

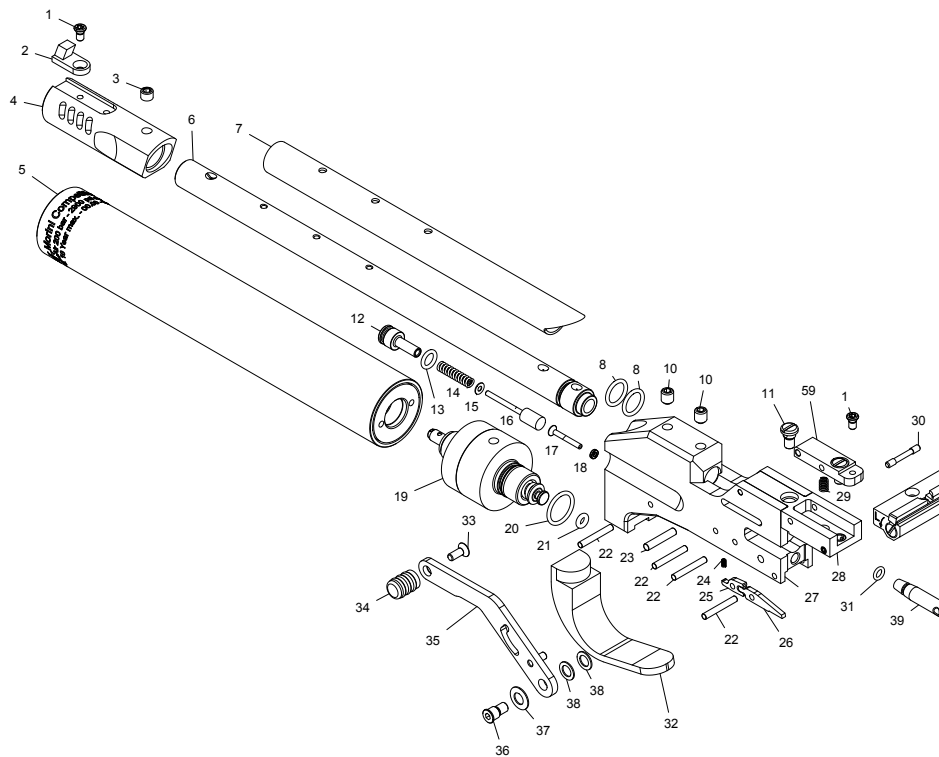


## MORINI CM 200EI

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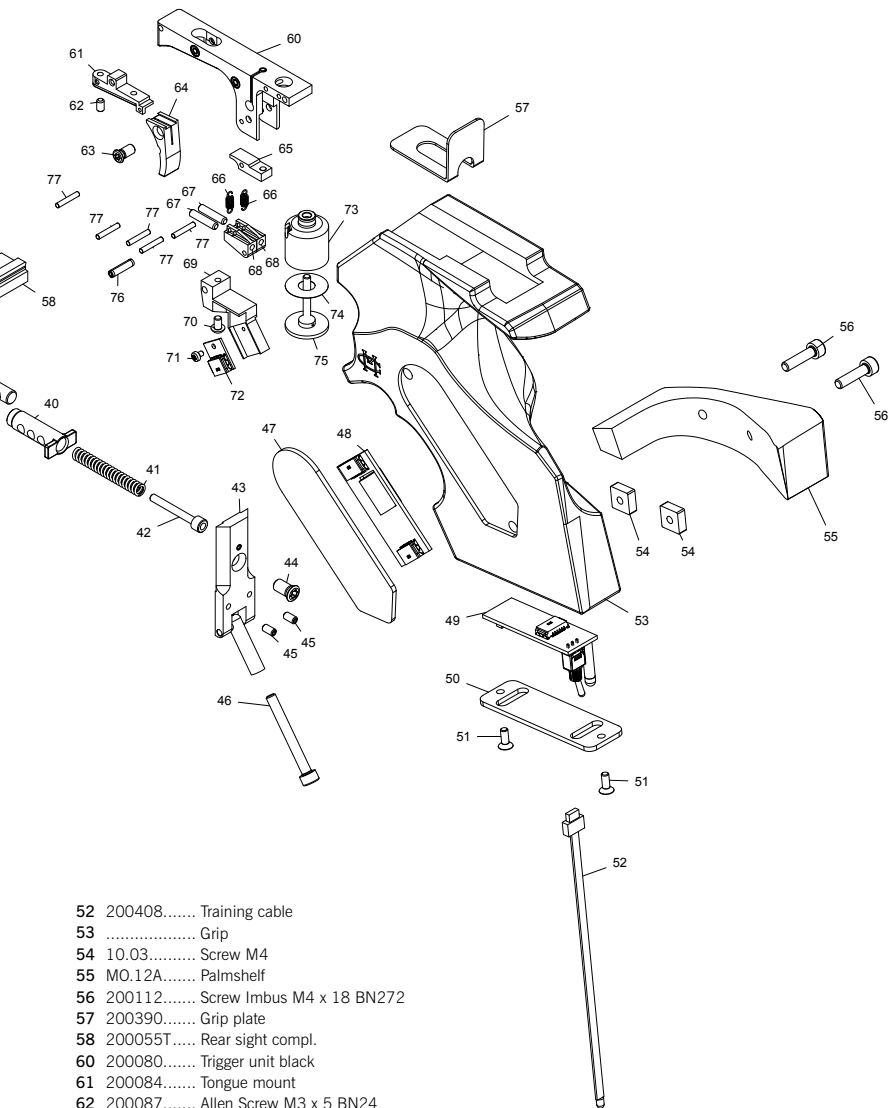
### TECHNICAL DATA

