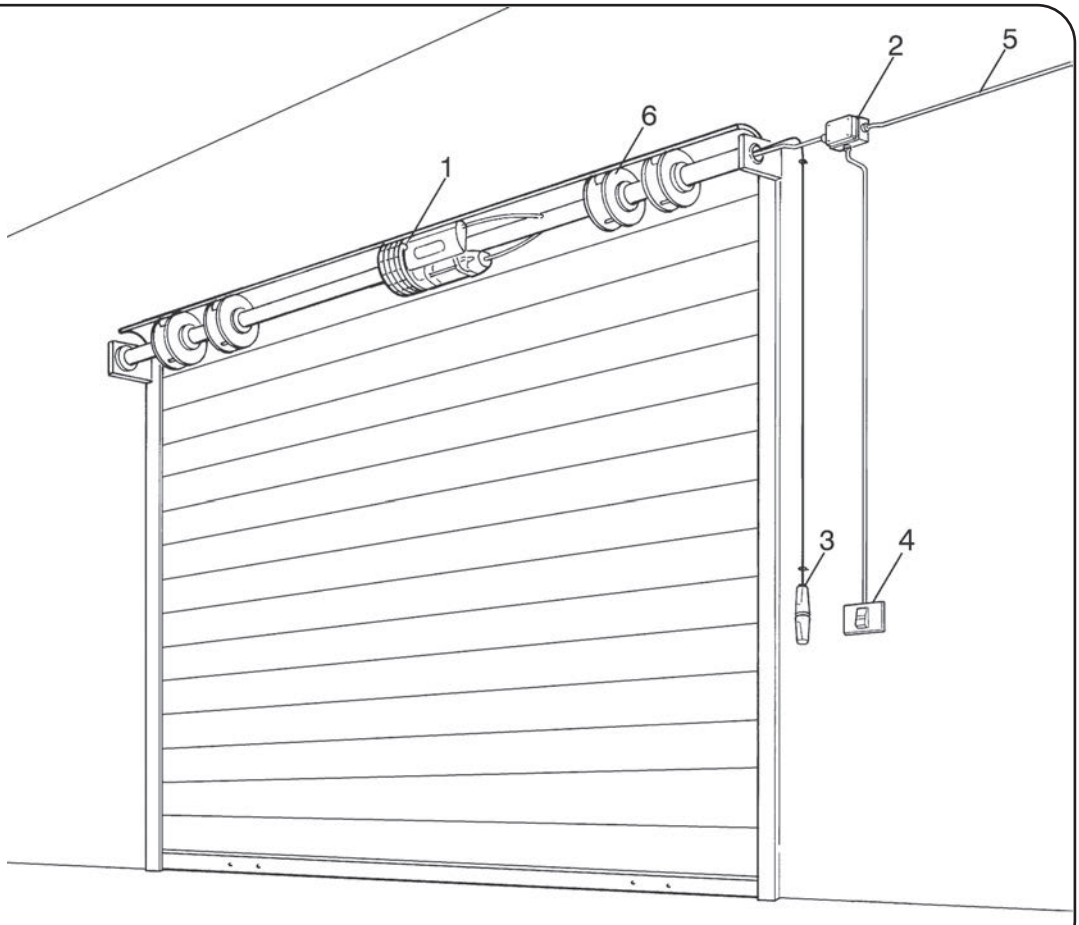

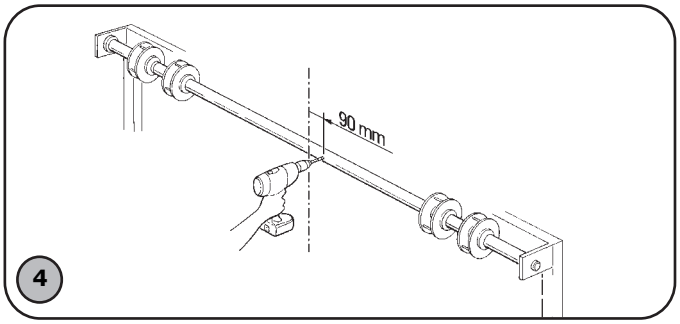
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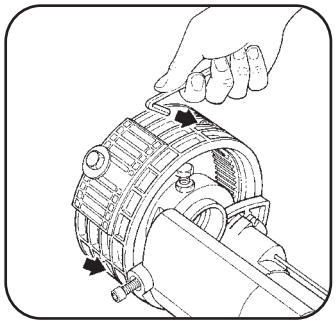

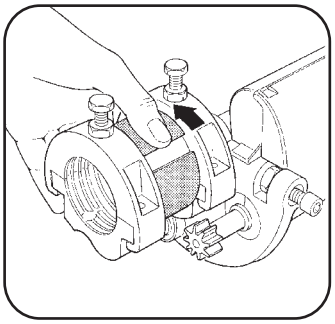

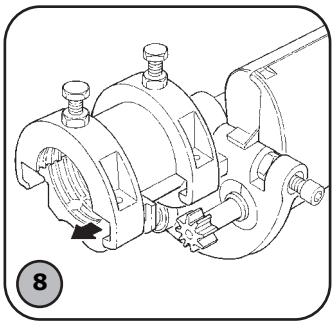
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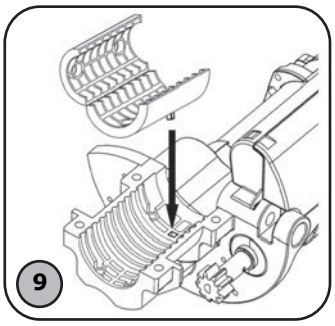
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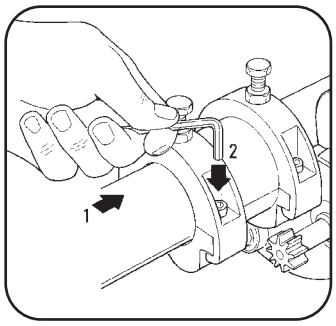