- Caliber: 4.5 mm (.177)
  - Weight: 985 g
  - Total Length: 400 mm
  - Total Height: 150 mm
  - Total Width: 50 mm
  - Length of Sight Line: From 330 mm to 350 mm
  - Barrel Length: 230 mm
  - Type of Barrel: Lothar Walther 6 dx 450 mm
  - Number of Riflings: 6 Polygon
  - Functioning: Compressed Air
  - Trigger: Electronic
  - Path: 0 - 1.5 mm
  - Arrest Point: 0.1 - 0.03 mm
  - First Stage Weight: 300 g - 700 g
  - Second Stage Weight: 50 g - 300 g
  - Trigger: Mounted on Micro-Roller Bearing
  - Voltage: 3 V
  - Battery Life: 15.000 Firings ca.
  - Sight: 4.0 - 4.5 - 5.0 - 5.5 - 6.0 mm
  - Sight Slot: Micrometrically Adjustable
  - Average Bullet Speed:  $V_0 = 150$  m/s
  - Number of Shot with 200 bar: 150
  - Grips: Adjustable/Fixed - Left/Right
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|----|--|----|---|
| 1  | 200003..... Torx Screw T10 / M3 x 6.5                | 27 | 200024..... Frame                         |
| 2  | 200002..... Front sight 5.0mm x 8.5mm                | 28 | 200500T..... Rear sight extension         |
| 3  | 200005..... Allen Screw M5 x 5 BN25                  | 29 | 200057..... Spring D=3.5/df=0.5/L=11.1    |
| 4  | 200004A..... Muzzle Break                            | 30 | 200056..... Pin                           |
| 5  | 200190AGT. Air cylinder gold with analogic manometer | 31 | 200027A..... OR 3.5 x 1.2                 |
| 6  | 200001..... Barrel cal. 4.5mm/.177, L= 230mm         | 32 | 200100..... Trigger guard                 |
| 7  | 200001CF... Carbon fiber sleeve                      | 33 | 200216..... Allen Screw                   |
| 8  | 200001A..... OR 9.0 x 1.5                            | 34 | 200039..... Knob                          |
| 10 | 200026..... Allen Screw M5 x 6 BN27                  | 35 | 200037..... Cocking lever                 |
| 11 | 200059..... Screw                                    | 36 | 200038..... Screw M4                      |
| 12 | 200052..... Opening valve screw                      | 37 | 200043..... Washer 10/5.2/0.5 BN804       |
| 13 | 200052A..... OR 5.5 x 1.5                            | 38 | 200044..... Washer 8/5/0.5 BN91220        |
| 14 | 200051..... Spring D=4.15/df=0.9/L=18.5              | 39 | 200027..... Loading bolt                  |
| 15 | 200048..... Washer M2/2.2/5/0.3 BN670                | 40 | 200029..... Stricking piece               |
| 16 | 200047T..... Opening valve compl.                    | 41 | 200030..... Main spring D=5.5/df=1.0/L=38 |
| 17 | 200046..... Opening pin                              | 42 | 200031..... Spring guide                  |
| 18 | 200046A..... QR 1.78 x 1.02                          | 43 | 200371T..... Closing Plate compl.         |
| 19 | 200200T..... Pressure reduction compl.               | 44 | 200078..... Torx Screw T20 / M5 x 10.2    |
| 20 | 200007A..... OR 12.0 x 1.5                           | 45 | 200087..... Allen Screw M3 x 5 BN24       |
| 21 | 200010A..... OR 2.9 x 1.78                           | 46 | 200391..... Screw Imbus M4 x 35           |
| 22 | 200036..... Pin 2.5 x 17.8                           | 47 | 200107..... Electronic cover lateral      |
| 23 | 200028..... Pin 3 x 13.8                             | 48 | 200400..... Electronic board 3V           |
| 24 | 200034..... Spring D=2.4/df=0.3/L=6                  | 49 | 200401..... Battery holder                |
| 25 | 200033..... Sear                                     | 50 | 200106..... Battery cover                 |
| 26 | 200032..... Lever                                    | 51 | 200216..... Allen Screw M3 x 8 BN20       |

- 66 200097..... Trigger spring
- 67 200098..... Allen Screw M3 x 14 BN24
- 68 200095..... Trigger weight regulator
- 69 200091..... Electronic connection holder
- 70 200353..... Allen Screw M3 x 6 BN19
- 71 200094..... Torx Screw T6 M2 x 3
- 72 200043..... Washer
- 73 162088..... Solenoid
- 74 200088B .... Spring for solenoid
- 75 200088T2... Disk complet
- 76 200028..... Pin 3 x 13.8



- 52 200408..... Training cable
- 53 ..... Grip
- 54 10.03..... Screw M4
- 55 MO.12A..... Palmshelf
- 56 200112..... Screw Imbus M4 x 18 BN272
- 57 200390..... Grip plate
- 58 200055T..... Rear sight compl.
- 60 200080..... Trigger unit black
- 61 200084..... Tongue mount
- 62 200087..... Allen Screw M3 x 5 BN24
- 63 200086..... Torx screw T10/M4 x 8.5
- 64 200085..... Trigger tongue
- 65 200081..... Balance lever

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### PLEASE READ CAREFULLY BEFORE USING

Before using your Pistol, please be sure to get absolutely well acquainted with the handling and function of the gun, guided by these instructions. Even a safe gun may become dangerous to you and other persons by faulty handling. Generally, hold the gun only in a way that you do not expose anyone to danger. Even an unloaded the gun must generally be handled as a loaded one. Any changes to the gun, using non-original MORINI spare parts, the use of force while stripping down the gun or the presence of corrosion, or bad maintenance, may very much influence safety and function of the gun. Morini, as manufacturer is, in such cases, generally discharged from any warranty. From time to time it is recommended to have the gun tested by an authorised gunsmith for safety and function.

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Dear shooting friend, You are now in possession of a Compressed Air Pistol model **MORINI CM 200EI**, manufactured in Switzerland. **Morini Competition Arm S.A.** placed in Bedano (Switzerland), produces precision target pistols suitable for top level competitions. Modern design principles combined with the use of the best available materials, absolute precision and attention to the details in the manufacturing of all Morini products assures satisfaction in functioning and almost unlimited durability of these pistols, under normal usage. The pistol also features a very sophisticated electronic trigger mechanism, with moving parts mounted on micro-roller bearings, and a unique air pressure regulator assuring constant and uniform air release pressures. The pistol is the result of the desire to produce a high quality match air pistol combining the advantages of the precompressed air systems without the disadvantages of the usual cocking effort. Compressed air is much less affected by temperature changes and has much less recoil effects than the widely used CO<sub>2</sub> gas systems. Some of the worlds most experienced shooters cooperated with Morini, helping to combine engineering design excellence, reliable functioning and accuracy with excellent balance and handling. Morini Competition Arm S.A. is also the master of producing excellent anatomical target grips for a wide range of pistols and thus the excellence in design, reliable functioning and high quality of this pistol is also complimented by the use of these well known grips, made of fine quality walnut timber.