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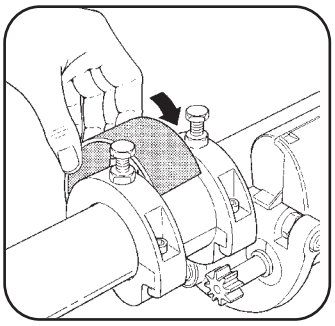

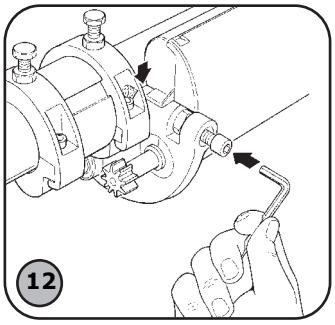
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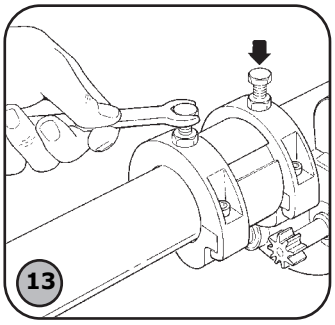
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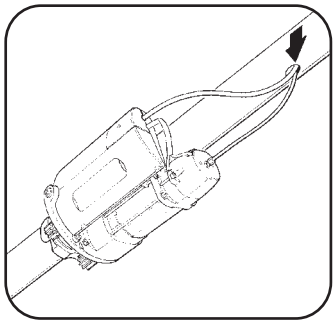

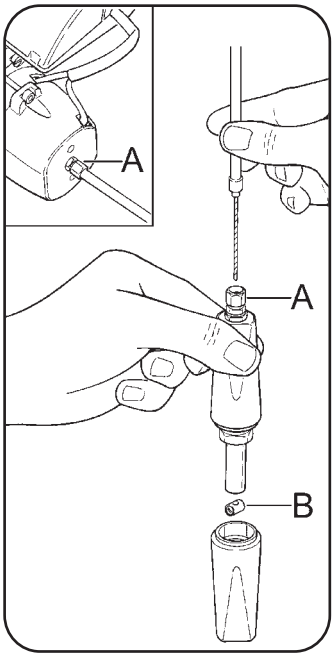
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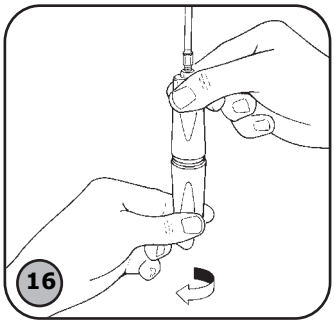