At this point we would like to wish you good shooting.

### COMPRESSED AIR PISTOL MORINI MODEL CM 200EI

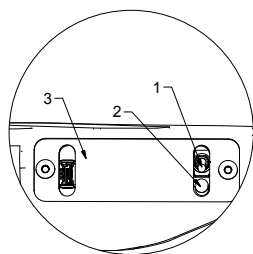
This model is conceived for firing single shot of 4.5 mm / .177 calibre. The propelling element is Air, which is found in the detachable cylinder under the barrel. Do NEVER use CO<sub>2</sub> in your pistol, as it has not been conceived for this purpose, the use of CO<sub>2</sub> may provoke inconveniences or breaks, which are not considered in the guarantee. For transport purposes, the cylinder containing the air is empty and therefore you need to fill it before first use. For any damages, which are caused by non observance of the instructions, by any changing of parts, remodelling or mounting of parts which are not of Morini origin, for corrosion or bad maintenance, no guarantee is granted from our part for direct or indirect damages.

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### WARRANTY

The compressed air pistol **MORINI CM 200EI** has a guarantee of 2 years (not related to sealing, for digital Manometer we guarantee 1 year). Within this period our obligation is to exchange, free of charge, all those parts that, due to factory defects, are deficient. This guarantee loses its validity if the weapon has been improperly treated, inexpert repaired, corroded, bad maintained or altered in any way.

FIG. 1



## 1. TURNING THE ELECTRONIC ON (FIG. 1)

### 1.1 Switching the electronic on

Push the switch lever (1) up.

When powered on the LED (2) shows the battery status:

*Fast blinking:*

Error detected

*The LED flashes every 4 seconds:* Batteries OK

*The LED blinks slowly:*

The duty cycle between on and off shows how much the battery is empty. If the LED is more on than off, the battery is good, if it is more off than on it is better to change battery.

The LED force depends on the battery voltage. If it is empty it may be more difficult to see the flashing LED. Unless more than 2 seconds are needed to generate the 30V it is still possible to shot. We strongly recommend, however, changing the battery when the LED off period is longer then the on period. The pistol is so ready to be loaded and for dry firing, which take place simply by pulling the trigger. The battery life is about 15'000 shots.

Error condition can occur if:

- *The electronic is powered on with pressed trigger:* Turn off and on again without pressing the trigger.
- *The electronic is extracted from the trigger unit when on:* Turn off.
- *The electronic is inserted in the trigger unit when on:* Turn off and on again.
- *Could not reach the 30 V in 2 seconds:* The electronic is damaged or there is a short circuit on the output contacts.

- 1.2 *Introduction of the battery:* We recommend the use of high quality batteries. Unscrew the cover plate (3) situated at the bottom of the grip. Extract the electronic from the grip and introduce 1 battery 3V - CR2 Lithium paying attention to the polarity. Reinsert the electronic and screw the cover plate (3) in position again.

**IMPORTANT:** This operation and eventually the displacement of the electronic must be done with unloaded pistol and electronic turned off. We suggest to always remove the battery if you don't use the pistol for longer time. After every use, ALWAYS switch off the electronic to keep battery life longer.