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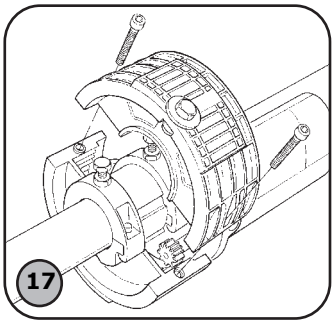
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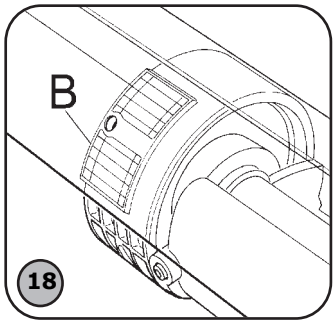
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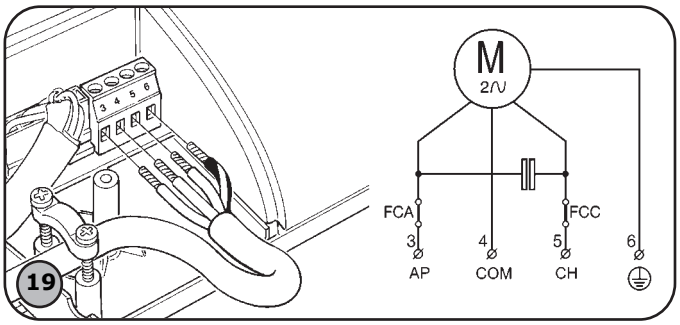
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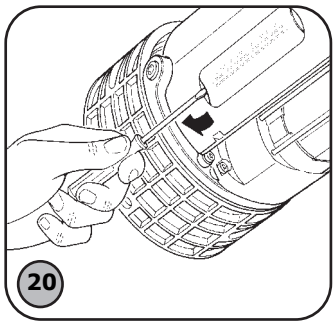
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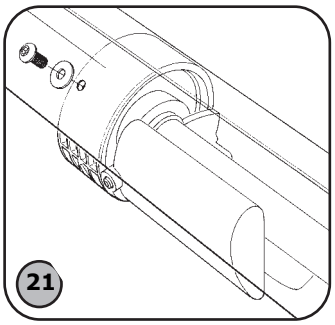
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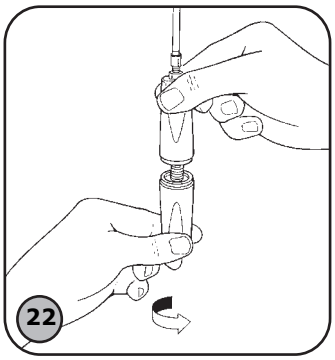
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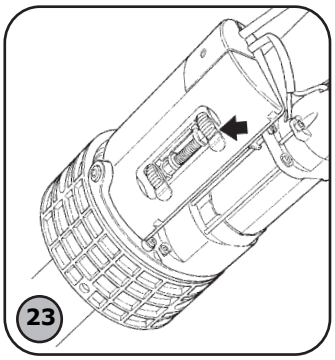
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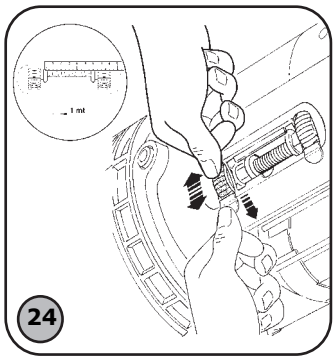
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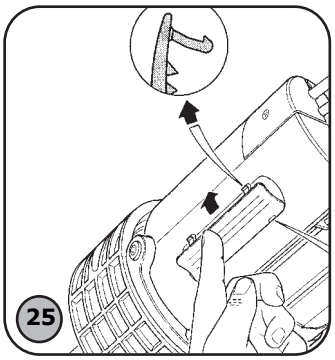
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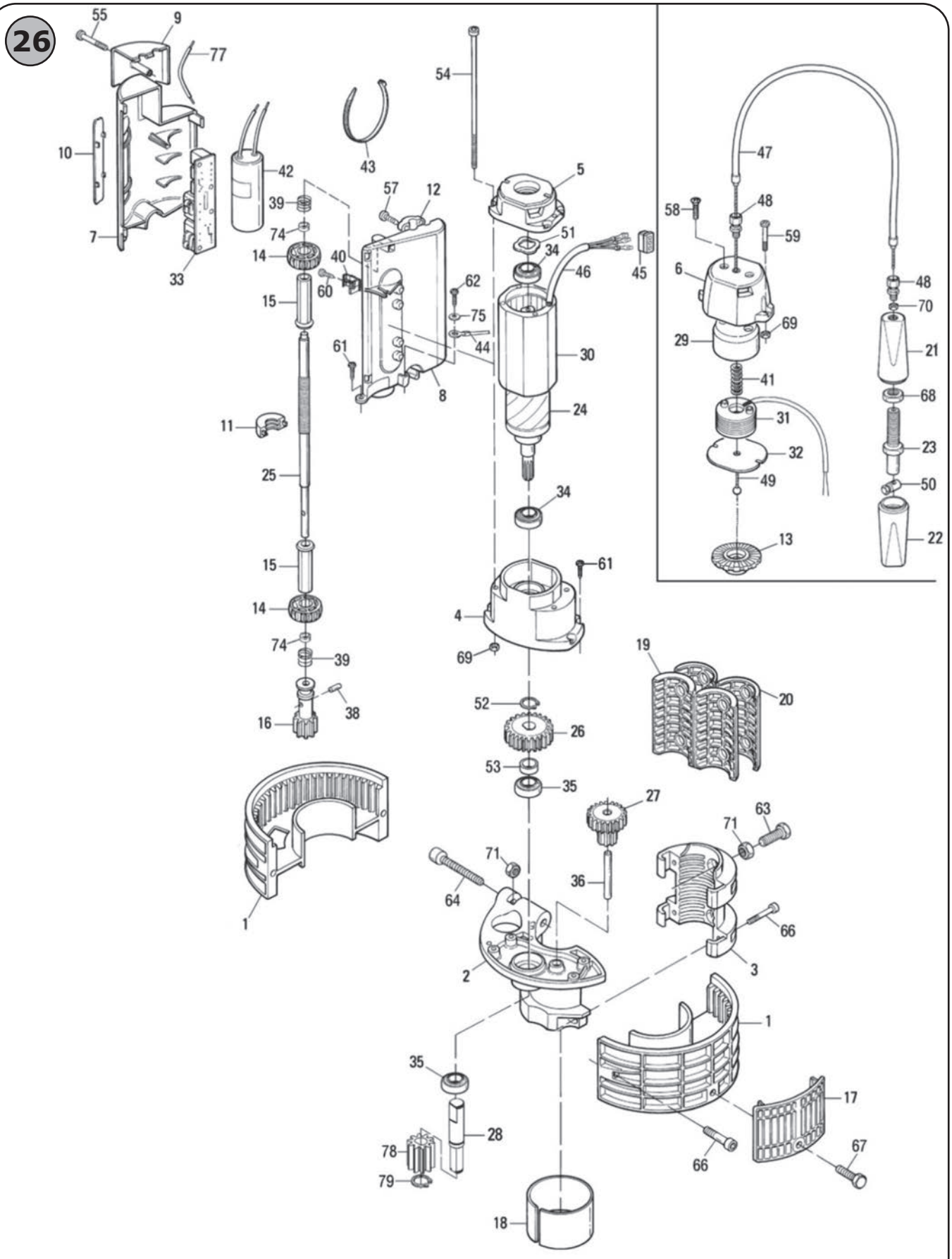

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