FIG. 2

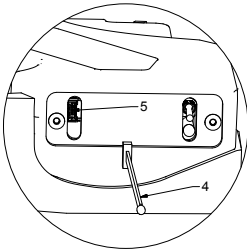


FIG. 3

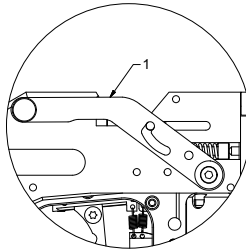
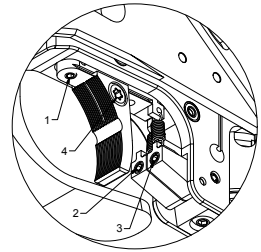


FIG. 4



## 2. USING THE TRAINING CABLE (FIG. 2)

### 2.1 Activate training mode:

With the electronic switched off and the weapon unloaded, insert the training dummy (4) into the plug (5) on the underside of the grip and then switch on the electronic.

### 2.2 Training function:

By activating the training mode, a random function is started, which randomly generates the activation of the trigger.

### 2.3 Disable training mode:

Turn off the electronic and remove the training dummy.

## 3. LOADING THE PISTOL (FIG. 3)

Pull lever (1) up, introduce the pellet in the chamber and close by pushing the lever down in place. The pistol is now ready for firing.

## 4. TRIGGER ADJUSTMENT (FIG. 4)

The trigger is adjusted at the factory according to the ISSF rules in an optimal manner, but it is still modifiable by the following way:

### 4.1 Adjustment of first stage travel:

Turning adjustment screw (1) clockwise will shorten first stage travel. After adjust screw (1) check trigger weight and readjust if necessary.

### 4.2 Adjustment of first stage weight:

Turning adjustment screw (3) clockwise increases the load. The range is 300 - 700 g.

### 4.3 Adjustment of second stage weight:

Turning adjustment screw (2) clockwise increases the load. The range is 50 - 300 g.

### 4.4 Adjustment of trigger position:

Unlock screw (4) and move the trigger to the desired position, then lock screw (4) again.

## 5. SIGHTING ADJUSTMENT (FIG. 5)

### 5.1 Vertical adjustment:

To move group on target DOWN, turn adjustment screw (1) clockwise. One click will move hit on target by 1.5 mm.

### 5.2 Horizontal adjustment:

To move group on target to the RIGHT, turn adjustment screw (2) clockwise. One click will move hit on target by 1 mm.

### 5.3 Adjusting the width of the rear sight notch:

Turning adjustment screw (3) clockwise will widen the rear sight opening by 0.1 mm every click.

FIG. 5

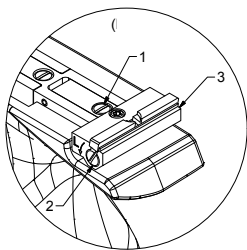


FIG. 6

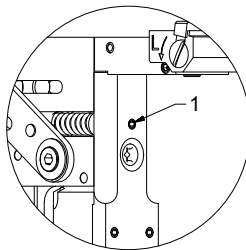
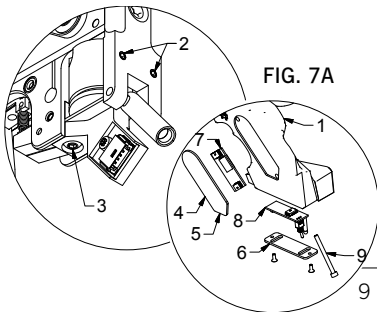


FIG. 7



## 6. PELLET VELOCITY (FIG. 6)

Pellet velocity  $V_0$  is set at the factory between 145 and 150 m/s (475 - 492 ft/s). It is suggested that this adjustment should not be changed if you do not have the necessary equipment. The velocity, however, is regulated by turning adjustment screw (1) clockwise.

## 7. SIGHT

The pistol is supplied with a 5.0 mm wide front sight post, as standard. Other front sights with different widths (4.0 - 4.5 - 5.5 and 6.0 mm) are supplied as accessories.

## 8. ADJUSTING THE GRIP ANGLE (FIG. 7 / FIG. 7A)

The grip (1) can be adjusted and swiveled in all directions to match the shooter's shooting posture. The adjustment takes place, after unscrewing the grip, by means of adjustment on the frame of the screws (2) for lateral adjustment and (3) for longitudinal adjustment. To remove the grip, remove the side cover (4), which is attached to the grip with magnets, with a tool by inserting it into the special slot (5) and unscrew the bottom cover (6). Remove the electronic (7) and (8) by disconnecting the electronic cables from the plugs. Remove the grip by loosening the screw (9). Repeat the procedure in reverse order to assemble the grip again, making sure that the cables are in their proper position. Make sure that the grip is well tightened.

## 9. COMPRESSED AIR CYLINDER

It is by all means required to observe the legal dispositions and rules of the own country.

The compressed air cylinder can be unscrewed and exchanged even if not empty. While doing so a small quantity of air from the spacing chamber will escape. The filling pressure can be checked with the manometer that is built in all cylinders. The air pressure **MUST** never exceed 200 bar / 2900 psi. The cylinder must never be exposed to a temperature of more than 50°C (122°F) and to corrosive agents in the air, like salt or chlorine, etc...

If the weapon is not used for a long time, we recommend to unscrew the air cylinder.

**WARNING:** The compressed air cylinders must be emptied and safely disposed 10 years after production date. The production and disposal dates are noted on the compressed air cylinder. Aluminum can be deposited as trash where admitted by the own country. It is responsibility of the enduser to do that. Please no USE of any detergent or oil or any other product for cleaning the bottles.

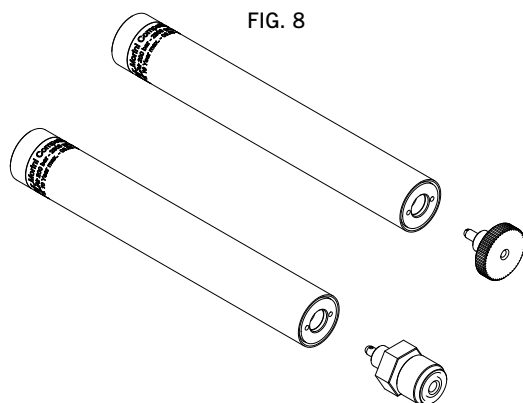


FIG. 8

## 10. FILLING THE CYLINDER (FIG. 8)

Many common methods are used to fill the cylinders:

- connecting the cylinder to the adapter, supplied standard, attached to a scuba diving bottle;
- connecting the cylinder to the adapter, supplied standard, attached to a hand pump;
- connecting the cylinder to the adapter, supplied standard, attached to a compressor.

**ATTENTION:** Morini is not responsible for bad maintenance of hand pumps or diving bottles, and for damages due to corrosion or bad maintenance. Fill always the bottle from a scuba diving bottle or pump or compressor, which has filter and is not expired. Morini is not responsible for damages caused by bad maintained or expired scuba diving bottles or pumps or compressors.

**WARNING:** Do not tamper on cylinder including the valve! Danger! if you violate this rule, the guarantee expires. Never stand in front of the bottle and the compressor when filling up. Fill the bottle with air slowly (not with max power) to max 200 bar. Morini is not responsible in case of not correct filling or exceeding the max pressure admitted. Water and sand and other agents can damage the cylinder.

## 11. EMPTY OUT A CYLINDER (FIG. 8)

To empty out a cylinder use the adapter supplied with the pistol and the air will come out. Remember to empty out all cylinders before air flights.

## 12. MAINTENANCE

The pistol does not need any special maintenance, except normal inspection and service regularly and/or when necessary. In countries with more humidity the check should be done more frequently. No lubrication is necessary, as lubrication of the individual parts has been done in the factory, with long lasting lubricants. It is recommended, however, to clean the pistol with a soft cloth after every shooting without using any product. For cleaning the barrel bore, the use of special cleaning pellets, made for this purpose, is recommended. The barrel should be oiled internally only if it is not used for long periods. It is then to be cleaned before using the pistol again. Forbidden to use any corrosive products or oil for cleaning. We recommend the use of high quality Match pellets, made for this purposes. It is recommended to use nothing else. Store always the pistol switched off in a dry place, far away from dust and fire, humidity, never expose the pistol under the sun, other hot sources or with corrosive agents in the air. We are sure that today we have delivered the best in air gun construction for you and for longer. Finally, we wish you every success with our **MORINI CM 200EI**.